GROUNDWATER MONITORING AND CORRECTIVE ACTION 2024 ANNUAL REPORT

Prepared for:

Plum Point Services Company, LLC

Osceola, Arkansas

January 2025

Olsson Project No. 024-01343

FTN Project No. R14590-3336-001

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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 2024 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 Associates, Ltd. [FTN] 2017a) with four new wells added to the CCR program and sampled for background in 2024. Groundwater sample collection is performed in accordance with the landfill's groundwater sampling and analysis plan (FTN 2017b) and data are evaluated in accordance with the landfill's certified statistical analysis plan (FTN 2017c).

Olsson was contracted to sample groundwater and statistically evaluate the data from the semiannual monitoring events performed during 2024. Results from these events are summarized as follows:

1. Detection monitoring was performed during April and October 2024 for the first and second half of 2024 monitoring periods, respectively. Groundwater samples from each event were submitted to a third-party Arkansas-licensed laboratory for analysis of the appendix III list of parameters, excluding pH, which is field-measured.
2. The direction of groundwater flow varied between the first and second half of 2024 monitoring events. The April 2024 potentiometric surface map shows groundwater flow was relatively flat across active cells 1 and 3 with a slight western flow across active cell 1 and a slight northeastern flow across active cell 3. The October 2024 potentiometric surface map shows groundwater flow was generally to the east-northeast across the active landfill cells. Cell 2, while approved by DEQ for waste disposal, was not completed during the first and second half monitoring 2024 events.
3. Of the appendix III parameters evaluated, only fluoride has an EPA-promulgated 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 the following appendix III parameters: calcium, chloride, fluoride, sulfate, and total dissolved solids (TDS). The remaining appendix III parameters, boron and pH, show relatively similar values across all wells, with measured boron being below the laboratory reporting detection limit (RDL) for the period of record at all wells with the exception of MW-102, which had a detection above the RDL during the second half 2024 monitoring period.

5. A comparison of the statistical power curve for the detection monitoring program to the EPA Reference Power Curve indicates that statistical power of the detection monitoring program exceeded EPA recommendations during the first half 2024 monitoring period. The statistical power of the landfill's detection monitoring program was below EPA recommendations at levels 3σ above background but met EPA recommendations at levels 4σ above background during the second half 2024 monitoring period. It is anticipated that the statistical power of the program will improve as additional data are incorporated into the background data sets at the newer wells.

6. Statistical evaluation of the first half of 2024 data set identified confirmed statistically significant increases (SSIs) for calcium, sulfate, and TDS at MW-117 and for sulfate at compliance well MW-108. 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 and an Arkansas-registered professional geologist on October 16, 2024, and the ASD is included with this report in accordance with §257.94(e)(2). Based on the successful ASD, PPSC continued with detection monitoring in the second half of 2024 in accordance with §257.94.

7. Statistical evaluation of the second half of 2024 data set identified confirmed SSIs for sulfate and TDS at MW-117. PPSC completed a successful ASD in response to the SSIs in accordance with §257.94(e)(2). The ASD was certified by an Arkansas-registered professional engineer and an Arkansas-registered professional geologist on January 24, 2025, and the ASD is included with this report in accordance with §257.94(e)(2). Based on the successful ASD, PPSC will continue with detection monitoring in the first half of 2025 in accordance with §257.94.

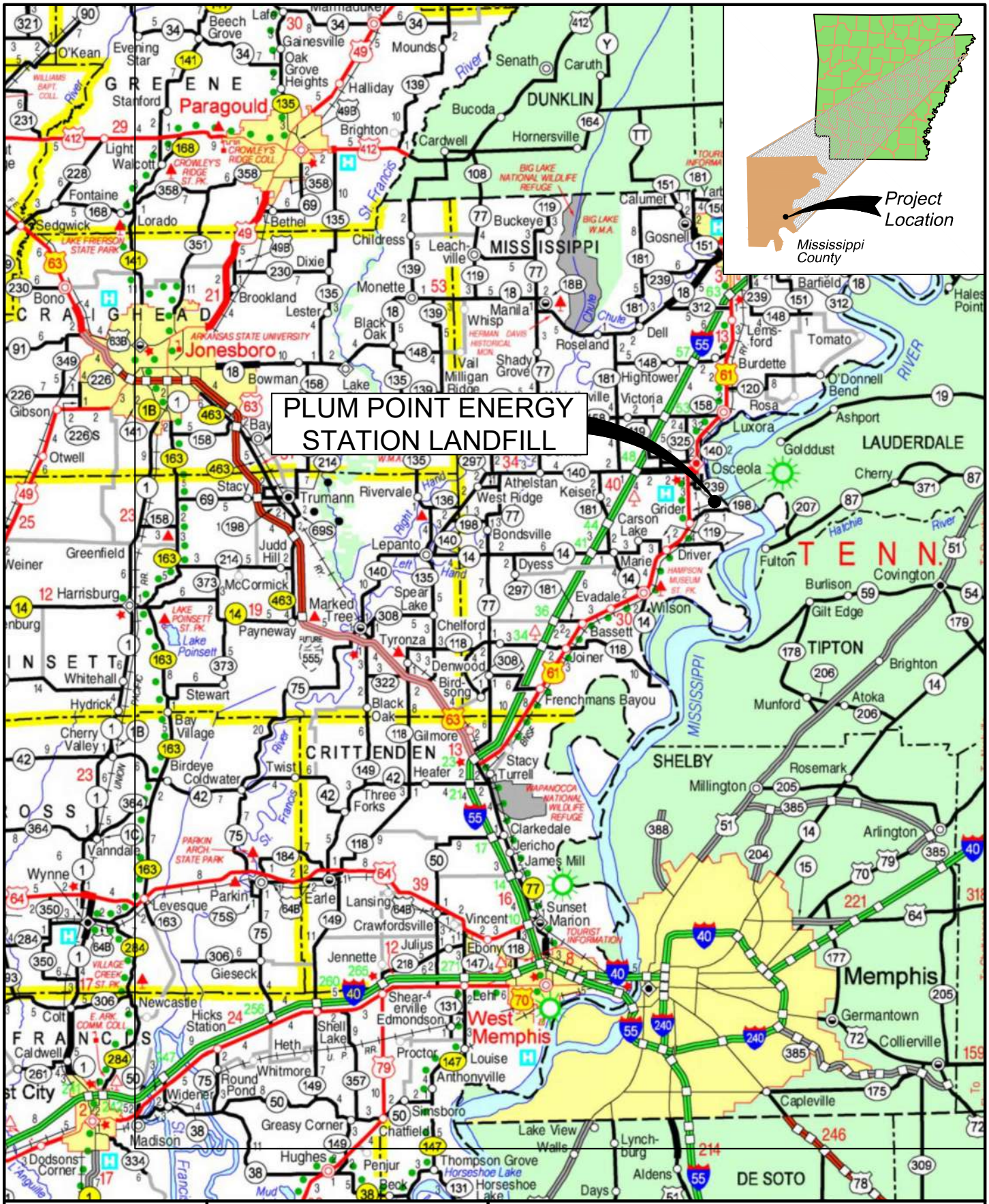
1. BACKGROUND

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. 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.

Olsson was contracted to sample groundwater and statistically evaluate the data from the semiannual monitoring events performed during 2024. 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 2.



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Figure 1. Location map, Plum Point Energy Station.

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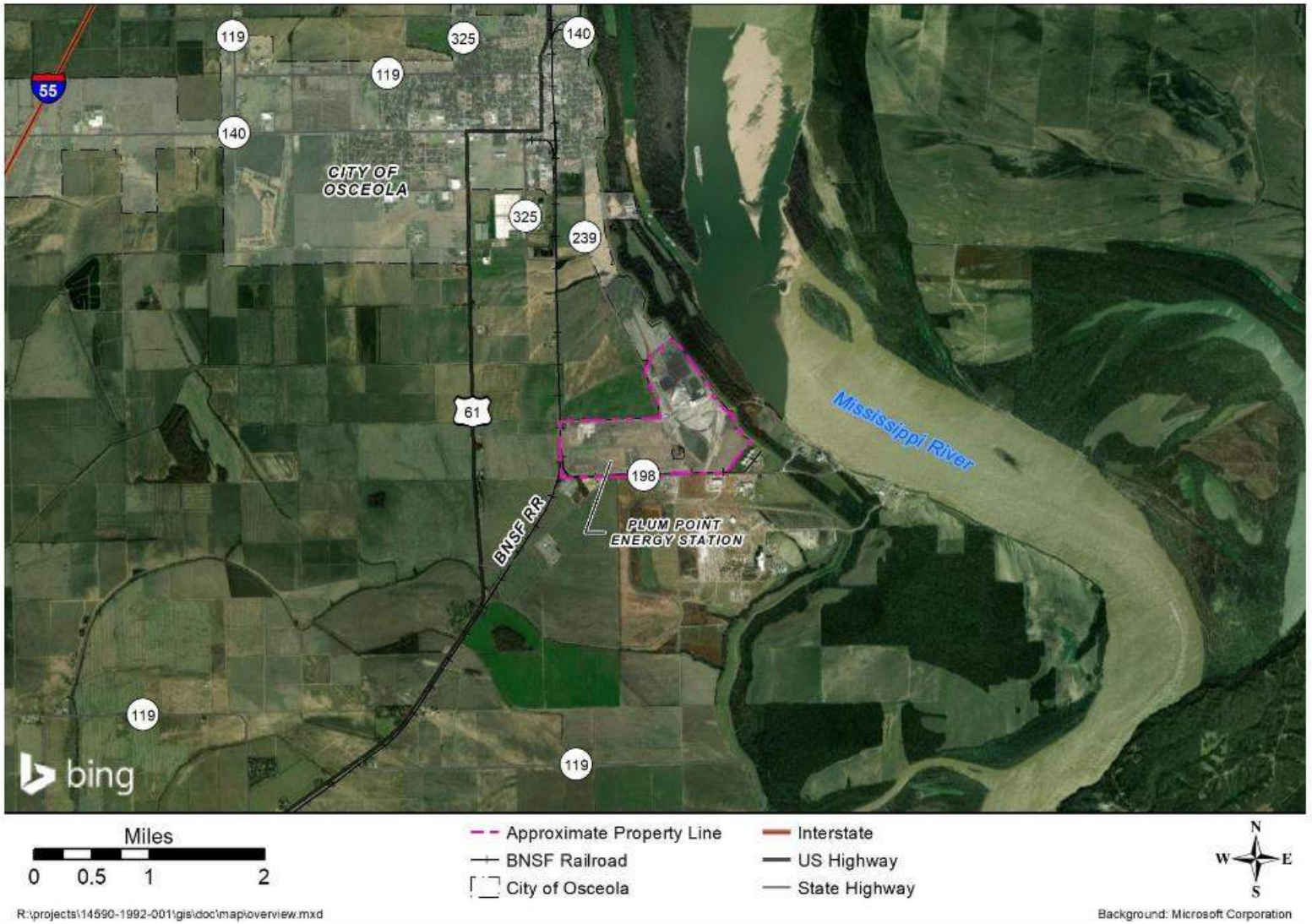


Figure 2. Vicinity map, Plum Point Energy Station.

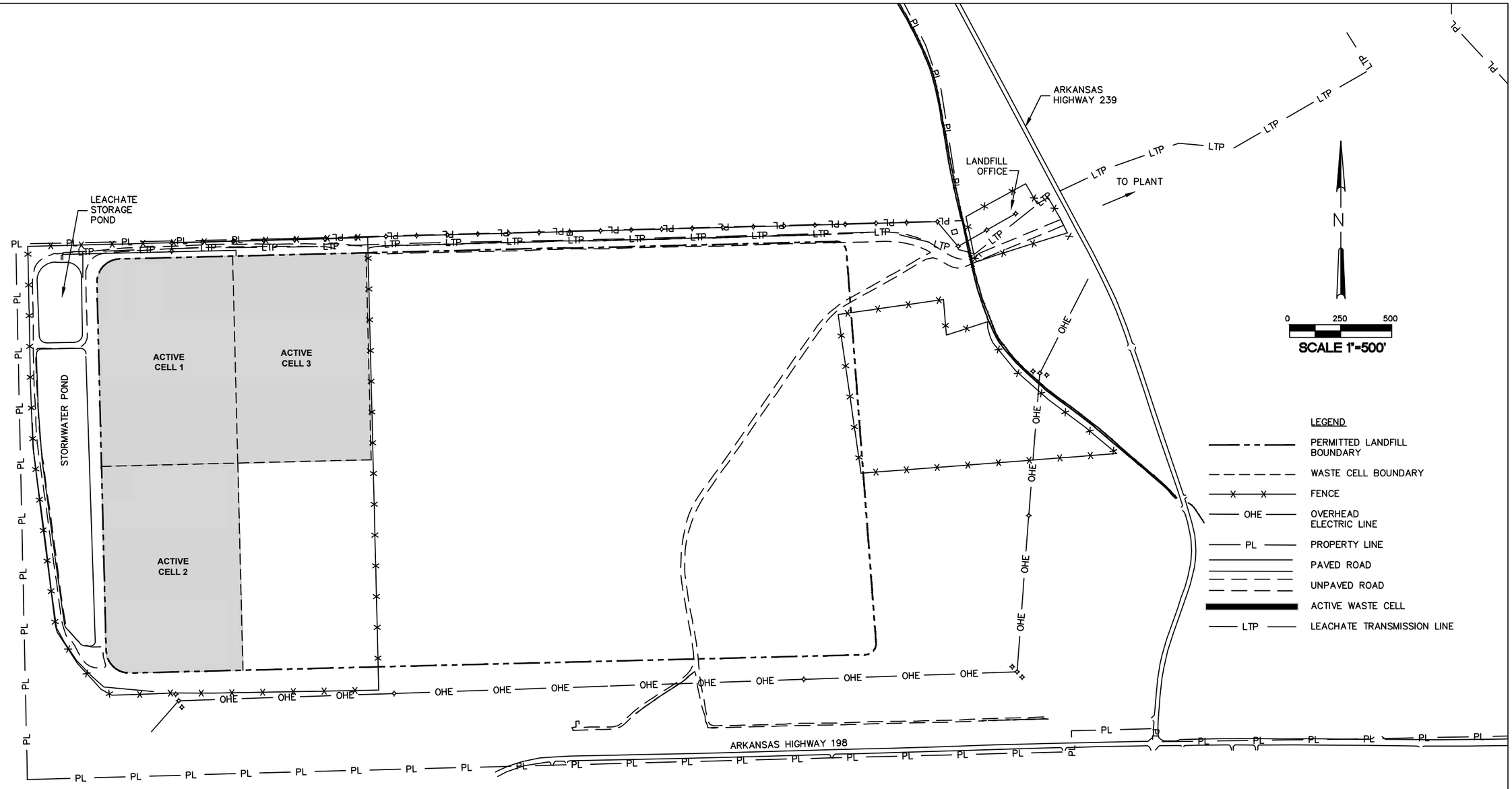
1.2 Operational History

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-R2 and became active during March 2010. The landfill currently has two active disposal cells, cells 1 and 3, which are shown on Figure 3. The combined area of the two active CCR disposal cells is approximately 30 acres. PPSC constructed cell 2, shown on Figure 3, during 2024. As of this report, Cell 2 is approved by DEQ for waste placement.

Groundwater detection monitoring was initiated at the landfill in November 2007, in accordance with Arkansas Pollution Control and Ecology Commission (APCEC) Rule 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 Associates, Ltd. (FTN) in October 2017 (FTN 2017a). Details regarding the certified groundwater monitoring network are provided in Section 2 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 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 a lower confining unit, described as the Tertiary-aged Jackson-Claiborne clay in older publications (Broom & Lyford 1981; Peterson, Broom, & Bush 1985); however, more recent publications indicate that sediments of the lower confining unit belong to the Tertiary-aged middle Claiborne confining unit (Hart, Clark, & Bolyard 2008). The regional direction of groundwater flow is toward the southwest (Schrader 2015, Rodgers & Whaling 2020).



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Figure 3. Landfill layout map.

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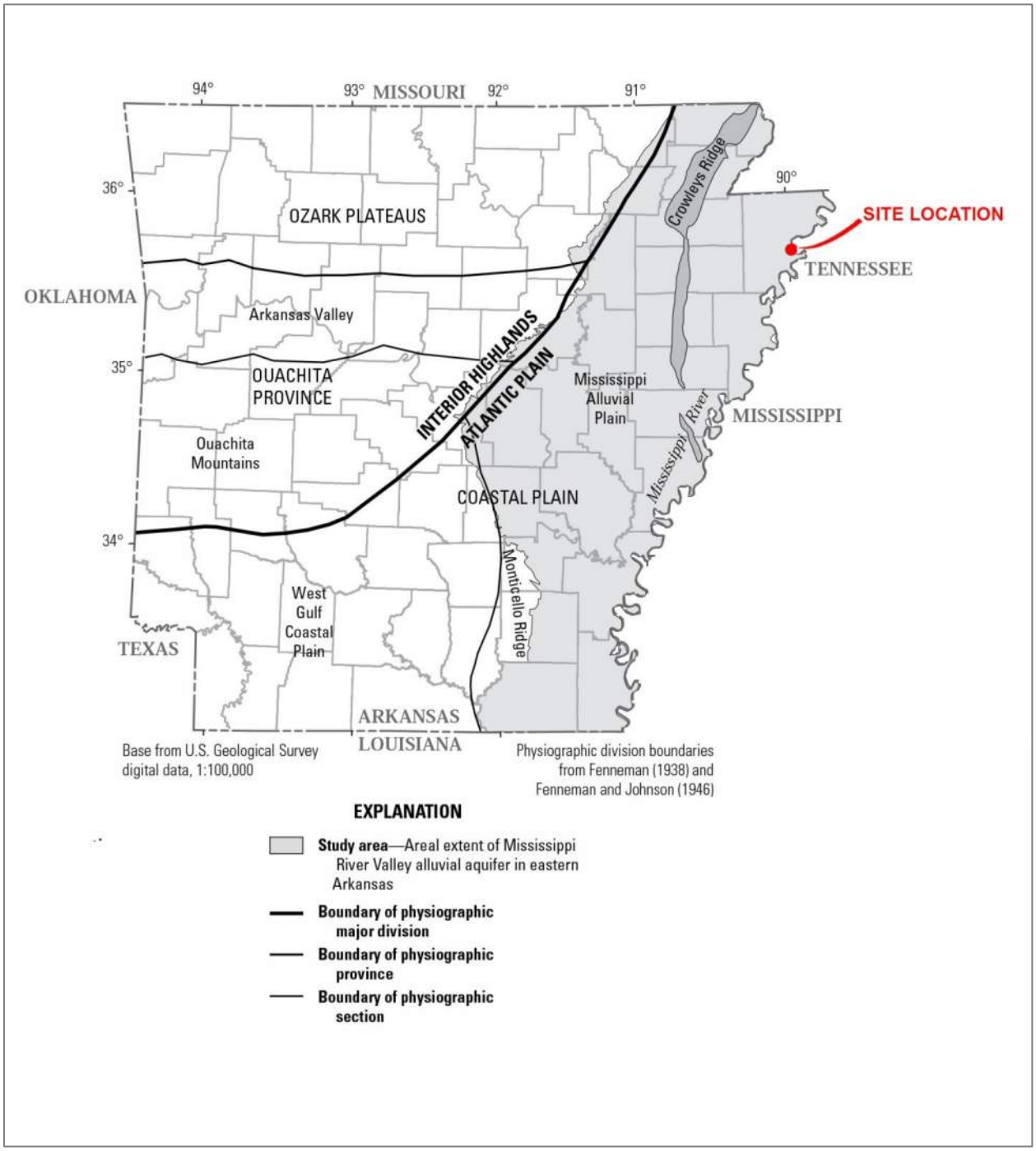


Figure 4. Physiographic location, Plum Point Energy Station (adapted from Schrader 2015).

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 of 4.8×10^{-6} centimeters per second (cm/s) based on the geometric mean of reported test results (GEC 2001). 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).

In 2023, a confining unit investigation was conducted by FTN for cells 2 and 4. Findings from the investigation indicated that the existing liner plan for cell 2 met the requirements for 5 ft of separation between the top of the landfill liner system and the seasonally high groundwater elevation. The borings advanced in cell 2 showed that the in situ soils that are part of the 5-ft buffer are of sufficient thickness, contained adequate cohesive material, and met the project-specific requirement for a hydraulic conductivity of 1×10^{-5} cm/sec or less. The investigation also indicated that the existing liner plan for cell 4 required redesigned to meet the 5-ft buffer requirement. This is due to samples from two borings lacking sufficient cohesive material, alluvial sand being encountered at higher than anticipated depths, and five samples not meeting the project-specific hydraulic conductivity of 1×10^{-5} cm/sec or less. The cell 4 liner system was redesigned and approved by DEQ.

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. MONITORING NETWORK AND SCHEDULE

The following sections describe the certified monitoring well network, changes made to the network during 2024, sampling schedule, network maintenance, sampling methodology, and required laboratory analyses.

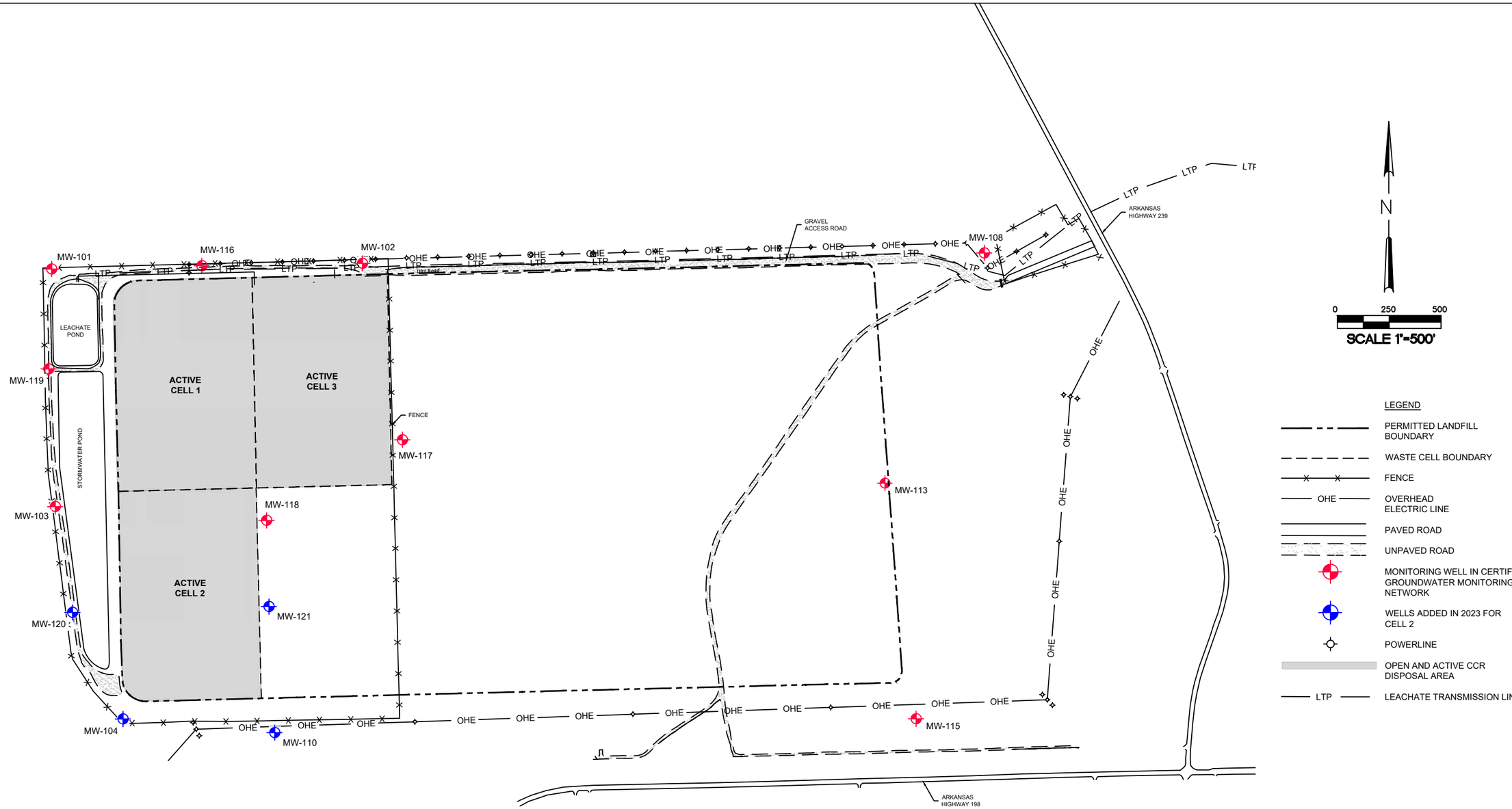
2.1 Monitoring Well Network

The certified groundwater monitoring network for the CCR rule includes the 10 monitoring wells shown on Figure 5 (FTN 2017a). Also shown on Figure 5, there are four additional wells located around cell 2. A narrative description of the purpose of these four additional wells is provided in Section 2.2. A summary of general well construction details is included in Table 1 and is based on available well installation and survey records. Each of wells listed in Table 1 is constructed of 2-inch, schedule 40 polyvinyl chloride (PVC) pipe, with 10-ft slotted well screens.

Table 1. Summary of well construction details.

Well Number	Well Installation Date	Ground Surface Elevation (ft NAVD88[a])	Measuring Point Elevation[b] (ft NAVD88)	Total Depth (ft below MP)	Screened Interval (ft NAVD88)
Certified Groundwater Monitoring Network					
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	220.6-210.6
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	221.1-211.1
Wells Added for Cell 2					
MW-104	5/4/2012	237.8	240.81	32.2	219.0-209.0
MW-110	9/25/2007	236.9	240.22	33.4	216.8-206.8
MW-120	5/17/2023	246.9	250.30	40.4	220.3-210.3
MW-121	5/16/2023	237.7	240.80	30.4	220.8-210.8

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



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Figure 5. Monitoring well locations, Plum Point Energy Station.

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Each monitoring well shown on Figure 5 and listed in Table 1 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 active cells 1, 2 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 5) are used for this purpose because they are positioned outside the potential zone of impact from cells 1, 2 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 Groundwater Monitoring System Improvements During 2024

The 10 monitoring wells in the certified groundwater monitoring system were installed prior to 2024. None of the existing wells were altered or abandoned during 2024.

Four new wells, MW-104, MW-110, MW-120 and MW-121, were added to the CCR sampling program during 2023 in anticipation of construction of cell 2 during 2024. In 2024, these wells were sampled for background as required by §257.90(b)(2). It is anticipated that the groundwater monitoring system certification will be updated in 2025.

2.3 Sampling Schedule

In accordance with the CCR rule and the landfill's groundwater sampling and analysis plan (GWSAP), detection monitoring occurs semiannually at the 10 monitoring wells in the certified groundwater monitoring system. Appendix III and IV sampling required by §257.90(b)(2) was performed monthly at MW-104, MW-110, MW-120, and MW-121 until background sampling was complete. Table 2 summarizes the sampling events and sampling schedule for each well during 2024.

Due to low water levels in the underlying aquifer, there was an insufficient volume of water to collect a background sample at MW-120 during January, February, and March 2024.

Detection monitoring events for the 2025 monitoring periods are tentatively scheduled for April and October 2025.

Table 2. 2024 sampling schedule.

Well ID	January 11	February 7-8	March 14-15	April 15-19	May 16	June 18-19	July 18-19	August 15	September 20	October 14-17	December 10
MW-101	---	---	---	DM	---	---	---	---	---	DM	---
MW-102	---	---	---	DM	---	---	---	---	---	DM	VS
MW-103	---	---	---	DM	---	---	---	---	---	DM	---
MW-104	BG	BG	BG	BG	BG	BG[(a)]	---	---	---	DM	---
MW-108	---	---	---	DM	---	VS	---	---	---	DM	---
MW-110	BG	BG	BG	BG	BG	BG[(a)]	---	---	---	DM	---
MW-113	---	---	---	DM	---	---	---	---	---	DM	---
MW-115	---	---	---	DM	---	---	---	---	---	DM	---
MW-116	---	---	---	DM	---	---	---	---	---	DM	VS
MW-117	---	---	---	DM	---	VS	---	---	---	DM	---
MW-118	---	---	---	DM	---	---	---	---	---	DM	---
MW-119	---	---	---	DM	---	---	---	---	---	DM	---
MW-120	NS[(b)]	NS[(b)]	NS[(b)]	BG	BG	BG	BG	BG	BG	DM	---
MW-121	BG	BG	BG	BG	---	BG[(a)]	---	---	---	DM	---

Notes:

BG = Monthly background sampling for appendix III and appendix IV parameters per §257.90(b)(2).

DM = Detection monitoring sampling for appendix III parameters in accordance with the landfill's GWSAP (FTN 2017b) and SAP (FTN 2017c).

VS = Verification sampling for confirmation of statistically significant results from detection monitoring in accordance with the landfill's GWSAP (FTN 2017b) and SAP (FTN 2017c).

a. Background sampling was complete at MW-121 as of April 2024 and at MW-104 and MW-110 as of May 2024; however, the January TDS samples were analyzed outside of the sample holding time due to staffing issues at the laboratory, so another TDS sample was collected at these wells in June 2024.

b. NS=not sampled due to low water levels in the aquifer.

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 2017b). Groundwater sample collection during the 2024 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 ProPlus or YSI MPS 556 multiparameter instrument fitted with a flow-through cell. Field sampling forms for the 2024 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 3. Groundwater samples collected for background sampling are required to be analyzed for both appendix III (Table 3) and appendix IV parameters (Table 4) of 40 CFR Part 257. Pace Analytical National (Pace), of Mt. Juliet, Tennessee, provided laboratory services for each sampling event performed during 2024. Samples were analyzed in accordance with EPA's *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846) (EPA 1986), or equivalent, and guidelines established by EPA. Laboratory reports from Pace are included in Appendix B.

Table 3. Appendix III parameters.

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

Table 4. Appendix IV parameters.

Appendix IV to Part 257 – Constituents for Assessment Monitoring	
Antimony	Lead
Arsenic	Lithium
Barium	Mercury
Beryllium	Molybdenum
Cadmium	Radium 226+228
Chromium	Selenium
Cobalt	Thallium
Fluoride	

3. DATA PRESENTATION

This section presents the data collected during the 2024 detection 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. Data associated with background sampling performed during 2024 at the new wells near cell 2 are not presented in this section other than the water level data collected during 2024. Available field and laboratory data for these wells are included in the appendices.

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 and the four new wells prior to conducting any sampling activities for the April and October detection monitoring events. Water levels were measured using a Geotech water level meter on April 15, 2024, and on October 14, 2024, for the first and second half 2024 monitoring periods, respectively. Depth to water was measured to the nearest 0.01 ft from the MP located on the 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 5.

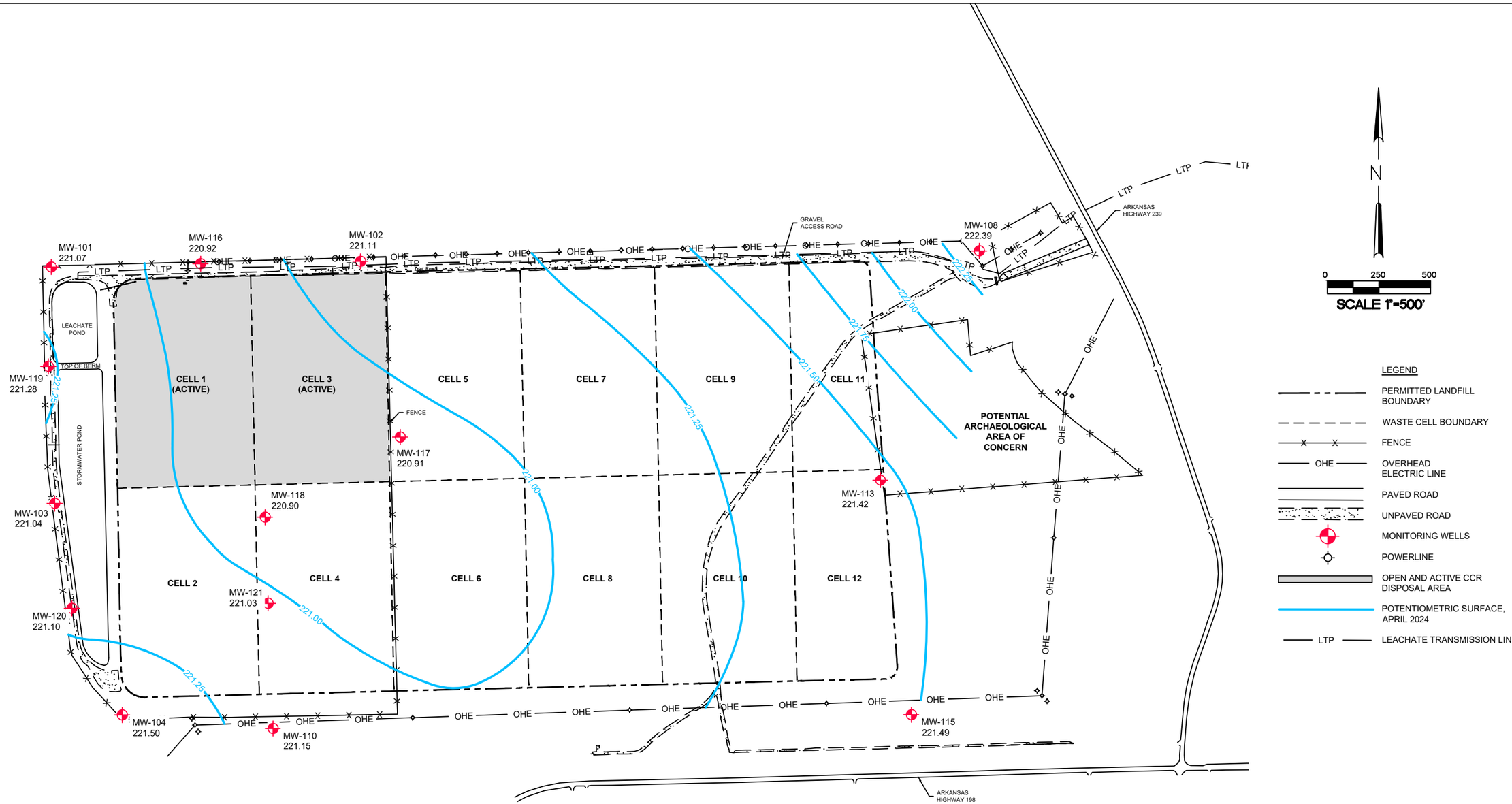
Hydrographs depicting water level elevations over time are included in Appendix C. As shown on the hydrograph, within-well water levels fluctuated seasonally as much as ±28 ft over the period of record for the CCR rule program.

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 6 and 7. As shown on Figure 6, the direction of groundwater flow across the active landfill area during the April 2024 monitoring event was relatively flat across active cells 1 and 3 with a slight western flow across active cell 1 and a slight northeastern flow across active cell 3. As shown on Figure 7, groundwater flow beneath the active landfill area was generally to the east-northeast during the October 2024 monitoring event.

Table 5. Water level data.

Well ID	MP Elevation (ft NAVD)	April 15, 2024		October 14, 2024	
		Depth to Water (ft below MP)	Groundwater Elevation (ft NAVD88)	Depth to Water (ft below MP)	Groundwater Elevation (ft NAVD88)
MW-101	242.75	21.68	221.07	22.63	220.12
MW-102	243.99	22.88	221.11	25.95	218.04
MW-103	243.25	22.21	221.04	23.48	219.77
MW-104	240.81	19.31	221.50	20.70	220.11
MW-108	245.11	22.72	222.39	29.37	215.74
MW-110	240.22	19.07	221.15	20.52	219.70
MW-113	244.63	23.21	221.42	27.66	216.97
MW-115	243.55	22.06	221.49	25.85	217.70
MW-116	243.97	23.05	220.92	25.56	218.41
MW-117	242.53	21.62	220.91	23.99	218.54
MW-118	241.23	20.33	220.90	21.98	219.25
MW-119	246.53	25.25	221.28	26.15	220.38
MW-120	250.30	29.20	221.10	30.40	219.90
MW-121	240.80	19.77	221.03	21.27	219.53

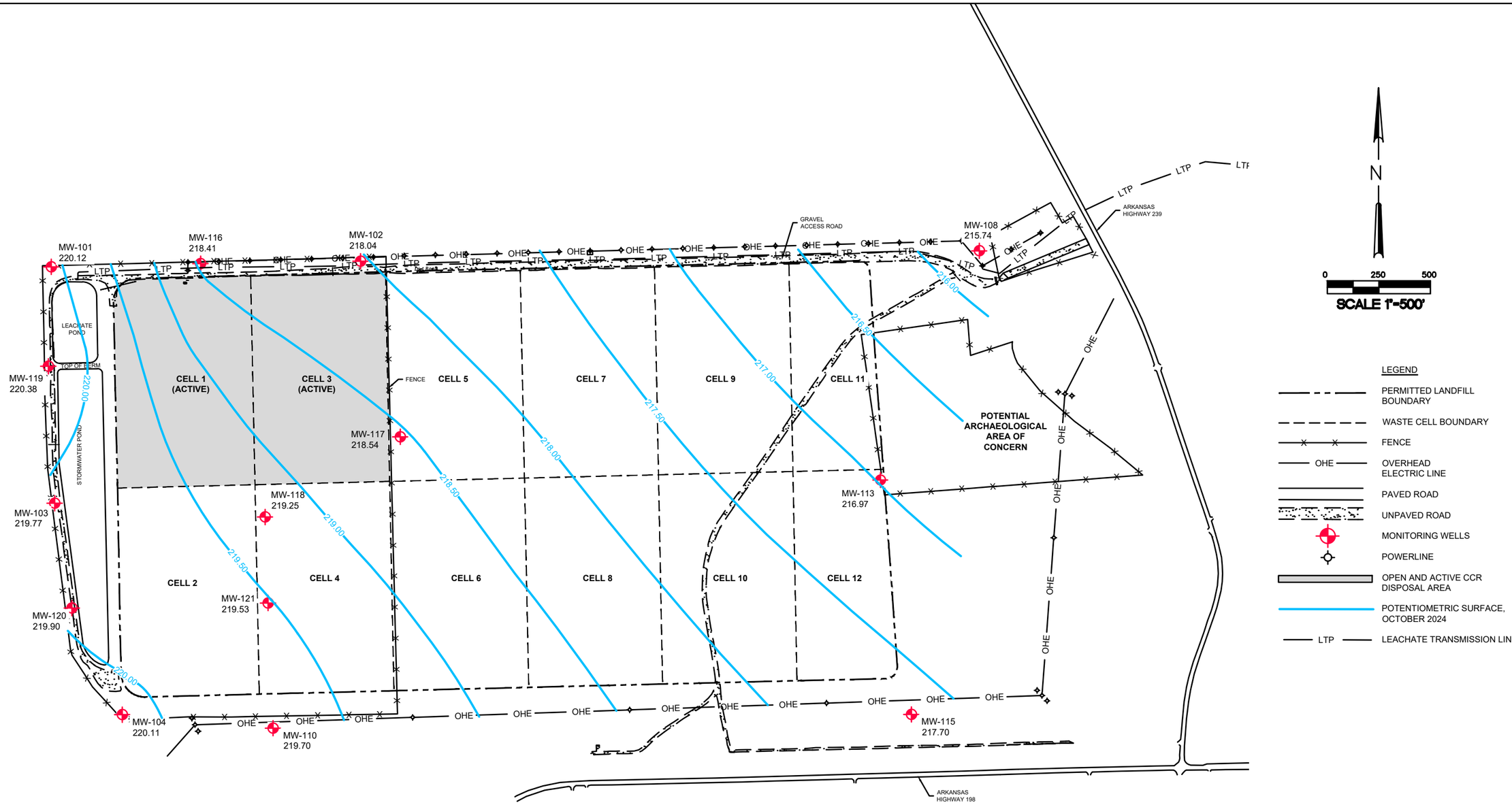


R:\projects\14590-3336-001\cad\dwg\EPA\14590-3336-001-EPA-FG06.dwg
DATE: Nov 20, 2024 1:26pm USER: jtorres

PROJECT NO: 024-01343
DRAWN BY: JT
DATE: 06.18.2024

Figure 6. Potentiometric surface, April 15, 2024.

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3 Innwood Circle
Suite 220
Little Rock, AR 72211
olsson.com
TEL 501.225.7779
Olsson - Engineering
Arkansas COA #1010



R:\projects\14590-3336-001\cad\dwg\EPA\14590-3336-001-EPA-FG07.dwg
DATE: Jan 24, 2025 7:00am USER: jtorres

PROJECT NO:	024-01343
DRAWN BY:	JT
DATE:	01.24.2025

Figure 7. Potentiometric surface, October 14, 2024.

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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 April 2024 hydraulic gradient was estimated to be 5.0×10^{-4} ft/ft across cell 1 and 4.0×10^{-4} ft/ft across cell 3 using the potentiometric surface map shown on Figure 6. The October 2024 hydraulic gradient was estimated to be 1.1×10^{-3} ft/ft using the potentiometric surface map shown on Figure 7. Based on these values, the April 2024 V_x was calculated to be approximately 21 ft/year across active cell 1 and 17 ft/year across active cell 3. The October 2024 V_x was calculated to be approximately 46 ft/year. The estimated flow rates for this monitoring period are within historically reported values, which typically range from approximately 10 to 48 ft/year. Second half of the year Vx values are typically higher due to the low water levels in the adjacent Mississippi River during that time of the year. Data reported by the US Army Corps of Engineers show these trends in the river gauge levels at Osceola, Arkansas. (https://rivergages.mvr.usace.army.mil).

3.2 Field-Measured Water Quality Data

Groundwater sampling records for the 2024 monitoring events are included in Appendix A. Field-measured water quality parameters from the 2024 detection monitoring events are summarized in Table 6 and field-measured water quality parameters from the 2024 background sampling events are compiled in Appendix D. A review of the field quality control samples is provided in Section 3.4.

Table 6. Field-measured water quality data.

Well	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
First Half 2024 Detection Monitoring, April 2024					
MW-101	4/19/2024	546	6.8	17.5	2.6
MW-102	4/19/2024	557	6.6	17.8	7.2
MW-103	4/19/2024	479	6.4	16.5	9.7
MW-104	4/18/2024	527	6.6	17.7	7.6
MW-108	4/17/2024	725	6.7	19.4	1.2
MW-110	4/18/2024	463	6.7	18.1	6.6
MW-113	4/17/2024	496	6.8	17.9	1.2
MW-115	4/17/2024	586	6.7	18.4	0.9
MW-116	4/19/2024	543	6.6	17.4	3.4
MW-117	4/19/2024	535	6.3	17.0	0.7
MW-118	4/18/2024	422	6.2	18.1	0.6
MW-119	4/19/2024	461	6.7	17.9	1.9
MW-120	4/18/2024	524	6.3	18.6	1.1
MW-121	4/18/2024	172	6.1	19.4	1.9
First Half 2024 Verification Sampling, June 2024					
MW-104	6/18/2024	545	6.8	20.3	9.6
MW-108	6/19/2024	807	6.6	21.1	3.9
MW-110	6/18/2024	511	6.6	18.8	3.9
MW-117	6/19/2024	617	6.4	19.2	3.0
MW-120	6/18/2024	580	6.3	20.0	3.9
MW-121	6/18/2024	226	6.3	19.9	3.1
Second Half 2024 Detection Monitoring, October 2024					
MW-101	10/16/2024	535	6.8	19.4	1.6
MW-102	10/16/2024	735	6.5	19.2	7.1
MW-103	10/16/2024	447	6.6	17.9	6.9
MW-104	10/15/2024	472	6.6	17.7	9.6
MW-108	10/15/2024	687	6.5	19.8	8.6
MW-110	10/15/2024	511	6.7	19.6	9.7
MW-113	10/15/2024	422	6.5	18.8	5.0

Well	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-115	10/15/2024	608	6.7	18.2	4.1
MW-116	10/16/2024	674	6.3	18.8	2.0
MW-117	10/17/2024	497	6.4	19.0	1.1
MW-118	10/17/2024	436	6.3	18.5	2.5
MW-119	10/16/2024	604	6.8	18.5	2.0
MW-120	10/16/2024	348	6.5	16.6	1.2
MW-121	10/17/2024	248	6.2	20.2	0.8
Second Half 2024 Verification Sampling, December 2024					
MW-102	12/10/2024	684	6.6	18.2	9.3
MW-116	12/10/2024	669	6.6	19.6	5.4

3.3 Laboratory Analytical Data

Laboratory reports for detection monitoring performed during the 2024 monitoring periods are included in Appendix B. A review of laboratory QC information is provided in Section 3.4. Reported values along with field-measured pH are summarized in Tables 7 and 8 for the first and second half of 2024 detection monitoring events, respectively. EPA-promulgated maximum contaminant levels (MCLs) are shown for comparison purposes. Of the appendix III parameters listed in Tables 7 and 8, fluoride is the only parameter with an established MCL. As shown in Tables 7 and 8, 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, included as Appendix D.

Reported values from the background sampling events for the newer wells (MW-104, MW-110, MW-120, and MW-121) are not summarized in the body of this report. The laboratory reports are included in Appendix B and the data are compiled in Appendix D. A discussion of the background data evaluation is included in Appendix E.

Table 7. Summary of appendix III results, first half of 2024.

Well	Date Collected	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	pH (mg/L)
First Half 2024 Detection Monitoring, April 2024								
MW-101	4/19/2024	0.0584(J)	108	4.96	0.191	12.4	368	6.8
MW-102	4/19/2024	0.101(J)	109	3.57	0.156	61.0	402	6.6
MW-103	4/19/2024	0.0636(J)	90.8	1.07	0.130(J)	8.80	308	6.4
MW-104	NS[a]	---	---	---	---	---	---	---
MW-108	4/17/2024	0.115(J)	139	2.52	0.111(J)	71.4	498(B)	6.7
MW-110	NS[a]	---	---	---	---	---	---	---
MW-113	4/17/2024	0.0728(J)	83.9	1.18	0.0704(J)	9.01	322	6.8
MW-115	4/17/2024	0.0501(J)	107	1.07	0.237	4.85(BJ)	369	6.7
MW-116	4/19/2024	0.0757(J)	104	3.54	0.197	50.4	392	6.6
MW-117	4/19/2024	0.0744(J)	108	1.69	0.151	54.7	400(B)	6.3
MW-118	4/18/2024	0.0632(J)	71.9	0.843(J)	0.175	12.8	258	6.2
MW-119	4/19/2024	0.0557(J)	89.5	1.15	0.285	5.93(B)	325	6.7
MW-120	NS[a]	---	---	---	---	---	---	---
MW-121	NS[a]	---	---	---	---	---	---	---
First Half 2024 Verification Sampling, June 2024								
MW-108	6/19/2024	---	---	---	---	67.1	---	6.6
MW-117	6/19/2024	---	98.7	---	---	37.8	376	6.4
Quality Control Samples								
MW-119 DUP[b]	4/19/2024	0.0565(J)	90.1	1.19	0.290	5.65(B)	329	---
EB-1[b]	4/19/2024	1.60	<1.00	0.623(J)	<0.150	0.680(BJ)	<10.0	---
MW-117 DUP[c]	6/19/2024	---	98.8	---	---	38	371	---
EB-2[c]	6/19/2024	---	<1.00	---	---	<5.00	<10.0	---
EPA MCL		---	---	---	**4**	---	---	---

Notes:

"B" flag indicates that the analyte was detected in an associated quality control blank. "J" flag indicates that the analyte was detected at a level below the laboratory reporting detection limit (RDL); therefore the value is an estimate.

a. New well was still undergoing background sampling during this event; see Appendices B and D.
b. Duplicate sample and field equipment rinsate blank collected during the April sampling event.
c. Duplicate sample and field equipment rinsate blank collected during the June verification sampling event.

Table 8. Summary of appendix III results, second half of 2024.

Well	Date	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	pH (mg/L)
Second Half 2024 Detection Monitoring, October 2024								
MW-101	10/16/2024	0.0553(J)	103	2.17	0.292	3.81(J)	357	6.8
MW-102	10/16/2024	0.29[a]	138	3.57	0.167[a]	128[a]	542	6.5
MW-103	10/16/2024	0.0644(J)	84.2	0.894(J)	0.242(B)	13.6	306	6.6
MW-104	10/15/2024	0.0548(J)	87.0	0.906(J)	0.334(B)	3.82(J)	315	6.6
MW-108	10/15/2024	0.0985(J)	134	1.70	0.235(B)	46.6	472	6.5
MW-110	10/15/2024	0.0626(J)	89.6	0.950(J)	0.256(B)	6.05	340	6.7
MW-113	10/15/2024	0.0769(J)	70.2	0.953(J)	0.147(BJ)	4.56(J)	288	6.5
MW-115	10/15/2024	0.0530(J)	115	1.08	0.186[a]	4.68(J)	414	6.7
MW-116	10/16/2024	0.0963(J)	136	2.15	<0.150	42.5	533	6.3
MW-117	10/17/2024	0.0780(J)	92.6	1.06	0.174(B)	20.1	342	6.4
MW-118	10/17/2024	0.0733(J)	81.1	1.07	0.155[a]	13.8	308	6.3
MW-119	10/16/2024	0.0699(J)	111	1.07	0.226[a]	22.6	410	6.8
MW-120	10/16/2024	0.0605(J)	61.3	0.983(J)	0.273(B)	8.02	244	6.5
MW-121	10/17/2024	0.0628(J)	41.2	1.02	0.184(B)	10.3	181	6.2
Second Half 2024 Verification Sampling, December 2024								
MW-102	12/10/2024	0.132(J)	---	---	---	78.4	446	6.6
MW-116	12/10/2024	---	---	---	---	---	480	6.6
Quality Control Samples								
MW-108 DUP[b]	10/15/2024	0.103(J)	133	1.74	0.187(B)	49.1	468	---
EB-1[b]	10/17/2024	0.0431(J)	<1.00	<1.00	0.0905(J)	<5.00	<10.0	---
MW-102 DUP[c]	12/10/2024	0.132(J)	---	---	---	79.0	441	---
EB-2[c]	12/10/2024	<0.200	---	---	---	<5.00	<10.0	---
EPA MCL		---	---	---	**4**	---	---	---

Notes:
"B" flag indicates that the analyte was detected in an associated quality control blank. "J" flag indicates that the analyte was detected at a level below the laboratory RDL; therefore the value is an estimate.

a. Value shown is the result of a laboratory re-run of the sample for verification purposes.
b. Duplicate sample and field equipment rinsate blank collected during the October sampling event.
c. Duplicate sample and field equipment rinsate blank collected during the December verification 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

The GWSAP requires a minimum of one duplicate sample and one equipment rinsate blank to be collected per sampling event, or one per 20 groundwater samples collected. Each type of QA/QC sample is described below.

- Field duplicates are two separate samples taken from the same well and collected as close to each other in time as practical. The relative percent difference (RPD) is calculated for parameters where the reported levels in the duplicate pairs are at least five times the laboratory RDL and where neither result is qualified or suspected of contamination. If RPD values are ≤20%, then level of precision associated with the sampling and analytical methods is considered acceptable.
- Field equipment rinsate blanks are prepared by pouring deionized water over decontaminated sampling equipment. Results from these samples are used to verify that proper protocols for equipment decontamination were followed in the field. When a detection occurs above the RDL in a field quality control blank, detections of that parameter in groundwater samples are flagged with a “B” in the historical database. Groundwater samples with detections in associated laboratory quality control blanks are flagged according to laboratory procedures. EPA guidance (1986) recommends that detections in quality control blanks not be used to correct groundwater data.

All QA/QC samples collected during 2024 were handled in the same manner as groundwater samples with respect to sample collection, packaging, shipping, preservation, and COC procedures. A summary of the QA/QC evaluation is provided below:

- 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, with the exception of boron during the first half 2024 sampling event, indicating field decontamination methods were effective. Boron results detected above the RDL during the first half 2024 monitoring event were flagged with a “B” in the historical database.

4. STATISTICAL EVALUATION

This section describes the statistical approach and evaluation of the detection monitoring data collected during 2024. Groundwater quality data were evaluated using the statistical software *Sanitas version 10.0*. 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 sample. 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 second half of 2024 monitoring period. Results of the evaluation are summarized in Appendix E. The next background evaluation is anticipated to occur prior to the second half of 2026 monitoring period.

4.1.2 Site-Wide False Positive Rate

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 Tables 9 and 10 for the first and second half of 2024 monitoring periods, respectively. The inputs for the second half of 2024 changed due to the addition of the new monitoring wells to the statistical program following completion of background sampling at those wells.

Table 9. Values used to determine test alpha and power curve for the first half 2024 monitoring period.

Test Alpha Inputs, First Half of 2024 Monitoring Period	
Statistical Test	Intrawell Prediction Limit
Number of Compliance Wells (w)	7
Minimum Background Sample Size (n)	12
Number of Constituents (c)	6
Resample Strategy	1 of 2
Semiannual SWFPR	0.05

Table 10. Values used to determine test alpha and power curve for the second half 2024 monitoring period.

Test Alpha Inputs, Second Half of 2024 Monitoring Period	
Statistical Test	Intrawell Prediction Limit
Number of Compliance Wells (w)	11
Minimum Background Sample Size (n)	8
Number of Constituents (c)	6
Resample Strategy	1 of 2
Semiannual SWFPR	0.05

4.1.3 Statistical Power

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 SSI or SSD. Any single statistical test should have the ability to detect an SSI or SSD

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 Tables 9 and 10 for the first and second half of 2024 detection monitoring periods, respectively, and discussed below.

Figure 8 depicts the power curve for the well network during the first half 2024 monitoring period plotted against the ERPC. This curve shows that any single test is expected to detect SSIs or SSDs approximately 75% of the time at levels 3σ above background and 96% of the time at levels 4σ above background. Given this comparison, the statistical power of the landfill's detection monitoring program exceeds EPA recommendations.

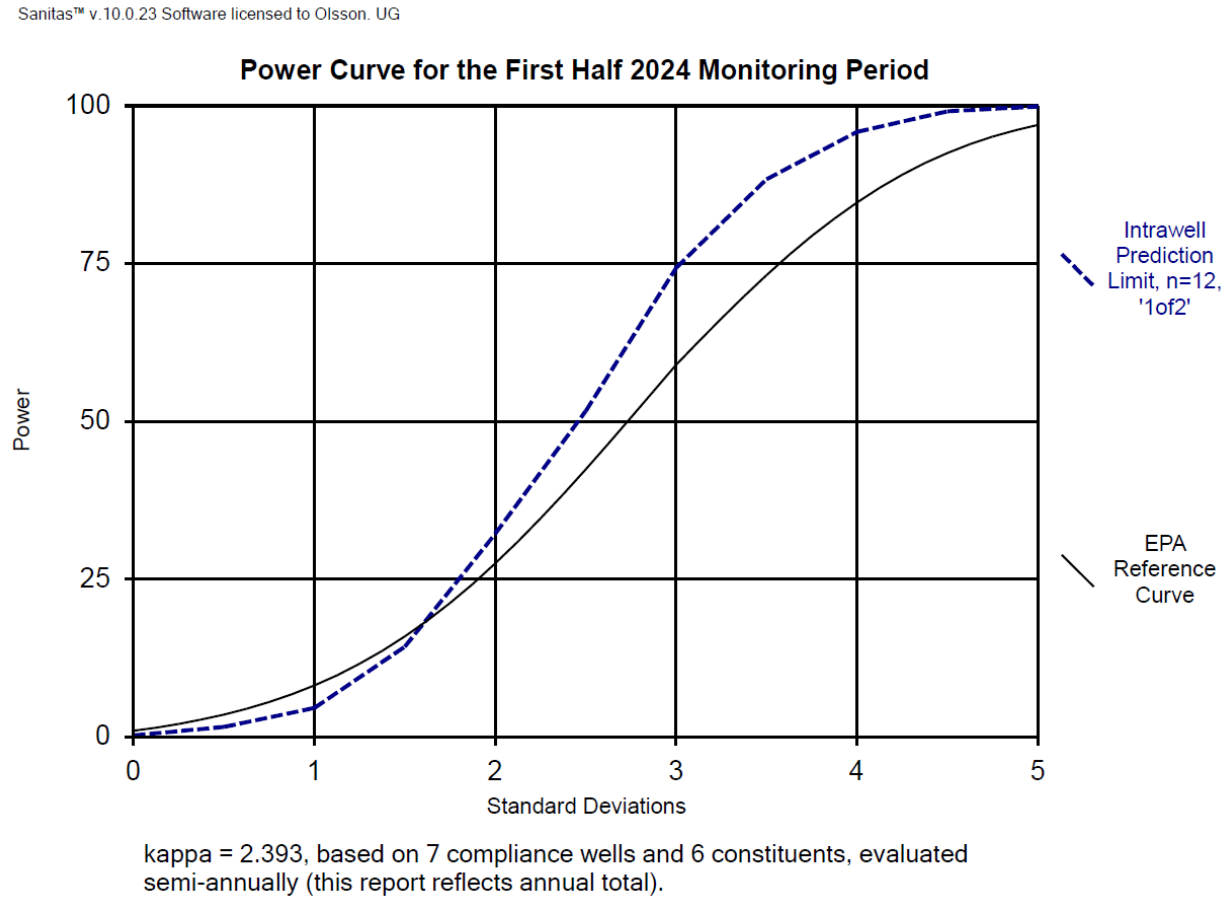


Figure 8. ERPC versus landfill power curve for detection monitoring, first half of 2024 monitoring period.

Figure 9 depicts the power curve for the well network during the second half 2024 monitoring period plotted against the ERPC. This curve shows that any single test is expected to detect SSIs or SSDs approximately 48% of the time at levels 3σ above background and approximately 80% of the time at levels 4σ above background. Given this comparison, the statistical power of the landfill's detection monitoring program is below EPA recommendations at levels 3σ above background but meets EPA recommendations at levels 4σ above background. The decreased statistical power during the second half 2024 monitoring period is due to some parameters at the newer wells having the minimum[1] number of values necessary to construct a prediction limit. It is anticipated that the statistical power of the program will improve as additional data are incorporated into the background data sets.

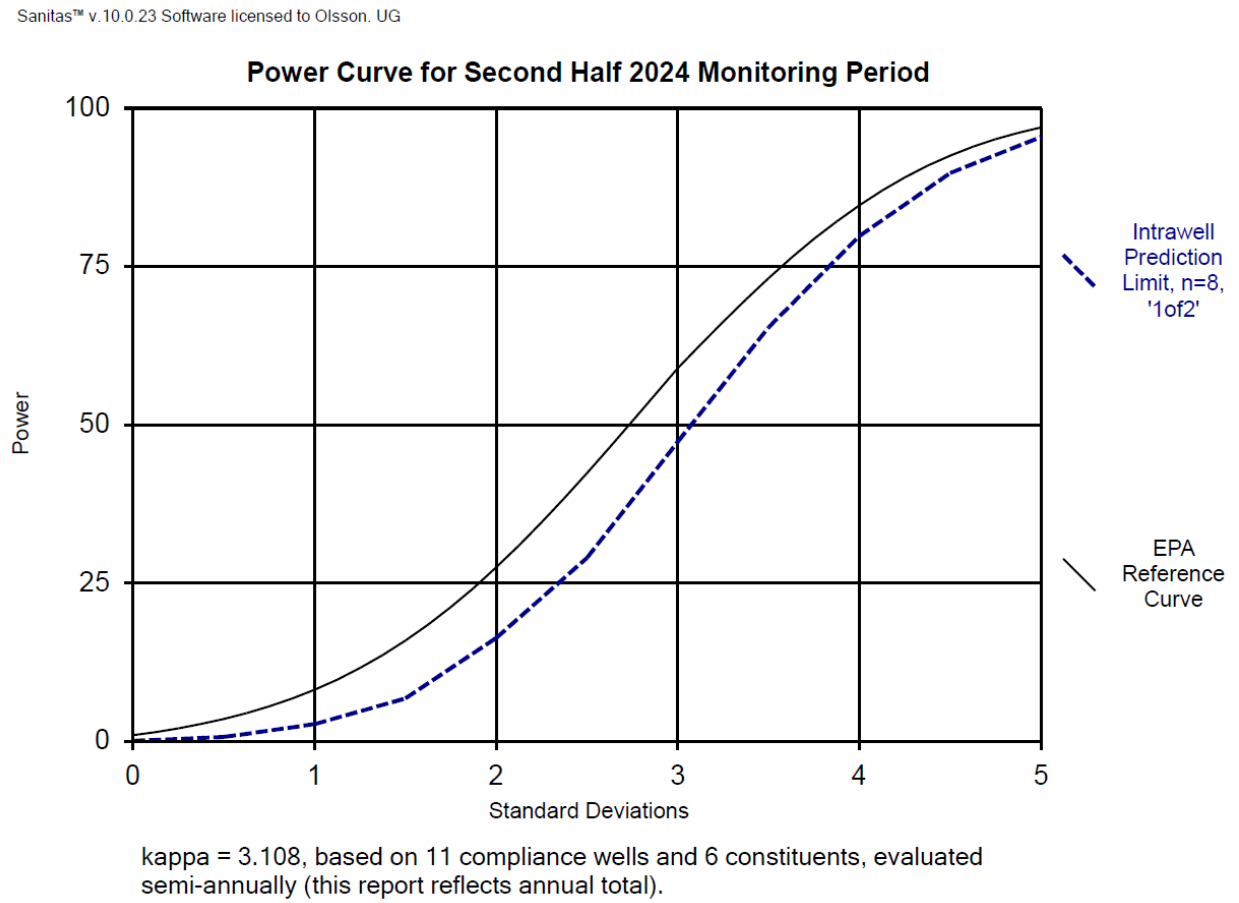


Figure 9. ERPC versus landfill power curve for detection monitoring, second half of 2024 monitoring period.

[1] The Unified Guidance recommends background data sets have a minimum of 8 to 10 values for statistical analysis using prediction limits. The minimum number of background values for the current data sets is 8.

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, with measured levels of boron being below the laboratory RDL for the period of record at all wells except for MW-102, which had a detection above the RDL during the second half 2024 monitoring event.

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 2024 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 that 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 testing identified three outliers in the April 2024 data set: sulfate and TDS at MW-117 were statistically high and sulfate at MW-119 was statistically low compared to their respective period-of-record data sets. Outlier testing identified outliers in the October 2024 data set: boron and sulfate at MW-102 were statistically high and fluoride at MW-116 was statistically low compared to their respective period-of-record data sets.

4.3 Statistical Evaluation Results

Groundwater quality data from the 2024 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 2024

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 2024 monitoring period are summarized in Table 11 and graphical plots of the evaluation are included in Appendix G.

As shown in Table 11, three previously confirmed SSIs were identified for calcium, sulfate, and TDS at MW-117. An unverified SSI for sulfate at MW-108 was also identified. 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 2024 for the unverified SSI for sulfate at compliance well MW-108. Verification sampling was also performed for the previously confirmed SSIs for calcium, sulfate, and TDS at MW-117 due to past fluctuations above and below the prediction limits. As shown in Table 11, verification sampling results confirmed all four SSIs.

Table 11. Summary of statistically significant results, intrawell prediction limit analysis, first half of 2024.

Parameter	Well	Prediction Limit (mg/L)	April 2024 Result (mg/L)	June 2024 Verification Result (mg/L)	SSI Confirmed?
Calcium	MW-117	92.01	108	98.7	Yes*
Sulfate	MW-108	56.89	71.4	67.1	Yes
Sulfate	MW-117	8.048	54.7	37.8	Yes*
TDS	MW-117	315.8	400	376	Yes*

*Previously confirmed.

In response to the confirmed SSIs identified during the first half of 2024 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 and an Arkansas-registered professional geologist on October 15, 2024, and the ASD 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 2024

Well-parameter pairs that are 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 were analyzed for each detected well-parameter pair listed in Table E.2 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 2024

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. Results from the second half of 2024 monitoring period are summarized in Table 12 and graphical plots of the evaluation are included in Appendix G.

As shown in Table 12, previously confirmed SSIs for sulfate and TDS at MW-117 were identified along with unverified SSIs for boron, fluoride and sulfate at MW-102; and TDS at MW-116. 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 2024 for the unverified SSIs. As shown in Table 12, verification sampling results disconfirmed the SSIs for boron, sulfate and TDS at MW-102 and TDS at MW-116.

Table 12. Summary of statistically significant results, intrawell prediction limit analysis, second half of 2024.

Parameter	Well	Prediction Limit (mg/L)	October 2024 Result (mg/L)	December 2024 Verification Result (mg/L)	SSI Confirmed?
MW-102	Boron	0.1519	0.29[a]	0.132 J	No
MW-102	Sulfate	109.4	128[a]	78.4	No
MW-117	Sulfate	8.182	20.1	NA[b]	Yes[b]
MW-102	TDS	501.9	542	446	No
MW-116	TDS	531.8	533	480	No
MW-117	TDS	318.5	342	NA[b]	Yes[b]

Notes: J – the reported value is an estimate.
a. Value shown is the result of a laboratory re-run of the sample for verification purposes.
b. SSI was previously confirmed; verification sampling was not performed.

In response to the confirmed SSIs identified during the second half of 2024 monitoring period, PPSC completed a successful ASD in accordance with §257.94(e)(2). The ASD was certified by an Arkansas-registered professional engineer and Arkansas-registered professional geologist on January 24, 2025, and the ASD is included with this report (Appendix H) as required by §257.94(e)(2). Based on the successful ASD, the facility will continue with detection monitoring in accordance with §257.94.

4.3.4 Mann-Kendall Test/Theil-Sen Trend Line, Second Half of 2024

Well-parameter pairs that are 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 were analyzed for each detected well-parameter pair in Table E.2 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. CONCLUSIONS

The following recommendations and conclusions are based on a review of data for the landfill from the 2024 monitoring period:

1. The direction of groundwater flow varied between the first and second half of 2024 monitoring events. The April 2024 potentiometric surface map shows groundwater flow was relatively flat across active cells 1 and 3 with a slight western flow across active cell 1 and a slight northeastern flow across active cell 3. The October 2024 potentiometric surface map shows groundwater flow was generally to the east-northeast across the active landfill cells.
2. Of the appendix III parameters evaluated, only fluoride has an EPA-promulgated MCL. None of the measured values in groundwater exceeded the MCL for fluoride.
3. Time-series plots and box-and-whiskers diagrams show variability across the well network for the following appendix III parameters: calcium, chloride, fluoride, sulfate, and TDS. The remaining appendix III parameters, boron and pH, show relatively similar values across all wells, with measured boron being below the laboratory RDL for the period of record at all wells with the exception of MW-102, which had a detection above the RDL during the second half 2024 monitoring period.
4. A comparison of the statistical power curve for the detection monitoring program to the EPA Reference Power Curve indicates that statistical power of the detection monitoring program exceeded EPA recommendations during the first half 2024 monitoring period. The statistical power of the landfill's detection monitoring program was below EPA recommendations at levels 3σ above background but met EPA recommendations at levels 4σ above background during the second half 2024 monitoring period. It is anticipated that the statistical power of the program will improve as additional data are incorporated into the background data sets at the newer wells.
5. Statistical evaluation of the first half of 2024 data set identified confirmed statistically significant increases (SSIs) for calcium, sulfate, and TDS at MW-117 and for sulfate at compliance well MW-108. 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 and Arkansas-registered professional geologist on October 16, 2024, and the ASD is included with this report in accordance with §257.94(e)(2). Based on the successful ASD, PPSC continued with detection monitoring in the second half of 2024 in accordance with §257.94.
6. Statistical evaluation of the second half of 2024 data set identified confirmed SSIs for sulfate and TDS at MW-117. PPSC completed a successful ASD in response to the SSIs in accordance with §257.94(e)(2). The ASD was certified by an Arkansas-registered professional engineer and Arkansas-registered professional geologist on January 24, 2025, and the ASD is included with this report in accordance with §257.94(e)(2). Based on the successful ASD, PPSC will continue with detection monitoring in the first half of 2025 in accordance with §257.94.

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PLUM POINT ENERGY STATION CCR LANDFILL GROUNDWATER MONITORING AND CORRECTIVE ACTION 2024 ANNUAL REPORT

Osceola, Arkansas

January 2025

Olsson Project No. 024-01343

FTN Project No. R14590-3336-001

APPENDIX A
FIELD SAMPLING FORMS

Monthly Background Sampling Event, January 2024

Groundwater Level Data Sheet

Project Name:	**Project Number:**	**Investigator:**	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: Partly cloudy, 37ºF, wind south-southwest at 10 mph	**Measuring Device:** GeoTech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	1/10/2024	1116	26.69	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	1/10/2024	1136	29.71	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	1/10/2024	1104	27.62	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☒ Lacks access ☐ See GW sampling record
MW-104	1/10/2024	1046	25.10	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	1/10/2024	0954	31.92	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	1/10/2024	1030	24.92	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	1/10/2024	0948	32.09	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	1/10/2024	0942	30.52	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	1/10/2024	1130	29.36	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	1/10/2024	1153	28.33	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	1/10/2024	1123	26.29	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	1/10/2024	1110	30.34	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	1/10/2024	1053	34.58	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	1/10/2024	1037	25.67	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 1/10/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 48	Wind: south-southeast at 13 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	1/10/2024	1/10/2024	1/10/2024	1/10/2024	1/10/2024	
Time	24-hour	1046	1605	1628	1643	1708	
Depth to Water	feet	25.10	25.09	25.09	25.09	25.09	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	1640					Remarks
Purge vol.	gallons												
Purge rate	mL/min	310	310	310	310	310	240	240					
pH	su	6.5	6.4	6.5	6.6	6.7	6.7	6.8					
Temp.	ºC	17.3	17.2	17.2	17.2	17.2	17.2	17.2					
Conductivity	µS/cm	537	536	534	535	536	536	537					
DO	mg/L	1.2	0.7	0.4	0.4	0.4	0.4	0.4					
ORP	mV	-49.9	-39.8	-50.5	-58.1	-55.4	-54.9	-55.5					
Turbidity	NTU	105	84.9	52.6	35.3	21.2	13.8	9.6					
Color/tint	--	cloudy	cloudy	cloudy	cloudy	clear	clear	clear					
Odor	--	none	none	none	none	none	none	none					

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	1/10/2024	1645	5	0	
MW-104 DUP	1/10/2024	1650	5	0	
EPA EB-BG	1/10/2024	1720	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 1/10/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 43	Wind: south-southwest at 10 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	1/10/2024	1/10/2024		1/10/2024	1/10/2024	
Time	24-hour	1030	1330		1418	1439	
Depth to Water	feet	24.92	24.92		24.92	24.92	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth: feet
Well goes dry during purging: ☐ Yes ☑ No
Casing vol.: gallons
= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408

Time	24-hour	1340	1345	1350	1355	1400	1405	1410	1415				Remarks
Purge vol.	gallons												
Purge rate	mL/min	300	300	300	190	190	190	190	190				
pH	su	6.1	6.0	6.4	6.6	6.7	6.8	6.7	6.9				
Temp.	ºC	16.7	16.8	16.8	17.0	17.0	17.0	17.0	17.1				
Conductivity	µS/cm	530	527	527	527	526	526	525	525				
DO	mg/L	2.8	1.3	0.7	0.5	0.4	0.4	0.4	0.3				
ORP	mV	79.1	46.1	19.9	9.1	10.4	9.4	8.8	13.7				
Turbidity	NTU	144	101	43.5	26.4	15.3	10.3	14.9	8.0				
Color/tint	--	cloudy	cloudy	cloudy	cloudy	clear	clear	clear	clear				
Odor	--	none	none	none	none	none	none	none	none				

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	1/10/2024	1420	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 1/10/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 46	Wind: south at 12 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	1/10/2024	1/10/2024		1/10/2024	1/10/2024	
Time	24-hour	1037	1450		1523	1548	
Depth to Water	feet	25.67	25.67		25.67	25.67	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1455	1500	1505	1510	1515	1520						Remarks
Purge vol.	gallons												
Purge rate	mL/min	470	470	400	400	400	400						
pH	su	6.5	6.4	6.4	6.4	6.4	6.4						
Temp.	ºC	19.1	19.0	19.0	19.0	19.0	19.0						
Conductivity	µS/cm	220	213	212	213	215	215						
DO	mg/L	3.0	1.4	1.1	1.2	1.1	1.2						
ORP	mV	63.8	69.5	72.0	74.7	77.5	77.3						
Turbidity	NTU	11.5	8.3	7.0	6.5	5.9	5.6						
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-121	1/10/2024	1535	5	0	

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

Monthly Background Sampling Event, February 2024

Groundwater Level Data Sheet

Project Name:	**Project Number:**	**Investigator:**	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: partly cloudy, 61ºF, SSW @ 8	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	2/7/2024	1203	25.41	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	2/7/2024	1223	27.42	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	2/7/2024	1149	25.90	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	2/7/2024	1137	22.80	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	2/7/2024	1053	26.91	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	2/7/2024	1123	22.84	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	2/7/2024	1046	27.66	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	2/7/2024	1040	26.30	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	2/7/2024	1217	27.37	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	2/7/2024	1231	26.01	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	2/7/2024	1211	24.38	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	2/7/2024	1155	28.88	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	2/7/2024	1144	32.81	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	2/7/2024	1130	23.70	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 2/7/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 62	Wind: southwest at 7 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	2/7/2024	2/7/2024	2/7/2024	2/7/2024	2/7/2024	
Time	24-hour	1137	1340	1413	1427	1449	
Depth to Water	feet	22.80	22.80	22.80	22.80	22.80	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1345	1350	1355	1400	1405	1410	1415	1420	1425			Remarks
Purge vol.	gallons												
Purge rate	mL/min	180	180	180	180	180	180	230	230	230			
pH	su	6.8	6.5	6.6	6.7	6.7	6.8	6.8	6.8	6.8			
Temp.	ºC	18.0	17.8	17.7	17.8	17.8	17.8	17.8	17.8	17.8			
Conductivity	µS/cm	473	474	473	475	477	479	480	480	480			
DO	mg/L	3.3	3.0	2.3	2.0	1.8	1.7	1.7	1.5	1.4			
ORP	mV	82.9	83.8	71.5	64.6	65.6	62.0	65.4	66.9	67.1			
Turbidity	NTU	47.2	23.5	22.8	19.1	16.9	14.8	12.6	10.5	9.1			
Color/tint	--	cloudy	cloudy	cloudy	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-104	2/7/2024	1430	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 2/7/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 63	Wind: southwest at 3 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	2/7/2024	2/7/2024	2/7/2024	2/7/2024	2/7/2024	
Time	24-hour	1123	1555	1618	1627	1642	
Depth to Water	feet	22.84	22.83	22.83	22.83	22.83	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1600	1605	1610	1615	1620	1625						Remarks
Purge vol.	gallons												
Purge rate	mL/min	260	260	260	260	260	260						
pH	su	6.7	6.8	6.8	6.9	6.9	6.9						
Temp.	ºC	17.7	17.6	17.6	17.6	17.6	17.6						
Conductivity	µS/cm	420	413	409	408	408	408						
DO	mg/L	1.6	0.7	0.6	0.6	0.6	0.6						
ORP	mV	47.2	62.0	65.8	68.8	70.1	71.0						
Turbidity	NTU	50.4	6.4	5.8	3.9	2.9	4.0						
Color/tint	--	cloudy	clear	clear	clear	clear	clear						
Odor	--	none	none	none	none	none	none						

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	2/7/2024	1630	5	0	
MW-110 DUP	2/7/2024	1635	5	0	
EPA-EB-BG	2/7/2024	1655	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 2/7/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 63	Wind: southwest at 4 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	2/7/2024	2/7/2024	2/7/2024	2/7/2024	2/7/2024	
Time	24-hour	1130	1505	1517	1533	1546	
Depth to Water	feet	23.70	23.69	23.69	23.69	23.69	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1510	1515	1520	1525	1530							Remarks
Purge vol.	gallons												
Purge rate	mL/min	340	340	340	340	340							
pH	su	6.7	6.2	6.3	6.4	6.4							
Temp.	ºC	19.3	19.0	19.1	19.1	19.1							
Conductivity	µS/cm	199	189	187	186	186							
DO	mg/L	1.3	0.5	0.4	0.4	0.4							
ORP	mV	89.2	106.7	106.7	106.3	108.5							
Turbidity	NTU	4.1	1.8	1.8	1.7	1.6							
Color/tint	--	clear	clear	clear	clear	clear							
Odor	--	none	none	none	none	none							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-121	2/7/2024	1535	5	0	

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

Monthly Background Sampling Event, March 2024

Groundwater Level Data Sheet

Project Name:	**Project Number:**	**Investigator:**	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: cloudy, 67ºF, SSW @ 23 mph	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	3/14/2024	1203	23.13	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	3/14/2024	1228	24.07	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	3/14/2024	1144	23.52	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	3/14/2024	1000	20.98	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	3/14/2024	0908	24.84	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	3/14/2024	0946	20.47	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	3/14/2024	0855	24.57	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	3/14/2024	0846	23.66	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	3/14/2024	1221	21.24	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	3/14/2024	1238	22.76	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	3/14/2024	1214	21.52	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	3/14/2024	1152	26.93	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	3/14/2024	1136	30.52	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	3/14/2024	0954	21.03	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 3/14/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 78	Wind: south-southwest at 14 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	3/14/2024	3/14/2024	3/14/2024	3/14/2024	3/14/2024	
Time	24-hour	1000	1640	1707	1817	1837	
Depth to Water	feet	20.98	20.96	21.51	21.51	21.51	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1645	1650	1655	1700	1705	1710	1715	1720	1725	1730	1735	Remarks
Purge vol.	gallons												
Purge rate	mL/min	230	230	230	230	230	160	160	160	160	120	120	
pH	su	6.6	6.2	6.2	6.3	6.4	6.5	6.6	6.6	6.6	6.6	6.6	
Temp.	ºC	18.0	17.9	17.9	17.8	17.8	18.2	18.1	18.1	18.1	18.2	18.3	
Conductivity	µS/cm	554	559	560	561	562	561	560	562	561	561	560	
DO	mg/L	2.8	1.7	1.3	1.1	1.1	0.8	1.8	1.0	0.8	0.7	0.7	
ORP	mV	130.6	135.7	116.1	90.8	80.2	71.8	73.6	77.8	75.4	72.2	67.6	
Turbidity	NTU	34.7	33.5	28.2	20.8	52.2	33.9	55.8	39.4	29.2	21.5	16.3	
Color/tint	--	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	clear	
Odor	--	none	none	none	none	none	none	none	none	none	none	none	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	3/14/2024	---	---	---	see next page
EPA-EB-BG	3/14/2024	---	---	---	see next page

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104 (cont)	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 3/14/2024	Sampler Organization: Olsson FTN

Site Description

Weather: ---	Air Temp. (ºF): ---	Wind: ---			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	---	---	---	---	---	
Time	24-hour	---	---	---	---	---	
Depth to Water	feet	---	---	---	---	---	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1740	1745	1750	1755	1800	1805	1810	1815				Remarks
Purge vol.	gallons												
Purge rate	mL/min	120	120	90	90	90	90	90	90				
pH	su	6.6	6.7	6.7	6.7	6.7	6.7	6.7	6.7				
Temp.	ºC	18.3	18.2	18.9	18.8	18.7	18.6	18.6	18.7				
Conductivity	µS/cm	560	563	561	561	562	562	562	562				
DO	mg/L	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8				
ORP	mV	64.5	60.8	46.3	48.9	50.7	52.7	53.4	54.5				
Turbidity	NTU	13.1	14.7	18.2	17.7	14.4	12.4	11.1	9.67				
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-104	3/14/2024	1820	5	0	
EPA-EB-BG	3/14/2024	1845	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 3/14/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 76	Wind: south-southwest at 12 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	3/14/2024	3/14/2024	3/14/2024	3/14/2024	3/14/2024	
Time	24-hour	0946	1400	1437	1456	1517	
Depth to Water	feet	20.47	20.45	20.45	20.45	20.45	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1410	1415	1420	1425	1430	1435	1440	1445	1450	1455		Remarks
Purge vol.	gallons												
Purge rate	mL/min	260	260	260	260	260	260	260	260	260	260		
pH	su	6.9	6.2	6.0	6.1	6.2	6.2	6.3	6.4	6.5	6.5		
Temp.	ºC	19.2	18.9	18.9	18.7	18.6	18.6	18.6	18.7	18.6	18.4		
Conductivity	µS/cm	500	489	481	479	478	478	476	476	474	475		
DO	mg/L	4.5	1.5	1.1	0.6	0.7	0.5	0.5	0.5	0.4	0.5		
ORP	mV	105.5	149.2	165.8	175.3	171.0	165.0	157.5	157.5	157.6	153.9		
Turbidity	NTU	79.2	71.7	48.0	30.3	16.1	11.0	7.9	7.9	7.2	6.0		
Color/tint	--	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy		
Odor	--	none	none	none	none	none	none	none	none	none	none		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	3/14/2024	1500	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 3/14/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 72	Wind: south-southwest at 14 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	3/14/2024	3/14/2024	3/14/2024	3/14/2024	3/14/2024	
Time	24-hour	0954	1525	1543	1557	1628	
Depth to Water	feet	21.03	21.02	21.02	21.02	21.02	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1530	1535	1540	1545	1550	1555						Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	280	280	280	280	280						
pH	su	6.5	5.9	6.1	6.1	6.1	6.1						
Temp.	ºC	19.8	19.4	19.5	19.5	19.4	19.5						
Conductivity	µS/cm	199	190	190	190	189	189						
DO	mg/L	1.7	0.7	0.5	0.4	0.4	0.4						
ORP	mV	145.4	175.1	153.4	148.2	146.4	141.8						
Turbidity	NTU	2.0	2.2	2.0	1.86	2.3	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-121	3/14/2024	1600	5	0	
MW-121 DUP	3/14/2024	1605	5	0	

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

First Half 2024 Detection Monitoring &
Monthly Background Sampling Event, April 2024

Groundwater Level Data Sheet

Project Name:	**Project Number:**	**Investigator:**	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: Partly cloudy, 83ºF, SSW @ 12	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	4/15/2024	1316	21.68	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	4/15/2024	1330	22.88	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	4/15/2024	1300	22.21	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	4/15/2024	1223	19.31	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	4/15/2024	1130	22.72	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	4/15/2024	1211	19.07	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	4/15/2024	1203	20.60	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	4/15/2024	1116	22.06	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	4/15/2024	1323	23.05	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	4/15/2024	1342	21.62	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	4/15/2024	1237	20.33	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	4/15/2024	1309	25.25	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	4/15/2024	1246	29.20	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	4/15/2024	1231	19.77	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-101	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/19/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 56	Wind: north at 14 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/19/2024	4/19/2024	4/19/2024	4/19/2024	
Time	24-hour	1316	1020	1037	1046	1102	
Depth to Water	feet	21.68	21.51	21.51	21.51	21.51	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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							Remarks
Purge vol.	gallons												
Purge rate	mL/min	220	220	220	220	220							
pH	su	6.8	6.9	6.8	6.8	6.8							
Temp.	ºC	17.6	17.5	17.6	17.4	17.5							
Conductivity	µS/cm	551	551	550	548	546							
DO	mg/L	2.6	2.3	1.7	1.4	13.8							
ORP	mV	100.3	104.6	104.6	102.2	100.8							
Turbidity	NTU	6.9	5.1	3.1	2.3	2.6							
Color/tint	--	clear	clear	clear	clear	clear							
Odor	--	none	none	none	none	none							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-101	4/19/2024	1055	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-102	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/19/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 57	Wind: north			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/19/2024	4/19/2024	4/19/2024	4/19/2024	
Time	24-hour	1330	1220	1238	1252	1311	
Depth to Water	feet	22.88	22.79	22.79	22.79	22.79	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1225	1230	1235	1240	1245	1250						Remarks
Purge vol.	gallons												
Purge rate	mL/min	220	220	220	220	220	220						
pH	su	6.6	6.6	6.6	6.6	6.6	6.6						
Temp.	ºC	18.1	17.8	17.9	17.9	17.8	17.8						
Conductivity	µS/cm	559	557	557	557	557	557						
DO	mg/L	2.95	1.5	2.1	2.2	2.3	2.3						
ORP	mV	107.3	103.0	101.0	100.5	97.6	96.9						
Turbidity	NTU	17.1	11.8	7.5	8.3	7.4	7.2						
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-102	4/19/2024	1300	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-103	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/19/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 54	Wind: north at 16 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/19/2024	4/19/2024	4/19/2024	4/19/2024	
Time	24-hour	1300	0800	0822	0847	0910	
Depth to Water	feet	22.21	22.08	22.08	22.08	22.08	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth: feet
Well goes dry during purging: ☐ Yes ☑ No
Casing vol.: gallons
= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408

Time	24-hour	0810	0815	0820	0825	0830	0835	0840	0845				Remarks
Purge vol.	gallons												
Purge rate	mL/min	160	160	160	160	160	160	160	160				
pH	su	6.2	6.2	6.3	6.4	6.4	6.4	6.4	6.4				
Temp.	ºC	16.2	16.3	16.3	16.4	16.4	16.4	16.4	16.5				
Conductivity	µS/cm	477	477	477	478	478	478	479	479				
DO	mg/L	1.9	1.4	1.3	1.2	1.2	1.2	1.1	1.1				
ORP	mV	184.0	170.0	147.5	132.1	127.1	126.6	123.4	120.9				
Turbidity	NTU	22.7	25.1	25.7	19.0	15.6	13.4	11.1	9.7				
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-103	4/19/2024	0855	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 76	Wind: south at 11 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/18/2024	4/18/2024	4/18/2024	4/18/2024	
Time	24-hour	1223	1050	1117	1152	1219	
Depth to Water	feet	19.31	19.21	19.21	19.21	19.21	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1055	1100	1110	1115	1120	1125	1130	1135	1140	1145	1150	Remarks
Purge vol.	gallons												
Purge rate	mL/min	340	340	340	340	260	260	260	260	260	260	260	
pH	su	6.5	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	
Temp.	ºC	17.2	17.2	17.2	17.2	17.7	17.8	17.8	17.7	17.8	17.7	17.7	
Conductivity	µS/cm	517	516	516	518	520	520	522	524	525	525	527	
DO	mg/L	1.4	1.1	0.9	0.9	0.7	0.7	0.6	0.5	0.5	0.5	0.5	
ORP	mV	102.5	96.0	93.9	84.0	77.8	73.7	66.2	59.1	56.3	56.5	54.7	
Turbidity	NTU	45.6	56.9	64.1	51.5	114.0	59.5	41.9	28.5	14.8	10.4	7.6	
Color/tint	--	cloudy*	cloudy*	cloudy*	cloudy*	cloudy*	cloudy*	cloudy*	cloudy*	clear	clear	clear	*w/ orange particulate
Odor	--	none	none	none	none	none	none	none	none	none	none	none	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	4/18/2024	1200	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-108	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/17/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 83	Wind: southwest at 9 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/17/2024	4/17/2024	4/17/2024	4/17/2024	
Time	24-hour	1130	1540	1607	1616	1636	
Depth to Water	feet	22.72	22.25	22.31	22.31	22.31	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1545	1550	1555	1600	1605	1610	1615					Remarks
Purge vol.	gallons												
Purge rate	mL/min	270	270	270	270	270	270	270					
pH	su	6.8	6.8	6.7	6.7	6.7	6.7	6.7					
Temp.	ºC	19.8	19.4	19.3	19.3	19.2	19.2	19.4					
Conductivity	µS/cm	740	741	742	752	728	724	725					
DO	mg/L	3.6	2.4	2.2	2.0	2.0	1.8	1.8					
ORP	mV	137.9	129.9	125.6	123.8	124.0	122.8	123.7					
Turbidity	NTU	2.2	3.0	3.0	2.0	1.6	1.2	1.2					
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-108	4/17/2024	1625	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 74	Wind: south at 11 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/18/2024	4/18/2024	4/18/2024	4/18/2024	
Time	24-hour	1211	0940	0947	1006	1029	
Depth to Water	feet	19.07	18.95	18.95	18.94	18.94	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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							Remarks
Purge vol.	gallons												
Purge rate	mL/min	210	210	210	210	210							
pH	su	6.7	6.7	6.7	6.7	6.7							
Temp.	ºC	18.2	18.0	18.0	18.0	18.1							
Conductivity	µS/cm	475.1	467.2	466.7	462.3	462.8							
DO	mg/L	1.4	0.9	0.7	0.6	0.6							
ORP	mV	131.5	104.4	103.9	105.7	106.3							
Turbidity	NTU	38.2	26.7	14.8	9.1	6.6							
Color/tint	--	cloudy	cloudy	clear	clear	clear							
Odor	--	none	none	none	none	none							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	4/18/2024	1015	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-113	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/17/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 83	Wind: southwest at 10 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/17/2024	4/17/2024	4/17/2024	4/17/2024	
Time	24-hour	1123	1430	1452	1502	1517	
Depth to Water	feet	23.21	22.89	22.89	22.89	22.89	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1435	1440	1445	1450	1455	1500						Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	280	280	280	280	280						
pH	su	6.8	6.8	6.8	6.8	6.8	6.8						
Temp.	ºC	17.9	18.0	18.3	18.2	18.0	17.9						
Conductivity	µS/cm	502	500	500	498	496	496						
DO	mg/L	0.4	0.2	0.2	0.2	0.2	0.2						
ORP	mV	123.9	111.8	109.3	109.0	108.2	108.3						
Turbidity	NTU	2.5	4.0	2.6	1.8	1.5	1.2						
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-113	4/17/2024	1510	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-115	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/17/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 81	Wind: west-southwest at 10 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/17/2024	4/17/2024	4/17/2024	4/17/2024	
Time	24-hour	1116	1330	1347	1402	1414	
Depth to Water	feet	22.06	21.74	21.74	21.74	21.74	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	1350	1355	1400						Remarks
Purge vol.	gallons												
Purge rate	mL/min	200	200	200	200	200	200						
pH	su	6.5	6.5	6.6	6.6	6.6	6.7						
Temp.	ºC	18.7	18.4	18.3	18.4	18.3	18.4						
Conductivity	µS/cm	589	586	586	592	587	586						
DO	mg/L	1.5	1.6	1.6	1.9	2.0	2.0						
ORP	mV	185.1	172.7	159.5	153.4	148.3	144.4						
Turbidity	NTU	3.0	1.5	1.1	1.0	0.8	0.9						
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-115	4/17/2024	1410	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-116	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/19/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 57	Wind: north at 9 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/19/2024	4/19/2024	4/19/2024	4/19/2024	
Time	24-hour	1323	1120	1136	1151	1213	
Depth to Water	feet	23.05	22.82	22.82	22.82	22.82	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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						Remarks
Purge vol.	gallons												
Purge rate	mL/min	260	260	260	260	260	260						
pH	su	6.6	6.6	6.6	6.6	6.6	6.6						
Temp.	ºC	17.2	17.2	17.3	17.4	17.3	17.4						
Conductivity	µS/cm	543	543	543	544	543	543						
DO	mg/L	3.4	2.7	2.6	2.4	2.3	2.8						
ORP	mV	112.5	108.8	103.1	85.9	85.1	80.7						
Turbidity	NTU	2.0	2.7	2.7	3.3	2.8	3.4						
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-116	4/19/2024	1205	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-117	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/19/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 58	Wind: north at 14 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/19/2024	4/19/2024	4/19/2024	4/19/2024	
Time	24-hour	1342	1325	1343	1356	1413	
Depth to Water	feet	21.62	21.28	21.28	21.28	21.28	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth: feet
Well goes dry during purging: ☐ Yes ☑ 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						Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	280	280	280	280	280						
pH	su	6.3	6.3	6.3	6.3	6.3	6.3						
Temp.	ºC	16.9	16.9	16.9	17.0	17.0	17.0						
Conductivity	µS/cm	537	537	534	535	536	535						
DO	mg/L	1.2	1.1	1.1	1.0	1.0	1.0						
ORP	mV	113.0	107.4	105.3	103.1	101.8	101.3						
Turbidity	NTU	0.9	1.0	0.7	0.7	0.7	0.7						
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	4/19/2024	1405	3	0	
EPA EB-1	4/19/2024	1435	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-118	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 82	Wind: south at 11 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/18/2024	4/18/2024	4/18/2024	4/18/2024	
Time	24-hour	1237	1350	1406	1422	1440	
Depth to Water	feet	20.33	20.11	20.11	20.11	20.11	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	1420						Remarks
Purge vol.	gallons												
Purge rate	mL/min	240	240	240	240	240	240						
pH	su	6.1	6.2	6.2	6.2	6.2	6.2						
Temp.	ºC	18.1	18.3	18.2	18.1	18.1	18.1						
Conductivity	µS/cm	419.3	416.6	418.8	422.3	417.3	421.8						
DO	mg/L	0.5	0.4	0.4	0.5	0.5	0.5						
ORP	mV	116.4	112.7	111.4	110.4	110.5	110.4						
Turbidity	NTU	1.0	1.0	0.8	0.6	0.9	0.6						
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-118	4/18/2024	1430	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-119	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/19/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 56	Wind: north at 16 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/19/2024	4/19/2024	4/19/2024	4/19/2024	
Time	24-hour	1309	0920	0937	0946	1010	
Depth to Water	feet	25.25	25.23	25.23	25.23	25.23	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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							Remarks
Purge vol.	gallons												
Purge rate	mL/min	300	300	300	300	300							
pH	su	6.7	6.7	6.7	6.7	6.7							
Temp.	ºC	17.6	17.5	17.5	17.8	17.9							
Conductivity	µS/cm	455	456	458	460	461							
DO	mg/L	2.9	2.7	3.5	2.8	2.5							
ORP	mV	121	120	119	118	117							
Turbidity	NTU	4.5	2.5	2.5	2.6	1.9							
Color/tint	--	clear	clear	clear	clear	clear							
Odor	--	none	none	none	none	none							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-119	4/19/2024	0955	3	0	
MW-119 DUP	4/19/2024	1000	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 83	Wind: south at 16 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/18/2024	4/18/2024	4/18/2024	4/18/2024	
Time	24-hour	1246	1500	1517	1532	1558	
Depth to Water	feet	29.20	29.04	29.04	29.04	29.04	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1505	1510	1515	1520	1525	1530						Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	280	280	280	280	280						
pH	su	6.3	6.3	6.3	6.3	6.3	6.3						
Temp.	ºC	19.0	18.8	18.8	18.5	18.5	18.6						
Conductivity	µS/cm	534	531	530	528	526	524						
DO	mg/L	3.1	2.3	2.2	2.2	2.1	2.6						
ORP	mV	127.4	122.9	119.9	118.8	118.4	117.9						
Turbidity	NTU	0.8	0.8	0.7	1.2	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-120	4/18/2024	1540	5	0	
EPA EB-BG	4/18/2024	1620	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 4/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 80	Wind: south at 12 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/15/2024	4/18/2024	4/18/2024	4/18/2024	4/18/2024	
Time	24-hour	1231	1233	1253	1302	1340	
Depth to Water	feet	19.77	19.59	19.59	19.59	19.59	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☑ YSI ProPlus ☑ Hach 2100P Turbidimeter
☐ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	300	300	300	300	300	300						
pH	su	6.2	6.1	6.1	6.1	6.1	6.1						
Temp.	ºC	19.5	19.5	19.6	19.5	19.5	19.4						
Conductivity	µS/cm	174.1	172.2	172.7	171.4	170.4	171.8						
DO	mg/L	0.6	0.3	0.3	0.4	0.3	0.3						
ORP	mV	114.7	110.3	108.1	104.9	105.3	104.4						
Turbidity	NTU	4.1	2.1	1.5	1.2	0.8	1.9						
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-121	4/18/2024	1310	5	0	
MW-121 DUP	4/18/2024	1315	5	0	

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

Monthly Background Sampling Event, May 2024

Groundwater Level Data Sheet

Project Name:	**Project Number:**	**Investigator:**	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Eric Necaise Olsson FTN	**Page 1 of 1**
Weather Conditions: Sunny, 73ºF, wind S @ 5 mph	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	5/16/2024	0925	20.19	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	5/16/2024	0915	20.88	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	5/16/2024	1030	20.75	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	5/16/2024	0940	17.97	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	5/16/2024	0900	19.58	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	5/16/2024	0945	17.42	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	5/16/2024	1040	20.35	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	5/16/2024	0955	19.40	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	5/16/2024	0920	21.34	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	5/16/2024	1005	19.60	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	5/16/2024	1025	18.55	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	5/16/2024	0930	23.92	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	5/16/2024	0935	27.73	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	5/16/2024	1010	18.05	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Eric Necaise
Project Number: R14590-3336-001 / 024-01343	Date: 5/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 85	Wind: south at 10 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed: none					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	5/16/2024	5/16/2024	5/16/2024	5/16/2024	5/16/2024	
Time	24-hour	0940	1400	1425	1434	1515	
Depth to Water	feet	17.97	17.94	18.18	18.40	18.42	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☐ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☑ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408

Time	24-hour	1410	1413	1416	1419	1422	1425	1428	1431	1434			Remarks
Purge vol.	gallons	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.56	0.64			
Purge rate	mL/min	100	100	100	100	100	100	100	100	100			
pH	su	6.8	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7			
Temp.	ºC	20.5	20.5	20.8	20.9	20.9	20.8	21.0	21.0	21.0			
Conductivity	µS/cm	497	497	497	496	497	497	498	498	498			
DO	mg/L	1.4	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9			
ORP	mV	88.4	91.1	87.6	86.0	85.9	85.8	84.3	80.3	80.4			
Turbidity	NTU	83.0	85.3	84.3	81.0	80.6	84.7	79.0	80.3	78.4			
Color/tint	--	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow			
Odor	--	none	none	none	none	none	none	none	none	none			

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	5/16/2024	1435	5	0	

Sampler's Name (print): Eric Necaise	Sampler Signature: transcribed by HLF

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Eric Necaise
Project Number: R14590-3336-001 / 024-01343	Date: 5/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 84	Wind: south at 5 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed: none					

Water Level Data

Measuring point description:
☐ Mark/notch on TOC
☑ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	5/16/2024	5/16/2024	5/16/2024	5/16/2024	5/16/2024	
Time	24-hour	0945	1325	1335	1340	1358	
Depth to Water	feet	17.42	17.40	17.45	17.45	17.47	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☐ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☑ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408

Time	24-hour	1328	1331	1334	1337	1340							Remarks
Purge vol.	gallons	0.0	0.2	0.4	0.6	0.8							
Purge rate	mL/min	250	250	250	250	250							
pH	su	6.9	6.8	6.8	6.9	6.9							
Temp.	ºC	18.9	19.0	19.1	19.1	19.0							
Conductivity	µS/cm	455	451	450	449	448							
DO	mg/L	3.0	2.9	2.7	2.8	2.8							
ORP	mV	138.7	134.9	134.0	133.9	134.1							
Turbidity	NTU	61.6	63.3	51.3	47.6	49.3							
Color/tint	--	yellow	yellow	yellow	yellow	yellow							
Odor	--	none	none	none	none	none							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	5/16/2024	1340	5	0	
MW-110 DUP	5/16/2024	1350	5	0	

Sampler's Name (print): Eric Necaise	Sampler Signature: transcribed by HLF

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Eric Necaise
Project Number: R14590-3336-001 / 024-01343	Date: 5/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather:	Air Temp. (ºF): 84	Wind: none			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	5/16/2024	5/16/2024	5/16/2024	5/16/2024	5/16/2024	
Time	24-hour	0935	1620	1645	1702	1712	
Depth to Water	feet	27.73	27.72	27.72	27.72	27.72	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☐ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☑ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1635	1638	1641	1644	1647	1650	1653	1656	1659	1702		Remarks
Purge vol.	gallons	0.0	0.13	0.26	0.39	0.52	0.68	0.81	0.94	1.17	1.30		
Purge rate	mL/min	500	500	500	500	500	500	500	500	500	500		
pH	su	6.6	6.2	6.0	6.0	6.0	6.0	6.0	6.1	6.2	6.2		
Temp.	ºC	19.2	19.0	19.0	19.0	19.0	19.0	19.0	18.9	19.0	18.9		
Conductivity	µS/cm	572	562	564	561	562	563	565	566	567	566		
DO	mg/L	2.2	1.8	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4		
ORP	mV	-14.8	12.7	22.2	24.2	20.6	18.1	17.6	17.3	18.2	17.9		
Turbidity	NTU	9.2	12.7	12.0	12.9	11.4	16.3	10.4	9.7	8.4	9.6		
Color/tint	--	none	none	none	none	none	none	none	none	none	none		
Odor	--	none	none	none	none	none	none	none	none	none	none		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-120	5/16/2024	1705	5	0	
EPA EB-BG	5/16/2024	1745	5	0	

Sampler's Name (print): Eric Necaise	Sampler Signature: transcribed by HLF

First Half 2024 Verification &
Monthly Background Sampling Event, June 2024

Groundwater Level Data Sheet

Project Name:	Project Number:	Investigator:	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: Cloudy, 81ºF, wind S @ 9 mph	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	6/18/2024	0830	19.27	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	6/18/2024	0841	19.82	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	6/18/2024	0822	19.74	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☒ Lacks access ☐ See GW sampling record
MW-104	6/18/2024	0740	19.27	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	6/17/2024	1026	20.40	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	6/17/2024	1052	16.72	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	6/17/2024	1021	19.74	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	6/17/2024	1015	19.00	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	6/18/2024	0835	20.40	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	6/18/2024	0821	18.53	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	6/18/2024	0815	17.61	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	6/18/2024	0826	22.46	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	6/18/2024	0747	27.03	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	6/18/2024	0753	17.12	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 6/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy/overcast	Air Temp. (ºF): 78	Wind: southeast at 6 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	6/18/2024	6/18/2024	6/18/2024	6/18/2024	6/18/2024	
Time	24-hour	0740	1040	1127	1148	1204	
Depth to Water	feet	17.27	17.25	17.41	17.41	17.41	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1045	1050	1055	1100	1105	1110	1115	1120	1125	1130	1135	Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	280	280	140	80	80	80	80	80	80	80	
pH	su	5.2	5.8	6.0	6.4	6.7	6.7	6.7	6.7	6.7	6.7	6.8	
Temp.	ºC	18.1	18.0	18.1	18.6	19.0	19.5	19.7	19.4	19.4	19.6	20.2	
Conductivity	µS/cm	540	540	539	538	540	541	541	544	545	544	546	
DO	mg/L	1.0	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	
ORP	mV	234.1	148.7	121.9	93.1	70.8	59.2	54.6	51.5	40.9	38.9	20.7	
Turbidity	NTU	34.8	32.4	34.5	36.0	36.5	41.5	35.7	23.9	16.7	14.5	13.5	
Color/tint	--	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	clear	clear	clear	
Odor	--	none	none	none	none	none	none	none	none	none	none	none	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	---	---	---	---	see next page

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104 (cont.)	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 6/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy/overcast	Air Temp. (ºF): 78	Wind: southeast at 6 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	6/18/2024	6/18/2024	6/18/2024	6/18/2024	6/18/2024	
Time	24-hour	0740	1040	1127	1148	1204	
Depth to Water	feet	17.27	17.25	17.41	17.41	17.41	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1140	1145										Remarks
Purge vol.	gallons												
Purge rate	mL/min	80	80										
pH	su	6.8	6.8										
Temp.	ºC	20.3	20.3										
Conductivity	µS/cm	545	545										
DO	mg/L	0.3	0.3										
ORP	mV	22.7	23.6										
Turbidity	NTU	10.9	9.6										
Color/tint	--	clear	clear										
Odor	--	none	none										

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	6/18/2024	1150	1	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-108	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 6/19/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 86	Wind: southeast at 2 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	6/17/2024	6/19/2024	6/19/2024	6/19/2024	6/19/2024	
Time	24-hour	1026	1240	1257	1317	1325	
Depth to Water	feet	20.40	20.77	20.77	20.77	20.77	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1245	1250	1255	1300	1305	1310	1315					Remarks
Purge vol.	gallons												
Purge rate	mL/min	290	290	200	200	200	200	200					
pH	su	5.8	5.9	6.1	6.4	6.6	6.6	6.6					
Temp.	ºC	20.5	20.5	21.0	21.2	21.2	21.2	21.1					
Conductivity	µS/cm	806	805	802	804	806	806	807					
DO	mg/L	2.2	1.8	1.7	1.6	1.5	1.5	1.5					
ORP	mV	236.3	219.5	195.0	169.9	161.5	158.8	156.1					
Turbidity	NTU	4.3	5.0	5.0	5.3	5.6	4.8	3.9					
Color/tint	--	cloudy	clear	clear	clear	clear	clear	clear					
Odor	--	none	none	none	none	none	none	none					

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-108	6/19/2024	1320	1	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 6/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: overcast	Air Temp. (ºF): 81	Wind: southeast at 6 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	6/17/2024	6/18/2024	6/18/2024	6/18/2024	6/18/2024	
Time	24-hour	1052	1350	1423	1434	1452	
Depth to Water	feet	16.72	16.46	16.46	16.46	16.46	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	1420	1425	1430	1435			Remarks
Purge vol.	gallons												
Purge rate	mL/min	290	290	290	290	290	290	290	290	290			
pH	su	5.5	5.6	6.5	6.5	6.5	6.8	6.6	6.5	6.6			
Temp.	ºC	18.6	18.6	18.7	18.7	18.6	18.6	18.7	18.7	18.8			
Conductivity	µS/cm	513	509	509	507	509	509	511	511	511			
DO	mg/L	0.5	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1			
ORP	mV	137.3	130.3	97.4	94.5	78.6	75.2	71.2	67.4	62.5			
Turbidity	NTU	13.9	11.5	9.0	5.5	5.1	4.5	6.7	4.3	3.9			
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-110	6/18/2024	1440	1	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-117	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 6/19/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 84	Wind: southeast at 8 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	6/18/2024	6/19/2024	6/19/2024	6/19/2024	6/19/2024	
Time	24-hour	0821	1135	1157	1212	1226	
Depth to Water	feet	18.53	18.53	18.53	18.53	18.53	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	1210					Remarks
Purge vol.	gallons												
Purge rate	mL/min	210	210	210	210	210	210	210					
pH	su	6.2	5.9	6.2	6.3	6.3	6.4	6.4					
Temp.	ºC	19.0	18.8	18.6	18.8	19.1	19.1	19.2					
Conductivity	µS/cm	619	619	620	618	617	617	617					
DO	mg/L	2.2	0.8	0.8	0.8	0.8	0.8	0.8					
ORP	mV	131.9	136.6	122.5	118.4	114.3	111.6	111.0					
Turbidity	NTU	3.0	2.8	3.0	2.7	2.7	2.7	3.0					
Color/tint	--	clean	clean	clean	clean	clean	clean	clean					
Odor	--	none	none	none	none	none	none	none					

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-117	6/19/2024	1220	3	0	
MW-117 DUP	6/19/2024	1225	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 6/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 81	Wind: southeast at 7 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	6/18/2024	6/18/2024	6/18/2024	6/18/2024	6/18/2024	
Time	24-hour	0747	1215	1237	1253	1334	
Depth to Water	feet	27.03	26.98	26.98	26.98	26.98	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1220	1225	1230	1235	1240	1245	1250					Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	280	280	280	280	280	280					
pH	su	5.9	5.6	5.9	6.2	6.4	6.4	6.3					
Temp.	ºC	20.6	20.5	20.1	20.0	20.1	20.0	20.0					
Conductivity	µS/cm	577	577	577	579	580	581	580					
DO	mg/L	1.1	0.8	0.6	0.6	0.7	0.7	0.7					
ORP	mV	95.1	106.7	95.0	86.3	84.9	86.0	86.6					
Turbidity	NTU	5.3	5.9	5.7	5.5	4.6	3.8	3.9					
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-120	6/18/2024	1255	5	0	
MW-120 DUP	6/18/2024	1300	5	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 6/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: overcast	Air Temp. (ºF): 81	Wind: southeast at 6 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	6/18/2024	6/18/2024	6/18/2024	6/18/2024	6/18/2024	
Time	24-hour	0753	1500	1527	1542	1550	
Depth to Water	feet	17.12	17.07	17.07	17.07	17.07	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408

Time	24-hour	1505	1510	1515	1520	1525	1530	1535	1540				Remarks
Purge vol.	gallons												
Purge rate	mL/min	260	260	260	260	260	260	260	260				
pH	su	5.6	5.4	6.0	6.1	6.3	6.3	6.3	6.3				
Temp.	ºC	19.8	19.8	19.7	19.7	19.9	19.9	20.0	19.9				
Conductivity	µS/cm	242	238	227	224	225	225	226	226				
DO	mg/L	0.8	0.4	0.2	0.2	0.2	0.2	0.2	0.2				
ORP	mV	119.8	131.3	101.6	98.9	95.9	94.1	95.8	96.4				
Turbidity	NTU	3.3	3.1	3.2	3.2	2.6	3.1	3.5	3.1				
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-121	6/18/2024	1545	1	0	
EPA EB-BG	6/19/2024	1030	5	0	

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

Monthly Background Sampling Event, July 2024

Groundwater Level Data Sheet

Project Name:	Project Number:	Investigator:	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: Partly cloudy, 75ºF, wind N @ 6	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	7/18/2024	1106	20.60	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	7/18/2024	1120	21.37	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	7/18/2024	1055	21.27	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	7/18/2024	0957	18.53	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	7/18/2024	0857	21.79	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	7/18/2024	0936	17.78	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	7/18/2024	0849	21.39	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	7/18/2024	0843	20.30	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	7/18/2024	1113	21.79	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	7/18/2024	1150	19.87	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	7/18/2024	1019	18.81	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	7/18/2024	1100	24.41	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	7/18/2024	1047	28.18	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	7/18/2024	1012	18.32	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 7/18/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 86	Wind: north at 10 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	7/18/2024	7/18/2024	7/18/2024	7/18/2024	7/18/2024	
Time	24-hour	1047	1325	1402	1416	1515	
Depth to Water	feet	28.18	28.18	28.18	28.18	28.18	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	1350	1355	1400	1405	1410	1415			Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	210	210	210	210	210	210	210	210			
pH	su	4.5	4.8	5.1	5.6	6.0	6.0	6.2	6.1	6.1			
Temp.	ºC	20.2	20.0	19.9	19.9	20.1	20.0	20.1	19.9	19.9			
Conductivity	µS/cm	494	491	490	488	486	487	487	487	486			
DO	mg/L	1.9	1.8	1.6	1.5	1.4	1.5	1.4	1.4	1.4			
ORP	mV	266	242	225	191	165	164	150	154	153			
Turbidity	NTU	3.1	2.6	2.2	1.8	1.5	1.5	1.5	1.3	1.3			
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-120	7/18/2024	1425	3	0	
MW-120 DUP	7/18/2024	1430	3	0	
EPA-EB-BG	7/18/2024	1715	3	0	

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

Monthly Background Sampling Event, August 2024

Groundwater Level Data Sheet

Project Name:	**Project Number:**	**Investigator:**	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: Partly cloudy, 89ºF, SSW @ 9	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	8/15/2024	1246	21.29	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	8/15/2024	1306	22.47	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	8/15/2024	1231	21.92	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	8/15/2024	1142	19.33	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	8/15/2024	1102	24.55	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	8/15/2024	1132	19.74	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	8/15/2024	1055	23.19	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	8/15/2024	1050	22.06	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	8/15/2024	1252	22.63	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	8/15/2024	1211	20.88	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	8/15/2024	1204	19.64	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	8/15/2024	1240	25.06	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	8/15/2024	1259	28.90	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	8/15/2024	1157	19.15	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 8/15/2024	Sampler Organization: Olsson FTN

Site Description

Weather:	Air Temp. (ºF):	Wind:			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	8/15/2024	8/15/2024	8/15/2024	8/15/2024		
Time	24-hour	1259	1420	1447	1502		
Depth to Water	feet	28.90	28.88	28.88	28.88		
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1425	1430	1435	1440	1445	1450	1455	1500				Remarks
Purge vol.	gallons												
Purge rate	mL/min	400	400	400	400	400	400	400	400				
pH	su	5.8	5.1	5.1	5.5	5.9	6.1	6.1	6.1				
Temp.	ºC	23.0	22.4	21.6	21.8	21.8	22.0	21.9	21.9				
Conductivity	µS/cm	509	502	498	498	497	497	499	498				
DO	mg/L	5.5	2.1	1.8	1.7	1.8	1.7	1.7	1.6				
ORP	mV	182.4	207.8	204.3	176.4	162.5	141.1	135.1	135.0				
Turbidity	NTU	2.2	1.7	1.8	1.9	1.2	1.3	1.2	1.3				
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-120	8/15/2024	1505	5	0	
MW-120 DUP	8/15/2024	1510	5	0	
EPA EB-BG	8/15/2024	1530	5	0	

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

Monthly Background Sampling Event, September 2024

Groundwater Level Data Sheet

Project Name:	**Project Number:**	**Investigator:**	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: Partly cloudy, 79ºF, SSW @ 6	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	9/20/2024	1004	21.60	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	9/20/2024	1017	24.96	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	9/20/2024	0957	21.48	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	9/20/2024	0940	19.65	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	9/20/2024	0857	29.18	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	9/20/2024	0933	19.68	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	9/20/2024	0849	27.32	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	9/20/2024	0842	25.36	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	9/20/2024	1011	24.53	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	9/20/2024	1036	23.22	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	9/20/2024	1023	21.12	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	9/20/2024	0946	24.73	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	9/20/2024	0825	28.96	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	9/20/2024	1030	20.45	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 9/20/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 83	Wind: south-southwest at 8 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description: ☑ Mark/notch on TOC ☐ North rim of TOC ☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	9/20/2024	9/20/2024	9/20/2024	9/20/2024	9/20/2024	
Time	24-hour	0825	1125	1202	1218	1309	
Depth to Water	feet	28.96	28.96	28.96	28.96	28.96	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters: ☐ YSI ProPlus ☑ YSI MPS 556 ☐ Other: ☑ Hach 2100P Turbidimeter ☐ HF Scientific Turbidimeter ☐ Other:

Pump description: ☑ Peristaltic ☐ Bladder [☐ dedicated / ☐ portable] ☐ Submersible

Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1130	1135	1140	1145	1150	1155	1200	1205	1210	1215		Remarks
Purge vol.	gallons												
Purge rate	mL/min	320	320	320	320	320	320	320	320	320	320		
pH	su	5.5	5.6	6.0	6.1	6.2	6.2	6.2	6.2	6.3	6.3		
Temp.	ºC	20.6	20.6	20.5	20.6	20.6	20.4	20.4	20.5	20.5	20.6		
Conductivity	µS/cm	449	450	450	446	446	448	445	442	445	443		
DO	mg/L	2.8	2.6	2.8	2.8	2.7	2.7	2.7	2.7	2.6	2.7		
ORP	mV	212.6	212.5	186.3	169.4	163.1	159.8	154.1	151.8	145.9	144.4		
Turbidity	NTU	4.9	4.3	3.7	4.0	4.0	4.5	4.4	4.0	3.6	5.4		
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-120	9/20/2024	1220	6	0	
MW-120 DUP	9/20/2024	1225	6	0	
EPA EB-BG	9/20/2024	1330	6	0	

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

Second Half 2024 Detection Monitoring Event, October 2024

Groundwater Level Data Sheet

Project Name:	**Project Number:**	**Investigator:**	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	**Page 1 of 1**
Weather Conditions: Clear, 62ºF, wind W @ 8 mph	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	10/14/2024	1327	22.63	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	10/14/2024	1342	25.95	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	10/14/2024	1312	23.48	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	10/14/2024	1255	20.70	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	10/14/2024	1201	29.37	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	10/14/2024	1246	20.52	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	10/14/2024	1145	27.66	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	10/14/2024	1134	25.85	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☒ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	10/14/2024	1333	25.56	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	10/14/2024	1406	23.99	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	10/14/2024	1358	21.98	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	10/14/2024	1320	26.15	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	10/14/2024	1306	30.40	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	10/14/2024	1351	21.27	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-101	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 60	Wind: north at 8 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/16/2024	10/16/2024	10/16/2024	10/16/2024	
Time	24-hour	1327	1300	1318	1331	1346	
Depth to Water	feet	22.63	22.76	22.76	22.76	22.76	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1305	1310	1315	1320	1325	1330						Remarks
Purge vol.	gallons												
Purge rate	mL/min	150	150	150	150	150	150						
pH	su	6.7	6.6	6.7	6.8	6.8	6.8						
Temp.	ºC	19.4	19.3	19.4	19.3	19.4	19.4						
Conductivity	µS/cm	540	539	538	538	536	535						
DO	mg/L	1.9	1.3	1.0	0.9	0.9	0.8						
ORP	mV	87.8	97.9	96.7	95.9	96.4	96.6						
Turbidity	NTU	5.2	3.6	3.0	2.8	2.7	1.6						
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	10/16/2024	1335	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-102	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 62	Wind: north at 7 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description: ☑ Mark/notch on TOC ☐ North rim of TOC ☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/16/2024	10/16/2024	10/16/2024	10/16/2024	
Time	24-hour	1342	1405	1422	1438	1451	
Depth to Water	feet	25.95	26.06	26.06	26.06	26.06	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters: ☐ YSI ProPlus ☑ YSI MPS 556 ☐ Other: ☑ Hach 2100P Turbidimeter ☐ HF Scientific Turbidimeter ☐ Other:

Pump description: ☑ Peristaltic ☐ Bladder [☐ dedicated / ☐ portable] ☐ Submersible

Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1410	1415	1420	1425	1430	1435						Remarks
Purge vol.	gallons												
Purge rate	mL/min	210	210	140	140	140	140						
pH	su	6.3	6.2	6.4	6.5	6.5	6.5						
Temp.	ºC	19.3	19.1	19.2	19.3	19.2	19.2						
Conductivity	µS/cm	710	718	727	731	738	735						
DO	mg/L	3.4	2.5	2.6	2.2	2.2	2.2						
ORP	mV	120.6	129.8	119.6	114.5	110.4	110.0						
Turbidity	NTU	7.2	9.5	11.0	11.2	8.4	7.1						
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-102	10/16/2024	1445	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-103	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 52	Wind: north-northeast at 9 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/16/2024	10/16/2024	10/16/2024	10/16/2024	
Time	24-hour	1312	1035	1058	1107	1121	
Depth to Water	feet	23.48	23.65	24.01	24.02	24.06	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	210	210	210	210	210	210						
pH	su	6.6	6.9	6.5	6.6	6.7	6.6						
Temp.	ºC	17.8	17.7	17.6	17.7	17.8	17.9						
Conductivity	µS/cm	444	445	446	447	447	447						
DO	mg/L	2.7	1.5	1.2	0.8	0.8	0.7						
ORP	mV	133.3	125.1	129.6	118.3	112.9	109.2						
Turbidity	NTU	9.6	6.9	5.7	7.0	7.2	6.9						
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	10/16/2024	1115	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/15/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 57	Wind: north-northeast at 17 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/15/2024	10/15/2024	10/15/2024	10/15/2024	
Time	24-hour	1255	1500	1523	1613	1642	
Depth to Water	feet	20.70	20.79	21.01	21.01	21.01	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408

Time	24-hour	1505	1510	1515	1520	1525	1530	1535	1540	1545	1550	1555	Remarks
Purge vol.	gallons												
Purge rate	mL/min	120	120	120	120	60	60	60	90	90	90	90	
pH	su	6.6	6.2	6.2	6.4	6.5	6.7	6.7	6.6	6.5	6.5	6.6	
Temp.	ºC	17.9	17.6	17.7	17.4	17.5	18.4	18.2	17.9	17.7	17.7	17.7	
Conductivity	µS/cm	472	470	469	470	469	468	469	467	467	466	467	
DO	mg/L	2.9	0.7	0.6	0.4	0.4	0.6	0.6	0.6	0.6	0.6	0.5	
ORP	mV	78.0	92.3	89.7	72.1	65.9	38.0	27.3	24.9	23.0	21.4	22.4	
Turbidity	NTU	114	52.8	43.1	44.1	37.0	32.5	26.9	22.2	21.1	22.4	30.2	
Color/tint	--	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	clear	clear	clear	clear	
Odor	--	none	none	none	none	none	none	none	none	none	none	none	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	---	---	---	---	see next page

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-104 (cont.)	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/15/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 57	Wind: north-northeast at 17 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/15/2024	10/15/2024	10/15/2024	10/15/2024	
Time	24-hour	1255	1500	1523	1613	1642	
Depth to Water	feet	20.70	20.79	21.01	21.01	21.01	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1600	1605	1610									Remarks
Purge vol.	gallons												
Purge rate	mL/min	60	60	60									
pH	su	6.6	6.6	6.6									
Temp.	ºC	17.7	17.8	17.7									
Conductivity	µS/cm	469	469	472									
DO	mg/L	0.5	0.5	0.8									
ORP	mV	26.6	25.5	17.5									
Turbidity	NTU	20.1	16.3	9.6									
Color/tint	--	clear	clear	clear									
Odor	--	none	none	none									

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	10/15/2024	1620	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-108	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/15/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 63	Wind: northeast at 6 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/15/2024	10/15/2024	10/15/2024	10/15/2024	
Time	24-hour	1201	1110	1142	1157	1227	
Depth to Water	feet	29.37	29.47	29.47	29.47	29.47	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters: ☐ YSI ProPlus ☑ Hach 2100P Turbidimeter ☑ YSI MPS 556 ☐ HF Scientific Turbidimeter ☐ Other: ☐ Other:	Pump description: ☑ Peristaltic ☐ Bladder [☐ dedicated / ☐ portable] ☐ Submersible	Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC

Well goes dry during purging: ☐ Yes ☑ No

Casing vol. (gallons) = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408

Purge depth	feet												
Time	24-hour	1135	1140	1145	1150	1155							Remarks
Purge vol.	gallons												
Purge rate	mL/min	80	80	80	80	80							
pH	su	6.5	6.5	6.4	6.5	6.5							
Temp.	ºC	20.7	20.3	19.9	19.8	19.8							
Conductivity	µS/cm	697	697	691	687	687							
DO	mg/L	2.0	1.3	1.0	0.9	0.7							
ORP	mV	109.6	112.5	112.6	111.2	108.1							
Turbidity	NTU	59.4	43.7	17.7	10.4	8.6							
Color/tint	--	light brown	light brown	clear	clear	clear							
Odor	--	none	none	none	none	none							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-108	10/15/2024	1205	3	0	
MW-108 DUP	10/15/2024	1210	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/15/2024	Sampler Organization: Olsson FTN

Site Description

Weather: cloudy	Air Temp. (ºF): 65	Wind: north at 18 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/15/2024	10/15/2024	10/15/2024	10/15/2024	
Time	24-hour	1246	1335	1358	1428	1447	
Depth to Water	feet	20.52	20.59	20.59	20.59	20.59	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1340	1345	1350	1355	1400	1405	1410	1415	1420	1425		Remarks
Purge vol.	gallons												
Purge rate	mL/min	140	140	140	140	140	140	140	120	120	120		
pH	su	6.4	6.4	6.6	6.7	6.7	6.7	6.7	6.7	6.7	6.7		
Temp.	ºC	18.3	18.1	18.2	18.2	18.2	18.0	17.8	17.8	17.7	19.6		
Conductivity	µS/cm	505	510	510	512	513	512	512	512	511	511		
DO	mg/L	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3		
ORP	mV	58.4	49.6	37.7	29.9	29.9	33.8	36.7	42.9	45.2	46.7		
Turbidity	NTU	35.1	74.4	58.7	31.7	24.1	20.5	13.1	10.1	9.8	9.7		
Color/tint	--	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy	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-110	10/15/2024	1435	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-113	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/15/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 56	Wind: north at 4 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/15/2024	10/15/2024	10/15/2024	10/15/2024	
Time	24-hour	1145	1010	1028	1036	1102	
Depth to Water	feet	27.66	27.71	27.71	27.71	27.71	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1015	1020	1025	1030	1035	1040						Remarks
Purge vol.	gallons												
Purge rate	mL/min	210	210	210	210	210	210						
pH	su	6.5	6.5	6.4	6.4	6.5	6.5						
Temp.	ºC	19.1	18.8	18.5	18.5	18.5	18.8						
Conductivity	µS/cm	429	423	421	421	421	422						
DO	mg/L	5.5	4.7	4.4	4.2	4.6	4.0						
ORP	mV	106.4	113.6	116.1	119.0	116.0	115.7						
Turbidity	NTU	6.4	5.5	5.1	4.6	5.1	5.0						
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-113	10/15/2024	1055	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-115	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/15/2024	Sampler Organization: Olsson FTN

Site Description

Weather: partly cloudy	Air Temp. (ºF): 55	Wind: northeast at 3 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/15/2024	10/15/2024	10/15/2024	10/15/2024	
Time	24-hour	1134	0915	0938	0952	1004	
Depth to Water	feet	25.85	25.92	25.92	25.92	25.92	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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						Remarks
Purge vol.	gallons												
Purge rate	mL/min	310	310	310	310	240	240						
pH	su	6.6	6.6	6.7	6.6	6.6	6.7						
Temp.	ºC	18.2	18.0	18.0	18.0	18.2	18.2						
Conductivity	µS/cm	605	607	607	608	607	608						
DO	mg/L	4.0	3.9	4.0	3.8	3.5	3.5						
ORP	mV	142.6	139.6	137.8	137.5	135.5	134.4						
Turbidity	NTU	6.8	5.9	4.5	4.3	4.6	4.1						
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-115	10/15/2024	1000	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-116	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 63	Wind: north at 7 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/16/2024	10/16/2024	10/16/2024	10/16/2024	
Time	24-hour	1333	1510	1533	1548	1612	
Depth to Water	feet	25.56	25.67	25.67	25.67	25.67	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	220	190	190	190	190	190						
pH	su	6.5	6.2	6.3	6.3	6.4	6.3						
Temp.	ºC	19.2	19.8	18.9	18.8	18.8	18.8						
Conductivity	µS/cm	373	590	619	649	665	674						
DO	mg/L	5.8	3.7	3.7	3.6	3.6	3.6						
ORP	mV	125.8	135.1	130.8	127.4	125.8	120.4						
Turbidity	NTU	10.6	4.7	3.2	2.4	2.0	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-116	10/16/2024	1555	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-117	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/17/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 60	Wind: southeast at 3 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/17/2024	10/17/2024	10/17/2024	10/17/2024	
Time	24-hour	1406	1145	1203	1218	1233	
Depth to Water	feet	23.99	24.16	24.16	24.16	24.16	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	150	150	150	150	150	150						
pH	su	6.3	6.2	6.3	6.4	6.4	6.4						
Temp.	ºC	18.6	18.6	18.8	18.8	18.8	19.0						
Conductivity	µS/cm	495	495	495	496	497	497						
DO	mg/L	4.2	3.8	3.4	3.6	3.3	3.5						
ORP	mV	142.1	150.0	144.0	143.3	143.9	143.1						
Turbidity	NTU	1.8	0.9	1.0	1.0	1.3	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-117	10/17/2024	1230	3	0	
EPA EB-1	10/17/2024	1250	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-118	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/17/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 56	Wind: calm			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/17/2024	10/17/2024	10/17/2024	10/17/2024	
Time	24-hour	1358	1045	1103	1117	1134	
Depth to Water	feet	21.98	22.16	22.16	22.16	22.16	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	6.2	6.0	6.1	6.2	6.3	6.3						
Temp.	ºC	18.9	18.8	18.4	18.3	18.5	18.5						
Conductivity	µS/cm	395	409	429	430	433	436						
DO	mg/L	4.6	4.1	3.7	3.7	3.8	3.7						
ORP	mV	165.9	177.5	167.4	164.4	161.0	159.1						
Turbidity	NTU	4.0	2.8	2.0	2.2	2.0	2.5						
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	10/17/2024	1125	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-119	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 56	Wind: north-northeast at 8 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/16/2024	10/16/2024	10/16/2024	10/16/2024	
Time	24-hour	1320	1140	1158	1212	1227	
Depth to Water	feet	26.15	26.31	26.31	26.31	26.31	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1145	1150	1155	1200	1205	1210						Remarks
Purge vol.	gallons												
Purge rate	mL/min	130	130	130	130	130	130						
pH	su	6.8	7.0	6.8	6.8	6.8	6.8						
Temp.	ºC	18.6	18.5	18.5	18.5	18.5	18.5						
Conductivity	µS/cm	614	615	616	613	611	604						
DO	mg/L	3.2	2.9	2.8	2.8	2.6	2.9						
ORP	mV	99.7	95.4	102.5	101.3	104.3	106.0						
Turbidity	NTU	3.7	2.6	2.6	1.9	1.4	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-119	10/16/2024	1220	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 48	Wind: north-northeast at 9 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/16/2024	10/16/2024	10/16/2024	10/16/2024	
Time	24-hour	1306	0920	0957	1012	1024	
Depth to Water	feet	30.40	30.56	30.56	30.56	30.56	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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						Remarks
Purge vol.	gallons												
Purge rate	mL/min	120	120	120	120	120	120						
pH	su	6.3	6.5	6.4	6.5	6.5	6.5						
Temp.	ºC	16.5	16.5	16.5	16.6	16.6	16.6						
Conductivity	µS/cm	354	354	354	353	349	348						
DO	mg/L	4.2	3.7	3.6	3.6	3.5	3.5						
ORP	mV	176.1	163.3	159.1	156.8	155.4	155.8						
Turbidity	NTU	7.0	3.8	2.7	2.3	1.7	1.2						
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-120	10/16/2024	1020	3	0	

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

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 10/16/2024	Sampler Organization: Olsson FTN

Site Description

Weather: clear	Air Temp. (ºF): 44	Wind: north at 2 mph			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/14/2024	10/17/2024	10/17/2024	10/17/2024	10/17/2024	
Time	24-hour	1351	0945	1012	1021	1033	
Depth to Water	feet	21.27	21.49	21.49	21.49	21.49	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	0955	1000	1005	1010	1015	1020						Remarks
Purge vol.	gallons												
Purge rate	mL/min	300	300	300	300	300	300						
pH	su	6.2	6.2	6.2	6.2	6.2	6.2						
Temp.	ºC	19.9	20.0	20.1	20.2	20.3	20.2						
Conductivity	µS/cm	248	246	246	247	247	248						
DO	mg/L	3.7	3.5	2.9	2.9	2.8	2.7						
ORP	mV	176.0	172.2	164.5	162.4	161.7	161.0						
Turbidity	NTU	1.3	1.3	1.3	1.0	1.1	0.8						
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-121	10/17/2024	1030	3	0	

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

Second Half 2024 Verification Sampling Event, December 2024

Groundwater Level Data Sheet

Project Name:	Project Number:	Investigator:	
Plum Point Energy Station EPA Program	R14590-3336-001 / 024-01343 EPA Program	Michael Clayton Olsson FTN	Page 1 of 1
Weather Conditions: overcast, 50 degrees, NW 14	**Measuring Device:** Geotech 200'		

Well ID	Date	Time	Depth to Water (feet below MP)	Damages/Repairs		
MW-101	12/10/2024	1035	24.51	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-102	12/10/2024	1045	27.74	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-103	12/10/2024	1023	25.20	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-104	12/10/2024	1001	22.22	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-108	12/10/2024	916	30.59	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-110	12/10/2024	952	22.02	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-113	12/10/2024	911	28.95	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-115	12/10/2024	902	27.14	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-116	12/10/2024	1040	27.37	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-117	12/10/2024	1051	25.73	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-118	12/10/2024	1019	23.66	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-119	12/10/2024	1029	27.94	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-120	12/10/2024	1014	31.93	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record
MW-121	12/10/2024	1009	22.88	☐ Damaged well pad/casing ☐ Damaged bollards ☐ Damaged equipment	☐ Damaged MP ☐ Damaged lock ☐ Unkept vegetation	☐ Lacks visibility ☐ Lacks access ☐ See GW sampling record

Notes: MP=measuring point on the top of casing; GW=groundwater

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-102	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 12/10/2024	Sampler Organization: Olsson FTN

Site Description

Weather:	Air Temp. (ºF):	Wind:			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	12/10/2024	12/10/2024	12/10/2024	12/10/2024	12/10/2024	
Time	24-hour	1045	1500	1518	1533	1558	
Depth to Water	feet	27.74	27.72	27.72	27.72	27.72	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)]^2 × 0.0408										
Time	24-hour	1505	1510	1515	1520	1525	1530						Remarks
Purge vol.	gallons												
Purge rate	mL/min	160	160	160	160	160	160						
pH	su	6.5	6.5	6.5	6.6	6.6	6.6						
Temp.	ºC	18.1	18.2	18.6	18.3	18.2	18.2						
Conductivity	µS/cm	746	737	714	711	694	684						
DO	mg/L	2.4	1.7	1.0	1.0	1.1	1.0						
ORP	mV	100.3	108.8	107.6	106.4	109.5	114.2						
Turbidity	NTU	29.0	22.5	19.6	16.3	13.2	9.3						
Color/tint	--	cloudy	cloudy	clear	clear	clear	clear						
Odor	--	None	None	None	None	None	None						

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-102	12/10/2024	1545	3	0	
MW-102 DUP	12/10/2024	1550	3	0	
EPA EB-2	12/10/2024	1630	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by MMV

Groundwater Sampling Record
PPES EPA Program

Facility: Plum Point Energy Station	Site ID: MW-116	Sampler: Michael Clayton
Project Number: R14590-3336-001 / 024-01343	Date: 12/10/2024	Sampler Organization: Olsson FTN

Site Description

Weather:	Air Temp. (ºF):	Wind:			
Site type: ☑ Monitoring Well ☐ Extraction Well ☐ Production Well ☐ Borehole ☐ Dewatering Well ☐ Spring ☐ Other:	Well casing material: ☑ PVC ☐ Steel ☐ Iron ☐ Other:	Well diameter	inches	2	Well locked? ☑ Yes ☐ No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

Water Level Data

Measuring point description:
☑ Mark/notch on TOC
☐ North rim of TOC
☐ Other:

Water level meter: ☐ Geotech/Keck 100' ☑ Geotech/Keck 200' ☐ Heron Dipper–T ☐ Solinst 101 ☐ Other:

		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	12/10/2024	12/10/2024	12/10/2024	12/10/2024	12/10/2024	
Time	24-hour	1040	1330	1358	1422	1442	
Depth to Water	feet	27.37	27.34	27.34	27.34	27.34	
Product/Thickness	LNAPL/DNAPL feet						

Field Data

Field data meters:
☐ YSI ProPlus ☑ Hach 2100P Turbidimeter
☑ YSI MPS 556 ☐ HF Scientific Turbidimeter
☐ Other: ☐ Other:

Pump description:
☑ Peristaltic
☐ Bladder [☐ dedicated / ☐ portable]
☐ Submersible

Bailer description:
☐ Disposable polyethylene
☐ Disposable Teflon
☐ Disposable PVC

Purge depth	feet		Well goes dry during purging: ☐ Yes ☑ 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	1350	1355	1400	1405	1410	1415	1420		Remarks
Purge vol.	gallons												
Purge rate	mL/min	160	160	160	160	160	160	160	160	160	160		
pH	su	5.9	6.2	6.4	6.5	6.5	6.3	6.5	6.6	6.6	6.6		
Temp.	ºC	17.5	18.3	18.8	19.0	19.3	18.8	19.3	19.5	19.6	19.6		
Conductivity	µS/cm	635	632	635	639	650	661	663	667	667	669		
DO	mg/L	3.4	2.9	2.7	2.7	2.4	2.4	2.2	2.4	2.3	2.3		
ORP	mV	171.8	143.0	133.4	130.9	132.2	144.9	137.9	135.0	134.5	135.1		
Turbidity	NTU	12.7	10.8	9.3	8.1	6.7	5.7	5.6	6.1	5.1	5.4		
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-116	12/10/2024	1425	1	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by MMV

APPENDIX B
LABORATORY REPORTS

MONTHLY BACKGROUND SAMPLING EVENT
JANUARY 2024

ANALYTICAL REPORT

January 29, 2024

Plum Point Services Co., LLC

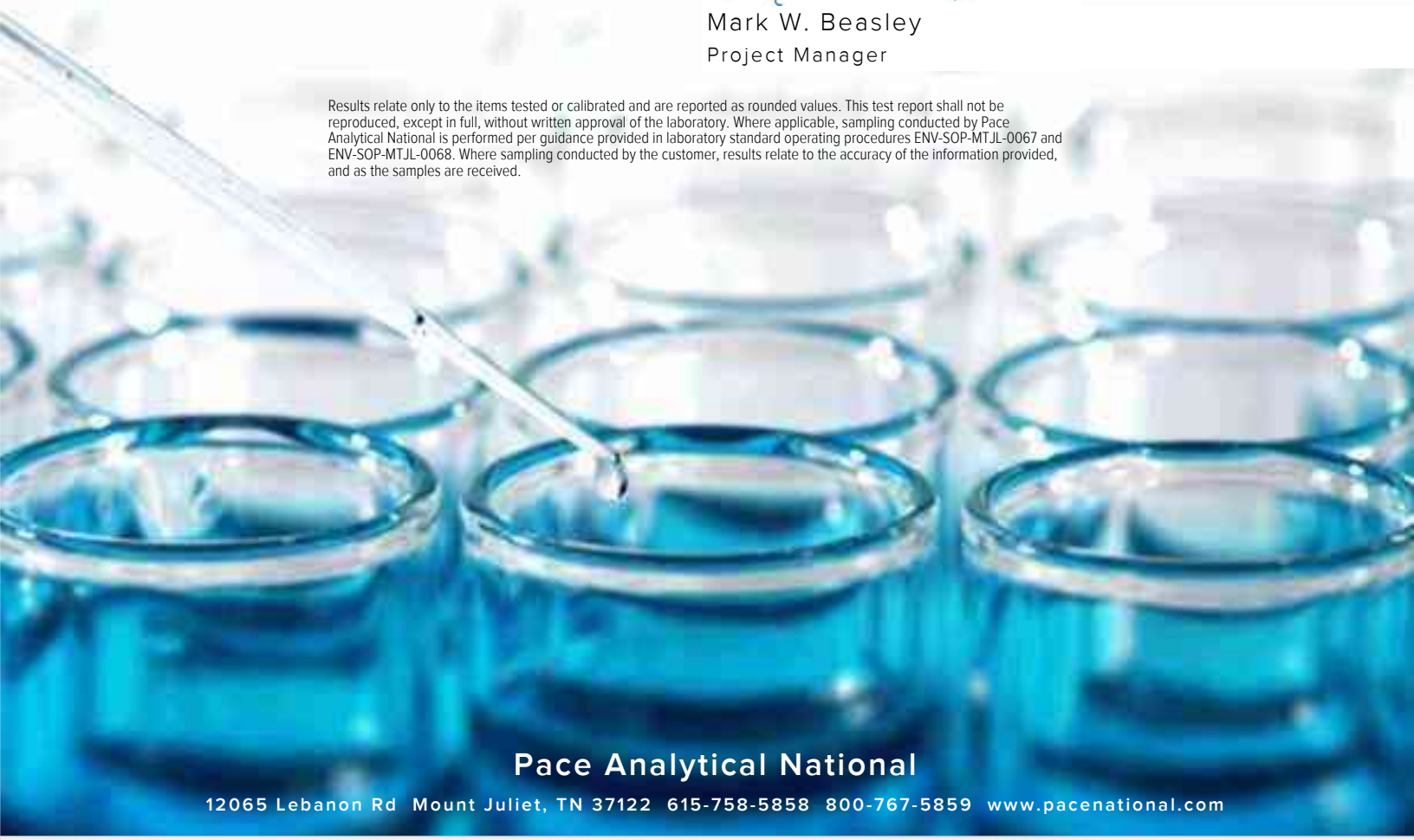
Sample Delivery Group:	L1695884
Samples Received:	01/12/2024
Project Number:	14590-3037-001
Description:	Plum Point Energy Station

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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MW-104 L1695884-01 GW

Collected by: Michael Clayton | Collected date/time: 01/10/24 16:45 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2210738	1	01/22/24 14:28	01/22/24 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2206334	1	01/12/24 22:57	01/12/24 22:57	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2206433	1	01/14/24 14:37	01/17/24 18:09	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2206793	1	01/17/24 12:42	01/18/24 13:54	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2206284	1	01/17/24 12:16	01/28/24 13:44	SJM	Mt. Juliet, TN

MW-110 L1695884-02 GW

Collected by: Michael Clayton | Collected date/time: 01/10/24 14:20 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2210738	1	01/22/24 14:28	01/22/24 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2206334	1	01/12/24 23:10	01/12/24 23:10	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2206433	1	01/14/24 10:53	01/17/24 18:11	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2206793	1	01/17/24 12:42	01/18/24 13:57	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2206284	1	01/17/24 12:16	01/28/24 13:47	SJM	Mt. Juliet, TN

MW-121 L1695884-03 GW

Collected by: Michael Clayton | Collected date/time: 01/10/24 15:35 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2210738	1	01/22/24 14:28	01/22/24 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2206334	1	01/12/24 23:22	01/12/24 23:22	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2206433	1	01/14/24 10:53	01/17/24 18:14	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2206793	1	01/17/24 12:42	01/18/24 14:00	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2206284	1	01/17/24 12:16	01/28/24 13:50	SJM	Mt. Juliet, TN

MW-104 DUP L1695884-04 GW

Collected by: Michael Clayton | Collected date/time: 01/10/24 16:50 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2210738	1	01/22/24 14:28	01/22/24 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2206334	1	01/12/24 23:35	01/12/24 23:35	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2206433	1	01/14/24 14:37	01/17/24 18:16	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2206793	1	01/17/24 12:42	01/18/24 14:03	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2206284	1	01/17/24 12:16	01/28/24 13:54	SJM	Mt. Juliet, TN

EPA EB-BG L1695884-05 GW

Collected by: Michael Clayton | Collected date/time: 01/10/24 17:20 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2210738	1	01/22/24 14:28	01/22/24 16:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2206334	1	01/12/24 23:47	01/12/24 23:47	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2206433	1	01/14/24 10:53	01/17/24 18:19	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2206793	1	01/17/24 12:42	01/18/24 14:06	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2206284	1	01/17/24 12:16	01/28/24 13:57	SJM	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

Project Narrative

TDS was analyzed outside of the 7 day holding time due to local winter weather that limited laboratory staffing.

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	334000	Q	10000	1	01/22/2024 16:33	WG2210738

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1050		379	1000	1	01/12/2024 22:57	WG2206334
Fluoride	322		64.0	150	1	01/12/2024 22:57	WG2206334
Sulfate	5280		594	5000	1	01/12/2024 22:57	WG2206334

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	01/17/2024 18:09	WG2206433

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	53.3	J	20.0	200	1	01/18/2024 13:54	WG2206793
Calcium	87600		79.3	1000	1	01/18/2024 13:54	WG2206793

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	01/28/2024 13:44	WG2206284
Arsenic	5.20		0.180	2.00	1	01/28/2024 13:44	WG2206284
Barium	161		0.381	2.00	1	01/28/2024 13:44	WG2206284
Beryllium	U		0.190	2.00	1	01/28/2024 13:44	WG2206284
Cadmium	U		0.150	1.00	1	01/28/2024 13:44	WG2206284
Chromium	U		1.24	2.00	1	01/28/2024 13:44	WG2206284
Cobalt	0.699	J	0.0596	2.00	1	01/28/2024 13:44	WG2206284
Lead	U		0.849	2.00	1	01/28/2024 13:44	WG2206284
Molybdenum	3.48	J	0.348	5.00	1	01/28/2024 13:44	WG2206284
Selenium	0.722	J	0.300	2.00	1	01/28/2024 13:44	WG2206284
Thallium	U		0.121	2.00	1	01/28/2024 13:44	WG2206284
Lithium	4.76		0.695	2.00	1	01/28/2024 13:44	WG2206284

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	326000	Q	10000	1	01/22/2024 16:33	WG2210738

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1010		379	1000	1	01/12/2024 23:10	WG2206334
Fluoride	236		64.0	150	1	01/12/2024 23:10	WG2206334
Sulfate	5810		594	5000	1	01/12/2024 23:10	WG2206334

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	01/17/2024 18:11	WG2206433

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	54.8	J	20.0	200	1	01/18/2024 13:57	WG2206793
Calcium	88900		79.3	1000	1	01/18/2024 13:57	WG2206793

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	01/28/2024 13:47	WG2206284
Arsenic	4.14		0.180	2.00	1	01/28/2024 13:47	WG2206284
Barium	224		0.381	2.00	1	01/28/2024 13:47	WG2206284
Beryllium	U		0.190	2.00	1	01/28/2024 13:47	WG2206284
Cadmium	U		0.150	1.00	1	01/28/2024 13:47	WG2206284
Chromium	U		1.24	2.00	1	01/28/2024 13:47	WG2206284
Cobalt	0.405	J	0.0596	2.00	1	01/28/2024 13:47	WG2206284
Lead	U		0.849	2.00	1	01/28/2024 13:47	WG2206284
Molybdenum	0.958	J	0.348	5.00	1	01/28/2024 13:47	WG2206284
Selenium	U		0.300	2.00	1	01/28/2024 13:47	WG2206284
Thallium	U		0.121	2.00	1	01/28/2024 13:47	WG2206284
Lithium	4.54		0.695	2.00	1	01/28/2024 13:47	WG2206284

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	151000	Q	10000	1	01/22/2024 16:33	WG2210738

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1080		379	1000	1	01/12/2024 23:22	WG2206334
Fluoride	154		64.0	150	1	01/12/2024 23:22	WG2206334
Sulfate	12000		594	5000	1	01/12/2024 23:22	WG2206334

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	01/17/2024 18:14	WG2206433

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	24.4	J	20.0	200	1	01/18/2024 14:00	WG2206793
Calcium	34900		79.3	1000	1	01/18/2024 14:00	WG2206793

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	01/28/2024 13:50	WG2206284
Arsenic	1.14	J	0.180	2.00	1	01/28/2024 13:50	WG2206284
Barium	85.6		0.381	2.00	1	01/28/2024 13:50	WG2206284
Beryllium	U		0.190	2.00	1	01/28/2024 13:50	WG2206284
Cadmium	U		0.150	1.00	1	01/28/2024 13:50	WG2206284
Chromium	U		1.24	2.00	1	01/28/2024 13:50	WG2206284
Cobalt	U		0.0596	2.00	1	01/28/2024 13:50	WG2206284
Lead	U		0.849	2.00	1	01/28/2024 13:50	WG2206284
Molybdenum	U		0.348	5.00	1	01/28/2024 13:50	WG2206284
Selenium	1.94	J	0.300	2.00	1	01/28/2024 13:50	WG2206284
Thallium	U		0.121	2.00	1	01/28/2024 13:50	WG2206284
Lithium	2.05		0.695	2.00	1	01/28/2024 13:50	WG2206284

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	340000	Q	10000	1	01/22/2024 16:33	WG2210738

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1030		379	1000	1	01/12/2024 23:35	WG2206334
Fluoride	339		64.0	150	1	01/12/2024 23:35	WG2206334
Sulfate	4680	J	594	5000	1	01/12/2024 23:35	WG2206334

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	01/17/2024 18:16	WG2206433

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	51.1	J	20.0	200	1	01/18/2024 14:03	WG2206793
Calcium	86000		79.3	1000	1	01/18/2024 14:03	WG2206793

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	01/28/2024 13:54	WG2206284
Arsenic	6.07		0.180	2.00	1	01/28/2024 13:54	WG2206284
Barium	157		0.381	2.00	1	01/28/2024 13:54	WG2206284
Beryllium	U		0.190	2.00	1	01/28/2024 13:54	WG2206284
Cadmium	U		0.150	1.00	1	01/28/2024 13:54	WG2206284
Chromium	U		1.24	2.00	1	01/28/2024 13:54	WG2206284
Cobalt	0.601	J	0.0596	2.00	1	01/28/2024 13:54	WG2206284
Lead	U		0.849	2.00	1	01/28/2024 13:54	WG2206284
Molybdenum	3.18	J	0.348	5.00	1	01/28/2024 13:54	WG2206284
Selenium	1.21	J	0.300	2.00	1	01/28/2024 13:54	WG2206284
Thallium	U		0.121	2.00	1	01/28/2024 13:54	WG2206284
Lithium	4.95		0.695	2.00	1	01/28/2024 13:54	WG2206284

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND	Q	10000	1	01/22/2024 16:33	WG2210738

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	U		379	1000	1	01/12/2024 23:47	WG2206334
Fluoride	95.9	J	64.0	150	1	01/12/2024 23:47	WG2206334
Sulfate	659	J	594	5000	1	01/12/2024 23:47	WG2206334

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	01/17/2024 18:19	WG2206433

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	01/18/2024 14:06	WG2206793
Calcium	U		79.3	1000	1	01/18/2024 14:06	WG2206793

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	01/28/2024 13:57	WG2206284
Arsenic	U		0.180	2.00	1	01/28/2024 13:57	WG2206284
Barium	U		0.381	2.00	1	01/28/2024 13:57	WG2206284
Beryllium	U		0.190	2.00	1	01/28/2024 13:57	WG2206284
Cadmium	U		0.150	1.00	1	01/28/2024 13:57	WG2206284
Chromium	U		1.24	2.00	1	01/28/2024 13:57	WG2206284
Cobalt	U		0.0596	2.00	1	01/28/2024 13:57	WG2206284
Lead	U		0.849	2.00	1	01/28/2024 13:57	WG2206284
Molybdenum	0.493	J	0.348	5.00	1	01/28/2024 13:57	WG2206284
Selenium	U		0.300	2.00	1	01/28/2024 13:57	WG2206284
Thallium	U		0.121	2.00	1	01/28/2024 13:57	WG2206284
Lithium	U		0.695	2.00	1	01/28/2024 13:57	WG2206284

Method Blank (MB)

(MB) R4025973-1 01/22/24 16:33

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

L1695751-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1695751-02 01/22/24 16:33 • (DUP) R4025973-3 01/22/24 16:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1420000	1650000	1	15.0	J3	10

L1695789-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1695789-01 01/22/24 16:33 • (DUP) R4025973-4 01/22/24 16:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2020000	2310000	1	13.2	J3	10

Laboratory Control Sample (LCS)

(LCS) R4025973-2 01/22/24 16:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8470000	96.3	85.0-115	

Method Blank (MB)

(MB) R4024672-1 01/12/24 17:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1695860-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1695860-04 01/12/24 18:45 • (DUP) R4024672-3 01/12/24 18:58

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	21700	21400	1	1.00		15
Fluoride	U	121	1	200	J P1	15
Sulfate	18700	18500	1	1.30		15

L1695895-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1695895-01 01/13/24 00:00 • (DUP) R4024672-6 01/13/24 00:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3080	3100	1	0.482		15
Fluoride	76.9	74.5	1	3.17	J	15
Sulfate	1880	1830	1	2.73	J	15

Laboratory Control Sample (LCS)

(LCS) R4024672-2 01/12/24 17:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	41000	102	80.0-120	
Fluoride	8000	8520	106	80.0-120	
Sulfate	40000	41300	103	80.0-120	

L1695860-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1695860-04 01/12/24 18:45 • (MS) R4024672-4 01/12/24 19:36 • (MSD) R4024672-5 01/12/24 19:48

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	40000	21700	58300	58300	91.5	91.6	1	80.0-120			0.0918	15
Fluoride	8000	U	8900	8960	111	112	1	80.0-120			0.665	15
Sulfate	40000	18700	56500	56500	94.4	94.4	1	80.0-120			0.0283	15

L1695895-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1695895-01 01/13/24 00:00 • (MS) R4024672-7 01/13/24 00:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	3080	42400	98.4	1	80.0-120	
Fluoride	8000	76.9	8500	105	1	80.0-120	
Sulfate	40000	1880	41300	98.6	1	80.0-120	

Method Blank (MB)

(MB) R4023721-1 01/17/24 17:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4023721-2 01/17/24 17:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.96	98.8	80.0-120	

L1695971-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1695971-04 01/17/24 17:56 • (MS) R4023721-3 01/17/24 17:59 • (MSD) R4023721-4 01/17/24 18:01

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 %
Mercury	3.00	U	2.48	2.47	82.8	82.4	1	75.0-125			0.422	20

Method Blank (MB)

(MB) R4024015-1 01/18/24 13:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		20.0	200
Calcium	92.7	J	79.3	1000

Laboratory Control Sample (LCS)

(LCS) R4024015-2 01/18/24 13:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	950	95.0	80.0-120	
Calcium	10000	9660	96.6	80.0-120	

L1695871-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1695871-01 01/18/24 13:24 • (MS) R4024015-4 01/18/24 13:30 • (MSD) R4024015-5 01/18/24 13:33

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 %
Boron	1000	202	1170	1170	96.7	96.8	1	75.0-125			0.0919	20
Calcium	10000	263000	270000	268000	66.1	48.7	1	75.0-125	V	V	0.646	20

Method Blank (MB)

(MB) R4026995-1 01/28/24 12:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	2.43	J	1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4026995-2 01/28/24 12:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	57.1	114	80.0-120	
Arsenic	50.0	49.6	99.1	80.0-120	
Barium	50.0	49.4	98.8	80.0-120	
Beryllium	50.0	51.3	103	80.0-120	
Cadmium	50.0	52.4	105	80.0-120	
Chromium	50.0	50.1	100	80.0-120	
Cobalt	50.0	50.8	102	80.0-120	
Lead	50.0	52.0	104	80.0-120	
Molybdenum	50.0	48.9	97.8	80.0-120	
Selenium	50.0	50.0	99.9	80.0-120	
Thallium	50.0	50.3	101	80.0-120	
Lithium	50.0	47.3	94.5	80.0-120	

L1695612-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1695612-02 01/28/24 12:58 • (MS) R4026995-4 01/28/24 13:04 • (MSD) R4026995-5 01/28/24 13:08

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 %
Antimony	50.0	U	56.7	56.9	113	114	1	75.0-125			0.465	20
Arsenic	50.0	0.983	50.3	50.2	98.6	98.4	1	75.0-125			0.194	20
Barium	50.0	69.1	119	118	99.9	98.2	1	75.0-125			0.719	20

L1695612-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1695612-02 01/28/24 12:58 • (MS) R4026995-4 01/28/24 13:04 • (MSD) R4026995-5 01/28/24 13:08

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 %
Beryllium	50.0	U	49.4	48.8	98.9	97.7	1	75.0-125			1.20	20
Cadmium	50.0	U	52.0	51.4	104	103	1	75.0-125			1.19	20
Chromium	50.0	1.53	50.2	50.4	97.3	97.8	1	75.0-125			0.570	20
Cobalt	50.0	14.2	63.9	63.4	99.4	98.4	1	75.0-125			0.764	20
Lead	50.0	U	52.6	51.2	105	102	1	75.0-125			2.73	20
Molybdenum	50.0	U	49.8	50.5	99.5	101	1	75.0-125			1.50	20
Selenium	50.0	0.337	52.3	50.9	104	101	1	75.0-125			2.64	20
Thallium	50.0	0.182	50.8	50.9	101	101	1	75.0-125			0.311	20
Lithium	50.0	1.14	44.0	43.9	85.8	85.5	1	75.0-125			0.264	20

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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
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

Report to: **Dana Derrington**

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 # **14590-3037-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature): Michael Clayton

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1695884
B228
Acctnum: NAESOAR
Template: **T106048**
Prelogin: **P1047844**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEx Priority**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres				Remarks	Sample # (lab only)
								+2	+2	+2	+2	+2						
MW-104	Grab	GW		2/10/24	1645	5		X	X	X	X	X	X					-01
MW-110	↓	GW		2/10/24	1420	5		X	X	X	X	X	X					-02
MW-120		GW						X	X	X	X	X	X					
MW-121		GW		2/10/24	1435	5		X	X	X	X	X	X					-03
MW-104 DUP		GW		2/10/24	1650	5		X	X	X	X	X	X					-04
EPA EB-BG		GW		2/10/24	1720	5		X	X	X	X	X	X					-05
		GW																
		GW																
		GW																

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 715503034908

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Michael Clayton	2/11/24	1430		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: MS ADC 0.3+0=0.3 Bottles Received: 25
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/12/24 Time: 0900
			Hailey Rutter	Hold: Condition: NCF / OK

ANALYTICAL REPORT

January 24, 2024

Plum Point Services Co., LLC

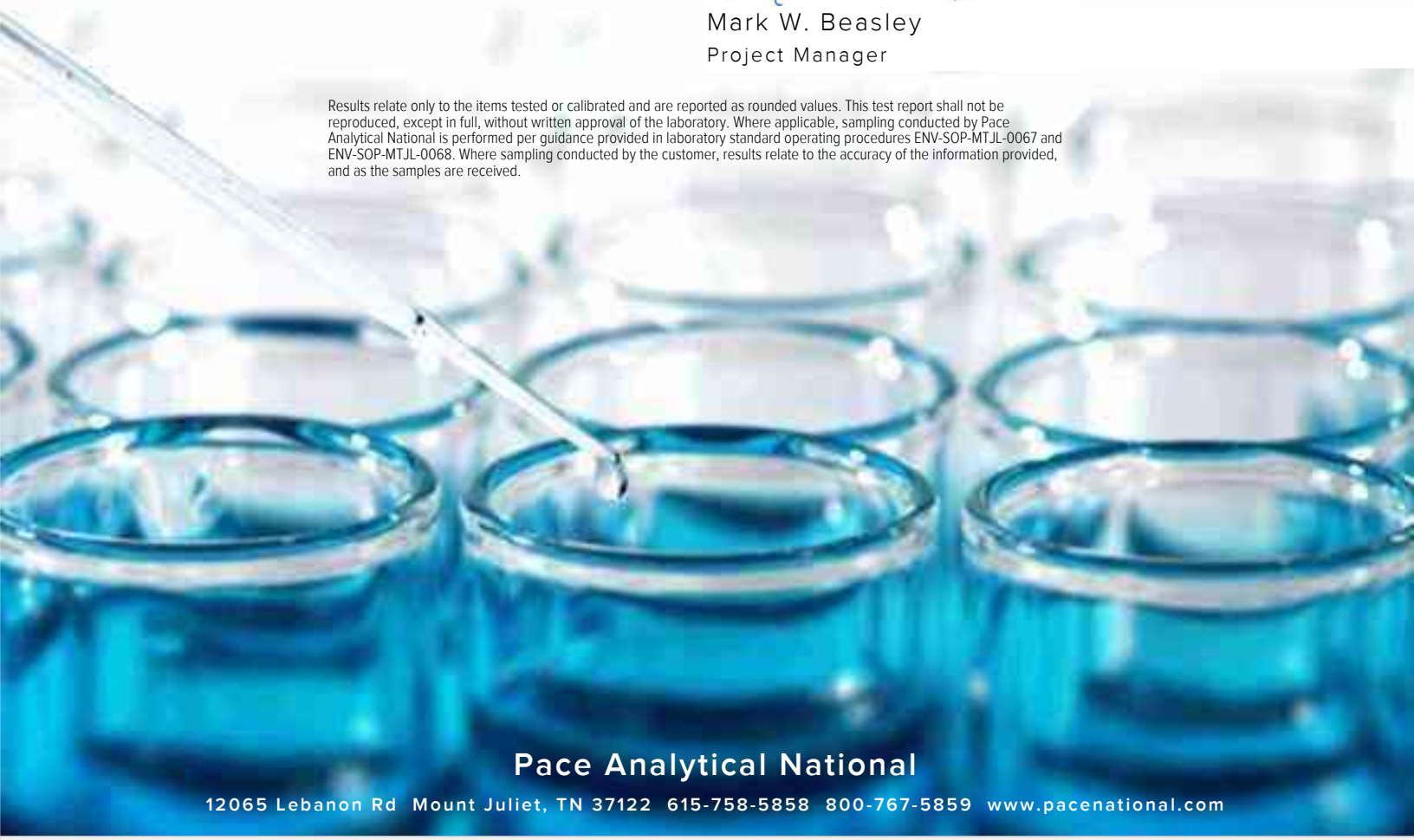
Sample Delivery Group:	L1695885
Samples Received:	01/12/2024
Project Number:	14590-3037-001
Description:	Plum Point Energy Station

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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MW-104 L1695885-01 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 01/10/24 16:45 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2208389	1	01/17/24 21:50	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2207657	1	01/16/24 14:44	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2207657	1	01/16/24 14:44	01/19/24 20:14	ZRG	Mt. Juliet, TN

MW-110 L1695885-03 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 01/10/24 14:20 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2208389	1	01/17/24 21:50	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2207657	1	01/16/24 14:44	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2207657	1	01/16/24 14:44	01/19/24 20:14	ZRG	Mt. Juliet, TN

MW-121 L1695885-04 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 01/10/24 15:35 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2208389	1	01/17/24 21:50	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2207657	1	01/16/24 14:44	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2207657	1	01/16/24 14:44	01/19/24 20:14	ZRG	Mt. Juliet, TN

MW-104 DUP L1695885-05 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 01/10/24 16:50 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2208389	1	01/17/24 21:50	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2207657	1	01/16/24 14:44	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2207657	1	01/16/24 14:44	01/19/24 20:14	ZRG	Mt. Juliet, TN

EPA EB-BG L1695885-06 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 01/10/24 17:20 | Received date/time: 01/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2208389	1	01/17/24 21:50	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2207657	1	01/16/24 14:44	01/22/24 20:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2207657	1	01/16/24 14:44	01/19/24 20:14	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0896	U	0.252	2.96	0.452	0.237	01/22/2024 20:14	WG2208389
(T) Barium	*141*					*30.0-143*	*01/22/2024 20:14*	WG2208389
(T) Yttrium	*113*					*30.0-136*	*01/22/2024 20:14*	WG2208389

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0896	U	0.323	0.659	01/22/2024 20:14	WG2207657

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	-0.0781	U	0.202	0.0470	0.479	0.324	01/19/2024 20:14	WG2207657
(T) Barium-133	*69.1*					*30.0-143*	*01/19/2024 20:14*	WG2207657

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.786		0.231	0.957	0.393	0.207	01/22/2024 20:14	WG2208389
(T) Barium	*135*					*30.0-143*	*01/22/2024 20:14*	WG2208389
(T) Yttrium	*111*					*30.0-136*	*01/22/2024 20:14*	WG2208389

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.52		0.479	0.559	01/22/2024 20:14	WG2207657

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.737		0.420	0.163	0.398	0.273	01/19/2024 20:14	WG2207657
(T) Barium-133	*78.6*					*30.0-143*	*01/19/2024 20:14*	WG2207657

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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.529		0.262	1.24	0.456	0.239	01/22/2024 20:14	WG2208389
(T) Barium	*136*					*30.0-143*	*01/22/2024 20:14*	WG2208389
(T) Yttrium	*125*					*30.0-136*	*01/22/2024 20:14*	WG2208389

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.07		0.432	0.572	01/22/2024 20:14	WG2207657

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.539		0.344	0.149	0.346	0.240	01/19/2024 20:14	WG2207657
(T) Barium-133	*88.3*					*30.0-143*	*01/19/2024 20:14*	WG2207657

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.100	U	0.241	2.73	0.432	0.227	01/22/2024 20:14	WG2208389
(T) Barium	*124*					*30.0-143*	*01/22/2024 20:14*	WG2208389
(T) Yttrium	*117*					*30.0-136*	*01/22/2024 20:14*	WG2208389

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.282	J	0.385	0.625	01/22/2024 20:14	WG2207657

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.182	J	0.300	0.107	0.452	0.298	01/19/2024 20:14	WG2207657
(T) Barium-133	*80.8*					*30.0-143*	*01/19/2024 20:14*	WG2207657

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.351	J	0.231	1.44	0.408	0.214	01/22/2024 20:14	WG2208389
(T) Barium	*135*					*30.0-143*	*01/22/2024 20:14*	WG2208389
(T) Yttrium	*118*					*30.0-136*	*01/22/2024 20:14*	WG2208389

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.359	J	0.280	0.521	01/22/2024 20:14	WG2207657

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.00826	U	0.158	0.0589	0.324	0.224	01/19/2024 20:14	WG2207657
(T) Barium-133	*92.8*					*30.0-143*	*01/19/2024 20:14*	WG2207657

Method Blank (MB)

(MB) R4025510-1 01/22/24 20:14

Analyte	MB Result	MB Qualifier	MB 2 sigma CE	MB MDA	MB Lc
	pCi/l		+ / -	pCi/l	pCi/l
Radium-228	0.488		0.157	0.269	0.142
(T) Barium	*130*		*130*		
(T) Yttrium	*97.7*		*97.7*		

L1695879-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1695879-01 01/22/24 20:14 • (DUP) R4025510-5 01/22/24 20:14

Analyte	Original Result	Original 2 sigma CE	Original MDA	Original Lc	DUP Result	DUP 2 sigma CE	DUP MDA	DUP Lc	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	pCi/l	+ / -	pCi/l	pCi/l	%			%	
Radium-228	1.36	0.304	0.504	0.266	2.28	0.403	0.663	0.346	50.7	1.82		20	3
(T) Barium	*131*				*122*	*122*							
(T) Yttrium	*118*				*112*	*112*							

Laboratory Control Sample (LCS)

(LCS) R4025510-2 01/22/24 20:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	5.19	104	80.0-120	
(T) Barium			*133*		
(T) Yttrium			*117*		

L1695899-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1695899-02 01/22/24 20:14 • (MS) R4025510-3 01/22/24 20:14 • (MSD) R4025510-4 01/22/24 20:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-228	16.7	0.570	15.5	15.5	89.2	89.3	1	70.0-130			0.129		20
(T) Barium		*127*			*137*	*136*							
(T) Yttrium		*118*			*105*	*114*							

Method Blank (MB)

(MB) R4024184-1 01/17/24 19:18

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.00346	U	0.0214	0.0500	0.0380
(T) Barium-133	*90.3*		*90.3*		

L1695885-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1695885-06 01/19/24 20:14 • (DUP) R4024184-5 01/17/24 19:18

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.00826	0.158	0.324	0.224	0.0547	0.124	0.226	0.172	148	0.231	U	20	3
(T) Barium-133	*92.8*				*87.5*	*87.5*							

Laboratory Control Sample (LCS)

(LCS) R4024184-2 01/17/24 19:18

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.15	103	80.0-120	
(T) Barium-133			*79.1*		

L1693512-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1693512-03 01/17/24 19:18 • (MS) R4024184-3 01/17/24 19:18 • (MSD) R4024184-4 01/17/24 19:18

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.0232	19.9	18.4	99.4	91.8	1	75.0-125			7.99		20
(T) Barium-133		*98.9*			*95.9*	*95.0*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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	LAO000356
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/Ad: **Plum Poi[illegible] ervices Co., LLC**

2739 SCR 623
Osceola, AR 72370

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

Report to: **Dana Derrington**

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 # **14590-3037-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature): Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-104	Grab	GW		1/10/24	1645	5	X	X	X	X	X	X	-01	-01
MW-110		GW		1/10/24	1420	5	X	X	X	X	X	X	-03	-02
MW-120		GW					X	X	X	X	X	X		
MW-121		GW		1/10/24	1435	5	X	X	X	X	X	X	-04	-03
MW-104 DUP		GW		1/10/24	1650	5	X	X	X	X	X	X	-05	-04
EPA EB-BG		GW		1/10/24	1720	5	X	X	X	X	X	X	-06	-05
		GW												
		GW												
		GW												

HR 1/12

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1495885
T: B228
Acctnum: NAESOAR
Template: T106048
Prelogin: P1047844
PM: 134 - Mark W. Beasley
PB:
Shipped Via: FedEX Priority

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 715503034908

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
Michael Clayton	1/11/24	1430		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: MS Acc 0.3±0=0.3 Bottles Received: 25
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Hailey Rutter	Date: 1/12/24 Time: 0900
				Hold:
				Condition: NCF / OK

MONTHLY BACKGROUND SAMPLING EVENT
FEBRUARY 2024

ANALYTICAL REPORT

February 16, 2024

Plum Point Services Co., LLC

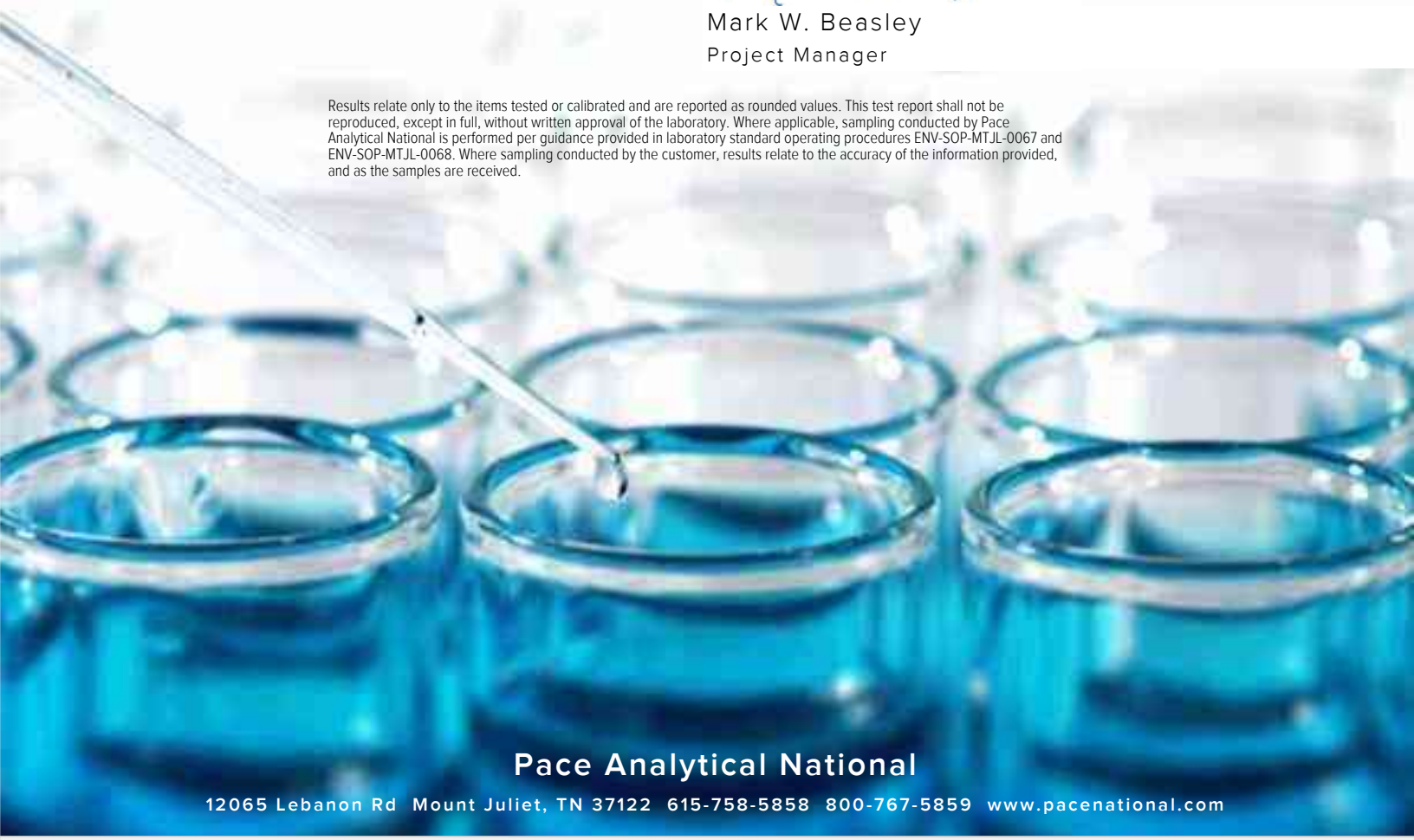
Sample Delivery Group:	L1704327
Samples Received:	02/10/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

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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MW-104 L1704327-01 GW

Collected by: Michael Clayton | Collected date/time: 02/07/24 14:30 | Received date/time: 02/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2224281	1	02/11/24 14:36	02/11/24 14:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2223877	1	02/10/24 17:25	02/10/24 17:25	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2224600	1	02/14/24 10:11	02/14/24 22:48	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2225413	1	02/15/24 09:13	02/15/24 14:53	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 16:10	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 19:36	LD	Mt. Juliet, TN

MW-110 L1704327-02 GW

Collected by: Michael Clayton | Collected date/time: 02/07/24 16:30 | Received date/time: 02/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2224270	1	02/12/24 08:13	02/12/24 17:53	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2223877	1	02/10/24 16:53	02/10/24 16:53	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2224600	1	02/14/24 10:11	02/14/24 22:56	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2225413	1	02/15/24 09:13	02/15/24 14:55	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 16:14	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 19:39	LD	Mt. Juliet, TN

MW-121 L1704327-03 GW

Collected by: Michael Clayton | Collected date/time: 02/07/24 15:35 | Received date/time: 02/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2224270	1	02/12/24 08:13	02/12/24 17:53	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2223877	1	02/10/24 17:09	02/10/24 17:09	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2224600	1	02/14/24 10:11	02/14/24 22:58	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2225413	1	02/15/24 09:13	02/15/24 14:56	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 16:17	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 19:42	LD	Mt. Juliet, TN

MW-110 DUP L1704327-04 GW

Collected by: Michael Clayton | Collected date/time: 02/07/24 16:35 | Received date/time: 02/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2224276	1	02/12/24 08:47	02/12/24 14:17	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2223877	1	02/10/24 19:00	02/10/24 19:00	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2224600	1	02/14/24 10:11	02/14/24 23:06	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2225413	1	02/15/24 09:13	02/15/24 14:58	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 16:20	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 19:46	LD	Mt. Juliet, TN

EPA EB-BG L1704327-05 GW

Collected by: Michael Clayton | Collected date/time: 02/07/24 16:55 | Received date/time: 02/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2224921	1	02/12/24 18:52	02/13/24 14:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2223877	1	02/10/24 19:16	02/10/24 19:16	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2224600	1	02/14/24 10:11	02/14/24 23:09	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2225413	1	02/15/24 09:13	02/15/24 15:03	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2225427	1	02/15/24 06:07	02/15/24 16:23	LD	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	318000		10000	1	02/11/2024 14:52	WG2224281

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1280		379	1000	1	02/10/2024 17:25	WG2223877
Fluoride	325		64.0	150	1	02/10/2024 17:25	WG2223877
Sulfate	5570		594	5000	1	02/10/2024 17:25	WG2223877

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	02/14/2024 22:48	WG2224600

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	61.4	J	20.0	200	1	02/15/2024 14:53	WG2225413
Calcium	87800		79.3	1000	1	02/15/2024 14:53	WG2225413

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	02/15/2024 16:10	WG2225427
Arsenic	4.92		0.180	2.00	1	02/15/2024 16:10	WG2225427
Barium	158		0.381	2.00	1	02/15/2024 16:10	WG2225427
Beryllium	U		0.190	2.00	1	02/15/2024 16:10	WG2225427
Cadmium	U		0.150	1.00	1	02/15/2024 16:10	WG2225427
Chromium	U		1.24	2.00	1	02/15/2024 16:10	WG2225427
Cobalt	0.0936	J	0.0596	2.00	1	02/15/2024 16:10	WG2225427
Lead	U		0.849	2.00	1	02/15/2024 16:10	WG2225427
Molybdenum	2.14	J	0.348	5.00	1	02/15/2024 16:10	WG2225427
Selenium	4.60		0.300	2.00	1	02/15/2024 16:10	WG2225427
Thallium	U		0.121	2.00	1	02/15/2024 16:10	WG2225427
Lithium	6.73		0.695	2.00	1	02/15/2024 19:36	WG2225427

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	286000		10000	1	02/12/2024 17:53	WG2224270

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1160		379	1000	1	02/10/2024 16:53	WG2223877
Fluoride	261		64.0	150	1	02/10/2024 16:53	WG2223877
Sulfate	7780		594	5000	1	02/10/2024 16:53	WG2223877

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	02/14/2024 22:56	WG2224600

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	54.3	J	20.0	200	1	02/15/2024 14:55	WG2225413
Calcium	68600		79.3	1000	1	02/15/2024 14:55	WG2225413

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	02/15/2024 16:14	WG2225427
Arsenic	6.50		0.180	2.00	1	02/15/2024 16:14	WG2225427
Barium	207		0.381	2.00	1	02/15/2024 16:14	WG2225427
Beryllium	U		0.190	2.00	1	02/15/2024 16:14	WG2225427
Cadmium	U		0.150	1.00	1	02/15/2024 16:14	WG2225427
Chromium	U		1.24	2.00	1	02/15/2024 16:14	WG2225427
Cobalt	0.704	J	0.0596	2.00	1	02/15/2024 16:14	WG2225427
Lead	U		0.849	2.00	1	02/15/2024 16:14	WG2225427
Molybdenum	0.883	J	0.348	5.00	1	02/15/2024 16:14	WG2225427
Selenium	U		0.300	2.00	1	02/15/2024 16:14	WG2225427
Thallium	U		0.121	2.00	1	02/15/2024 16:14	WG2225427
Lithium	5.59		0.695	2.00	1	02/15/2024 19:39	WG2225427

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	139000		10000	1	02/12/2024 17:53	WG2224270

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1030		379	1000	1	02/10/2024 17:09	WG2223877
Fluoride	169		64.0	150	1	02/10/2024 17:09	WG2223877
Sulfate	10900		594	5000	1	02/10/2024 17:09	WG2223877

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	02/14/2024 22:58	WG2224600

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	29.7	J	20.0	200	1	02/15/2024 14:56	WG2225413
Calcium	30200		79.3	1000	1	02/15/2024 14:56	WG2225413

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	02/15/2024 16:17	WG2225427
Arsenic	1.16	J	0.180	2.00	1	02/15/2024 16:17	WG2225427
Barium	76.2		0.381	2.00	1	02/15/2024 16:17	WG2225427
Beryllium	U		0.190	2.00	1	02/15/2024 16:17	WG2225427
Cadmium	U		0.150	1.00	1	02/15/2024 16:17	WG2225427
Chromium	U		1.24	2.00	1	02/15/2024 16:17	WG2225427
Cobalt	U		0.0596	2.00	1	02/15/2024 16:17	WG2225427
Lead	U		0.849	2.00	1	02/15/2024 16:17	WG2225427
Molybdenum	U		0.348	5.00	1	02/15/2024 16:17	WG2225427
Selenium	0.338	J	0.300	2.00	1	02/15/2024 16:17	WG2225427
Thallium	U		0.121	2.00	1	02/15/2024 16:17	WG2225427
Lithium	1.89	J	0.695	2.00	1	02/15/2024 19:42	WG2225427

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	279000		10000	1	02/12/2024 14:17	WG2224276

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1080		379	1000	1	02/10/2024 19:00	WG2223877
Fluoride	193		64.0	150	1	02/10/2024 19:00	WG2223877
Sulfate	7660		594	5000	1	02/10/2024 19:00	WG2223877

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	02/14/2024 23:06	WG2224600

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	55.2	J	20.0	200	1	02/15/2024 14:58	WG2225413
Calcium	69500		79.3	1000	1	02/15/2024 14:58	WG2225413

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	02/15/2024 16:20	WG2225427
Arsenic	6.52		0.180	2.00	1	02/15/2024 16:20	WG2225427
Barium	197		0.381	2.00	1	02/15/2024 16:20	WG2225427
Beryllium	U		0.190	2.00	1	02/15/2024 16:20	WG2225427
Cadmium	U		0.150	1.00	1	02/15/2024 16:20	WG2225427
Chromium	U		1.24	2.00	1	02/15/2024 16:20	WG2225427
Cobalt	0.703	J	0.0596	2.00	1	02/15/2024 16:20	WG2225427
Lead	U		0.849	2.00	1	02/15/2024 16:20	WG2225427
Molybdenum	0.905	J	0.348	5.00	1	02/15/2024 16:20	WG2225427
Selenium	U		0.300	2.00	1	02/15/2024 16:20	WG2225427
Thallium	U		0.121	2.00	1	02/15/2024 16:20	WG2225427
Lithium	5.48		0.695	2.00	1	02/15/2024 19:46	WG2225427

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	02/13/2024 14:00	WG2224921

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	U		379	1000	1	02/10/2024 19:16	WG2223877
Fluoride	U		64.0	150	1	02/10/2024 19:16	WG2223877
Sulfate	U		594	5000	1	02/10/2024 19:16	WG2223877

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	02/14/2024 23:09	WG2224600

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	02/15/2024 15:03	WG2225413
Calcium	U		79.3	1000	1	02/15/2024 15:03	WG2225413

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	02/15/2024 16:23	WG2225427
Arsenic	U		0.180	2.00	1	02/15/2024 16:23	WG2225427
Barium	U		0.381	2.00	1	02/15/2024 16:23	WG2225427
Beryllium	U		0.190	2.00	1	02/15/2024 16:23	WG2225427
Cadmium	U		0.150	1.00	1	02/15/2024 16:23	WG2225427
Chromium	U		1.24	2.00	1	02/15/2024 16:23	WG2225427
Cobalt	U		0.0596	2.00	1	02/15/2024 16:23	WG2225427
Lead	U		0.849	2.00	1	02/15/2024 16:23	WG2225427
Molybdenum	U		0.348	5.00	1	02/15/2024 16:23	WG2225427
Selenium	U		0.300	2.00	1	02/15/2024 16:23	WG2225427
Thallium	U		0.121	2.00	1	02/15/2024 16:23	WG2225427
Lithium	U		0.695	2.00	1	02/15/2024 16:23	WG2225427

Method Blank (MB)

(MB) R4034304-1 02/12/24 17:53

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

L1703999-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1703999-08 02/12/24 17:53 • (DUP) R4034304-3 02/12/24 17:53

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2170000	2170000	1	0.115		10

L1704093-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1704093-03 02/12/24 17:53 • (DUP) R4034304-4 02/12/24 17:53

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	672000	680000	1	1.18		10

Laboratory Control Sample (LCS)

(LCS) R4034304-2 02/12/24 17:53

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8600000	97.7	85.0-115	

Method Blank (MB)

(MB) R4034305-1 02/12/24 14:17

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

L1703999-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1703999-07 02/12/24 14:17 • (DUP) R4034305-3 02/12/24 14:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	639000	645000	1	1.04		10

L1703999-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1703999-11 02/12/24 14:17 • (DUP) R4034305-4 02/12/24 14:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1360000	1420000	1	4.17		10

Laboratory Control Sample (LCS)

(LCS) R4034305-2 02/12/24 14:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8500000	96.6	85.0-115	

Method Blank (MB)

(MB) R4033294-1 02/11/24 14:52

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

L1704445-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1704445-18 02/11/24 14:52 • (DUP) R4033294-3 02/11/24 14:52

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	3830000	3800000	1	0.590		10

Sample Narrative:

OS: Results confirmed in duplicate

Laboratory Control Sample (LCS)

(LCS) R4033294-2 02/11/24 14:52

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8370000	95.1	85.0-115	

Method Blank (MB)

(MB) R4034247-1 02/13/24 14:00

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

L1704635-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1704635-03 02/13/24 14:00 • (DUP) R4034247-3 02/13/24 14:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2730000	2920000	1	6.55		10

L1704664-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1704664-03 02/13/24 14:00 • (DUP) R4034247-4 02/13/24 14:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	588000	579000	1	1.60		10

Laboratory Control Sample (LCS)

(LCS) R4034247-2 02/13/24 14:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8550000	97.2	85.0-115	

Method Blank (MB)

(MB) R4034586-1 02/10/24 12:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1704327-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1704327-01 02/10/24 17:25 • (DUP) R4034586-3 02/10/24 18:13

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1280	1230	1	4.22		15
Fluoride	325	316	1	2.81		15
Sulfate	5570	5540	1	0.430		15

L1704330-37 Original Sample (OS) • Duplicate (DUP)

(OS) L1704330-37 02/10/24 21:23 • (DUP) R4034586-6 02/10/24 21:39

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	149000	149000	1	0.300		15
Fluoride	95.9	120	1	22.3	J P1	15
Sulfate	U	U	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R4034586-2 02/10/24 12:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	40100	100	80.0-120	
Fluoride	8000	8520	107	80.0-120	
Sulfate	40000	42600	107	80.0-120	

L1704327-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1704327-01 02/10/24 17:25 • (MS) R4034586-4 02/10/24 18:28 • (MSD) R4034586-5 02/10/24 18:44

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	40000	1280	39500	40000	95.6	96.9	1	80.0-120			1.35	15
Fluoride	8000	325	7780	7910	93.2	94.8	1	80.0-120			1.64	15
Sulfate	40000	5570	45200	45700	99.0	100	1	80.0-120			1.07	15

L1704330-37 Original Sample (OS) • Matrix Spike (MS)

(OS) L1704330-37 02/10/24 21:23 • (MS) R4034586-7 02/10/24 21:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	149000	156000	18.0	1	80.0-120	J6
Fluoride	8000	95.9	7730	95.5	1	80.0-120	
Sulfate	40000	U	41500	104	1	80.0-120	

Method Blank (MB)

(MB) R4033913-1 02/14/24 22:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4033913-2 02/14/24 22:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	3.24	108	80.0-120	

L1704327-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1704327-01 02/14/24 22:48 • (MS) R4033913-3 02/14/24 22:51 • (MSD) R4033913-4 02/14/24 22:53

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 %
Mercury	3.00	U	3.25	3.57	108	119	1	75.0-125			9.50	20

Method Blank (MB)

(MB) R4034398-1 02/15/24 14:43

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

Laboratory Control Sample (LCS)

(LCS) R4034398-2 02/15/24 14:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	956	95.6	80.0-120	
Calcium	10000	10000	100	80.0-120	

L1704462-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1704462-02 02/15/24 14:46 • (MS) R4034398-4 02/15/24 14:50 • (MSD) R4034398-5 02/15/24 14:51

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 %
Boron	1000	1140	2090	2080	94.7	94.0	1	75.0-125			0.319	20
Calcium	10000	449000	451000	450000	21.8	7.77	1	75.0-125	V	V	0.312	20

Method Blank (MB)

(MB) R4034288-1 02/15/24 15:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	1.06		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4034288-2 02/15/24 15:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	49.6	99.1	80.0-120	
Arsenic	50.0	49.8	99.5	80.0-120	
Barium	50.0	46.2	92.3	80.0-120	
Beryllium	50.0	47.7	95.5	80.0-120	
Cadmium	50.0	51.0	102	80.0-120	
Chromium	50.0	51.8	104	80.0-120	
Cobalt	50.0	50.5	101	80.0-120	
Lead	50.0	49.5	98.9	80.0-120	
Molybdenum	50.0	48.7	97.4	80.0-120	
Selenium	50.0	49.6	99.2	80.0-120	
Thallium	50.0	50.3	101	80.0-120	
Lithium	50.0	48.6	97.2	80.0-120	

L1704195-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1704195-05 02/15/24 15:17 • (MS) R4034288-4 02/15/24 15:23 • (MSD) R4034288-5 02/15/24 15:26

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 %
Antimony	50.0	3.50	57.0	56.7	107	106	1	75.0-125			0.542	20
Arsenic	50.0	2.78	53.8	53.8	102	102	1	75.0-125			0.00589	20
Barium	50.0	79.1	125	126	92.8	94.1	1	75.0-125			0.521	20

L1704195-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1704195-05 02/15/24 15:17 • (MS) R4034288-4 02/15/24 15:23 • (MSD) R4034288-5 02/15/24 15:26

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 %
Beryllium	50.0	U	49.9	49.0	99.7	98.0	1	75.0-125			1.71	20
Cadmium	50.0	0.878	51.4	51.1	101	100	1	75.0-125			0.621	20
Chromium	50.0	2.76	56.1	52.8	107	100	1	75.0-125			6.00	20
Cobalt	50.0	1.28	50.7	50.6	98.8	98.6	1	75.0-125			0.171	20
Lead	50.0	5.82	56.0	56.6	100	102	1	75.0-125			0.994	20
Molybdenum	50.0	85.5	139	137	106	103	1	75.0-125			0.933	20
Selenium	50.0	23.4	74.9	75.3	103	104	1	75.0-125			0.594	20
Thallium	50.0	U	51.6	51.9	103	104	1	75.0-125			0.601	20
Lithium	50.0	178	231	227	106	96.3	1	75.0-125			2.06	20

L1704445-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1704445-03 02/15/24 15:30 • (MS) R4034288-6 02/15/24 15:33 • (MSD) R4034288-7 02/15/24 15:36

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 %
Antimony	50.0	U	51.9	52.9	104	106	1	75.0-125			1.86	20
Arsenic	50.0	1.20	51.5	51.7	101	101	1	75.0-125			0.322	20
Barium	50.0	103	150	149	93.8	91.2	1	75.0-125			0.867	20
Beryllium	50.0	U	47.0	46.6	94.1	93.2	1	75.0-125			0.983	20
Cadmium	50.0	0.153	51.1	51.2	102	102	1	75.0-125			0.162	20
Chromium	50.0	4.05	54.9	54.4	102	101	1	75.0-125			0.862	20
Cobalt	50.0	0.568	50.4	50.6	99.6	100	1	75.0-125			0.410	20
Lead	50.0	3.80	50.5	52.6	93.4	97.7	1	75.0-125			4.16	20
Molybdenum	50.0	1.90	53.0	54.8	102	106	1	75.0-125			3.28	20
Selenium	50.0	0.345	50.7	50.9	101	101	1	75.0-125			0.439	20
Thallium	50.0	U	48.0	49.7	96.1	99.4	1	75.0-125			3.38	20
Lithium	50.0	6.68	51.9	51.8	90.4	90.3	1	75.0-125			0.0530	20

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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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

Report to: **Dana Derrington**

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): MICHAEL CLAYTON

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y U

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

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres				Remarks	Sample # (lab only)
MW-104	Grab	GW		2/7/24	1430	5	X	X	X	X	X	X					-01
MW-110		GW		2/7/24	1630	5	X	X	X	X	X	X					-02
MW-120		GW					X	X	X	X	X	X					
MW-121		GW		2/7/24	1535	5	X	X	X	X	X	X					-03
MW-110 DUP		GW		2/7/24	1635	5	X	X	X	X	X	X					-04
EPA EB-BG		GW		2/7/24	1655	5	X	X	X	X	X	X					-05
		GW					X	X	X	X	X	X					
		GW					X	X	X	X	X	X					
		GW					X	X	X	X	X	X					

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1704327
C093

T

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1052899**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via:

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

PH-10BDH6021 TRC-2352362
CR6-20221V

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	2/8/24	1220		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.0 °C Bottles Received: 25
				3.6+0-3.8
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 2/9/24 Time: 0900

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

ANALYTICAL REPORT

March 08, 2024

Plum Point Services Co., LLC

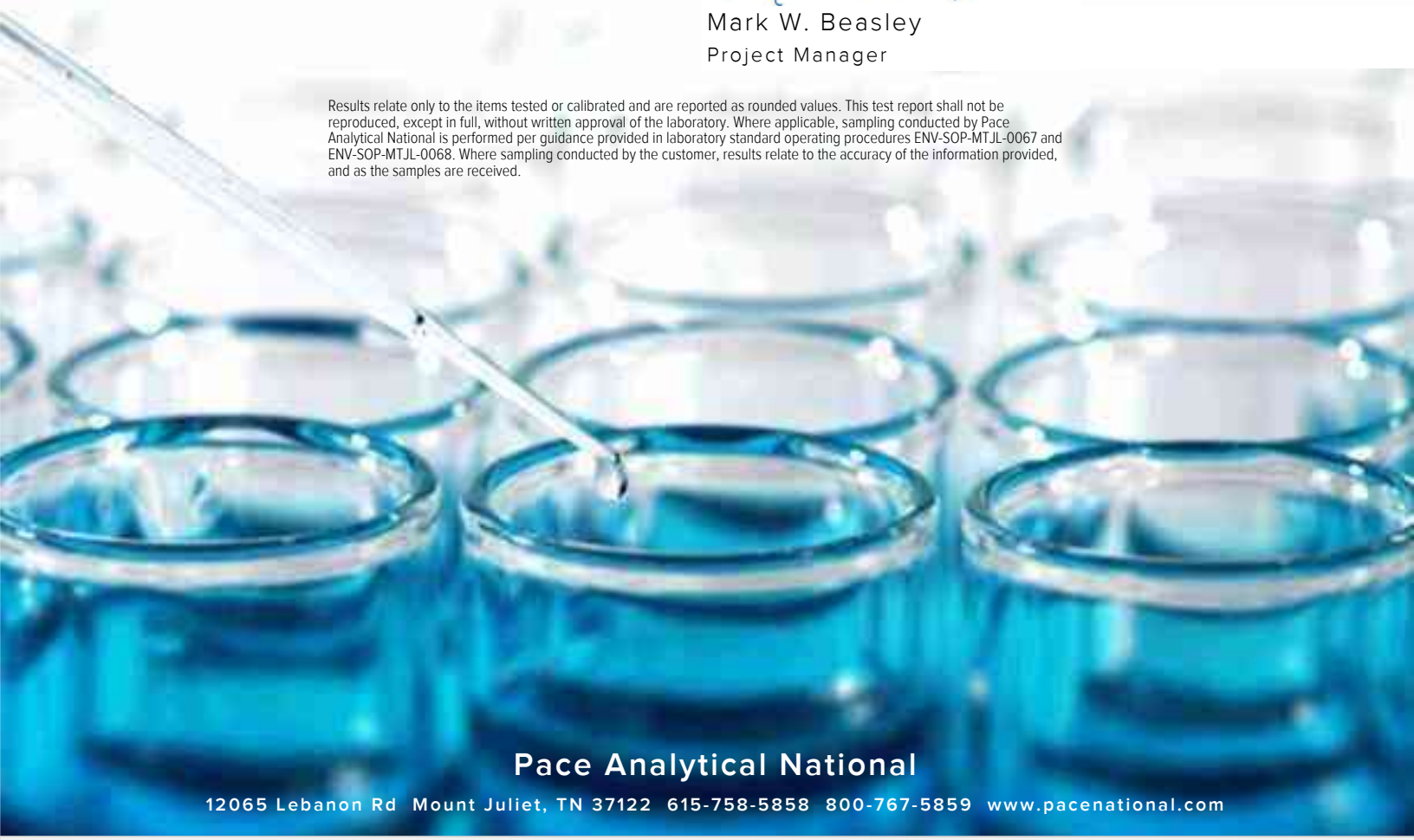
Sample Delivery Group:	L1704328
Samples Received:	02/09/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

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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MW-104 L1704328-01 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 02/07/24 14:30 | Received date/time: 02/09/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2231206	1	02/21/24 23:50	02/28/24 21:29	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2225973	1	02/15/24 09:06	02/28/24 21:29	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2225973	1	02/15/24 09:06	02/16/24 18:45	ZRG	Mt. Juliet, TN

MW-110 L1704328-02 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 02/07/24 16:30 | Received date/time: 02/09/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2234372	1	02/26/24 18:46	03/05/24 21:46	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2225973	1	02/15/24 09:06	03/05/24 21:46	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2225973	1	02/15/24 09:06	02/16/24 18:45	ZRG	Mt. Juliet, TN

MW-121 L1704328-03 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 02/07/24 15:35 | Received date/time: 02/09/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2234372	1	02/26/24 18:46	03/05/24 21:46	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2225973	1	02/15/24 09:06	03/05/24 21:46	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2225973	1	02/15/24 09:06	02/16/24 18:45	ZRG	Mt. Juliet, TN

MW-110 DUP L1704328-04 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 02/07/24 16:35 | Received date/time: 02/09/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2234372	1	02/26/24 18:46	03/05/24 21:46	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2225973	1	02/15/24 09:06	03/05/24 21:46	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2225973	1	02/15/24 09:06	02/16/24 18:45	ZRG	Mt. Juliet, TN

EPA EB-BG L1704328-05 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 02/07/24 16:55 | Received date/time: 02/09/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2234372	1	02/26/24 18:46	03/05/24 21:46	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2225973	1	02/15/24 09:06	03/05/24 21:46	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2225973	1	02/15/24 09:06	02/16/24 18:45	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.781		0.325	1.20	0.276	0.142	02/28/2024 21:29	WG2231206
(T) Barium	*120*					*30.0-143*	*02/28/2024 21:29*	WG2231206
(T) Yttrium	*99.0*					*30.0-136*	*02/28/2024 21:29*	WG2231206

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.929		0.411	0.473	02/28/2024 21:29	WG2225973

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.148	J	0.251	0.0994	0.384	0.258	02/16/2024 18:45	WG2225973
(T) Barium-133	*89.2*					*30.0-143*	*02/16/2024 18:45*	WG2225973

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.511	J	0.292	1.54	0.529	0.279	03/05/2024 21:46	WG2234372
(T) Barium	*133*					*30.0-143*	*03/05/2024 21:46*	WG2234372
(T) Yttrium	*107*					*30.0-136*	*03/05/2024 21:46*	WG2234372

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.20		0.469	0.618	03/05/2024 21:46	WG2225973

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.693		0.367	0.165	0.319	0.223	02/16/2024 18:45	WG2225973
(T) Barium-133	*90.0*					*30.0-143*	*02/16/2024 18:45*	WG2225973

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.460	J	0.259	1.34	0.468	0.245	03/05/2024 21:46	WG2234372
(T) Barium	*128*					*30.0-143*	*03/05/2024 21:46*	WG2234372
(T) Yttrium	*93.4*					*30.0-136*	*03/05/2024 21:46*	WG2234372

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.883		0.392	0.560	03/05/2024 21:46	WG2225973

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.423		0.294	0.138	0.307	0.215	02/16/2024 18:45	WG2225973
(T) Barium-133	*95.9*					*30.0-143*	*02/16/2024 18:45*	WG2225973

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.213	U	0.263	2.02	0.484	0.254	03/05/2024 21:46	WG2234372
(T) Barium	*122*					*30.0-143*	*03/05/2024 21:46*	WG2234372
(T) Yttrium	*95.8*					*30.0-136*	*03/05/2024 21:46*	WG2234372

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.574	J	0.393	0.593	03/05/2024 21:46	WG2225973

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.361		0.292	0.130	0.342	0.233	02/16/2024 18:45	WG2225973
(T) Barium-133	*93.3*					*30.0-143*	*02/16/2024 18:45*	WG2225973

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.326	J	0.261	1.58	0.477	0.250	03/05/2024 21:46	WG2234372
(T) Barium	*125*					*30.0-143*	*03/05/2024 21:46*	WG2234372
(T) Yttrium	*95.2*					*30.0-136*	*03/05/2024 21:46*	WG2234372

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.451	J	0.329	0.567	03/05/2024 21:46	WG2225973

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.126	J	0.200	0.0905	0.307	0.213	02/16/2024 18:45	WG2225973
(T) Barium-133	*99.5*					*30.0-143*	*02/16/2024 18:45*	WG2225973

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

Method Blank (MB)

(MB) R4042409-1 02/28/24 21:29

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.384		0.182	0.155	
(T) Barium	*120*		*120*		
(T) Yttrium	*108*		*108*		

L1703250-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1703250-01 03/04/24 21:31 • (DUP) R4042409-6 03/04/24 21:31

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	299	1.97	0.631	0.331	384	2.22	0.548		24.7	28.5	J3	20	3
(T) Barium	*587*				*930*	*930*					C1		
(T) Yttrium	*101*				*99.2*	*99.2*							

Laboratory Control Sample (LCS)

(LCS) R4042409-2 02/28/24 21:29

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.81	96.2	80.0-120	
(T) Barium			*118*		
(T) Yttrium			*103*		

L1702038-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1702038-08 02/28/24 21:29 • (MS) R4042409-3 02/28/24 21:29 • (MSD) R4042409-4 02/28/24 21:29

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.26	16.4	15.6	90.7	85.6	1	70.0-130			5.26		20
(T) Barium		*126*			*127*	*126*							
(T) Yttrium		*97.8*			*108*	*101*							

Method Blank (MB)

(MB) R4042402-1 03/05/24 21:46

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.000	U	0.141	0.264	0.139
(T) Barium	*125*		*125*		
(T) Yttrium	*98.9*		*98.9*		

L1704328-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1704328-02 03/05/24 21:46 • (DUP) R4042402-5 03/05/24 21:46

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.511	0.292	0.529	0.279	-0.326	0.365	0.687	0.358	200	1.79	U	20	3
(T) Barium	*133*				*126*	*126*							
(T) Yttrium	*107*				*109*	*109*							

Laboratory Control Sample (LCS)

(LCS) R4042402-2 03/05/24 21:46

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.20	104	80.0-120	
(T) Barium			*126*		
(T) Yttrium			*98.4*		

L1703627-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1703627-05 03/05/24 21:46 • (MS) R4042402-3 03/05/24 21:46 • (MSD) R4042402-4 03/05/24 21:46

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.18	18.6	15.8	104	87.6	1	70.0-130			16.2		20
(T) Barium		*122*			*130*	*120*							
(T) Yttrium		*103*			*109*	*99.6*							

Method Blank (MB)

(MB) R4036386-5 02/16/24 18:45

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.000	U	0.0237	0.0493	0.0321
(T) Barium-133	*76.9*		*76.9*		

L1704328-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1704328-01 02/16/24 18:45 • (DUP) R4036386-4 02/16/24 18:40

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.148	0.251	0.384	0.258	0.169	0.250	0.375	0.262	12.8	0.0573	J	20	3
(T) Barium-133	*89.2*				*66.5*	*66.5*							

Laboratory Control Sample (LCS)

(LCS) R4036386-1 02/16/24 18:40

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.23	105	80.0-120	
(T) Barium-133			*74.7*		

L1705227-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1705227-03 02/16/24 18:45 • (MS) R4036386-2 02/16/24 18:40 • (MSD) R4036386-3 02/16/24 18:40

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.372	21.0	21.2	103	104	1	75.0-125			1.23		20
(T) Barium-133		*95.8*			*75.9*	*72.9*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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
C1	Tracer recovery limits have been exceeded; values are outside upper control limits.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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/Ad: **Plum Poi[illegible]ervices Co., LLC**
2739 SCR 623
Osceola, AR 72370

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

Pres Chk

Report to: **Dana Derrington**

Email To: dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): MICHAEL CLAYTON

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature): Michael C

Immediately Packed on Ice N ___ Y V

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

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-104	Grab	GW		2/7/24	1430	5	X	X	X	X	X	X		-01
MW-110		GW		2/7/24	1630	5	X	X	X	X	X	X		-02
MW-120		GW					X	X	X	X	X	X		
MW-121		GW		2/7/24	1535	5	X	X	X	X	X	X		-03
MW-110 DUP		GW		2/7/24	1635	5	X	X	X	X	X	X		-04
EPA EB-BG		GW		2/7/24	1655	5	X	X	X	X	X	X		-05
		GW					X	X	X	X	X	X		
		GW					X	X	X	X	X	X		
		GW					X	X	X	X	X	X		

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L704328
C093

T

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1052899**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via:

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl
PH-10BDH5021 TRC-2352362
CR6-20221V

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Michael C	2/8/24	1220		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.0 °C Bottles Received: 25
				3.6+0-3.8
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 2/9/24 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

MONTHLY BACKGROUND SAMPLING EVENT
MARCH 2024

ANALYTICAL REPORT

March 28, 2024

Plum Point Services Co., LLC

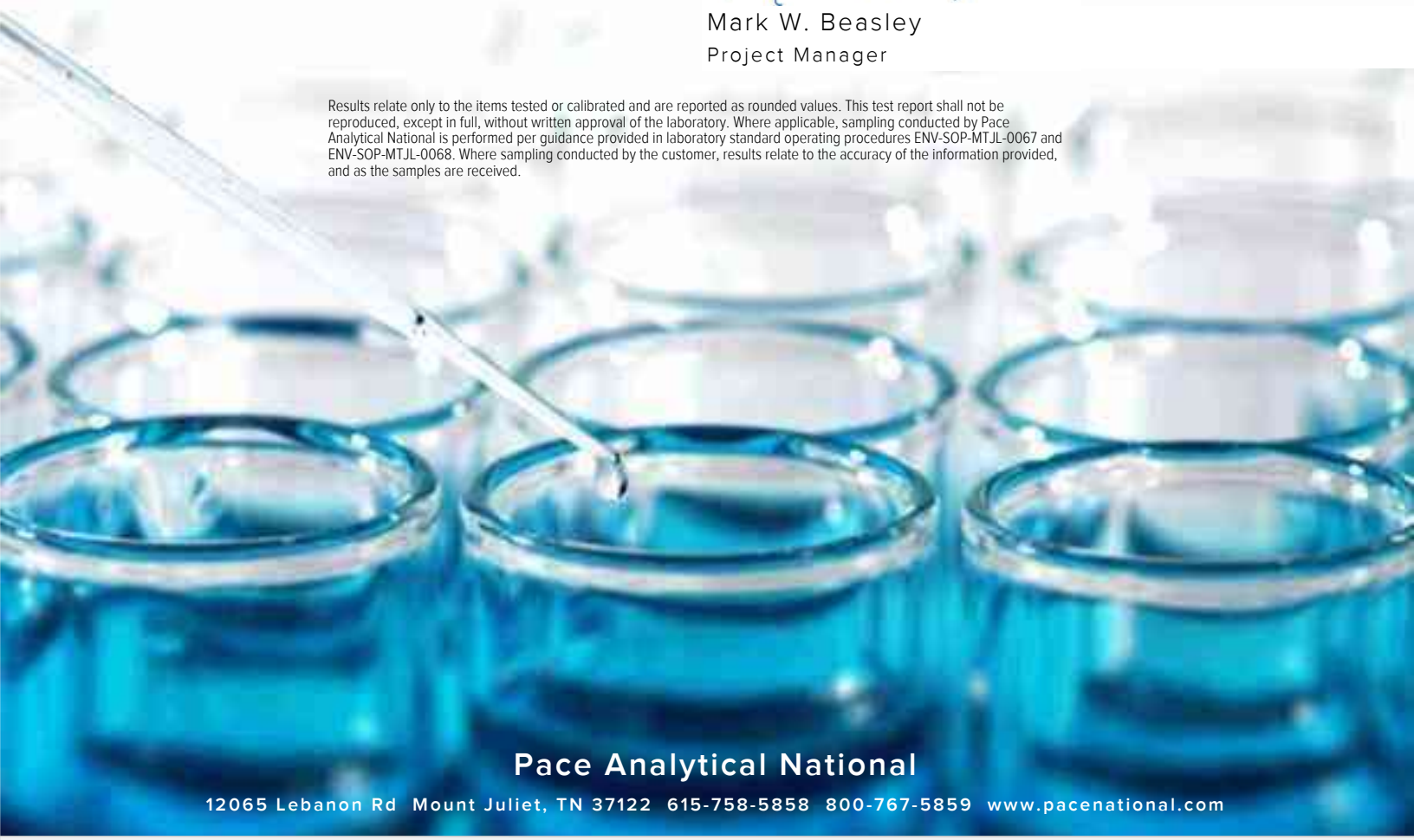
Sample Delivery Group:	L1715945
Samples Received:	03/16/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

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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MW-104 L1715945-01 GW

Collected by: Michael Clayton | Collected date/time: 03/14/24 18:20 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2250575	1	03/20/24 23:39	03/21/24 12:23	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2253206	1	03/27/24 02:44	03/27/24 02:44	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2248092	1	03/18/24 12:43	03/19/24 11:51	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2250114	1	03/21/24 08:49	03/21/24 11:39	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2250469	1	03/22/24 03:54	03/27/24 12:57	JPD	Mt. Juliet, TN

MW-110 L1715945-02 GW

Collected by: Michael Clayton | Collected date/time: 03/14/24 15:00 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2250575	1	03/20/24 23:39	03/21/24 12:23	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2253206	1	03/27/24 03:48	03/27/24 03:48	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2248092	1	03/18/24 12:43	03/19/24 11:54	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2250114	1	03/21/24 08:49	03/21/24 11:41	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2250469	1	03/22/24 03:54	03/27/24 13:00	JPD	Mt. Juliet, TN

MW-121 L1715945-03 GW

Collected by: Michael Clayton | Collected date/time: 03/14/24 16:00 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2250575	1	03/20/24 23:39	03/21/24 12:23	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2253206	1	03/27/24 04:01	03/27/24 04:01	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2248092	1	03/18/24 12:43	03/19/24 11:56	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2250114	1	03/21/24 08:49	03/21/24 11:43	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2250469	1	03/22/24 03:54	03/27/24 13:03	JPD	Mt. Juliet, TN

MW-121 DUP L1715945-04 GW

Collected by: Michael Clayton | Collected date/time: 03/14/24 16:05 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2250575	1	03/20/24 23:39	03/21/24 12:23	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2253206	1	03/27/24 04:14	03/27/24 04:14	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2248092	1	03/18/24 12:43	03/19/24 12:03	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2250460	1	03/21/24 14:12	03/21/24 19:32	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2250469	1	03/22/24 03:54	03/27/24 13:06	JPD	Mt. Juliet, TN

EPA EB-EG L1715945-05 GW

Collected by: Michael Clayton | Collected date/time: 03/14/24 18:45 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2250575	1	03/20/24 23:39	03/21/24 12:23	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2253206	1	03/27/24 04:26	03/27/24 04:26	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2248092	1	03/18/24 12:43	03/19/24 12:05	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2250460	1	03/21/24 14:12	03/21/24 19:39	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2250469	1	03/22/24 03:54	03/27/24 13:10	JPD	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	315000		10000	1	03/21/2024 12:23	WG2250575

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1140	P1	379	1000	1	03/27/2024 02:44	WG2253206
Fluoride	259	P1	64.0	150	1	03/27/2024 02:44	WG2253206
Sulfate	3480	J	594	5000	1	03/27/2024 02:44	WG2253206

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	03/19/2024 11:51	WG2248092

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	59.7	B J	20.0	200	1	03/21/2024 11:39	WG2250114
Calcium	88400		79.3	1000	1	03/21/2024 11:39	WG2250114

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	1.22	J	1.03	4.00	1	03/27/2024 12:57	WG2250469
Arsenic	7.28		0.180	2.00	1	03/27/2024 12:57	WG2250469
Barium	180		0.381	2.00	1	03/27/2024 12:57	WG2250469
Beryllium	U		0.190	2.00	1	03/27/2024 12:57	WG2250469
Cadmium	U		0.150	1.00	1	03/27/2024 12:57	WG2250469
Chromium	U		1.24	2.00	1	03/27/2024 12:57	WG2250469
Cobalt	0.118	J	0.0596	2.00	1	03/27/2024 12:57	WG2250469
Lead	U		0.849	2.00	1	03/27/2024 12:57	WG2250469
Molybdenum	1.31	J	0.348	5.00	1	03/27/2024 12:57	WG2250469
Selenium	6.16		0.300	2.00	1	03/27/2024 12:57	WG2250469
Thallium	U		0.121	2.00	1	03/27/2024 12:57	WG2250469
Lithium	7.30		0.695	2.00	1	03/27/2024 12:57	WG2250469

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	271000		10000	1	03/21/2024 12:23	WG2250575

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1190		379	1000	1	03/27/2024 03:48	WG2253206
Fluoride	123	J	64.0	150	1	03/27/2024 03:48	WG2253206
Sulfate	4950	J	594	5000	1	03/27/2024 03:48	WG2253206

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/19/2024 11:54	WG2248092

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	54.2	B J	20.0	200	1	03/21/2024 11:41	WG2250114
Calcium	68700		79.3	1000	1	03/21/2024 11:41	WG2250114

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	03/27/2024 13:00	WG2250469
Arsenic	6.67		0.180	2.00	1	03/27/2024 13:00	WG2250469
Barium	212		0.381	2.00	1	03/27/2024 13:00	WG2250469
Beryllium	U		0.190	2.00	1	03/27/2024 13:00	WG2250469
Cadmium	U		0.150	1.00	1	03/27/2024 13:00	WG2250469
Chromium	U		1.24	2.00	1	03/27/2024 13:00	WG2250469
Cobalt	0.485	J	0.0596	2.00	1	03/27/2024 13:00	WG2250469
Lead	U		0.849	2.00	1	03/27/2024 13:00	WG2250469
Molybdenum	U		0.348	5.00	1	03/27/2024 13:00	WG2250469
Selenium	U		0.300	2.00	1	03/27/2024 13:00	WG2250469
Thallium	U		0.121	2.00	1	03/27/2024 13:00	WG2250469
Lithium	5.81		0.695	2.00	1	03/27/2024 13:00	WG2250469

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	120000		10000	1	03/21/2024 12:23	WG2250575

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1200		379	1000	1	03/27/2024 04:01	WG2253206
Fluoride	71.7	J	64.0	150	1	03/27/2024 04:01	WG2253206
Sulfate	3320	J	594	5000	1	03/27/2024 04:01	WG2253206

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/19/2024 11:56	WG2248092

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	30.0	B J	20.0	200	1	03/21/2024 11:43	WG2250114
Calcium	26800		79.3	1000	1	03/21/2024 11:43	WG2250114

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	03/27/2024 13:03	WG2250469
Arsenic	1.18	J	0.180	2.00	1	03/27/2024 13:03	WG2250469
Barium	71.9		0.381	2.00	1	03/27/2024 13:03	WG2250469
Beryllium	U		0.190	2.00	1	03/27/2024 13:03	WG2250469
Cadmium	U		0.150	1.00	1	03/27/2024 13:03	WG2250469
Chromium	U		1.24	2.00	1	03/27/2024 13:03	WG2250469
Cobalt	0.182	J	0.0596	2.00	1	03/27/2024 13:03	WG2250469
Lead	U		0.849	2.00	1	03/27/2024 13:03	WG2250469
Molybdenum	U		0.348	5.00	1	03/27/2024 13:03	WG2250469
Selenium	U		0.300	2.00	1	03/27/2024 13:03	WG2250469
Thallium	U		0.121	2.00	1	03/27/2024 13:03	WG2250469
Lithium	1.99	J	0.695	2.00	1	03/27/2024 13:03	WG2250469

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	116000		10000	1	03/21/2024 12:23	WG2250575

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	981	J	379	1000	1	03/27/2024 04:14	WG2253206
Fluoride	88.3	J	64.0	150	1	03/27/2024 04:14	WG2253206
Sulfate	3570	J	594	5000	1	03/27/2024 04:14	WG2253206

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/19/2024 12:03	WG2248092

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	37.3	J	20.0	200	1	03/21/2024 19:32	WG2250460
Calcium	26200		79.3	1000	1	03/21/2024 19:32	WG2250460

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	03/27/2024 13:06	WG2250469
Arsenic	1.14	J	0.180	2.00	1	03/27/2024 13:06	WG2250469
Barium	69.8		0.381	2.00	1	03/27/2024 13:06	WG2250469
Beryllium	U		0.190	2.00	1	03/27/2024 13:06	WG2250469
Cadmium	U		0.150	1.00	1	03/27/2024 13:06	WG2250469
Chromium	U		1.24	2.00	1	03/27/2024 13:06	WG2250469
Cobalt	0.0707	J	0.0596	2.00	1	03/27/2024 13:06	WG2250469
Lead	U		0.849	2.00	1	03/27/2024 13:06	WG2250469
Molybdenum	U		0.348	5.00	1	03/27/2024 13:06	WG2250469
Selenium	U		0.300	2.00	1	03/27/2024 13:06	WG2250469
Thallium	U		0.121	2.00	1	03/27/2024 13:06	WG2250469
Lithium	1.97	J	0.695	2.00	1	03/27/2024 13:06	WG2250469

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	03/21/2024 12:23	WG2250575

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	507	J	379	1000	1	03/27/2024 04:26	WG2253206
Fluoride	U		64.0	150	1	03/27/2024 04:26	WG2253206
Sulfate	U		594	5000	1	03/27/2024 04:26	WG2253206

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	03/19/2024 12:05	WG2248092

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	03/21/2024 19:39	WG2250460
Calcium	U		79.3	1000	1	03/21/2024 19:39	WG2250460

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	03/27/2024 13:10	WG2250469
Arsenic	U		0.180	2.00	1	03/27/2024 13:10	WG2250469
Barium	U		0.381	2.00	1	03/27/2024 13:10	WG2250469
Beryllium	U		0.190	2.00	1	03/27/2024 13:10	WG2250469
Cadmium	U		0.150	1.00	1	03/27/2024 13:10	WG2250469
Chromium	U		1.24	2.00	1	03/27/2024 13:10	WG2250469
Cobalt	U		0.0596	2.00	1	03/27/2024 13:10	WG2250469
Lead	U		0.849	2.00	1	03/27/2024 13:10	WG2250469
Molybdenum	U		0.348	5.00	1	03/27/2024 13:10	WG2250469
Selenium	U		0.300	2.00	1	03/27/2024 13:10	WG2250469
Thallium	U		0.121	2.00	1	03/27/2024 13:10	WG2250469
Lithium	U		0.695	2.00	1	03/27/2024 13:10	WG2250469

Method Blank (MB)

(MB) R4049388-1 03/21/24 12:23

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

L1715902-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1715902-01 03/21/24 12:23 • (DUP) R4049388-3 03/21/24 12:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	764000	808000	1	5.60		10

L1715902-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1715902-04 03/21/24 12:23 • (DUP) R4049388-4 03/21/24 12:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	621000	652000	1	4.82		10

Laboratory Control Sample (LCS)

(LCS) R4049388-2 03/21/24 12:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8830000	100	85.0-115	

Method Blank (MB)

(MB) R4050465-1 03/26/24 09:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1715945-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1715945-01 03/27/24 02:44 • (DUP) R4050465-3 03/27/24 02:57

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1140	1370	1	17.9	P1	15
Fluoride	259	172	1	40.3	P1	15
Sulfate	3480	3370	1	3.01	J	15

L1715989-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1715989-07 03/27/24 04:52 • (DUP) R4050465-5 03/27/24 05:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	67700	66300	10	2.10		15
Fluoride	U	U	10	0.000		15
Sulfate	1180000	1160000	10	1.58		15

Laboratory Control Sample (LCS)

(LCS) R4050465-2 03/26/24 09:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38500	96.3	80.0-120	
Fluoride	8000	8010	100	80.0-120	
Sulfate	40000	37600	93.9	80.0-120	

L1715945-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1715945-01 03/27/24 02:44 • (MS) R4050465-4 03/27/24 03:35

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1140	39900	96.9	1	80.0-120	
Fluoride	8000	259	8330	101	1	80.0-120	
Sulfate	40000	3480	41000	93.8	1	80.0-120	

L1715989-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715989-07 03/27/24 04:52 • (MS) R4050465-7 03/27/24 06:09 • (MSD) R4050465-8 03/27/24 06:22

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	40000	67700	190000	186000	305	295	10	80.0-120	J5	J5	2.15	15
Fluoride	8000	U	13900	14200	173	177	10	80.0-120	J5	J5	2.16	15
Sulfate	40000	1180000	1960000	1930000	1950	1870	10	80.0-120	V	V	1.49	15

Sample Narrative:

MS: Spike failure due to matrix interference

MSD: Spike failure due to matrix interference

Method Blank (MB)

(MB) R4047304-1 03/19/24 10:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4047304-2 03/19/24 11:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.96	98.6	80.0-120	

L1715989-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715989-07 03/19/24 11:08 • (MS) R4047304-3 03/19/24 11:10 • (MSD) R4047304-4 03/19/24 11:12

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 %
Mercury	3.00	U	3.04	3.02	101	101	1	75.0-125			0.695	20

Method Blank (MB)

(MB) R4048380-1 03/21/24 11:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	25.7	J	20.0	200
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R4048380-2 03/21/24 11:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	971	97.1	80.0-120	
Calcium	10000	9760	97.6	80.0-120	

L1715989-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715989-07 03/21/24 11:20 • (MS) R4048380-4 03/21/24 11:23 • (MSD) R4048380-5 03/21/24 11:24

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 %
Boron	1000	264	1240	1230	97.1	96.2	1	75.0-125			0.728	20
Calcium	10000	516000	512000	511000	0.000	0.000	1	75.0-125	V	V	0.200	20

Method Blank (MB)

(MB) R4048572-1 03/21/24 19:29

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

Laboratory Control Sample (LCS)

(LCS) R4048572-2 03/21/24 19:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	969	96.9	80.0-120	
Calcium	10000	9880	98.8	80.0-120	

L1715945-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715945-04 03/21/24 19:32 • (MS) R4048572-4 03/21/24 19:35 • (MSD) R4048572-5 03/21/24 19:37

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 %
Boron	1000	37.3	1000	996	96.3	95.8	1	75.0-125			0.502	20
Calcium	10000	26200	35700	35100	95.1	89.0	1	75.0-125			1.72	20

QUALITY CONTROL SUMMARY

L1715945-01,02,03,04,05

Method Blank (MB)

(MB) R4050476-1 03/27/24 11:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	0.596	J	0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	0.123	J	0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4050476-2 03/27/24 11:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	52.2	104	80.0-120	
Arsenic	50.0	51.5	103	80.0-120	
Barium	50.0	49.7	99.5	80.0-120	
Beryllium	50.0	46.4	92.7	80.0-120	
Cadmium	50.0	50.7	101	80.0-120	
Chromium	50.0	51.3	103	80.0-120	
Cobalt	50.0	52.1	104	80.0-120	
Lead	50.0	50.2	100	80.0-120	
Molybdenum	50.0	51.1	102	80.0-120	
Selenium	50.0	51.6	103	80.0-120	
Thallium	50.0	48.7	97.3	80.0-120	
Lithium	50.0	45.1	90.2	80.0-120	

L1715989-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715989-07 03/27/24 11:18 • (MS) R4050476-4 03/27/24 11:25 • (MSD) R4050476-5 03/27/24 11:28

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 %
Antimony	50.0	U	55.4	53.4	111	107	1	75.0-125			3.70	20
Arsenic	50.0	0.748	52.2	52.8	103	104	1	75.0-125			1.02	20
Barium	50.0	28.2	83.4	88.8	110	121	1	75.0-125			6.33	20

L1715989-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715989-07 03/27/24 11:18 • (MS) R4050476-4 03/27/24 11:25 • (MSD) R4050476-5 03/27/24 11:28

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 %
Beryllium	50.0	U	45.7	46.9	91.4	93.8	1	75.0-125			2.60	20
Cadmium	50.0	U	51.9	52.5	104	105	1	75.0-125			1.25	20
Chromium	50.0	U	51.6	52.1	103	104	1	75.0-125			0.910	20
Cobalt	50.0	0.454	50.8	51.0	101	101	1	75.0-125			0.364	20
Lead	50.0	U	49.7	51.3	99.5	103	1	75.0-125			3.12	20
Molybdenum	50.0	6.49	59.9	59.1	107	105	1	75.0-125			1.47	20
Selenium	50.0	13.2	65.5	64.6	105	103	1	75.0-125			1.30	20
Thallium	50.0	U	50.3	51.0	101	102	1	75.0-125			1.44	20
Lithium	50.0	36.5	81.3	81.3	89.5	89.6	1	75.0-125			0.102	20

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
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
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

Report to: **Dana Derrington**

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature): Michael Clayton

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-104	Grab	GW		3/14/24	1820		X	X	X	X	X	X		-01
MW-110		GW			1500		X	X	X	X	X	X		-02
MW-120		GW					X	X	X	X	X	X		
MW-121		GW			1600		X	X	X	X	X	X		-03
~~MW-120 DUP~~ MW121 Dup		GW			1605		X	X	X	X	X	X		-04
EPA EB-BG		GW			1845		X	X	X	X	X	X		-05
		GW					X	X	X	X	X	X		
		GW					X	X	X	X	X	X		
		GW					X	X	X	X	X	X		

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1715945
A191

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1061311**
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:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓FedEx __ Courier _____

Tracking # 732096004 4030

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)	Date:	Time:	Received by: (Signature)
Michael Clayton	3/15/24	1500	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			CRoberts

Trip Blank Received: Yes / (No)
HCL / MeoH
TBR

Temp: 2.7+0=2.7 °C TLA9
Bottles Received: 25

PH-10BDH6021 TRC-2362352
CR6-20221V

Date/Time

Date: 03.16.24 Time: 0900

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

April 24, 2024

Plum Point Services Co., LLC

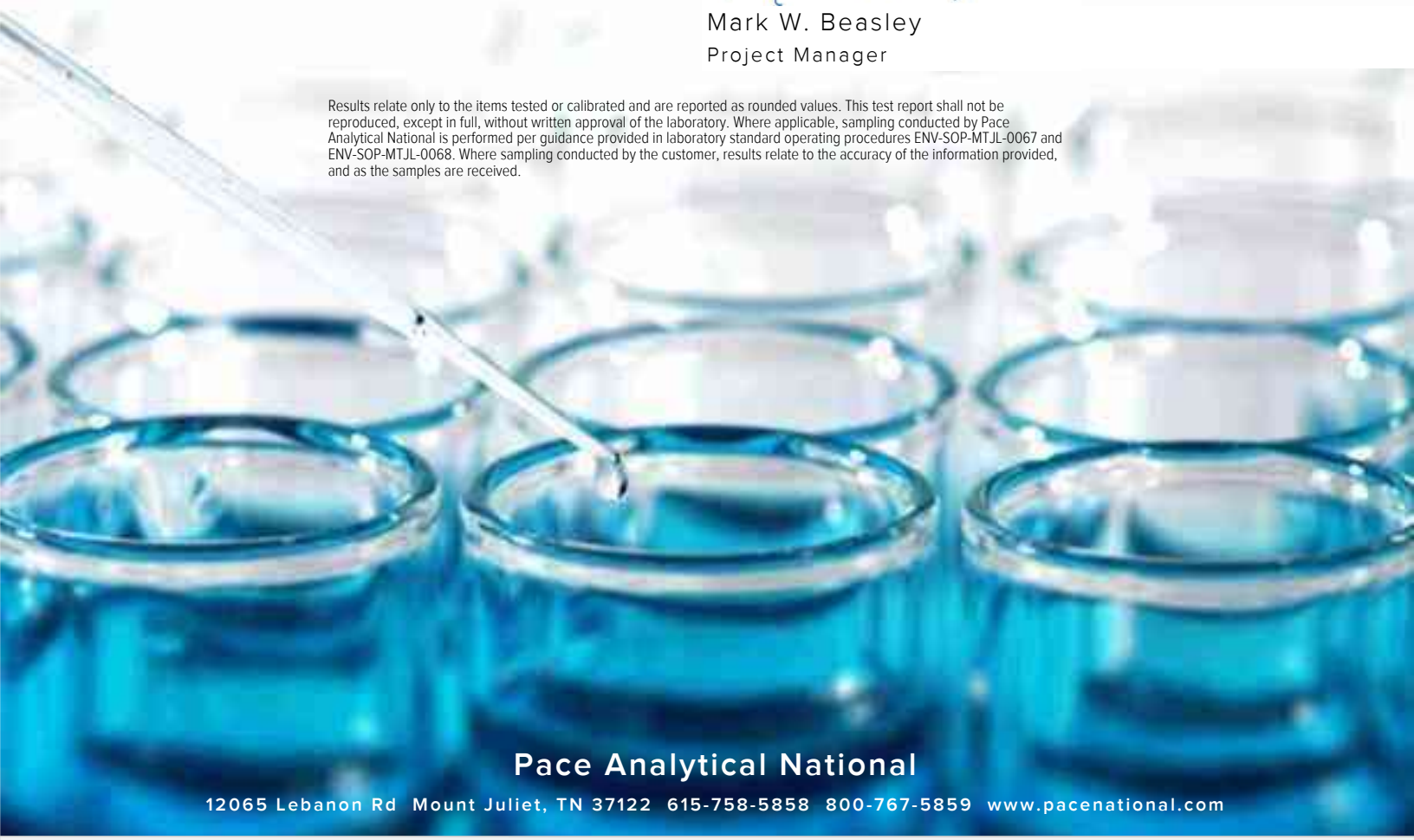
Sample Delivery Group:	L1715946
Samples Received:	03/16/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

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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MW-104 L1715946-01 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 03/14/24 18:20 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2262398	1	04/08/24 08:21	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2253292	1	03/26/24 08:22	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2253292	1	03/26/24 08:22	03/27/24 18:41	ZRG	Mt. Juliet, TN

MW-110 L1715946-03 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 03/14/24 15:00 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2262398	1	04/08/24 08:21	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2253292	1	03/26/24 08:22	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2253292	1	03/26/24 08:22	03/27/24 18:41	ZRG	Mt. Juliet, TN

MW-121 L1715946-04 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 03/14/24 16:00 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2262398	1	04/08/24 08:21	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2253292	1	03/26/24 08:22	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2253292	1	03/26/24 08:22	03/27/24 18:41	ZRG	Mt. Juliet, TN

MW-121 DUP L1715946-05 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 03/14/24 16:05 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2262398	1	04/08/24 08:21	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2253292	1	03/26/24 08:22	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2253292	1	03/26/24 08:22	03/27/24 18:41	ZRG	Mt. Juliet, TN

EPA EB-EG L1715946-06 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 03/14/24 18:45 | Received date/time: 03/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2262398	1	04/08/24 08:21	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2253292	1	03/26/24 08:22	04/16/24 22:39	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2253292	1	03/26/24 08:22	03/27/24 18:41	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.937		0.287	0.411	0.510	0.271	04/16/2024 22:39	WG2262398
(T) Barium	*107*					*30.0-143*	*04/16/2024 22:39*	WG2262398
(T) Yttrium	*90.8*					*30.0-136*	*04/16/2024 22:39*	WG2262398

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.20		0.353	0.541	04/16/2024 22:39	WG2253292

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.265		0.205	0.0913	0.179	0.148	03/27/2024 18:41	WG2253292
(T) Barium-133	*87.9*					*30.0-143*	*03/27/2024 18:41*	WG2253292

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0691	U	0.269	1.16	0.504	0.263	04/16/2024 22:39	WG2262398
(T) Barium	*94.2*					*30.0-143*	*04/16/2024 22:39*	WG2262398
(T) Yttrium	*102*					*30.0-136*	*04/16/2024 22:39*	WG2262398

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.335	J	0.338	0.535	04/16/2024 22:39	WG2253292

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.266		0.205	0.0885	0.180	0.149	03/27/2024 18:41	WG2253292
(T) Barium-133	*84.9*					*30.0-143*	*03/27/2024 18:41*	WG2253292

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.141	U	0.201	0.815	0.388	0.204	04/16/2024 22:39	WG2262398
(T) Barium	*106*					*30.0-143*	*04/16/2024 22:39*	WG2262398
(T) Yttrium	*107*					*30.0-136*	*04/16/2024 22:39*	WG2262398

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.189	J	0.267	0.428	04/16/2024 22:39	WG2253292

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.189		0.176	0.0751	0.181	0.150	03/27/2024 18:41	WG2253292
(T) Barium-133	*84.7*					*30.0-143*	*03/27/2024 18:41*	WG2253292

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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.0324	U	0.240	1.04	0.452	0.236	04/16/2024 22:39	WG2262398
(T) Barium	*102*					*30.0-143*	*04/16/2024 22:39*	WG2262398
(T) Yttrium	*105*					*30.0-136*	*04/16/2024 22:39*	WG2262398

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0324	U	0.242	0.480	04/16/2024 22:39	WG2253292

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	-0.00704	U	0.0309	0.00670	0.162	0.134	03/27/2024 18:41	WG2253292
(T) Barium-133	*95.1*					*30.0-143*	*03/27/2024 18:41*	WG2253292

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.326	J	0.226	0.623	0.417	0.219	04/16/2024 22:39	WG2262398
(T) Barium	*105*					*30.0-143*	*04/16/2024 22:39*	WG2262398
(T) Yttrium	*98.0*					*30.0-136*	*04/16/2024 22:39*	WG2262398

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.389	J	0.248	0.448	04/16/2024 22:39	WG2253292

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0635	J	0.103	0.0466	0.163	0.134	03/27/2024 18:41	WG2253292
(T) Barium-133	*92.4*					*30.0-143*	*03/27/2024 18:41*	WG2253292

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

QUALITY CONTROL SUMMARY

L1715946-01,03,04,05,06

Method Blank (MB)

(MB) R4060613-1 04/16/24 22:39

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.0473	U	0.172	0.323	0.169
(T) Barium	*107*		*107*		
(T) Yttrium	*121*		*121*		

L1716396-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1716396-04 04/16/24 22:39 • (DUP) R4060613-4 04/16/24 22:39

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	7.70	0.608	0.862	0.458	6.14	0.536	0.786	0.417	22.6	1.93		20	3
(T) Barium	*116*				*125*	*125*							
(T) Yttrium	*88.9*				*108*	*108*							

Laboratory Control Sample (LCS)

(LCS) R4060613-2 04/16/24 22:39

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.32	86.5	80.0-120	
(T) Barium			*121*		
(T) Yttrium			*88.7*		

L1715946-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715946-01 04/16/24 22:39 • (MS) R4060613-5 04/22/24 11:10 • (MSD) R4060613-3 04/16/24 22:39

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.937	14.9	13.9	83.8	77.5	1	70.0-130			7.29		20
(T) Barium		*107*			*89.7*	*94.0*							
(T) Yttrium		*90.8*			*102*	*99.3*							

Method Blank (MB)

(MB) R4055862-1 03/27/24 18:41

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.00207	U	0.00907	0.0477	0.0394
(T) Barium-133	*90.7*		*90.7*		

Method Blank (MB)

(MB) R4055862-6 04/10/24 23:51

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.00216	U	0.0288	0.0539	0.0335
(T) Barium-133	*91.1*		*91.1*		

L1715946-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1715946-05 03/27/24 18:41 • (DUP) R4055862-5 03/27/24 18:41

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	-0.00704	0.0309	0.162	0.134	0.000	0.120	0.286	0.208	0.000	0.0568	U	20	3
(T) Barium-133	*95.1*				*90.3*	*90.3*							

Laboratory Control Sample (LCS)

(LCS) R4055862-2 03/27/24 18:41

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.51	110	80.0-120	
(T) Barium-133			*92.9*		

L1715714-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1715714-22 03/27/24 18:41 • (MS) R4055862-3 03/27/24 18:41 • (MSD) R4055862-4 03/27/24 18:41

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.124	19.6	22.1	97.4	110	1	75.0-125			12.0		20
(T) Barium-133		*85.9*			*93.6*	*86.5*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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	LAO000356
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

Report to: **Dana Derrington**

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-104	Grab	GW		3/14/24	1820		X	X	X	X	X	X		-01
MW-110		GW			1500		X	X	X	X	X	X		-02
~~MW-120~~		GW					X	X	X	X	X	X		
MW-121		GW			1600		X	X	X	X	X	X		-03
~~MW-120 DUP~~ MW12 Dup		GW			1605		X	X	X	X	X	X		-04
EPA EB-BG		GW			1845		X	X	X	X	X	X		-05
		GW					X	X	X	X	X	X		
		GW					X	X	X	X	X	X		
		GW					X	X	X	X	X	X		

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1759446
A191

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1061311**
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:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS ✓FedEx __ Courier _____

Tracking # 732096004 4030

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR	
Michael Clayton	3/15/24	1500			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.1+0=2.1 °C TRA9	Bottles Received: 25
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) CRoberts	Date: 03/16/24	Time: 0900

PH-10BDH5021 TRC-2362351
CR5-20221V

Date/Time

Hold:

Condition: NCF / (OK)

FIRST HALF 2024 DETECTION MONITORING / MONTHLY BACKGROUND SAMPLING EVENT
APRIL 2024

ANALYTICAL REPORT

May 08, 2024

Plum Point Services Co., LLC

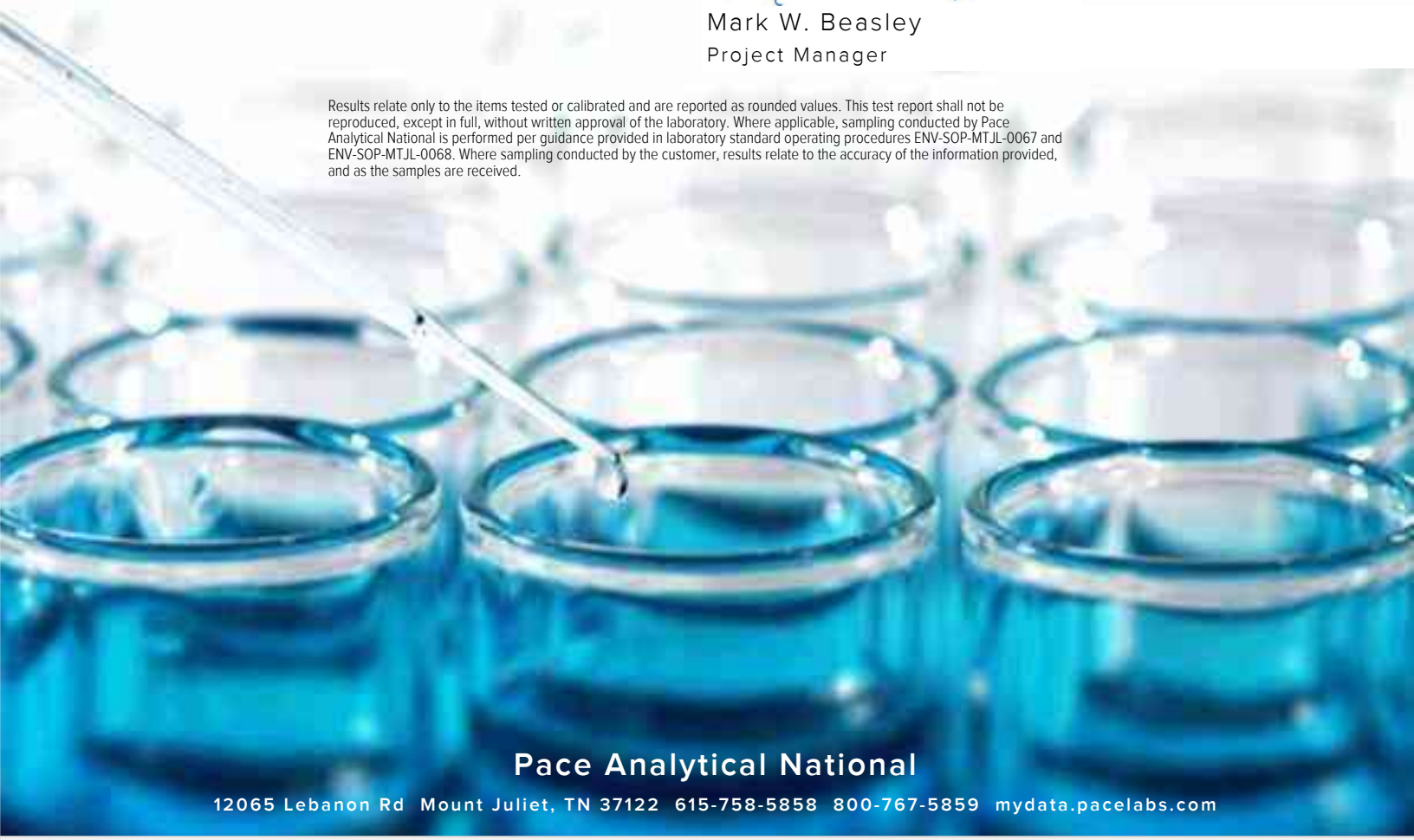
Sample Delivery Group:	L1727902
Samples Received:	04/20/2024
Project Number:	R14590-3336-001
Description:	Plum Point Energy Station

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 mydata.pacelabs.com

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MW-101 L1727902-01 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 10:55 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272216	1	04/23/24 08:52	04/24/24 13:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 15:58	04/29/24 15:58	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:26	JTM	Mt. Juliet, TN

MW-102 L1727902-02 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 13:00 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 16:12	04/29/24 16:12	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:28	JTM	Mt. Juliet, TN

MW-103 L1727902-03 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 08:55 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272216	1	04/23/24 08:52	04/24/24 13:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 16:26	04/29/24 16:26	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:29	JTM	Mt. Juliet, TN

MW-108 L1727902-04 GW

Collected by: Michael Clayton | Collected date/time: 04/17/24 16:25 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272219	1	04/23/24 09:23	04/23/24 16:45	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 16:39	04/29/24 16:39	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:31	JTM	Mt. Juliet, TN

MW-113 L1727902-05 GW

Collected by: Michael Clayton | Collected date/time: 04/17/24 15:10 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 16:53	04/29/24 16:53	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:32	JTM	Mt. Juliet, TN

MW-115 L1727902-06 GW

Collected by: Michael Clayton | Collected date/time: 04/17/24 14:10 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 01:24	04/29/24 01:24	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:34	JTM	Mt. Juliet, TN

MW-116 L1727902-07 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 12:05 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 02:27	04/29/24 02:27	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:36	JTM	Mt. Juliet, TN

MW-117 L1727902-08 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 14:05 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272219	1	04/23/24 09:23	04/23/24 16:45	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 02:43	04/29/24 02:43	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:37	JTM	Mt. Juliet, TN

MW-118 L1727902-09 GW

Collected by: Michael Clayton | Collected date/time: 04/18/24 14:30 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272216	1	04/23/24 08:52	04/24/24 13:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 02:59	04/29/24 02:59	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:39	JTM	Mt. Juliet, TN

MW-119 L1727902-10 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 09:55 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 03:15	04/29/24 03:15	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 09:16	JTM	Mt. Juliet, TN

MW-119 DUP L1727902-11 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 10:00 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 03:31	04/29/24 03:31	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 09:17	JTM	Mt. Juliet, TN

EPA EB-1 L1727902-12 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 14:35 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 03:47	04/29/24 03:47	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 09:19	JTM	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	368000		10000	1	04/24/2024 13:00	WG2272216

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	4960		379	1000	1	04/29/2024 15:58	WG2275237
Fluoride	191		64.0	150	1	04/29/2024 15:58	WG2275237
Sulfate	12400		594	5000	1	04/29/2024 15:58	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	58.4	J	20.0	200	1	04/25/2024 08:26	WG2271879
Calcium	108000		79.3	1000	1	04/25/2024 08:26	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	402000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	3570		379	1000	1	04/29/2024 16:12	WG2275237
Fluoride	156		64.0	150	1	04/29/2024 16:12	WG2275237
Sulfate	61000		594	5000	1	04/29/2024 16:12	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	101	J	20.0	200	1	04/25/2024 08:28	WG2271879
Calcium	109000		79.3	1000	1	04/25/2024 08:28	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	308000		10000	1	04/24/2024 13:00	WG2272216

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1070		379	1000	1	04/29/2024 16:26	WG2275237
Fluoride	130	J	64.0	150	1	04/29/2024 16:26	WG2275237
Sulfate	8800		594	5000	1	04/29/2024 16:26	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	63.6	J	20.0	200	1	04/25/2024 08:29	WG2271879
Calcium	90800		79.3	1000	1	04/25/2024 08:29	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	498000	B	10000	1	04/23/2024 16:45	WG2272219

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2520		379	1000	1	04/29/2024 16:39	WG2275237
Fluoride	111	J	64.0	150	1	04/29/2024 16:39	WG2275237
Sulfate	71400		594	5000	1	04/29/2024 16:39	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	115	J	20.0	200	1	04/25/2024 08:31	WG2271879
Calcium	139000		79.3	1000	1	04/25/2024 08:31	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	322000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1180		379	1000	1	04/29/2024 16:53	WG2275237
Fluoride	70.4	J P1	64.0	150	1	04/29/2024 16:53	WG2275237
Sulfate	9010		594	5000	1	04/29/2024 16:53	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	72.8	J	20.0	200	1	04/25/2024 08:32	WG2271879
Calcium	83900		79.3	1000	1	04/25/2024 08:32	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	369000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1070		379	1000	1	04/29/2024 01:24	WG2275239
Fluoride	237		64.0	150	1	04/29/2024 01:24	WG2275239
Sulfate	4850	B J	594	5000	1	04/29/2024 01:24	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	50.1	J	20.0	200	1	04/25/2024 08:34	WG2271879
Calcium	107000		79.3	1000	1	04/25/2024 08:34	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	392000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	3540		379	1000	1	04/29/2024 02:27	WG2275239
Fluoride	197		64.0	150	1	04/29/2024 02:27	WG2275239
Sulfate	50400		594	5000	1	04/29/2024 02:27	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	75.7	J	20.0	200	1	04/25/2024 08:36	WG2271879
Calcium	104000		79.3	1000	1	04/25/2024 08:36	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	400000	B	10000	1	04/23/2024 16:45	WG2272219

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1690		379	1000	1	04/29/2024 02:43	WG2275239
Fluoride	151		64.0	150	1	04/29/2024 02:43	WG2275239
Sulfate	54700		594	5000	1	04/29/2024 02:43	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	74.4	J	20.0	200	1	04/25/2024 08:37	WG2271879
Calcium	108000		79.3	1000	1	04/25/2024 08:37	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	258000		10000	1	04/24/2024 13:00	WG2272216

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	843	J	379	1000	1	04/29/2024 02:59	WG2275239
Fluoride	175		64.0	150	1	04/29/2024 02:59	WG2275239
Sulfate	12800		594	5000	1	04/29/2024 02:59	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	63.2	J	20.0	200	1	04/25/2024 08:39	WG2271879
Calcium	71900		79.3	1000	1	04/25/2024 08:39	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	325000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1150		379	1000	1	04/29/2024 03:15	WG2275239
Fluoride	285		64.0	150	1	04/29/2024 03:15	WG2275239
Sulfate	5930	B	594	5000	1	04/29/2024 03:15	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	55.7	J	20.0	200	1	04/25/2024 09:16	WG2271879
Calcium	89500		79.3	1000	1	04/25/2024 09:16	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	329000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1190		379	1000	1	04/29/2024 03:31	WG2275239
Fluoride	290		64.0	150	1	04/29/2024 03:31	WG2275239
Sulfate	5650	B	594	5000	1	04/29/2024 03:31	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	56.5	J	20.0	200	1	04/25/2024 09:17	WG2271879
Calcium	90100		79.3	1000	1	04/25/2024 09:17	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	623	J	379	1000	1	04/29/2024 03:47	WG2275239
Fluoride	U		64.0	150	1	04/29/2024 03:47	WG2275239
Sulfate	680	B J	594	5000	1	04/29/2024 03:47	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1600		20.0	200	1	04/25/2024 09:19	WG2271879
Calcium	U		79.3	1000	1	04/25/2024 09:19	WG2271879

Method Blank (MB)

(MB) R4063114-1 04/23/24 14:08

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

L1727804-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727804-01 04/23/24 14:08 • (DUP) R4063114-3 04/23/24 14:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1810000	1890000	1	4.33		10

L1727902-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-02 04/23/24 14:08 • (DUP) R4063114-4 04/23/24 14:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	402000	409000	1	1.73		10

Laboratory Control Sample (LCS)

(LCS) R4063114-2 04/23/24 14:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8690000	98.8	85.0-115	

Method Blank (MB)

(MB) R4063084-1 04/24/24 13:00

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

L1727780-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727780-01 04/24/24 13:00 • (DUP) R4063084-3 04/24/24 13:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1100000	1160000	1	5.65		10

L1727780-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1727780-03 04/24/24 13:00 • (DUP) R4063084-4 04/24/24 13:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1140000	1210000	1	6.31		10

Laboratory Control Sample (LCS)

(LCS) R4063084-2 04/24/24 13:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8860000	101	85.0-115	

Method Blank (MB)

(MB) R4062505-1 04/23/24 16:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	125000		10000	10000

L1727902-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-04 04/23/24 16:45 • (DUP) R4062505-3 04/23/24 16:45

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	498000	501000	1	0.601		10

L1727902-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-08 04/23/24 16:45 • (DUP) R4062505-4 04/23/24 16:45

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	400000	401000	1	0.250		10

Laboratory Control Sample (LCS)

(LCS) R4062505-2 04/23/24 16:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8730000	99.2	85.0-115	

Method Blank (MB)

(MB) R4066544-1 04/29/24 09:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1727615-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727615-01 04/29/24 12:05 • (DUP) R4066544-3 04/29/24 12:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	178000	182000	1	2.40		15
Fluoride	354	453	1	24.3	P1	15
Sulfate	4720	1930	1	84.0	J P1	15

L1727902-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-05 04/29/24 16:53 • (DUP) R4066544-6 04/29/24 17:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1180	1040	1	12.7		15
Fluoride	70.4	133	1	61.8	J P1	15
Sulfate	9010	8610	1	4.47		15

Laboratory Control Sample (LCS)

(LCS) R4066544-2 04/29/24 09:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39500	98.7	80.0-120	
Fluoride	8000	8220	103	80.0-120	
Sulfate	40000	39300	98.2	80.0-120	

L1727615-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727615-01 04/29/24 12:05 • (MS) R4066544-4 04/29/24 13:00 • (MSD) R4066544-5 04/29/24 13:14

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	40000	178000	187000	189000	22.3	27.5	1	80.0-120	V	V	1.11	15
Fluoride	8000	354	6710	7130	79.4	84.8	1	80.0-120	J6		6.20	15
Sulfate	40000	4720	37500	36500	81.8	79.5	1	80.0-120		J6	2.48	15

Sample Narrative:

MS: spike failed due to sample matrix

MSD: spike failed due to sample matrix

L1727902-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1727902-05 04/29/24 16:53 • (MS) R4066544-7 04/29/24 17:21

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1180	40600	98.6	1	80.0-120	
Fluoride	8000	70.4	8190	102	1	80.0-120	
Sulfate	40000	9010	47700	96.9	1	80.0-120	

Method Blank (MB)

(MB) R4066993-1 04/28/24 13:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	632	J	594	5000

L1727902-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-06 04/29/24 01:24 • (DUP) R4066993-3 04/29/24 01:39

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1070	1040	1	2.90		15
Fluoride	237	235	1	1.10		15
Sulfate	4850	4750	1	1.97	J	15

L1727904-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1727904-13 04/29/24 08:17 • (DUP) R4066993-6 04/29/24 08:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1180	1180	1	0.330		15
Fluoride	312	303	1	3.09		15
Sulfate	5800	5790	1	0.104		15

Laboratory Control Sample (LCS)

(LCS) R4066993-2 04/28/24 13:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38000	95.0	80.0-120	
Fluoride	8000	7940	99.3	80.0-120	
Sulfate	40000	37500	93.8	80.0-120	

L1727902-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727902-06 04/29/24 01:24 • (MS) R4066993-4 04/29/24 01:55 • (MSD) R4066993-5 04/29/24 02:11

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	40000	1070	40800	40500	99.4	98.5	1	80.0-120			0.876	15
Fluoride	8000	237	8510	8470	103	103	1	80.0-120			0.419	15
Sulfate	40000	4850	43900	43400	97.5	96.4	1	80.0-120			1.05	15

L1727904-13 Original Sample (OS) • Matrix Spike (MS)

(OS) L1727904-13 04/29/24 08:17 • (MS) R4066993-7 04/29/24 08:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1180	39500	95.8	1	80.0-120	
Fluoride	8000	312	8250	99.2	1	80.0-120	
Sulfate	40000	5800	43500	94.2	1	80.0-120	

Method Blank (MB)

(MB) R4062125-1 04/25/24 08:00

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

Laboratory Control Sample (LCS)

(LCS) R4062125-2 04/25/24 08:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	962	96.2	80.0-120	
Calcium	10000	10100	101	80.0-120	

L1727704-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727704-03 04/25/24 08:03 • (MS) R4062125-4 04/25/24 08:07 • (MSD) R4062125-5 04/25/24 08:08

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 %
Boron	1000	112	1060	1090	94.9	97.5	1	75.0-125			2.40	20
Calcium	10000	131000	138000	139000	74.5	80.4	1	75.0-125	V		0.424	20

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
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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 Po... Services Co., LLC
2739 SCR 623
Osceola, AR 72370

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

Pres Chk

Report to: **Dana Derrington**

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Site/Facility ID #

P.O. # **2024-00048**

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	Remarks	Sample # (lab only)
MW-101	Grab	GW		4/19/24	1055	3	X	X	X		-01
MW-102		GW		4/19/24	1300	3	X	X	X		-02
MW-103		GW		4/19/24	855	3	X	X	X		-03
MW-108		GW		4/17/24	1625	3	X	X	X		-04
MW-113		GW		4/17/24	1510	3	X	X	X		-05
MW-115		GW		4/17/24	1410	3	X	X	X		-06
MW-116		GW		4/19/24	1205	3	X	X	X		-07
MW-117		GW		4/19/24	1405	3	X	X	X		-08
MW-118		GW		4/18/24	1430	3	X	X	X		-09
MW-119		GW		4/19/24	955	3	X	X	X		-10

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L1722402

J123

Acctnum: **NAESOAR**
Template: **T175308**
Prelogin: **P1067931**
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: 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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Michael Clayton	4/19/24	1800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 36
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Caleb Tapp	Date: 4/20/24 Time: 09:00

If preservation required by Login: Date/Time

Hold:

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

Report to:
Dana Derrington

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 #
R14590-3336-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Clayton

Site/Facility ID #

P.O. #
2024-00048

Collected by (signature):
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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	Pres Chk	Remarks	Sample # (lab only)
MW-119 DUP	Grab	GW		4/19/24	0000	3	X	X	X			71
EPA EB-1	↓	GW		4/19/24	1435	3	X	X	X			72
		GW					X	X	X			
		GW					X	X	X			
		GW					X	X	X			

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L1727915

Table #

Acctnum: **NAESOAR**
Template: **T175308**
Prelogin: **P1067931**
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:	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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Michael Clayton	4/19/24	1800			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 36	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Caleb Tyler	Date: 4/20/24 Time: 09:00	Hold: Condition: NCF / OK

L1727902

Tracking Numbers	Temperature
7315 3189 4897	TLAG 2-0 + 0.1 = 2.1
7315 3189 5457	TLAG 1.0 + 0.1 = 1.1
7155 0310 7689	TLAG 3.5 + 0.1 = 3.6
7155 0310 9628	TLAG 1.8 + 0.1 = 1.9
7315 3189 5448	TLAG 0.3 + 0.1 = 0.4
7315 3189 4809	0.1 + 0.1 = 0.2

Caleb Tapp
Name

4/20/24
Date

ANALYTICAL REPORT

May 07, 2024

Plum Point Services Co., LLC

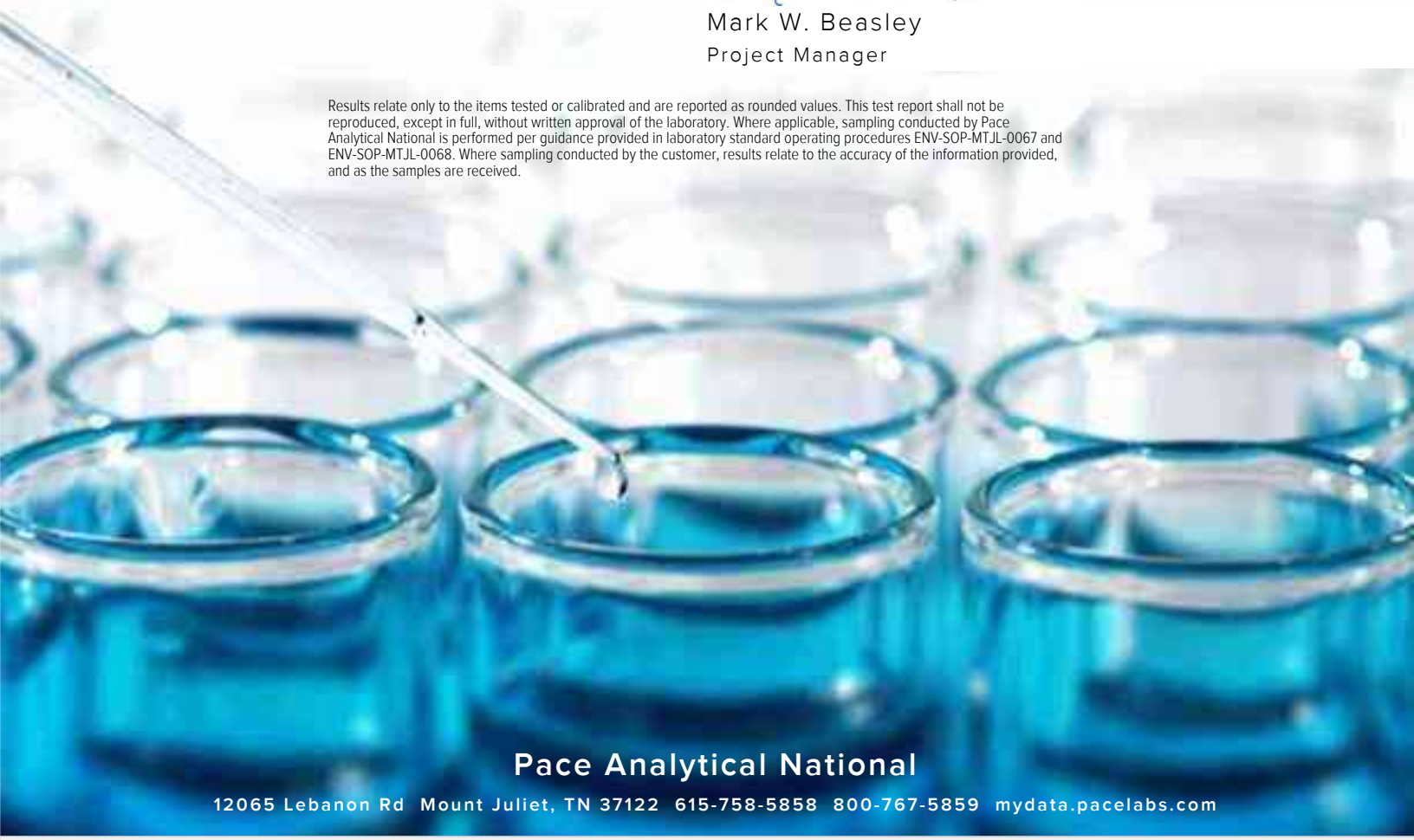
Sample Delivery Group:	L1727909
Samples Received:	04/20/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

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 mydata.pacelabs.com

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MW-104 L1727909-01 GW

Collected by: MC | Collected date/time: 04/18/24 12:00 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2271234	1	04/21/24 00:20	04/22/24 16:34	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275245	1	04/29/24 20:33	04/29/24 20:33	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2271225	1	04/22/24 16:50	04/23/24 10:38	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271881	1	04/25/24 15:17	04/26/24 10:10	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2271898	1	04/26/24 10:30	04/26/24 18:10	JPD	Mt. Juliet, TN

MW-110 L1727909-02 GW

Collected by: MC | Collected date/time: 04/18/24 10:15 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2271234	1	04/21/24 00:20	04/22/24 16:34	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275245	1	04/29/24 20:46	04/29/24 20:46	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2271225	1	04/22/24 16:50	04/23/24 10:40	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271881	1	04/25/24 15:17	04/26/24 10:11	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2271898	1	04/26/24 10:30	04/26/24 18:13	JPD	Mt. Juliet, TN

MW-120 L1727909-03 GW

Collected by: MC | Collected date/time: 04/18/24 15:40 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272216	1	04/23/24 08:52	04/24/24 13:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275245	1	04/29/24 21:00	04/29/24 21:00	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2271225	1	04/22/24 16:50	04/23/24 10:43	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271881	1	04/25/24 15:17	04/26/24 10:13	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2271898	1	04/26/24 10:30	04/26/24 18:16	JPD	Mt. Juliet, TN

MW-121 L1727909-04 GW

Collected by: MC | Collected date/time: 04/18/24 13:10 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272216	1	04/23/24 08:52	04/24/24 13:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275245	1	04/29/24 21:14	04/29/24 21:14	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2271225	1	04/22/24 16:50	04/23/24 10:45	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271881	1	04/25/24 15:17	04/26/24 10:14	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2271898	1	04/26/24 10:30	04/26/24 18:20	JPD	Mt. Juliet, TN

MW-121 DUP L1727909-05 GW

Collected by: MC | Collected date/time: 04/18/24 13:18 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275245	1	04/29/24 21:27	04/29/24 21:27	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2271225	1	04/22/24 16:50	04/23/24 10:48	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271881	1	04/25/24 15:17	04/26/24 10:23	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2271898	1	04/26/24 10:30	04/26/24 18:23	JPD	Mt. Juliet, TN

EPA EB-BG L1727909-06 GW

Collected by	Collected date/time	Received date/time
MC	04/18/24 16:20	04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275245	1	04/29/24 21:41	04/29/24 21:41	ASM	Mt. Juliet, TN
Mercury by Method 7470A	WG2271225	1	04/22/24 16:50	04/23/24 10:50	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271883	1	04/26/24 09:38	04/26/24 13:21	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2271898	1	04/26/24 10:30	04/26/24 18:26	JPD	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	341000		10000	1	04/22/2024 16:34	WG2271234

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1030	B	379	1000	1	04/29/2024 20:33	WG2275245
Fluoride	199		64.0	150	1	04/29/2024 20:33	WG2275245
Sulfate	3770	J	594	5000	1	04/29/2024 20:33	WG2275245

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	04/23/2024 10:38	WG2271225

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	54.2	J	20.0	200	1	04/26/2024 10:10	WG2271881
Calcium	84700		79.3	1000	1	04/26/2024 10:10	WG2271881

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/26/2024 18:10	WG2271898
Arsenic	4.85		0.180	2.00	1	04/26/2024 18:10	WG2271898
Barium	161		0.381	2.00	1	04/26/2024 18:10	WG2271898
Beryllium	U		0.190	2.00	1	04/26/2024 18:10	WG2271898
Cadmium	U		0.150	1.00	1	04/26/2024 18:10	WG2271898
Chromium	U		1.24	2.00	1	04/26/2024 18:10	WG2271898
Cobalt	0.138	J	0.0596	2.00	1	04/26/2024 18:10	WG2271898
Lead	U		0.849	2.00	1	04/26/2024 18:10	WG2271898
Molybdenum	1.74	B J	0.348	5.00	1	04/26/2024 18:10	WG2271898
Selenium	3.86		0.300	2.00	1	04/26/2024 18:10	WG2271898
Thallium	U		0.121	2.00	1	04/26/2024 18:10	WG2271898
Lithium	8.10		0.695	2.00	1	04/26/2024 18:10	WG2271898

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	300000		10000	1	04/22/2024 16:34	WG2271234

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1200	B	379	1000	1	04/29/2024 20:46	WG2275245
Fluoride	139	J	64.0	150	1	04/29/2024 20:46	WG2275245
Sulfate	5450		594	5000	1	04/29/2024 20:46	WG2275245

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	04/23/2024 10:40	WG2271225

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	50.7	J	20.0	200	1	04/26/2024 10:11	WG2271881
Calcium	68500		79.3	1000	1	04/26/2024 10:11	WG2271881

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	04/26/2024 18:13	WG2271898
Arsenic	6.15		0.180	2.00	1	04/26/2024 18:13	WG2271898
Barium	215		0.381	2.00	1	04/26/2024 18:13	WG2271898
Beryllium	U		0.190	2.00	1	04/26/2024 18:13	WG2271898
Cadmium	U		0.150	1.00	1	04/26/2024 18:13	WG2271898
Chromium	U		1.24	2.00	1	04/26/2024 18:13	WG2271898
Cobalt	0.303	J	0.0596	2.00	1	04/26/2024 18:13	WG2271898
Lead	U		0.849	2.00	1	04/26/2024 18:13	WG2271898
Molybdenum	U		0.348	5.00	1	04/26/2024 18:13	WG2271898
Selenium	0.511	J	0.300	2.00	1	04/26/2024 18:13	WG2271898
Thallium	U		0.121	2.00	1	04/26/2024 18:13	WG2271898
Lithium	6.72		0.695	2.00	1	04/26/2024 18:13	WG2271898

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	301000		10000	1	04/24/2024 13:00	WG2272216

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	2130	B	379	1000	1	04/29/2024 21:00	WG2275245
Fluoride	128	J	64.0	150	1	04/29/2024 21:00	WG2275245
Sulfate	14800		594	5000	1	04/29/2024 21:00	WG2275245

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	04/23/2024 10:43	WG2271225

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	58.0	J	20.0	200	1	04/26/2024 10:13	WG2271881
Calcium	83300		79.3	1000	1	04/26/2024 10:13	WG2271881

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	04/26/2024 18:16	WG2271898
Arsenic	0.532	J	0.180	2.00	1	04/26/2024 18:16	WG2271898
Barium	184		0.381	2.00	1	04/26/2024 18:16	WG2271898
Beryllium	U		0.190	2.00	1	04/26/2024 18:16	WG2271898
Cadmium	U		0.150	1.00	1	04/26/2024 18:16	WG2271898
Chromium	U		1.24	2.00	1	04/26/2024 18:16	WG2271898
Cobalt	0.0728	J	0.0596	2.00	1	04/26/2024 18:16	WG2271898
Lead	U		0.849	2.00	1	04/26/2024 18:16	WG2271898
Molybdenum	0.939	B J	0.348	5.00	1	04/26/2024 18:16	WG2271898
Selenium	18.0		0.300	2.00	1	04/26/2024 18:16	WG2271898
Thallium	U		0.121	2.00	1	04/26/2024 18:16	WG2271898
Lithium	17.7		0.695	2.00	1	04/26/2024 18:16	WG2271898

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	116000		10000	1	04/24/2024 13:00	WG2272216

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	924	B J	379	1000	1	04/29/2024 21:14	WG2275245
Fluoride	110	J	64.0	150	1	04/29/2024 21:14	WG2275245
Sulfate	2460	J	594	5000	1	04/29/2024 21:14	WG2275245

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	04/23/2024 10:45	WG2271225

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	23.6	J	20.0	200	1	04/26/2024 10:14	WG2271881
Calcium	24700		79.3	1000	1	04/26/2024 10:14	WG2271881

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	04/26/2024 18:20	WG2271898
Arsenic	1.05	J	0.180	2.00	1	04/26/2024 18:20	WG2271898
Barium	66.6		0.381	2.00	1	04/26/2024 18:20	WG2271898
Beryllium	U		0.190	2.00	1	04/26/2024 18:20	WG2271898
Cadmium	U		0.150	1.00	1	04/26/2024 18:20	WG2271898
Chromium	U		1.24	2.00	1	04/26/2024 18:20	WG2271898
Cobalt	U		0.0596	2.00	1	04/26/2024 18:20	WG2271898
Lead	U		0.849	2.00	1	04/26/2024 18:20	WG2271898
Molybdenum	U		0.348	5.00	1	04/26/2024 18:20	WG2271898
Selenium	U		0.300	2.00	1	04/26/2024 18:20	WG2271898
Thallium	U		0.121	2.00	1	04/26/2024 18:20	WG2271898
Lithium	2.14		0.695	2.00	1	04/26/2024 18:20	WG2271898

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	130000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1690	B	379	1000	1	04/29/2024 21:27	WG2275245
Fluoride	108	J	64.0	150	1	04/29/2024 21:27	WG2275245
Sulfate	2610	J	594	5000	1	04/29/2024 21:27	WG2275245

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	04/23/2024 10:48	WG2271225

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	29.1	J	20.0	200	1	04/26/2024 10:23	WG2271881
Calcium	25000		79.3	1000	1	04/26/2024 10:23	WG2271881

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	04/26/2024 18:23	WG2271898
Arsenic	1.28	J	0.180	2.00	1	04/26/2024 18:23	WG2271898
Barium	65.5		0.381	2.00	1	04/26/2024 18:23	WG2271898
Beryllium	U		0.190	2.00	1	04/26/2024 18:23	WG2271898
Cadmium	U		0.150	1.00	1	04/26/2024 18:23	WG2271898
Chromium	U		1.24	2.00	1	04/26/2024 18:23	WG2271898
Cobalt	U		0.0596	2.00	1	04/26/2024 18:23	WG2271898
Lead	U		0.849	2.00	1	04/26/2024 18:23	WG2271898
Molybdenum	U		0.348	5.00	1	04/26/2024 18:23	WG2271898
Selenium	U		0.300	2.00	1	04/26/2024 18:23	WG2271898
Thallium	U		0.121	2.00	1	04/26/2024 18:23	WG2271898
Lithium	2.21		0.695	2.00	1	04/26/2024 18:23	WG2271898

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	119000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	668	B J	379	1000	1	04/29/2024 21:41	WG2275245
Fluoride	U		64.0	150	1	04/29/2024 21:41	WG2275245
Sulfate	U		594	5000	1	04/29/2024 21:41	WG2275245

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	04/23/2024 10:50	WG2271225

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1590		20.0	200	1	04/26/2024 13:21	WG2271883
Calcium	U		79.3	1000	1	04/26/2024 13:21	WG2271883

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	04/26/2024 18:26	WG2271898
Arsenic	U		0.180	2.00	1	04/26/2024 18:26	WG2271898
Barium	U		0.381	2.00	1	04/26/2024 18:26	WG2271898
Beryllium	U		0.190	2.00	1	04/26/2024 18:26	WG2271898
Cadmium	U		0.150	1.00	1	04/26/2024 18:26	WG2271898
Chromium	U		1.24	2.00	1	04/26/2024 18:26	WG2271898
Cobalt	U		0.0596	2.00	1	04/26/2024 18:26	WG2271898
Lead	U		0.849	2.00	1	04/26/2024 18:26	WG2271898
Molybdenum	U		0.348	5.00	1	04/26/2024 18:26	WG2271898
Selenium	U		0.300	2.00	1	04/26/2024 18:26	WG2271898
Thallium	U		0.121	2.00	1	04/26/2024 18:26	WG2271898
Lithium	U		0.695	2.00	1	04/26/2024 18:26	WG2271898

Method Blank (MB)

(MB) R4061531-1 04/22/24 16:34

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

L1727909-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727909-01 04/22/24 16:34 • (DUP) R4061531-3 04/22/24 16:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	341000	326000	1	4.50		10

L1727909-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1727909-02 04/22/24 16:34 • (DUP) R4061531-4 04/22/24 16:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	300000	301000	1	0.333		10

Laboratory Control Sample (LCS)

(LCS) R4061531-2 04/22/24 16:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8590000	97.6	85.0-115	

Method Blank (MB)

(MB) R4063114-1 04/23/24 14:08

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

L1727804-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727804-01 04/23/24 14:08 • (DUP) R4063114-3 04/23/24 14:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1810000	1890000	1	4.33		10

L1727902-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-02 04/23/24 14:08 • (DUP) R4063114-4 04/23/24 14:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	402000	409000	1	1.73		10

Laboratory Control Sample (LCS)

(LCS) R4063114-2 04/23/24 14:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8690000	98.8	85.0-115	

Method Blank (MB)

(MB) R4063084-1 04/24/24 13:00

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

L1727780-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727780-01 04/24/24 13:00 • (DUP) R4063084-3 04/24/24 13:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1100000	1160000	1	5.65		10

L1727780-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1727780-03 04/24/24 13:00 • (DUP) R4063084-4 04/24/24 13:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1140000	1210000	1	6.31		10

Laboratory Control Sample (LCS)

(LCS) R4063084-2 04/24/24 13:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8860000	101	85.0-115	

Method Blank (MB)

(MB) R4066592-1 04/29/24 18:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	406	J	379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1727904-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1727904-15 04/29/24 18:43 • (DUP) R4066592-3 04/29/24 18:57

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	901	824	1	8.87	J	15
Fluoride	112	103	1	8.01	J	15
Sulfate	2340	2360	1	0.918	J	15

L1727909-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1727909-06 04/29/24 21:41 • (DUP) R4066592-6 04/29/24 21:55

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	668	610	1	8.97	J	15
Fluoride	U	U	1	0.000		15
Sulfate	U	U	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R4066592-2 04/29/24 18:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39200	98.1	80.0-120	
Fluoride	8000	8170	102	80.0-120	
Sulfate	40000	39600	98.9	80.0-120	

L1727904-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727904-15 04/29/24 18:43 • (MS) R4066592-4 04/29/24 19:10 • (MSD) R4066592-5 04/29/24 19:24

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 %
Chloride	40000	901	39300	39700	95.9	97.0	1	80.0-120			1.11	15
Fluoride	8000	112	8390	8510	103	105	1	80.0-120			1.50	15
Sulfate	40000	2340	41500	41900	98.0	98.8	1	80.0-120			0.785	15

L1727909-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1727909-06 04/29/24 21:41 • (MS) R4066592-7 04/29/24 22:09

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	668	39200	96.2	1	80.0-120	
Fluoride	8000	U	8210	103	1	80.0-120	
Sulfate	40000	U	39200	98.0	1	80.0-120	

Method Blank (MB)

(MB) R4060898-1 04/23/24 10:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4060898-2 04/23/24 10:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.56	85.3	80.0-120	

L1727904-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727904-17 04/23/24 10:21 • (MS) R4060898-4 04/23/24 10:26 • (MSD) R4060898-5 04/23/24 10:33

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 %
Mercury	3.00	U	2.50	2.74	83.5	91.3	1	75.0-125			8.96	20

Method Blank (MB)

(MB) R4062566-1 04/26/24 10:19

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

Laboratory Control Sample (LCS)

(LCS) R4062566-2 04/26/24 10:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	976	97.6	80.0-120	
Calcium	10000	10200	102	80.0-120	

L1727909-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727909-05 04/26/24 10:23 • (MS) R4062566-4 04/26/24 10:26 • (MSD) R4062566-5 04/26/24 10:28

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 %
Boron	1000	29.1	979	981	95.0	95.2	1	75.0-125			0.220	20
Calcium	10000	25000	34100	33800	91.4	88.6	1	75.0-125			0.829	20

Method Blank (MB)

(MB) R4062597-1 04/26/24 13:04

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

Laboratory Control Sample (LCS)

(LCS) R4062597-2 04/26/24 13:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	975	97.5	80.0-120	
Calcium	10000	9380	93.8	80.0-120	

L1727956-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727956-04 04/26/24 13:09 • (MS) R4062597-4 04/26/24 13:15 • (MSD) R4062597-5 04/26/24 13:18

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 %
Boron	1000	498	1460	1440	96.4	94.3	1	75.0-125			1.47	20
Calcium	10000	206000	210000	209000	45.8	31.8	1	75.0-125	V	V	0.669	20

Method Blank (MB)

(MB) R4062714-1 04/26/24 17:12

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	1.07		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	0.411	J	0.348	5.00
Selenium	U		0.300	2.00
Thallium	0.548	J	0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4062714-2 04/26/24 17:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	57.0	114	80.0-120	
Arsenic	50.0	47.8	95.7	80.0-120	
Barium	50.0	51.8	104	80.0-120	
Beryllium	50.0	47.5	95.0	80.0-120	
Cadmium	50.0	51.5	103	80.0-120	
Chromium	50.0	48.9	97.8	80.0-120	
Cobalt	50.0	48.8	97.5	80.0-120	
Lead	50.0	55.3	111	80.0-120	
Molybdenum	50.0	49.3	98.5	80.0-120	
Selenium	50.0	50.3	101	80.0-120	
Thallium	50.0	54.8	110	80.0-120	
Lithium	50.0	50.9	102	80.0-120	

L1727935-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727935-03 04/26/24 17:18 • (MS) R4062714-4 04/26/24 17:25 • (MSD) R4062714-5 04/26/24 17:28

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 %
Antimony	50.0	U	56.5	58.7	113	117	1	75.0-125			3.73	20
Arsenic	50.0	1.99	51.1	53.8	98.3	104	1	75.0-125			5.08	20
Barium	50.0	4.81	57.9	59.1	106	109	1	75.0-125			2.01	20

L1727935-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727935-03 04/26/24 17:18 • (MS) R4062714-4 04/26/24 17:25 • (MSD) R4062714-5 04/26/24 17:28

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 %
Beryllium	50.0	U	49.8	48.9	99.7	97.8	1	75.0-125			1.87	20
Cadmium	50.0	U	52.5	52.5	105	105	1	75.0-125			0.00674	20
Chromium	50.0	3.51	53.7	55.1	100	103	1	75.0-125			2.68	20
Cobalt	50.0	0.309	51.3	52.9	102	105	1	75.0-125			3.13	20
Lead	50.0	U	56.1	55.2	112	110	1	75.0-125			1.44	20
Molybdenum	50.0	0.400	52.3	51.0	104	101	1	75.0-125			2.47	20
Selenium	50.0	U	50.2	52.2	100	104	1	75.0-125			3.74	20
Thallium	50.0	0.159	55.7	53.8	111	107	1	75.0-125			3.55	20
Lithium	50.0	0.814	52.6	52.4	104	103	1	75.0-125			0.399	20

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.
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
B	The same analyte is found in the associated blank.
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.

Company Name/Address:
Plum Pd Services Co., LLC

2739 SCR 623
Osceola, AR 72370

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

Report to: **Dana Derrington**

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

Project Description: **Plum Point Energy Station**

City/State Collected: OSCeola

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

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

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-104	Grab	GW		4/18/24	1206	5	X	X	X	X	X	X		-01
MW-110		GW		4/18/24	1015	5	X	X	X	X	X	X		-02
MW-120		GW		4/18/24	1540	5	X	X	X	X	X	X		-03
MW-121		GW		4/18/24	1310	5	X	X	X	X	X	X		-04
MW-121 DUP		GW		4/18/24	1315	5	X	X	X	X	X	X		-05
EPA EB-BG		GW		4/18/24	1620	5	X	X	X	X	X	X		-06
		GW					X	X	X	X	X	X		
		GW					X	X	X	X	X	X		
		GW					X	X	X	X	X	X		

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L1727909

J125

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1067925**
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:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR
Michael Clayton	4/18/24	1800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 30
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/20/24 Time: 09:00
			Caleb Tapp	Hold: Condition: NCF / OK

L1727409

Tracking Numbers	Temperature
7315 3189 4897	TLAG 2-0 + 0.1 = 2.1
7315 3189 5459	TLAG 1.0 + 0.1 = 1.1
7155 0310 7689	TLAG 3.5 + 0.1 = 3.6
7155 0310 9628	TLAG 1.8 + 0.1 = 1.9
7315 3189 5448	TLAG 0.3 + 0.1 = 0.4
7315 3189 4809	0.1 + 0.1 = 0.2

Caleb T~~P~~

Name

4/20/24

Date

ANALYTICAL REPORT

May 21, 2024

Plum Point Services Co., LLC

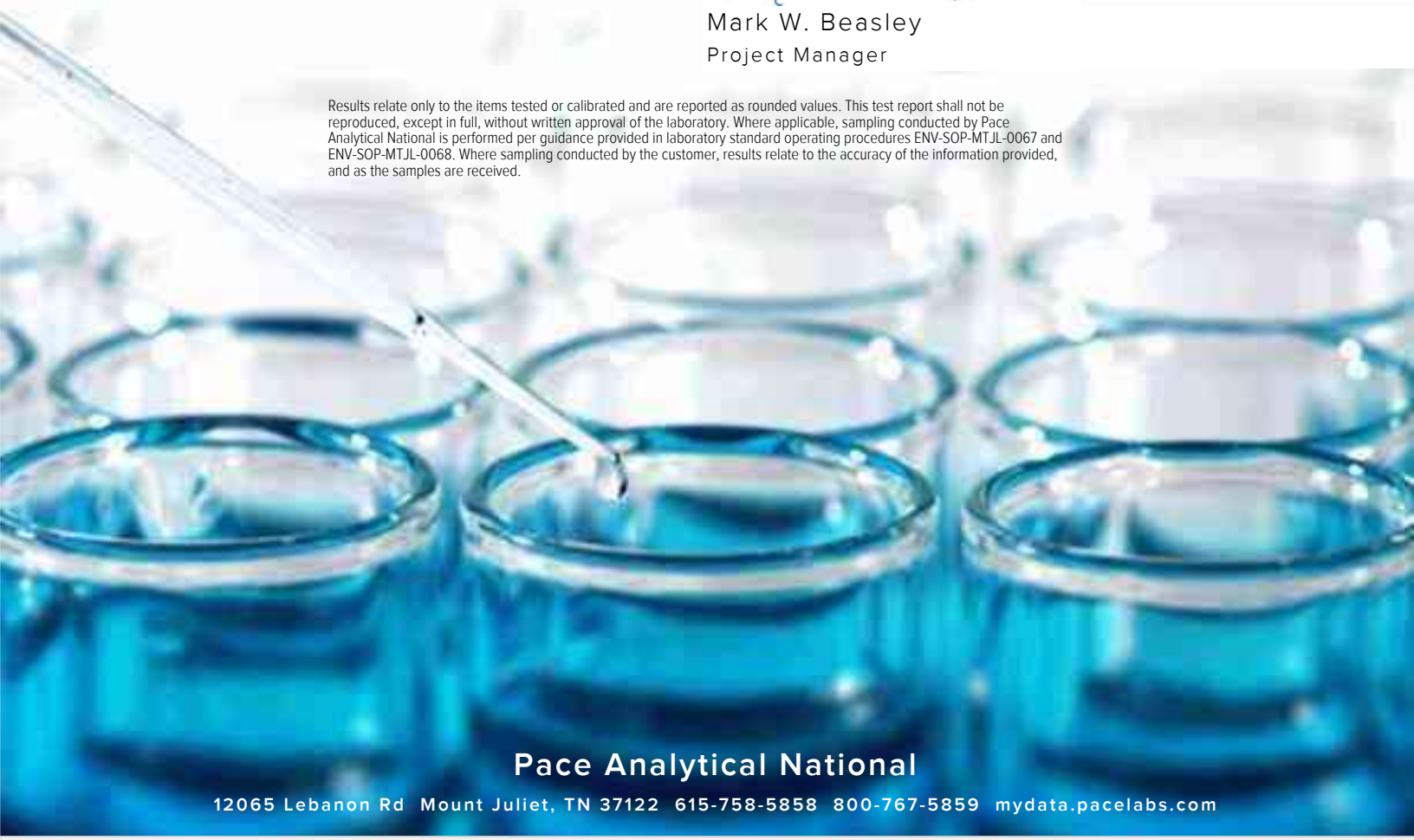
Sample Delivery Group:	L1727916
Samples Received:	04/20/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

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 mydata.pacelabs.com

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MW-104 L1727916-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	04/18/24 12:00	04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2283716	1	05/10/24 09:04	05/17/24 11:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2286162	1	05/15/24 12:17	05/17/24 19:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2286162	1	05/15/24 12:17	05/17/24 19:14	ZRG	Mt. Juliet, TN

MW-110 L1727916-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	04/18/24 10:15	04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2283716	1	05/10/24 09:04	05/17/24 11:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2286162	1	05/15/24 12:17	05/17/24 19:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2286162	1	05/15/24 12:17	05/17/24 19:14	ZRG	Mt. Juliet, TN

MW-120 L1727916-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	04/18/24 15:40	04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2283716	1	05/10/24 09:04	05/17/24 11:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2286162	1	05/15/24 12:17	05/17/24 19:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2286162	1	05/15/24 12:17	05/17/24 19:14	ZRG	Mt. Juliet, TN

MW-121 L1727916-04 Non-Potable Water

Collected by	Collected date/time	Received date/time
	04/18/24 13:10	04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2283716	1	05/10/24 09:04	05/17/24 11:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2286162	1	05/15/24 12:17	05/17/24 19:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2286162	1	05/15/24 12:17	05/17/24 19:14	ZRG	Mt. Juliet, TN

MW-121 DUP L1727916-05 Non-Potable Water

Collected by	Collected date/time	Received date/time
	04/18/24 13:15	04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2283716	1	05/10/24 09:04	05/17/24 11:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2286162	1	05/15/24 12:17	05/17/24 19:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2286162	1	05/15/24 12:17	05/17/24 19:14	ZRG	Mt. Juliet, TN

EPA EB-BG L1727916-06 Non-Potable Water

Collected by	Collected date/time	Received date/time
	04/18/24 16:20	04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2283717	1	05/13/24 10:51	05/17/24 17:15	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2286162	1	05/15/24 12:17	05/17/24 19:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2286162	1	05/15/24 12:17	05/17/24 19:14	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.236	U	0.216	0.317	0.406	0.214	05/17/2024 11:56	WG2283716
(T) Barium	*95.3*					*30.0-143*	*05/17/2024 11:56*	WG2283716
(T) Yttrium	*121*					*30.0-136*	*05/17/2024 11:56*	WG2283716

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.45		0.642	0.570	05/17/2024 19:14	WG2286162

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	1.45		0.605	0.196	0.400	0.291	05/17/2024 19:14	WG2286162
(T) Barium-133	*63.2*					*30.0-143*	*05/17/2024 19:14*	WG2286162

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.944		0.264	0.370	0.452	0.238	05/17/2024 11:56	WG2283716
(T) Barium	*88.7*					*30.0-143*	*05/17/2024 11:56*	WG2283716
(T) Yttrium	*106*					*30.0-136*	*05/17/2024 11:56*	WG2283716

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.31		0.388	0.535	05/17/2024 19:14	WG2286162

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.366		0.284	0.111	0.286	0.218	05/17/2024 19:14	WG2286162
(T) Barium-133	*78.3*					*30.0-143*	*05/17/2024 19:14*	WG2286162

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.945		0.228	0.327	0.384	0.203	05/17/2024 11:56	WG2283716
(T) Barium	*98.1*					*30.0-143*	*05/17/2024 11:56*	WG2283716
(T) Yttrium	*107*					*30.0-136*	*05/17/2024 11:56*	WG2283716

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.53		0.451	0.526	05/17/2024 19:14	WG2286162

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.590		0.389	0.133	0.360	0.267	05/17/2024 19:14	WG2286162
(T) Barium-133	*68.2*					*30.0-143*	*05/17/2024 19:14*	WG2286162

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.115	U	0.233	0.338	0.424	0.224	05/17/2024 11:56	WG2283716
(T) Barium	*88.5*					*30.0-143*	*05/17/2024 11:56*	WG2283716
(T) Yttrium	*120*					*30.0-136*	*05/17/2024 11:56*	WG2283716

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.231	J	0.294	0.508	05/17/2024 19:14	WG2286162

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.116	J	0.179	0.0692	0.279	0.212	05/17/2024 19:14	WG2286162
(T) Barium-133	*81.0*					*30.0-143*	*05/17/2024 19:14*	WG2286162

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.147	U	0.229	0.330	0.403	0.212	05/17/2024 11:56	WG2283716
(T) Barium	*96.7*					*30.0-143*	*05/17/2024 11:56*	WG2283716
(T) Yttrium	*112*					*30.0-136*	*05/17/2024 11:56*	WG2283716

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0191	U	0.290	0.541	05/17/2024 19:14	WG2286162

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.0191	U	0.178	0.0579	0.361	0.253	05/17/2024 19:14	WG2286162
(T) Barium-133	*79.6*					*30.0-143*	*05/17/2024 19:14*	WG2286162

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.369	U	0.381	0.485	0.688	0.360	05/17/2024 17:15	WG2283717
(T) Barium	*103*					*30.0-143*	*05/17/2024 17:15*	WG2283717
(T) Yttrium	*90.8*					*30.0-136*	*05/17/2024 17:15*	WG2283717

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0893	U	0.430	0.770	05/17/2024 19:14	WG2286162

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0893	U	0.199	0.0701	0.345	0.247	05/17/2024 19:14	WG2286162
(T) Barium-133	*78.4*					*30.0-143*	*05/17/2024 19:14*	WG2286162

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

QUALITY CONTROL SUMMARY

L1727916-01,02,03,04,05

Method Blank (MB)

(MB) R4071952-1 05/17/24 11:56

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.234	U	0.336	0.623	0.327
(T) Barium	*45.4*		*45.4*		
(T) Yttrium	*117*		*117*		

L1727913-41 Original Sample (OS) • Duplicate (DUP)

(OS) L1727913-41 05/17/24 11:56 • (DUP) R4071952-5 05/17/24 11:56

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.426	0.296	0.526	0.275	0.851	0.481	0.849	0.443	66.5	0.751		20	3
(T) Barium	*86.0*				*88.5*	*88.5*							
(T) Yttrium	*112*				*87.2*	*87.2*							

Laboratory Control Sample (LCS)

(LCS) R4071952-2 05/17/24 11:56

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.17	103	80.0-120	
(T) Barium			*97.6*		
(T) Yttrium			*119*		

L1727913-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727913-21 05/17/24 11:56 • (MS) R4071952-3 05/17/24 11:56 • (MSD) R4071952-4 05/17/24 11:56

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.237	20.3	19.9	120	118	1	70.0-130			1.99		20
(T) Barium		*91.2*			*87.0*	*97.5*							
(T) Yttrium		*111*			*111*	*123*							

Method Blank (MB)

(MB) R4071955-1 05/17/24 17:15

Analyte	MB Result	MB Qualifier	MB 2 sigma CE	MB MDA	MB Lc
	pCi/l		+ / -	pCi/l	pCi/l
Radium-228	-0.248	U	0.182	0.334	0.175
(T) Barium	*101*		*101*		
(T) Yttrium	*82.7*		*82.7*		

L1727916-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1727916-06 05/17/24 17:15 • (DUP) R4071955-5 05/17/24 17:15

Analyte	Original Result	Original 2 sigma CE	Original MDA	Original Lc	DUP Result	DUP 2 sigma CE	DUP MDA	DUP Lc	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	pCi/l	+ / -	pCi/l	pCi/l	%			%	
Radium-228	-0.369	0.381	0.688	0.360	-0.0182	0.438	0.778	0.406	0.000	0.605	U	20	3
(T) Barium	*103*				*89.3*	*89.3*							
(T) Yttrium	*90.8*				*94.8*	*94.8*							

Laboratory Control Sample (LCS)

(LCS) R4071955-2 05/17/24 17:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	4.79	95.9	80.0-120	
(T) Barium			*93.4*		
(T) Yttrium			*102*		

L1727929-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727929-03 05/17/24 17:15 • (MS) R4071955-3 05/17/24 17:15 • (MSD) R4071955-4 05/17/24 17:15

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-228	10.0	0.801	11.8	11.9	110	111	1	70.0-130			0.338		20
(T) Barium		*85.4*			*88.1*	*92.2*							
(T) Yttrium		*90.7*			*83.2*	*90.7*							

Method Blank (MB)

(MB) R4071512-1 05/17/24 19:14

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.0371	U	0.0788	0.125	0.0826
(T) Barium-133	*73.3*		*73.3*		

L1733369-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1733369-01 05/17/24 19:14 • (DUP) R4071512-5 05/17/24 19:14

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.290	0.254	0.174	0.174	0.570	0.399	0.440	0.296	65.1	0.592		20	3
(T) Barium-133	*57.2*				*78.1*	*78.1*							

Laboratory Control Sample (LCS)

(LCS) R4071512-2 05/17/24 19:14

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.40	108	80.0-120	
(T) Barium-133			*71.0*		

L1727916-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727916-04 05/17/24 19:14 • (MS) R4071512-3 05/17/24 19:14 • (MSD) R4071512-4 05/17/24 19:14

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.116	21.2	18.6	105	92.5	1	75.0-125			12.7		20
(T) Barium-133		*81.0*			*61.2*	*76.8*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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	LAO000356
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 Po[illegible] Services Co., LLC

2739 SCR 623
Osceola, AR 72370

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

Pres Chk

Report to:
Dana Derrington

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

Project Description:
Plum Point Energy Station

City/State Collected: Osceola

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project #
14590-3336-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Clayton

Site/Facility ID #

P.O. #
2024-00048

Collected by (signature):
[signature]

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres				Remarks	Sample # (lab only)
MW-104	Grab	GW		4/18/24	1206	5	X	X	X	X	X	X					01
MW-110		GW		4/18/24	1015	5	X	X	X	X	X	X					02
MW-120		GW		4/18/24	1540	5	X	X	X	X	X	X					03
MW-121		GW		4/18/24	1310	5	X	X	X	X	X	X					04
MW-121 DUP		GW		4/18/24	1315	5	X	X	X	X	X	X					05
EPA EB-BG		GW		4/18/24	1620	5	X	X	X	X	X	X					06
		GW					X	X	X	X	X	X					
		GW					X	X	X	X	X	X					
		GW					X	X	X	X	X	X					

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Relinquished by : (Signature)
[signature]
Date: 4/18/24 Time: 1800

Received by: (Signature)

Trip Blank Received: Yes / (No)
HCL / MeoH
TBR

Relinquished by : (Signature)
Date: Time:

Received by: (Signature)

Temp: °C Bottles Received: 30

If preservation required by Login: Date/Time

Relinquished by : (Signature)
Date: Time:

Received for lab by: (Signature)
Caleb Tapp
Date: 4/20/24 Time: 09:00

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

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1727916
J125

Acctnum: **NAESOAR**
Template:**T106048**
Prelogin: **P1067925**
PM: **134 - Mark W. Beasley**
PB:

Shipped Via: **FedEX Ground**

L1727916

Tracking Numbers	Temperature
7315 3189 4897	TLAG 2-0 + 0.1 = 2.1
7315 3189 5459	TLAG 1.0 + 0.1 = 1.1
7155 0310 7689	TLAG 3.5 + 0.1 = 3.6
7155 0310 9628	TLAG 1.8 + 0.1 = 1.9
7315 3189 5448	TLAG 0.3 + 0.1 = 0.4
7315 3189 4809	0.1 + 0.1 = 0.2

Caleb T

Name

4/20/24

Date

MONTHLY BACKGROUND SAMPLING EVENT
MAY 2024

ANALYTICAL REPORT

July 01, 2024

Plum Point Services Co., LLC

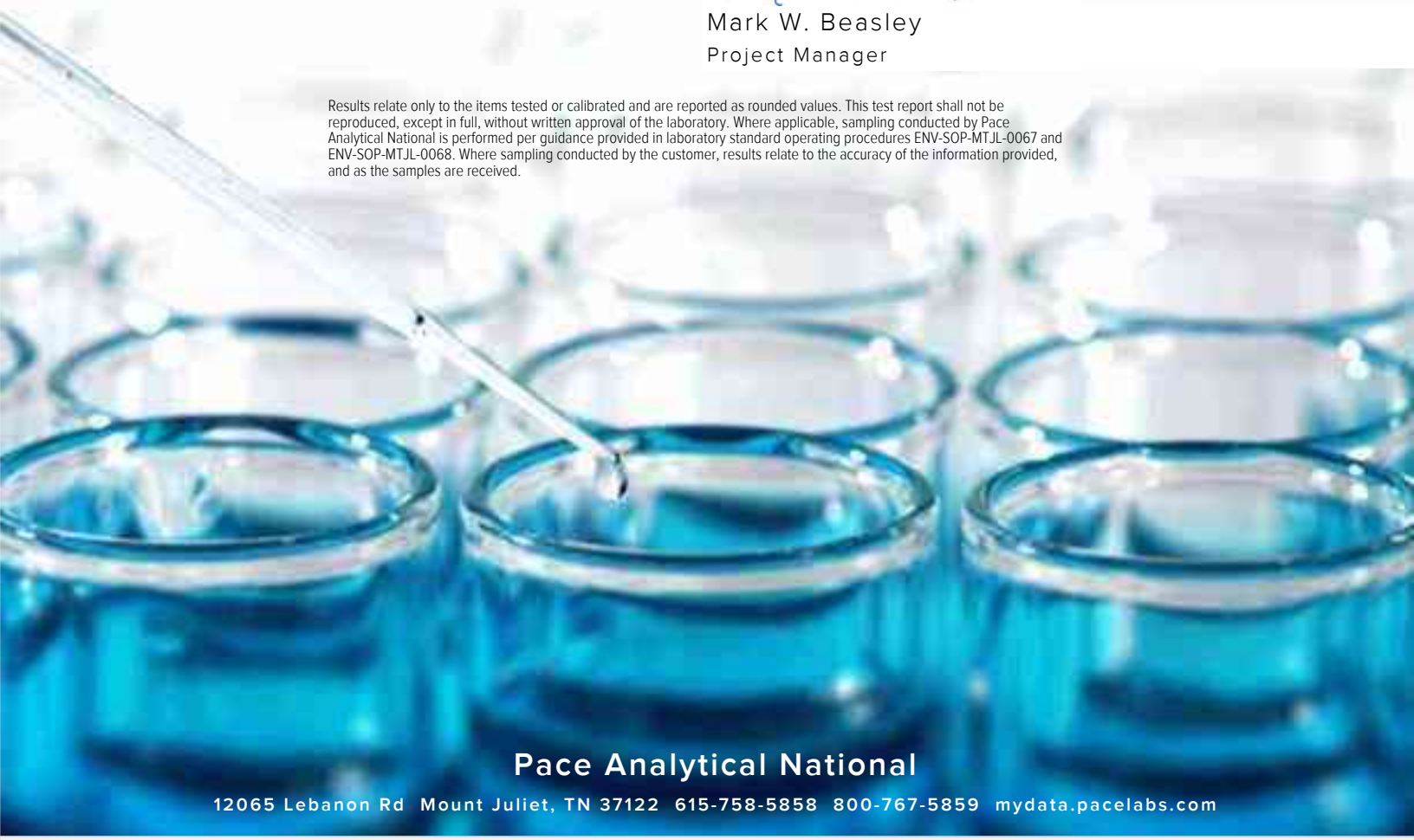
Sample Delivery Group:	L1738133
Samples Received:	05/18/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-104 L1738133-01 GW

Collected by	Collected date/time	Received date/time
	05/16/24 14:35	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2291822	1	05/23/24 11:09	05/23/24 14:07	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2294791	1	06/05/24 04:01	06/05/24 04:01	JD	Mt. Juliet, TN
Mercury by Method 7470A	WG2289430	1	05/20/24 16:05	05/21/24 12:59	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2292932	1	05/30/24 00:55	05/30/24 16:45	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2294297	1	05/29/24 10:59	06/29/24 11:43	JPD	Mt. Juliet, TN

MW-110 L1738133-02 GW

Collected by	Collected date/time	Received date/time
	05/16/24 13:40	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2291822	1	05/23/24 11:09	05/23/24 14:07	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2294791	1	06/05/24 04:14	06/05/24 04:14	JD	Mt. Juliet, TN
Mercury by Method 7470A	WG2289430	1	05/20/24 16:05	05/21/24 13:01	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2292932	1	05/30/24 00:55	05/30/24 16:47	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2294297	1	05/29/24 10:59	06/29/24 11:46	JPD	Mt. Juliet, TN

MW-120 L1738133-03 GW

Collected by	Collected date/time	Received date/time
	05/16/24 17:05	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2291822	1	05/23/24 11:09	05/23/24 14:07	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2294791	1	06/05/24 04:55	06/05/24 04:55	JD	Mt. Juliet, TN
Mercury by Method 7470A	WG2289430	1	05/20/24 16:05	05/21/24 13:04	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2292932	1	05/30/24 00:55	05/30/24 16:49	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2294297	1	05/29/24 10:59	06/29/24 11:49	JPD	Mt. Juliet, TN

MW-110 DUP L1738133-04 GW

Collected by	Collected date/time	Received date/time
	05/16/24 13:50	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2291822	1	05/23/24 11:09	05/23/24 14:07	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2294791	1	06/05/24 05:08	06/05/24 05:08	JD	Mt. Juliet, TN
Mercury by Method 7470A	WG2289430	1	05/20/24 16:05	05/21/24 13:06	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2292932	1	05/30/24 00:55	05/30/24 16:53	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2294297	1	05/29/24 10:59	06/29/24 11:52	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2294297	5	05/29/24 10:59	06/30/24 11:06	SJM	Mt. Juliet, TN

EPA EB-BG L1738133-05 GW

Collected by	Collected date/time	Received date/time
	05/16/24 17:45	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2291851	1	05/23/24 11:42	05/23/24 16:00	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2294791	1	06/05/24 05:48	06/05/24 05:48	JD	Mt. Juliet, TN
Mercury by Method 7470A	WG2289430	1	05/20/24 16:05	05/21/24 13:08	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2292932	1	05/30/24 00:55	05/30/24 16:55	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2294297	1	05/29/24 10:59	06/29/24 11:55	JPD	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	292000		10000	1	05/23/2024 14:07	WG2291822

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1250		379	1000	1	06/05/2024 04:01	WG2294791
Fluoride	245		64.0	150	1	06/05/2024 04:01	WG2294791
Sulfate	3960	J	594	5000	1	06/05/2024 04:01	WG2294791

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	05/21/2024 12:59	WG2289430

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	51.1	J	20.0	200	1	05/30/2024 16:45	WG2292932
Calcium	84500		79.3	1000	1	05/30/2024 16:45	WG2292932

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	06/29/2024 11:43	WG2294297
Arsenic	15.7		0.180	2.00	1	06/29/2024 11:43	WG2294297
Barium	250		0.381	2.00	1	06/29/2024 11:43	WG2294297
Beryllium	U		0.190	2.00	1	06/29/2024 11:43	WG2294297
Cadmium	U		0.150	1.00	1	06/29/2024 11:43	WG2294297
Chromium	U		1.24	2.00	1	06/29/2024 11:43	WG2294297
Cobalt	0.176	J	0.0596	2.00	1	06/29/2024 11:43	WG2294297
Lead	U		0.849	2.00	1	06/29/2024 11:43	WG2294297
Molybdenum	0.529	J	0.348	5.00	1	06/29/2024 11:43	WG2294297
Selenium	6.04		0.300	2.00	1	06/29/2024 11:43	WG2294297
Thallium	U		0.121	2.00	1	06/29/2024 11:43	WG2294297
Lithium	9.32		0.695	2.00	1	06/29/2024 11:43	WG2294297

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	269000		10000	1	05/23/2024 14:07	WG2291822

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1450		379	1000	1	06/05/2024 04:14	WG2294791
Fluoride	313	P1	64.0	150	1	06/05/2024 04:14	WG2294791
Sulfate	5720		594	5000	1	06/05/2024 04:14	WG2294791

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	05/21/2024 13:01	WG2289430

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	49.6	J	20.0	200	1	05/30/2024 16:47	WG2292932
Calcium	68000		79.3	1000	1	05/30/2024 16:47	WG2292932

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	06/29/2024 11:46	WG2294297
Arsenic	14.5		0.180	2.00	1	06/29/2024 11:46	WG2294297
Barium	307		0.381	2.00	1	06/29/2024 11:46	WG2294297
Beryllium	U		0.190	2.00	1	06/29/2024 11:46	WG2294297
Cadmium	U		0.150	1.00	1	06/29/2024 11:46	WG2294297
Chromium	U		1.24	2.00	1	06/29/2024 11:46	WG2294297
Cobalt	0.964	J	0.0596	2.00	1	06/29/2024 11:46	WG2294297
Lead	U		0.849	2.00	1	06/29/2024 11:46	WG2294297
Molybdenum	0.538	J	0.348	5.00	1	06/29/2024 11:46	WG2294297
Selenium	U		0.300	2.00	1	06/29/2024 11:46	WG2294297
Thallium	U		0.121	2.00	1	06/29/2024 11:46	WG2294297
Lithium	7.39		0.695	2.00	1	06/29/2024 11:46	WG2294297

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	336000		10000	1	05/23/2024 14:07	WG2291822

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2550		379	1000	1	06/05/2024 04:55	WG2294791
Fluoride	175		64.0	150	1	06/05/2024 04:55	WG2294791
Sulfate	19500		594	5000	1	06/05/2024 04:55	WG2294791

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	05/21/2024 13:04	WG2289430

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	60.4	J	20.0	200	1	05/30/2024 16:49	WG2292932
Calcium	95400		79.3	1000	1	05/30/2024 16:49	WG2292932

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	06/29/2024 11:49	WG2294297
Arsenic	0.571	J	0.180	2.00	1	06/29/2024 11:49	WG2294297
Barium	222		0.381	2.00	1	06/29/2024 11:49	WG2294297
Beryllium	U		0.190	2.00	1	06/29/2024 11:49	WG2294297
Cadmium	U		0.150	1.00	1	06/29/2024 11:49	WG2294297
Chromium	U		1.24	2.00	1	06/29/2024 11:49	WG2294297
Cobalt	U		0.0596	2.00	1	06/29/2024 11:49	WG2294297
Lead	U		0.849	2.00	1	06/29/2024 11:49	WG2294297
Molybdenum	1.09	J	0.348	5.00	1	06/29/2024 11:49	WG2294297
Selenium	15.8		0.300	2.00	1	06/29/2024 11:49	WG2294297
Thallium	U		0.121	2.00	1	06/29/2024 11:49	WG2294297
Lithium	18.8		0.695	2.00	1	06/29/2024 11:49	WG2294297

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	269000		10000	1	05/23/2024 14:07	WG2291822

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1590		379	1000	1	06/05/2024 05:08	WG2294791
Fluoride	419		64.0	150	1	06/05/2024 05:08	WG2294791
Sulfate	5740		594	5000	1	06/05/2024 05:08	WG2294791

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	05/21/2024 13:06	WG2289430

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	51.9	J	20.0	200	1	05/30/2024 16:53	WG2292932
Calcium	67900		79.3	1000	1	05/30/2024 16:53	WG2292932

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	06/29/2024 11:52	WG2294297
Arsenic	33.2		0.180	2.00	1	06/29/2024 11:52	WG2294297
Barium	514		1.90	10.0	5	06/30/2024 11:06	WG2294297
Beryllium	U		0.190	2.00	1	06/29/2024 11:52	WG2294297
Cadmium	U		0.150	1.00	1	06/29/2024 11:52	WG2294297
Chromium	U		1.24	2.00	1	06/29/2024 11:52	WG2294297
Cobalt	2.10		0.0596	2.00	1	06/29/2024 11:52	WG2294297
Lead	U		0.849	2.00	1	06/29/2024 11:52	WG2294297
Molybdenum	0.356	J	0.348	5.00	1	06/29/2024 11:52	WG2294297
Selenium	U		0.300	2.00	1	06/29/2024 11:52	WG2294297
Thallium	U		0.121	2.00	1	06/29/2024 11:52	WG2294297
Lithium	7.10		0.695	2.00	1	06/29/2024 11:52	WG2294297

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	05/23/2024 16:00	WG2291851

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	666	J	379	1000	1	06/05/2024 05:48	WG2294791
Fluoride	327		64.0	150	1	06/05/2024 05:48	WG2294791
Sulfate	U		594	5000	1	06/05/2024 05:48	WG2294791

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	05/21/2024 13:08	WG2289430

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	05/30/2024 16:55	WG2292932
Calcium	U		79.3	1000	1	05/30/2024 16:55	WG2292932

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	06/29/2024 11:55	WG2294297
Arsenic	U		0.180	2.00	1	06/29/2024 11:55	WG2294297
Barium	U		0.381	2.00	1	06/29/2024 11:55	WG2294297
Beryllium	U		0.190	2.00	1	06/29/2024 11:55	WG2294297
Cadmium	U		0.150	1.00	1	06/29/2024 11:55	WG2294297
Chromium	U		1.24	2.00	1	06/29/2024 11:55	WG2294297
Cobalt	U		0.0596	2.00	1	06/29/2024 11:55	WG2294297
Lead	U		0.849	2.00	1	06/29/2024 11:55	WG2294297
Molybdenum	U		0.348	5.00	1	06/29/2024 11:55	WG2294297
Selenium	U		0.300	2.00	1	06/29/2024 11:55	WG2294297
Thallium	U		0.121	2.00	1	06/29/2024 11:55	WG2294297
Lithium	U		0.695	2.00	1	06/29/2024 11:55	WG2294297

Method Blank (MB)

(MB) R4074074-1 05/23/24 14:07

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

L1737592-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1737592-02 05/23/24 14:07 • (DUP) R4074074-3 05/23/24 14:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	656000	692000	1	5.34		10

L1738076-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1738076-02 05/23/24 14:07 • (DUP) R4074074-4 05/23/24 14:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	135000	140000	1	3.64		10

Laboratory Control Sample (LCS)

(LCS) R4074074-2 05/23/24 14:07

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8410000	95.6	85.0-115	

Method Blank (MB)

(MB) R4074067-1 05/23/24 16:00

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

L1737559-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1737559-01 05/23/24 16:00 • (DUP) R4074067-3 05/23/24 16:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	712000	700000	1	1.70		10

Laboratory Control Sample (LCS)

(LCS) R4074067-2 05/23/24 16:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8850000	101	85.0-115	

Method Blank (MB)

(MB) R4080098-1 06/04/24 23:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1738133-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1738133-02 06/05/24 04:14 • (DUP) R4080098-3 06/05/24 04:28

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1450	1350	1	6.94		15
Fluoride	313	162	1	63.6	P1	15
Sulfate	5720	5740	1	0.284		15

L1738453-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1738453-01 06/05/24 08:02 • (DUP) R4080098-5 06/05/24 08:16

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	35800	40900	10	13.2		15
Fluoride	1370	U	10	200	P1	15

Sample Narrative:

OS: dilution due to high SO4

Laboratory Control Sample (LCS)

(LCS) R4080098-2 06/04/24 23:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39700	99.1	80.0-120	
Fluoride	8000	8270	103	80.0-120	
Sulfate	40000	40200	100	80.0-120	

L1738133-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1738133-02 06/05/24 04:14 • (MS) R4080098-4 06/05/24 04:41

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1450	41200	99.3	1	80.0-120	
Fluoride	8000	313	8700	105	1	80.0-120	
Sulfate	40000	5720	45300	98.8	1	80.0-120	

L1738453-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1738453-01 06/05/24 08:02 • (MS) R4080098-6 06/05/24 08:29 • (MSD) R4080098-7 06/05/24 08:42

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	40000	35800	75400	74600	98.8	96.8	10	80.0-120			1.08	15
Fluoride	8000	1370	U	U	0.000	0.000	10	80.0-120	J6	J6	0.000	15

Sample Narrative:

OS: dilution due to high SO4

Method Blank (MB)

(MB) R4072172-1 05/21/24 12:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4072172-2 05/21/24 12:28

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	3.21	107	80.0-120	

L1738149-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1738149-06 05/21/24 12:40 • (MS) R4072172-12 05/21/24 12:47 • (MSD) R4072172-13 05/21/24 12:50

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 %
Mercury	3.00	U	3.16	3.13	105	104	1	75.0-125			1.10	20

Method Blank (MB)

(MB) R4075599-1 05/30/24 16:10

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

Laboratory Control Sample (LCS)

(LCS) R4075599-2 05/30/24 16:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	938	93.8	80.0-120	
Calcium	10000	9740	97.4	80.0-120	

L1738105-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1738105-05 05/30/24 16:13 • (MS) R4075599-4 05/30/24 16:17 • (MSD) R4075599-5 05/30/24 16:18

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 %
Boron	1000	U	952	952	95.2	95.2	1	75.0-125			0.0727	20
Calcium	10000	7210	16800	17000	96.2	97.7	1	75.0-125			0.893	20

Method Blank (MB)

(MB) R4088137-1 06/29/24 10:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	0.488	J	0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	0.130	J	0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4088137-2 06/29/24 10:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	56.7	113	80.0-120	
Arsenic	50.0	56.8	114	80.0-120	
Barium	50.0	57.2	114	80.0-120	
Beryllium	50.0	55.5	111	80.0-120	
Cadmium	50.0	55.0	110	80.0-120	
Chromium	50.0	57.7	115	80.0-120	
Cobalt	50.0	58.4	117	80.0-120	
Lead	50.0	56.9	114	80.0-120	
Molybdenum	50.0	55.1	110	80.0-120	
Selenium	50.0	55.2	110	80.0-120	
Thallium	50.0	56.0	112	80.0-120	
Lithium	50.0	59.6	119	80.0-120	

L1738104-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1738104-18 06/29/24 10:52 • (MS) R4088137-4 06/29/24 10:58 • (MSD) R4088137-5 06/29/24 11:01

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 %
Antimony	50.0	U	56.5	57.7	113	115	1	75.0-125			2.12	20
Arsenic	50.0	0.438	54.8	55.1	109	109	1	75.0-125			0.602	20
Barium	50.0	208	255	260	94.2	103	1	75.0-125			1.68	20

L1738104-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1738104-18 06/29/24 10:52 • (MS) R4088137-4 06/29/24 10:58 • (MSD) R4088137-5 06/29/24 11:01

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 %
Beryllium	50.0	U	52.1	53.5	104	107	1	75.0-125			2.61	20
Cadmium	50.0	U	52.4	52.3	105	105	1	75.0-125			0.0802	20
Chromium	50.0	U	53.7	53.7	107	107	1	75.0-125			0.161	20
Cobalt	50.0	0.232	54.4	54.8	108	109	1	75.0-125			0.678	20
Lead	50.0	U	56.3	56.1	113	112	1	75.0-125			0.355	20
Molybdenum	50.0	5.04	59.7	61.0	109	112	1	75.0-125			2.20	20
Selenium	50.0	U	54.0	52.8	108	106	1	75.0-125			2.37	20
Thallium	50.0	U	55.3	53.6	111	107	1	75.0-125			3.07	20
Lithium	50.0		118	117	104	102	1	75.0-125			0.539	20

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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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	LAO000356
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.

Plum Point Services Co., LLC
2739 SCR 623
Osceola, AR 72370

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

Report to: **Dana Derrington**

Email To: dderrington@olsson.com;hferguson@olsson.co

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola, AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): ERIC NICARR

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-104	G	GW		5/16/24	1435		X	X	X	X	X	X		-01
MW-110	↓	GW		↓	1340		↓	↓	↓	↓	↓	↓		-02
MW-120		GW			1105									-03
MW-110 DUP		GW			1350									-04
EPA EB-BG	↓	GW		↓	1745		↓	↓	↓	↓	↓	↓		-05
		GW												
		GW												
		GW												

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	5/17/24	0815	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received: 25

Date: 5/18/24 Time: 900

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

PH-10BDH5021 TRC-2352362
CR6-20221V

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1738153

Table # 1206

Acctnum: NAESOAR
Template: T106048
Prelogin: P1074315
PM: 134 - Mark W. Beasley
PB: LM 5/17/24
Shipped Via: FedEX Ground

Tracking Numbers	Temperature
7411 4519 8525	EDAG 3.7+0.1=3.8
7411 4519 8536	EDAG 2.6+0.1=2.7

Arlo Henderson
Name

5/18/24
Date

ANALYTICAL REPORT

June 14, 2024

Plum Point Services Co., LLC

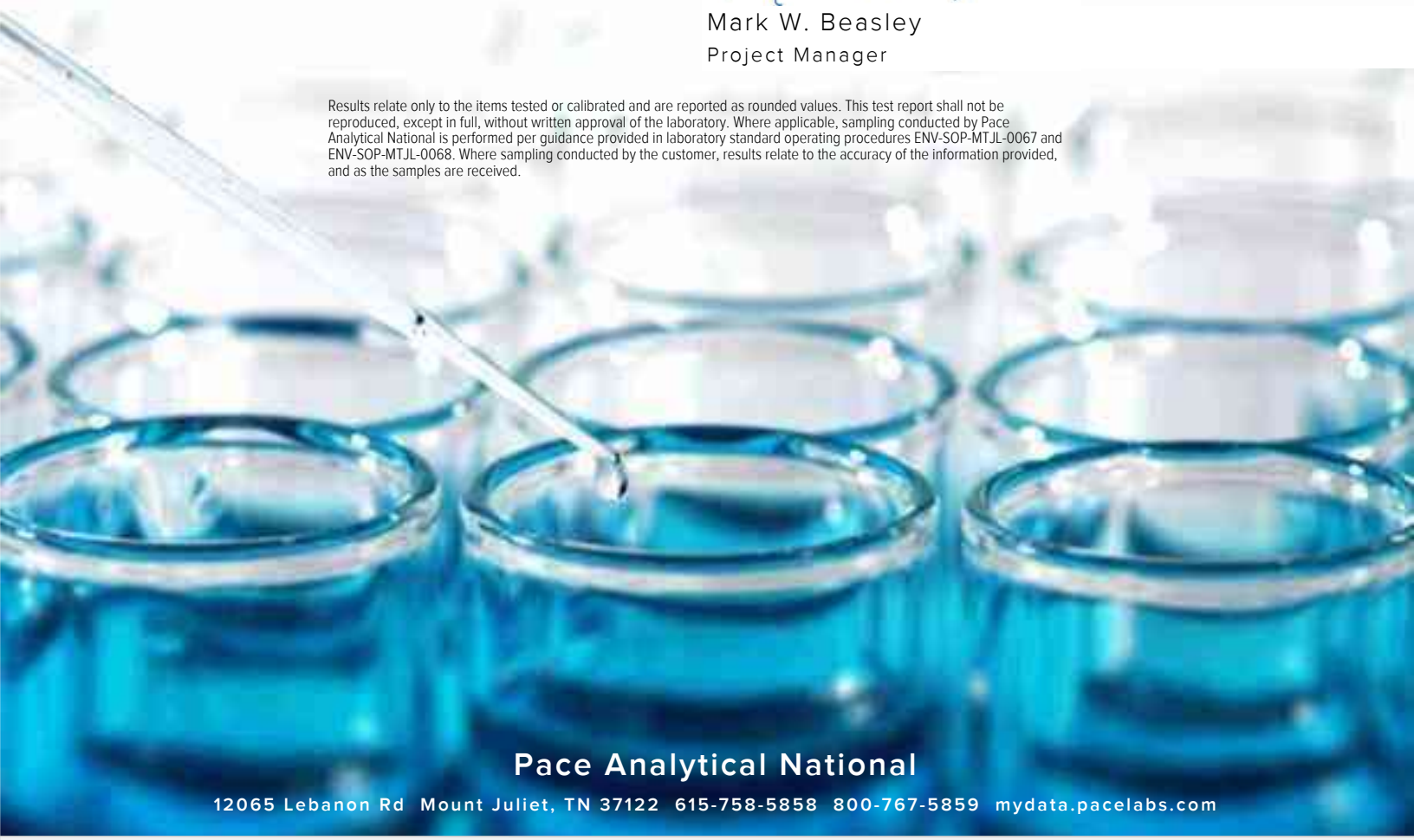
Sample Delivery Group:	L1738135
Samples Received:	05/18/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

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 mydata.pacelabs.com

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MW-104 L1738135-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/16/24 14:35	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2298328	1	06/04/24 14:50	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2298855	1	06/05/24 15:02	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2298855	1	06/05/24 15:02	06/06/24 20:13	ZRG	Mt. Juliet, TN

MW-110 L1738135-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/16/24 13:40	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2298328	1	06/04/24 14:50	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2298855	1	06/05/24 15:02	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2298855	1	06/05/24 15:02	06/06/24 20:13	ZRG	Mt. Juliet, TN

MW-120 L1738135-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/16/24 17:05	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2298328	1	06/04/24 14:50	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2298855	1	06/05/24 15:02	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2298855	1	06/05/24 15:02	06/06/24 20:13	ZRG	Mt. Juliet, TN

MW-110 DUP L1738135-04 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/16/24 13:50	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2298328	1	06/04/24 14:50	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2298855	1	06/05/24 15:02	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2298855	1	06/05/24 15:02	06/06/24 20:13	ZRG	Mt. Juliet, TN

EPA EB-BG L1738135-05 Non-Potable Water

Collected by	Collected date/time	Received date/time
	05/16/24 17:45	05/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2298328	1	06/04/24 14:50	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2298855	1	06/05/24 15:02	06/12/24 21:06	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2298855	1	06/05/24 15:02	06/06/24 20:13	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0445	U	0.271	0.373	0.499	0.260	06/12/2024 21:06	WG2298328
(T) Barium	*109*					*30.0-143*	*06/12/2024 21:06*	WG2298328
(T) Yttrium	*94.9*					*30.0-136*	*06/12/2024 21:06*	WG2298328

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.88		0.569	0.556	06/12/2024 21:06	WG2298855

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	1.84		0.500	0.260	0.245	0.173	06/06/2024 20:13	WG2298855
(T) Barium-133	*97.8*					*30.0-143*	*06/06/2024 20:13*	WG2298855

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.510	J	0.338	0.446	0.609	0.317	06/12/2024 21:06	WG2298328
(T) Barium	*85.4*					*30.0-143*	*06/12/2024 21:06*	WG2298328
(T) Yttrium	*116*					*30.0-136*	*06/12/2024 21:06*	WG2298328

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.695	J	0.422	0.709	06/12/2024 21:06	WG2298855

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.185	J	0.253	0.0999	0.364	0.240	06/06/2024 20:13	WG2298855
(T) Barium-133	*88.0*					*30.0-143*	*06/06/2024 20:13*	WG2298855

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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.114	U	0.294	0.396	0.539	0.281	06/12/2024 21:06	WG2298328
(T) Barium	*94.9*					*30.0-143*	*06/12/2024 21:06*	WG2298328
(T) Yttrium	*105*					*30.0-136*	*06/12/2024 21:06*	WG2298328

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.311	J	0.430	0.709	06/12/2024 21:06	WG2298855

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.197	J	0.314	0.126	0.460	0.292	06/06/2024 20:13	WG2298855
(T) Barium-133	*92.3*					*30.0-143*	*06/06/2024 20:13*	WG2298855

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.896		0.265	0.364	0.463	0.242	06/12/2024 21:06	WG2298328
(T) Barium	*101*					*30.0-143*	*06/12/2024 21:06*	WG2298328
(T) Yttrium	*112*					*30.0-136*	*06/12/2024 21:06*	WG2298328

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.61		0.610	0.590	06/12/2024 21:06	WG2298855

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	1.71		0.549	0.273	0.366	0.244	06/06/2024 20:13	WG2298855
(T) Barium-133	*94.5*					*30.0-143*	*06/06/2024 20:13*	WG2298855

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.0655	U	0.259	0.358	0.477	0.249	06/12/2024 21:06	WG2298328
(T) Barium	*102*					*30.0-143*	*06/12/2024 21:06*	WG2298328
(T) Yttrium	*107*					*30.0-136*	*06/12/2024 21:06*	WG2298328

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.330	J	0.348	0.546	06/12/2024 21:06	WG2298855

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.264	J	0.233	0.103	0.265	0.197	06/06/2024 20:13	WG2298855
(T) Barium-133	*89.8*					*30.0-143*	*06/06/2024 20:13*	WG2298855

Method Blank (MB)

(MB) R4081589-1 06/12/24 21:06

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.306	J	0.224	0.407	0.214
(T) Barium	*71.7*		*71.7*		
(T) Yttrium	*94.4*		*94.4*		

L1738135-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1738135-03 06/12/24 21:06 • (DUP) R4081589-5 06/12/24 21:06

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.114	0.294	0.539	0.281	0.343	0.668	1.22	0.640	100	0.313	U	20	3
(T) Barium	*94.9*				*89.0*	*89.0*							
(T) Yttrium	*105*				*97.2*	*97.2*							

Laboratory Control Sample (LCS)

(LCS) R4081589-2 06/12/24 21:06

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.51	90.2	80.0-120	
(T) Barium			*98.1*		
(T) Yttrium			*94.6*		

L1738142-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1738142-07 06/12/24 21:06 • (MS) R4081589-3 06/12/24 21:06 • (MSD) R4081589-4 06/12/24 21:06

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	-0.107	15.7	14.3	93.8	85.4	1	70.0-130			9.42		20
(T) Barium		*89.0*			*92.4*	*107*							
(T) Yttrium		*107*			*105*	*115*							

Method Blank (MB)

(MB) R4078678-1 06/06/24 20:13

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.0761	J	0.0794	0.105	0.0703
(T) Barium-133	*73.0*		*73.0*		

L1738113-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1738113-23 06/06/24 20:13 • (DUP) R4078678-5 06/06/24 20:13

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	1.39	0.472	0.234	0.178	0.332	0.219	0.183	0.143	123	2.03		20	3
(T) Barium-133	*87.9*				*87.0*	*87.0*							

Laboratory Control Sample (LCS)

(LCS) R4078678-2 06/06/24 20:13

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.07	101	80.0-120	
(T) Barium-133			*72.5*		

L1738113-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1738113-17 06/06/24 20:13 • (MS) R4078678-3 06/06/24 20:13 • (MSD) R4078678-4 06/06/24 20:13

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.735	19.7	19.7	95.0	94.8	1	75.0-125			0.254		20
(T) Barium-133		*76.7*			*76.4*	*66.6*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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	LAO000356
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

Report to: **Dana Derrington**

Email To: **dderrington@olsson.com;hferguson@olsson.co**

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola / AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): ERIC NICARR

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-104	G	GW		5/16/24	1435		X	X	X	X	X	X		-01
MW-110	↓	GW		↓	1340		↓	↓	↓	↓	↓	↓		-02
MW-120	↓	GW		↓	1705		↓	↓	↓	↓	↓	↓		-03
MW-110 DUP	↓	GW		↓	1350		↓	↓	↓	↓	↓	↓		-04
EPA EB-BG	↓	GW		↓	1745		↓	↓	↓	↓	↓	↓		-05
		GW												
		GW												
		GW												

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L1238135

Table #

Acctnum: **NAESOAR**

Template: **T106048**

Prelogin: **P1074315**

PM: **134 - Mark W. Beasley**

PB: LM 5/7/24

Shipped Via: **FedEX Ground**

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

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

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Eric Nicarr	5/17/24	0815		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 25
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Allen	Date: 5/18/24 Time: 901

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Tracking Numbers		Temperature
7411 4519 8525		EDA6 3.7+0.1=3.8
7411 4519 8536		EDA6 2.6+0.1=2.7

Arlo Henderson
Name

5/18/24
Date

FIRST HALF 2024 VERIFICATION / MONTHLY BACKGROUND SAMPLING EVENT
JUNE 2024

ANALYTICAL REPORT

July 12, 2024

Plum Point Services Co., LLC

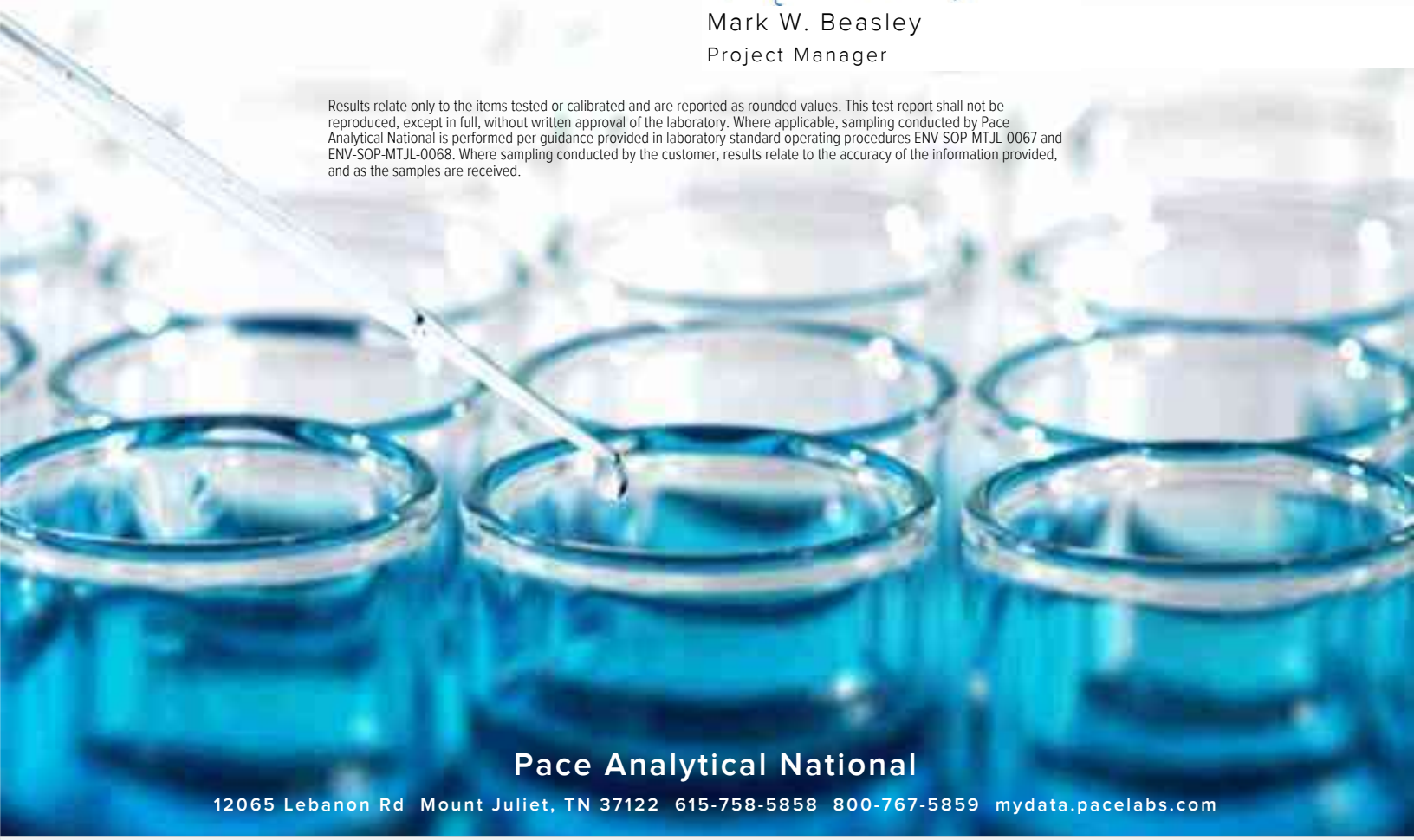
Sample Delivery Group:	L1748973
Samples Received:	06/20/2024
Project Number:	R14590-3336-001
Description:	PPES DEQ Program

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-117 L1748973-01 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 12:20 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2311369	1	06/25/24 09:14	06/25/24 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2320364	1	07/11/24 21:10	07/11/24 21:10	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2312627	1	07/03/24 14:01	07/03/24 17:45	ZSA	Mt. Juliet, TN

MW-117 DUP L1748973-02 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 12:25 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2311369	1	06/25/24 09:14	06/25/24 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2320364	1	07/11/24 22:02	07/11/24 22:02	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2312627	1	07/03/24 14:01	07/03/24 17:47	ZSA	Mt. Juliet, TN

EPA EB-2 L1748973-03 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 13:50 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2311370	1	06/25/24 08:34	06/25/24 11:37	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2320364	1	07/11/24 22:14	07/11/24 22:14	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2312627	1	07/03/24 14:01	07/03/24 17:48	ZSA	Mt. Juliet, TN

MW-108 L1748973-04 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 13:20 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2320364	1	07/11/24 22:27	07/11/24 22:27	DLH	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	376000		10000	1	06/25/2024 14:31	WG2311369

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	37800		594	5000	1	07/11/2024 21:10	WG2320364

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	98700		79.3	1000	1	07/03/2024 17:45	WG2312627

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	371000		10000	1	06/25/2024 14:31	WG2311369

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	38000		594	5000	1	07/11/2024 22:02	WG2320364

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	98800		79.3	1000	1	07/03/2024 17:47	WG2312627

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	06/25/2024 11:37	WG2311370

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	U		594	5000	1	07/11/2024 22:14	WG2320364

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Calcium	U		79.3	1000	1	07/03/2024 17:48	WG2312627

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	67100		594	5000	1	07/11/2024 22:27	WG2320364

Method Blank (MB)

(MB) R4087436-1 06/25/24 14:31

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

L1749443-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1749443-07 06/25/24 14:31 • (DUP) R4087436-3 06/25/24 14:31

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	360000	366000	1	1.65		10

L1749443-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1749443-08 06/25/24 14:31 • (DUP) R4087436-4 06/25/24 14:31

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	485000	487000	1	0.412		10

Laboratory Control Sample (LCS)

(LCS) R4087436-2 06/25/24 14:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8050000	91.5	85.0-115	

Method Blank (MB)

(MB) R4087363-1 06/25/24 11:37

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

L1748994-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1748994-01 06/25/24 11:37 • (DUP) R4087363-3 06/25/24 11:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	904000	910000	1	0.662		10

L1749443-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1749443-02 06/25/24 11:37 • (DUP) R4087363-4 06/25/24 11:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	211000	208000	1	1.43		10

Laboratory Control Sample (LCS)

(LCS) R4087363-2 06/25/24 11:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8650000	98.3	85.0-115	

Method Blank (MB)

(MB) R4093019-1 07/11/24 20:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	U		594	5000

L1748973-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1748973-01 07/11/24 21:10 • (DUP) R4093019-3 07/11/24 21:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	37800	37800	1	0.139		15

L1749495-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1749495-06 07/12/24 02:31 • (DUP) R4093019-6 07/12/24 02:43

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	7580	7570	1	0.100		15

Laboratory Control Sample (LCS)

(LCS) R4093019-2 07/11/24 20:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	39600	99.0	80.0-120	

L1748973-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748973-01 07/11/24 21:10 • (MS) R4093019-4 07/11/24 21:36 • (MSD) R4093019-5 07/11/24 21:49

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 %
Sulfate	40000	37800	71300	71400	83.9	84.1	1	80.0-120			0.142	15

L1749495-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1749495-06 07/12/24 02:31 • (MS) R4093019-7 07/12/24 02:56

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	7580	46500	97.2	1	80.0-120	

Method Blank (MB)

(MB) R4089974-1 07/03/24 17:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R4089974-2 07/03/24 17:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10000	10300	103	80.0-120	

L1748926-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748926-01 07/03/24 17:23 • (MS) R4089974-4 07/03/24 17:26 • (MSD) R4089974-5 07/03/24 17:28

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	508000	512000	506000	41.5	0.000	1	75.0-125	V	V	1.14	20

GLOSSARY OF TERMS

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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.
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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.

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: **Dana Derrington**

Email To: **dderrington@olsson.com;hferguson@olsson.co**

Project Description: **PPES DEQ Program**

City/State Collected: OSCEOLA AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature): Michael Clayton

Immediately Packed on Ice N ___ Y V

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1748973

D094

Acctnum: **NAESOAR**
Template: **T254081**
Prelogin: **P1080314**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CAICP 250mlHDPE-HNO3	SULFATE 125mlHDPE-NoPres	TDS 1L-HDPE NoPres	Pres Chk	Remarks	Sample # (lab only)
MW-117	Grab	GW		6/19/24	1220	3	X	X	X			-01
MW-117 DUP		GW		6/19/24	1225	3	X	X	X			-02
EPA EB-2		GW		6/19/24	1250	3	X	X	X			-03
MW-108		GW		6/19/24	1320	1		X				-04
		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 _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 7464 0843 4642

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Michael Clayton	6/19/24	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.9+0.3=2.2 °C Bottles Received: 10
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Chandler Stevenson	Date: 6-20-24 Time: 9:30

PH-10BDH4321
TRC-3223A228

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

August 05, 2024

Plum Point Services Co., LLC

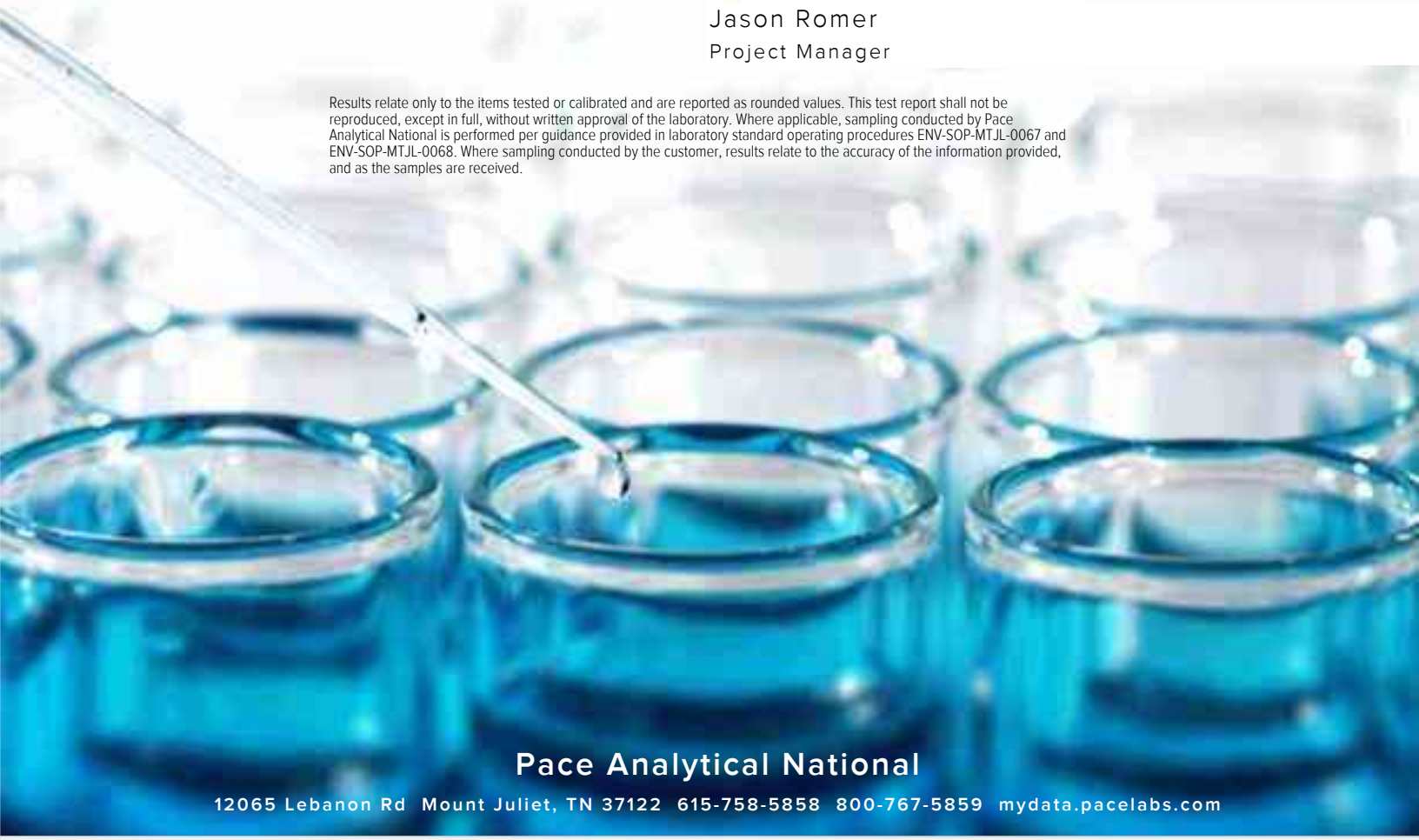
Sample Delivery Group:	L1749014
Samples Received:	06/20/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:

Jason Romer
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 mydata.pacelabs.com

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MW-120 L1749014-01 GW

Collected by: Michael Clayton | Collected date/time: 06/18/24 12:55 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2310831	1	06/24/24 09:16	06/24/24 15:26	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2329786	1	07/25/24 12:09	07/25/24 12:09	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2329786	1	07/25/24 13:20	07/25/24 13:20	SMC	Allen, TX
Mercury by Method 7470A	WG2309425	1	06/23/24 20:36	06/24/24 18:06	SDG	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2312627	1	07/03/24 14:01	07/03/24 17:55	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2313507	1	06/28/24 10:01	06/29/24 14:12	SJM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2313507	1	06/28/24 10:01	06/30/24 15:17	SJM	Mt. Juliet, TN

MW-120 DUP L1749014-02 GW

Collected by: Michael Clayton | Collected date/time: 06/18/24 13:00 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2310824	1	06/24/24 10:55	06/24/24 17:44	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2329786	1	07/25/24 12:21	07/25/24 12:21	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2329786	1	07/25/24 13:32	07/25/24 13:32	SMC	Allen, TX
Mercury by Method 7470A	WG2311164	1	06/26/24 12:19	06/26/24 22:30	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2319596	1	07/15/24 14:07	07/16/24 10:42	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2319614	1	07/15/24 17:24	08/02/24 20:38	JPD	Mt. Juliet, TN

EPA-EB-BG L1749014-03 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 10:30 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2310826	1	06/24/24 12:05	06/25/24 18:15	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2329786	1	07/25/24 12:33	07/25/24 12:33	SMC	Allen, TX
Mercury by Method 7470A	WG2311164	1	06/26/24 12:19	06/26/24 22:32	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2319596	1	07/15/24 14:07	07/16/24 10:44	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2319614	1	07/15/24 17:24	08/02/24 20:51	JPD	Mt. Juliet, TN

MW-104 L1749014-04 GW

Collected by: Michael Clayton | Collected date/time: 06/18/24 11:50 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2310831	1	06/24/24 09:16	06/24/24 15:26	MMF	Mt. Juliet, TN

MW-110 L1749014-05 GW

Collected by: Michael Clayton | Collected date/time: 06/18/24 14:40 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2310826	1	06/24/24 12:05	06/25/24 18:15	MMF	Mt. Juliet, TN

MW-121 L1749014-06 GW

Collected by: Michael Clayton | Collected date/time: 06/18/24 15:45 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2310824	1	06/24/24 10:55	06/24/24 17:44	MMF	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.



Jason Romer
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	338000		10000	1	06/24/2024 15:26	WG2310831

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2950	Q	325	800	1	07/25/2024 12:09	WG2329786
Fluoride	194	J Q	94.7	500	1	07/25/2024 12:09	WG2329786
Sulfate	22400	Q	211	700	1	07/25/2024 13:20	WG2329786

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	06/24/2024 18:06	WG2309425

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	69.6	J	20.0	200	1	07/03/2024 17:55	WG2312627
Calcium	87300		79.3	1000	1	07/03/2024 17:55	WG2312627

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	06/29/2024 14:12	WG2313507
Arsenic	0.560	J	0.180	2.00	1	06/29/2024 14:12	WG2313507
Barium	186		0.381	2.00	1	06/29/2024 14:12	WG2313507
Beryllium	U		0.190	2.00	1	06/29/2024 14:12	WG2313507
Cadmium	U		0.150	1.00	1	06/29/2024 14:12	WG2313507
Chromium	U		1.24	2.00	1	06/29/2024 14:12	WG2313507
Cobalt	U		0.0596	2.00	1	06/29/2024 14:12	WG2313507
Lead	U		0.849	2.00	1	06/29/2024 14:12	WG2313507
Molybdenum	0.905	J	0.348	5.00	1	06/29/2024 14:12	WG2313507
Selenium	13.0		0.300	2.00	1	06/29/2024 14:12	WG2313507
Thallium	U		0.121	2.00	1	06/29/2024 14:12	WG2313507
Lithium	15.4		0.695	2.00	1	06/30/2024 15:17	WG2313507

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	348000		10000	1	06/24/2024 17:44	WG2310824

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	2950	Q	325	800	1	07/25/2024 12:21	WG2329786
Fluoride	195	J Q	94.7	500	1	07/25/2024 12:21	WG2329786
Sulfate	22600	Q	211	700	1	07/25/2024 13:32	WG2329786

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	06/26/2024 22:30	WG2311164

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	61.7	J	20.0	200	1	07/16/2024 10:42	WG2319596
Calcium	86000		79.3	1000	1	07/16/2024 10:42	WG2319596

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	08/02/2024 20:38	WG2319614
Arsenic	0.650	J	0.180	2.00	1	08/02/2024 20:38	WG2319614
Barium	186		0.381	2.00	1	08/02/2024 20:38	WG2319614
Beryllium	U		0.190	2.00	1	08/02/2024 20:38	WG2319614
Cadmium	U		0.150	1.00	1	08/02/2024 20:38	WG2319614
Chromium	U		1.24	2.00	1	08/02/2024 20:38	WG2319614
Cobalt	U		0.0596	2.00	1	08/02/2024 20:38	WG2319614
Lead	U		0.849	2.00	1	08/02/2024 20:38	WG2319614
Molybdenum	0.989	J	0.348	5.00	1	08/02/2024 20:38	WG2319614
Selenium	13.8		0.300	2.00	1	08/02/2024 20:38	WG2319614
Thallium	U		0.121	2.00	1	08/02/2024 20:38	WG2319614
Lithium	15.8		0.695	2.00	1	08/02/2024 20:38	WG2319614

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	06/25/2024 18:15	WG2310826

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	U	Q	325	800	1	07/25/2024 12:33	WG2329786
Fluoride	U	Q	94.7	500	1	07/25/2024 12:33	WG2329786
Sulfate	U	Q	211	700	1	07/25/2024 12:33	WG2329786

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	06/26/2024 22:32	WG2311164

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	07/16/2024 10:44	WG2319596
Calcium	U		79.3	1000	1	07/16/2024 10:44	WG2319596

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	08/02/2024 20:51	WG2319614
Arsenic	U		0.180	2.00	1	08/02/2024 20:51	WG2319614
Barium	U		0.381	2.00	1	08/02/2024 20:51	WG2319614
Beryllium	U		0.190	2.00	1	08/02/2024 20:51	WG2319614
Cadmium	U		0.150	1.00	1	08/02/2024 20:51	WG2319614
Chromium	U		1.24	2.00	1	08/02/2024 20:51	WG2319614
Cobalt	U		0.0596	2.00	1	08/02/2024 20:51	WG2319614
Lead	U		0.849	2.00	1	08/02/2024 20:51	WG2319614
Molybdenum	U		0.348	5.00	1	08/02/2024 20:51	WG2319614
Selenium	U		0.300	2.00	1	08/02/2024 20:51	WG2319614
Thallium	U		0.121	2.00	1	08/02/2024 20:51	WG2319614
Lithium	U		0.695	2.00	1	08/02/2024 20:51	WG2319614

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	321000		10000	1	06/24/2024 15:26	WG2310831

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	293000		10000	1	06/25/2024 18:15	WG2310826

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	150000		10000	1	06/24/2024 17:44	WG2310824

Method Blank (MB)

(MB) R4086953-1 06/24/24 17:44

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

L1748795-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1748795-02 06/24/24 17:44 • (DUP) R4086953-3 06/24/24 17:44

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	434000	444000	1	2.28		10

L1749443-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1749443-01 06/24/24 17:44 • (DUP) R4086953-4 06/24/24 17:44

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	630000	627000	1	0.477		10

Laboratory Control Sample (LCS)

(LCS) R4086953-2 06/24/24 17:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8540000	97.0	85.0-115	

Method Blank (MB)

(MB) R4086935-1 06/25/24 18:15

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

L1748341-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1748341-08 06/25/24 18:15 • (DUP) R4086935-3 06/25/24 18:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	229000	233000	1	1.73		10

L1748993-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1748993-04 06/25/24 18:15 • (DUP) R4086935-4 06/25/24 18:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	489000	504000	1	3.02		10

Laboratory Control Sample (LCS)

(LCS) R4086935-2 06/25/24 18:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8760000	99.5	85.0-115	

Method Blank (MB)

(MB) R4086954-1 06/24/24 15:26

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

L1749014-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1749014-01 06/24/24 15:26 • (DUP) R4086954-3 06/24/24 15:26

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	338000	340000	1	0.590		10

L1749516-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1749516-10 06/24/24 15:26 • (DUP) R4086954-4 06/24/24 15:26

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	283000	281000	1	0.709		10

Laboratory Control Sample (LCS)

(LCS) R4086954-2 06/24/24 15:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8550000	97.2	85.0-115	

Method Blank (MB)

(MB) R4098670-1 07/25/24 11:46

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		325	800
Fluoride	U		94.7	500
Sulfate	U		211	700

Laboratory Control Sample (LCS)

(LCS) R4098670-2 07/25/24 11:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	5000	5110	102	80.0-120	
Fluoride	5000	5150	103	80.0-120	
Sulfate	5000	5200	104	80.0-120	

L1749014-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1749014-03 07/25/24 12:33 • (MS) R4098670-3 07/25/24 12:57 • (MSD) R4098670-4 07/25/24 13:09

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	5000	U	5060	5080	101	102	1	80.0-120			0.343	20
Fluoride	5000	U	5140	5140	103	103	1	80.0-120			0.165	20
Sulfate	5000	U	5190	5190	104	104	1	80.0-120			0.0501	20

L1760058-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1760058-01 07/25/24 14:08 • (MS) R4098670-5 07/25/24 14:22 • (MSD) R4098670-6 07/25/24 14:34

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 %
Sulfate	100000	140000	249000	247000	109	108	1	80.0-120			0.486	20

Method Blank (MB)

(MB) R4085863-1 06/24/24 16:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4085863-2 06/24/24 16:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.72	90.8	80.0-120	

L1748869-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748869-01 06/24/24 17:01 • (MS) R4085863-4 06/24/24 17:11 • (MSD) R4085863-5 06/24/24 17:13

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 %
Mercury	3.00	U	2.82	2.71	94.1	90.4	1	75.0-125			3.97	20

Method Blank (MB)

(MB) R4087013-1 06/26/24 22:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4087013-2 06/26/24 22:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.93	97.7	80.0-120	

L1749339-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1749339-29 06/26/24 22:19 • (MS) R4087013-4 06/26/24 22:24 • (MSD) R4087013-5 06/26/24 22:27

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 %
Mercury	3.00	U	2.90	2.91	96.8	97.1	1	75.0-125			0.337	20

Method Blank (MB)

(MB) R4089974-1 07/03/24 17:19

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

Laboratory Control Sample (LCS)

(LCS) R4089974-2 07/03/24 17:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	1010	101	80.0-120	
Calcium	10000	10300	103	80.0-120	

L1748926-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748926-01 07/03/24 17:23 • (MS) R4089974-4 07/03/24 17:26 • (MSD) R4089974-5 07/03/24 17:28

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 %
Boron	1000	21.7	1030	1010	101	98.8	1	75.0-125			2.24	20
Calcium	10000	508000	512000	506000	41.5	0.000	1	75.0-125	V	V	1.14	20

Method Blank (MB)

(MB) R4094342-1 07/16/24 10:32

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) R4094342-2 07/16/24 10:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	973	97.3	80.0-120	
Calcium	10000	10000	100	80.0-120	

L1752296-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1752296-02 07/16/24 10:35 • (MS) R4094342-4 07/16/24 10:39 • (MSD) R4094342-5 07/16/24 10:40

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	56.7	1030	1010	97.8	94.8	1	75.0-125			2.92	20
Calcium	10000	114000	125000	120000	106	65.8	1	75.0-125		V	3.30	20

Method Blank (MB)

(MB) R4088273-1 06/29/24 13:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	U		0.121	2.00

Method Blank (MB)

(MB) R4088348-1 06/30/24 14:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4088273-2 06/29/24 13:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	51.5	103	80.0-120	
Arsenic	50.0	50.8	102	80.0-120	
Barium	50.0	49.1	98.2	80.0-120	
Beryllium	50.0	47.2	94.5	80.0-120	
Cadmium	50.0	52.6	105	80.0-120	
Chromium	50.0	53.3	107	80.0-120	
Cobalt	50.0	53.5	107	80.0-120	
Lead	50.0	49.9	99.9	80.0-120	
Molybdenum	50.0	50.3	101	80.0-120	
Selenium	50.0	52.1	104	80.0-120	
Thallium	50.0	48.3	96.5	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4088348-2 06/30/24 15:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lithium	50.0	43.3	86.6	80.0-120	

L1748845-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748845-01 06/29/24 13:52 • (MS) R4088273-4 06/29/24 13:59 • (MSD) R4088273-5 06/29/24 14:02

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 %
Antimony	50.0	U	51.6	51.8	103	104	1	75.0-125			0.340	20
Arsenic	50.0	0.650	51.0	52.4	101	104	1	75.0-125			2.66	20
Barium	50.0	10.3	57.5	57.9	94.3	95.2	1	75.0-125			0.757	20
Beryllium	50.0	U	48.1	49.7	96.3	99.4	1	75.0-125			3.26	20
Cadmium	50.0	0.253	53.1	55.1	106	110	1	75.0-125			3.56	20
Chromium	50.0	U	51.6	53.2	103	106	1	75.0-125			2.93	20
Cobalt	50.0	3.30	55.6	56.0	105	105	1	75.0-125			0.691	20
Lead	50.0	U	53.2	51.4	106	103	1	75.0-125			3.51	20
Molybdenum	50.0	1.02	51.9	52.3	102	103	1	75.0-125			0.752	20
Selenium	50.0	U	50.3	52.1	101	104	1	75.0-125			3.49	20
Thallium	50.0	U	49.8	49.2	99.6	98.5	1	75.0-125			1.16	20

L1748845-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748845-01 06/30/24 15:04 • (MS) R4088348-4 06/30/24 15:10 • (MSD) R4088348-5 06/30/24 15:14

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 %
Lithium	50.0	4.56	47.7	48.6	86.2	88.2	1	75.0-125			2.02	20

QUALITY CONTROL SUMMARY

L1749014-02,03

Method Blank (MB)

(MB) R4102256-1 08/02/24 20:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4102256-2 08/02/24 20:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	57.0	114	80.0-120	
Arsenic	50.0	54.0	108	80.0-120	
Barium	50.0	50.3	101	80.0-120	
Beryllium	50.0	49.2	98.3	80.0-120	
Cadmium	50.0	56.0	112	80.0-120	
Chromium	50.0	55.6	111	80.0-120	
Cobalt	50.0	55.5	111	80.0-120	
Lead	50.0	52.7	105	80.0-120	
Molybdenum	50.0	52.3	105	80.0-120	
Selenium	50.0	52.0	104	80.0-120	
Thallium	50.0	51.5	103	80.0-120	
Lithium	50.0	48.4	96.7	80.0-120	

L1749014-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1749014-02 08/02/24 20:38 • (MS) R4102256-4 08/02/24 20:45 • (MSD) R4102256-5 08/02/24 20:48

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 %
Antimony	50.0	U	58.3	58.1	117	116	1	75.0-125			0.315	20
Arsenic	50.0	0.650	52.7	53.7	104	106	1	75.0-125			2.03	20
Barium	50.0	186	232	233	92.1	95.8	1	75.0-125			0.788	20

L1749014-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1749014-02 08/02/24 20:38 • (MS) R4102256-4 08/02/24 20:45 • (MSD) R4102256-5 08/02/24 20:48

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 %
Beryllium	50.0	U	48.1	47.2	96.3	94.4	1	75.0-125			1.97	20
Cadmium	50.0	U	54.7	55.1	109	110	1	75.0-125			0.709	20
Chromium	50.0	U	53.4	54.0	107	108	1	75.0-125			1.10	20
Cobalt	50.0	U	53.1	53.2	106	106	1	75.0-125			0.335	20
Lead	50.0	U	51.2	50.8	102	102	1	75.0-125			0.738	20
Molybdenum	50.0	0.989	54.2	54.4	106	107	1	75.0-125			0.378	20
Selenium	50.0	13.8	65.1	64.4	102	101	1	75.0-125			1.07	20
Thallium	50.0	U	51.3	49.6	103	99.1	1	75.0-125			3.36	20
Lithium	50.0	15.8	62.3	61.9	93.0	92.3	1	75.0-125			0.619	20

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.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
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	LAO00356
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		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

[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

Report to:
Dana Derrington

Email To:
dderrington@olsson.com;hferguson@olsson.co

Project Description:
Plum Point Energy Station

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project #
14590-3336-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Clayton

Site/Facility ID #

P.O. #
2024-00048

Collected by (signature):
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

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace
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MT JULIET, TN
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

SDG # L749014
Table H014

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1080311**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres				Remarks	Sample # (lab only)
MW-120	Grab	GW		6/18/24	1255	5	X	X	X	X	X	X					-01
MW-120 DUP	↓	GW		6/18/24	1300	5	X	X	X	X	X	X					-02
FPA-EB-BG	↓	GW		6/19/24	1030	5	X	X	X	X	X	X					-03
		GW															
		GW															
MW-104	Grab	GW		6/18/24	1150	1						X					-04
MW-110	↓	GW		6/18/24	1440	1						X					-05
MW-121	↓	GW		6/18/24	1545	1						X					-06

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

Remarks: Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7464 0893 4653

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Michael Clayton	6/19/24	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 6.0 °C Bottles Received: 18	
				4.6+0.3=4.9	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Landon Ryan	Date: 6/20/24 Time: 0900	Hold: Condition: NCF / OK

ANALYTICAL REPORT

July 03, 2024

Plum Point Services Co., LLC

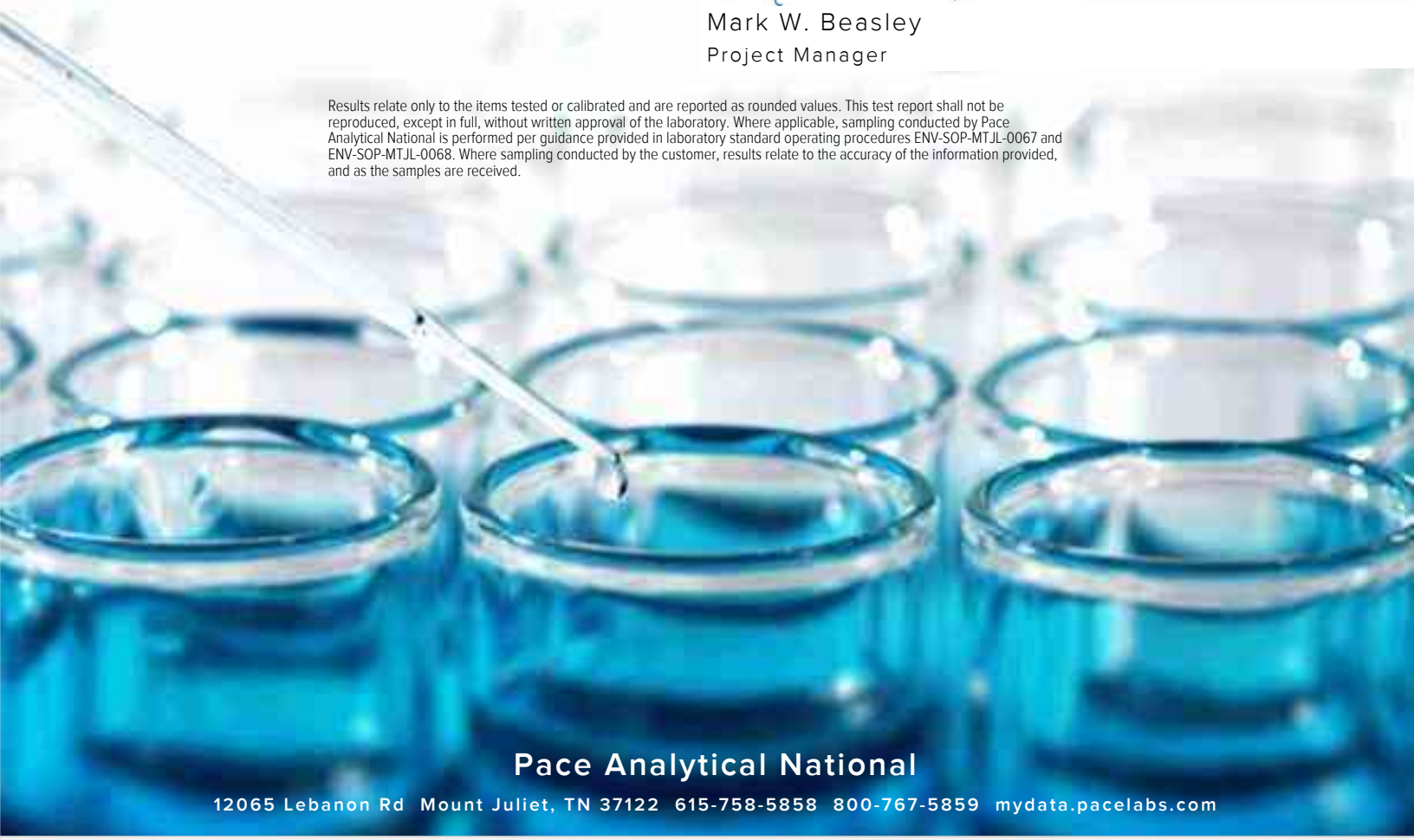
Sample Delivery Group:	L1749015
Samples Received:	06/20/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-120 L1749015-01 Non-Potable Water

Collected by: Michael Clayton
Collected date/time: 06/18/24 12:55
Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2309692	1	06/21/24 16:04	06/24/24 22:10	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2310839	1	06/24/24 14:24	06/25/24 22:46	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2310839	1	06/24/24 14:24	06/25/24 22:46	ZRG	Mt. Juliet, TN

MW-120 DUP L1749015-02 Non-Potable Water

Collected by: Michael Clayton
Collected date/time: 06/18/24 13:00
Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2309692	1	06/21/24 16:04	06/24/24 22:10	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2310839	1	06/24/24 14:24	06/25/24 22:46	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2310839	1	06/24/24 14:24	06/25/24 22:46	ZRG	Mt. Juliet, TN

EPA-EB-EG L1749015-03 Non-Potable Water

Collected by: Michael Clayton
Collected date/time: 06/19/24 10:30
Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2309692	1	06/21/24 16:04	06/24/24 22:10	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2310839	1	06/24/24 14:24	06/25/24 22:46	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2310839	1	06/24/24 14:24	06/25/24 22:46	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0719	U	0.273	0.392	0.522	0.275	06/24/2024 22:10	WG2309692
(T) Barium	*93.2*					*30.0-143*	*06/24/2024 22:10*	WG2309692
(T) Yttrium	*76.2*					*30.0-136*	*06/24/2024 22:10*	WG2309692

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.415	J	0.433	0.679	06/25/2024 22:46	WG2310839

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.343	J	0.336	0.134	0.435	0.286	06/25/2024 22:46	WG2310839
(T) Barium-133	*86.1*					*30.0-143*	*06/25/2024 22:46*	WG2310839

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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.996		0.326	0.436	0.591	0.308	06/24/2024 22:10	WG2309692
(T) Barium	*86.9*					*30.0-143*	*06/24/2024 22:10*	WG2309692
(T) Yttrium	*93.7*					*30.0-136*	*06/24/2024 22:10*	WG2309692

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.13		0.410	0.711	06/25/2024 22:46	WG2310839

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.132	U	0.249	0.0888	0.395	0.269	06/25/2024 22:46	WG2310839
(T) Barium-133	*80.4*					*30.0-143*	*06/25/2024 22:46*	WG2310839

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.354	J	0.280	0.394	0.524	0.275	06/24/2024 22:10	WG2309692
(T) Barium	*90.6*					*30.0-143*	*06/24/2024 22:10*	WG2309692
(T) Yttrium	*83.8*					*30.0-136*	*06/24/2024 22:10*	WG2309692

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.531	J	0.372	0.635	06/25/2024 22:46	WG2310839

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.177	J	0.245	0.0989	0.358	0.246	06/25/2024 22:46	WG2310839
(T) Barium-133	*88.1*					*30.0-143*	*06/25/2024 22:46*	WG2310839

QUALITY CONTROL SUMMARY

L1749015-01,02,03

Method Blank (MB)

(MB) R4086432-1 06/24/24 22:10

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.0364	U	0.217	0.416	0.217
(T) Barium	*82.9*		*82.9*		
(T) Yttrium	*96.8*		*96.8*		

L1748641-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1748641-05 06/24/24 22:10 • (DUP) R4086432-5 06/24/24 22:10

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	-0.0441	0.366	0.696	0.363	0.0759	0.363	0.690	0.360	200	0.233	U	20	3
(T) Barium	*100*				*94.8*	*94.8*							
(T) Yttrium	*99.0*				*107*	*107*							

Laboratory Control Sample (LCS)

(LCS) R4086432-2 06/24/24 22:10

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.73	94.7	80.0-120	
(T) Barium			*88.9*		
(T) Yttrium			*101*		

L1749030-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1749030-04 06/24/24 22:10 • (MS) R4086432-3 06/24/24 22:10 • (MSD) R4086432-4 06/24/24 22:10

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.54	14.2	13.8	75.7	73.2	1	70.0-130			3.00		20
(T) Barium		*100*			*98.8*	*93.8*							
(T) Yttrium		*107*			*112*	*97.0*							

Method Blank (MB)

(MB) R4087378-1 06/25/24 22:46

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.0320	J	0.0378	0.0565	0.0347
(T) Barium-133	*81.5*		*81.5*		

L1748641-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1748641-01 06/25/24 22:46 • (DUP) R4087378-5 06/25/24 22:46

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.0947	0.166	0.264	0.187	0.187	0.292	0.429	0.276	65.5	0.275	J	20	3
(T) Barium-133	*90.5*				*83.5*	*83.5*							

Laboratory Control Sample (LCS)

(LCS) R4087378-2 06/25/24 22:46

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.32	106	75.0-125	
(T) Barium-133			*90.5*		

L1749015-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1749015-03 06/25/24 22:46 • (MS) R4087378-3 06/25/24 22:46 • (MSD) R4087378-4 06/25/24 22:46

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.177	19.4	21.6	96.1	107	1	75.0-125			10.7		20
(T) Barium-133		*88.1*			*91.7*	*74.2*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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

Report to: Dana Derrington

Email To: dderrington@olsson.com;hferguson@olsson.co

Project Description: Plum Point Energy Station

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: 501-920-9642

Client Project # 14590-3336-001

Lab Project # NAESOAR-PLUMPOINT

Collected by (print): Michael Clayton

Site/Facility ID #

P.O. # 2024-00048

Collected by (signature):

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	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-120	Grab	GW		6/18/24	1255	5	X	X	X	X	X	X		-01
MW-120 DUP	↓	GW		6/18/24	1300	5	X	X	X	X	X	X		-02
EPA-EB-BG	↓	GW		6/14/24	1030	5	X	X	X	X	X	X		-03
		GW												
		GW												
MW-104	Grab	GW		6/18/24	1150	1						X		
MW-110	↓	GW		6/18/24	1440	1						X		
MW-121	↓	GW		6/18/24	1545	1						X		

Analysis / Container / Preservative

Pres Chk

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1749015
Table H014

Acctnum: NAESOAR
Template: T106048
Prelogin: P1080311
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: Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __UPS __FedEx __Courier _____

Tracking # 7464 0893 4653

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	6/19/24	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 6.0 °C 4.6+0.7=4.9 Bottles Received: 18	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Easton Pyron	Date: 6/20/24 Time: 0900	Hold: Condition: NCF / OK

MONTHLY BACKGROUND SAMPLING EVENT
JULY 2024

ANALYTICAL REPORT

August 15, 2024

Plum Point Services Co., LLC

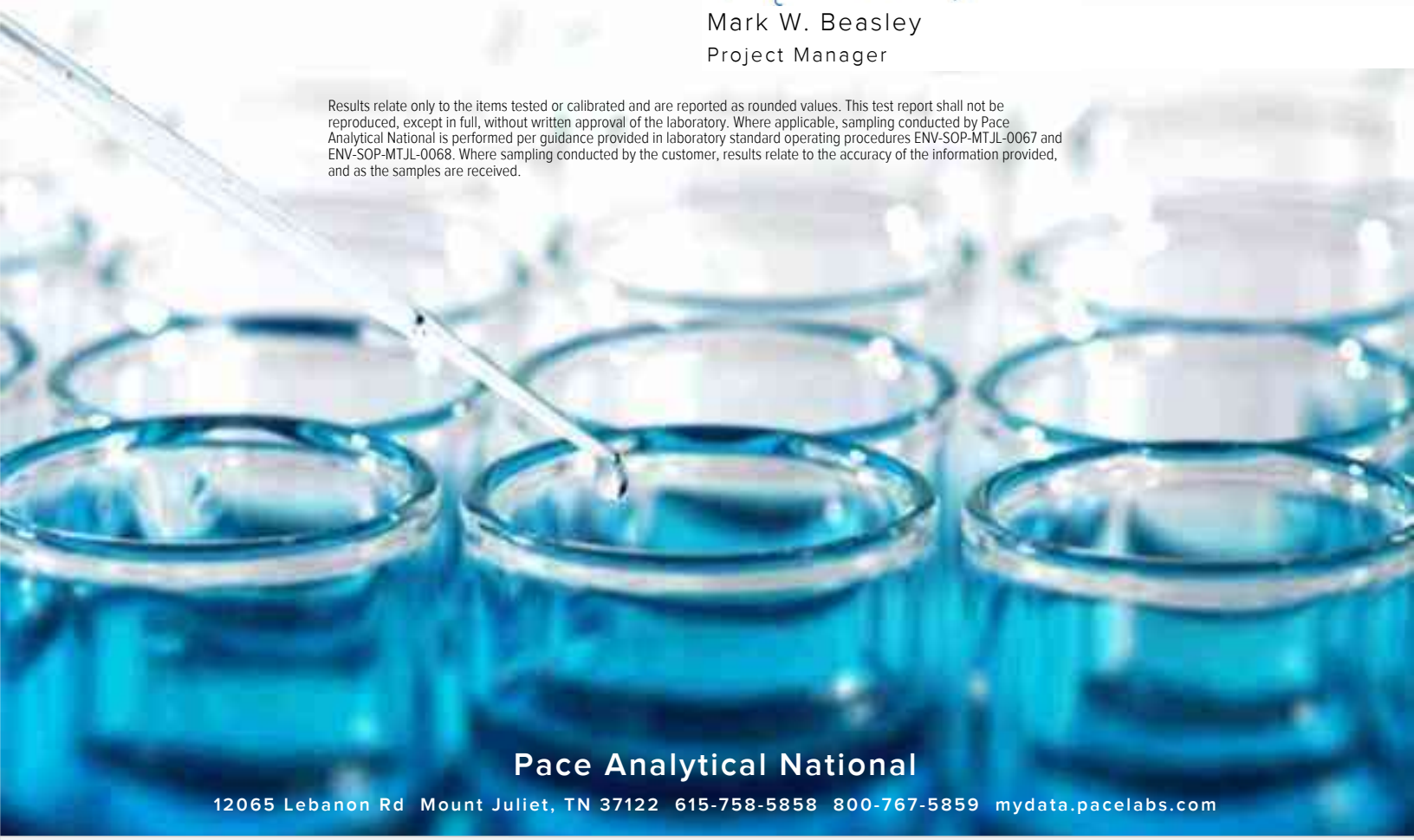
Sample Delivery Group:	L1758817
Samples Received:	07/20/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-120 L1758817-01 GW

Collected by: Michael Clayton
Collected date/time: 07/18/24 14:25
Received date/time: 07/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2327336	1	07/21/24 16:49	07/23/24 12:00	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2328744	1	07/26/24 03:01	07/26/24 03:01	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2327047	1	07/22/24 14:50	07/23/24 11:28	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2331930	1	07/30/24 10:04	07/31/24 00:46	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2331568	1	07/31/24 10:25	08/13/24 20:14	LD	Mt. Juliet, TN

MW-120 DUP L1758817-02 GW

Collected by: Michael Clayton
Collected date/time: 07/18/24 14:30
Received date/time: 07/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2327336	1	07/21/24 16:49	07/23/24 12:00	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2328744	1	07/26/24 03:52	07/26/24 03:52	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2327047	1	07/22/24 14:50	07/23/24 11:30	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2331930	1	07/30/24 10:04	07/31/24 00:49	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2331568	1	07/31/24 10:25	08/13/24 20:17	LD	Mt. Juliet, TN

EPA-EB-BG L1758817-03 GW

Collected by: Michael Clayton
Collected date/time: 07/18/24 17:15
Received date/time: 07/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2327336	1	07/21/24 16:49	07/23/24 12:00	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2328744	1	07/26/24 04:31	07/26/24 04:31	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2327047	1	07/22/24 14:50	07/23/24 11:32	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2331930	1	07/30/24 10:04	07/31/24 00:52	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2331568	1	07/31/24 10:25	08/13/24 20:20	LD	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	270000		10000	1	07/23/2024 12:00	WG2327336

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1260		379	1000	1	07/26/2024 03:01	WG2328744
Fluoride	218		64.0	150	1	07/26/2024 03:01	WG2328744
Sulfate	6950		594	5000	1	07/26/2024 03:01	WG2328744

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	07/23/2024 11:28	WG2327047

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	58.6	J	20.0	200	1	07/31/2024 00:46	WG2331930
Calcium	71700		79.3	1000	1	07/31/2024 00:46	WG2331930

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	08/13/2024 20:14	WG2331568
Arsenic	0.671	J	0.180	2.00	1	08/13/2024 20:14	WG2331568
Barium	159		0.381	2.00	1	08/13/2024 20:14	WG2331568
Beryllium	U		0.190	2.00	1	08/13/2024 20:14	WG2331568
Cadmium	U		0.150	1.00	1	08/13/2024 20:14	WG2331568
Chromium	U		1.24	2.00	1	08/13/2024 20:14	WG2331568
Cobalt	U		0.0596	2.00	1	08/13/2024 20:14	WG2331568
Lead	U		0.849	2.00	1	08/13/2024 20:14	WG2331568
Molybdenum	0.825	J	0.348	5.00	1	08/13/2024 20:14	WG2331568
Selenium	11.7		0.300	2.00	1	08/13/2024 20:14	WG2331568
Thallium	U		0.121	2.00	1	08/13/2024 20:14	WG2331568
Lithium	18.1		0.695	2.00	1	08/13/2024 20:14	WG2331568

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	271000		10000	1	07/23/2024 12:00	WG2327336

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1030		379	1000	1	07/26/2024 03:52	WG2328744
Fluoride	214		64.0	150	1	07/26/2024 03:52	WG2328744
Sulfate	6840		594	5000	1	07/26/2024 03:52	WG2328744

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	07/23/2024 11:30	WG2327047

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	57.2	J	20.0	200	1	07/31/2024 00:49	WG2331930
Calcium	70900		79.3	1000	1	07/31/2024 00:49	WG2331930

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	08/13/2024 20:17	WG2331568
Arsenic	0.641	J	0.180	2.00	1	08/13/2024 20:17	WG2331568
Barium	156		0.381	2.00	1	08/13/2024 20:17	WG2331568
Beryllium	U		0.190	2.00	1	08/13/2024 20:17	WG2331568
Cadmium	U		0.150	1.00	1	08/13/2024 20:17	WG2331568
Chromium	U		1.24	2.00	1	08/13/2024 20:17	WG2331568
Cobalt	U		0.0596	2.00	1	08/13/2024 20:17	WG2331568
Lead	U		0.849	2.00	1	08/13/2024 20:17	WG2331568
Molybdenum	0.932	J	0.348	5.00	1	08/13/2024 20:17	WG2331568
Selenium	12.4		0.300	2.00	1	08/13/2024 20:17	WG2331568
Thallium	U		0.121	2.00	1	08/13/2024 20:17	WG2331568
Lithium	13.8		0.695	2.00	1	08/13/2024 20:17	WG2331568

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	07/23/2024 12:00	WG2327336

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	U		379	1000	1	07/26/2024 04:31	WG2328744
Fluoride	U		64.0	150	1	07/26/2024 04:31	WG2328744
Sulfate	U		594	5000	1	07/26/2024 04:31	WG2328744

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	07/23/2024 11:32	WG2327047

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	07/31/2024 00:52	WG2331930
Calcium	U		79.3	1000	1	07/31/2024 00:52	WG2331930

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	08/13/2024 20:20	WG2331568
Arsenic	U		0.180	2.00	1	08/13/2024 20:20	WG2331568
Barium	U		0.381	2.00	1	08/13/2024 20:20	WG2331568
Beryllium	U		0.190	2.00	1	08/13/2024 20:20	WG2331568
Cadmium	U		0.150	1.00	1	08/13/2024 20:20	WG2331568
Chromium	U		1.24	2.00	1	08/13/2024 20:20	WG2331568
Cobalt	U		0.0596	2.00	1	08/13/2024 20:20	WG2331568
Lead	U		0.849	2.00	1	08/13/2024 20:20	WG2331568
Molybdenum	U		0.348	5.00	1	08/13/2024 20:20	WG2331568
Selenium	U		0.300	2.00	1	08/13/2024 20:20	WG2331568
Thallium	U		0.121	2.00	1	08/13/2024 20:20	WG2331568
Lithium	2.32		0.695	2.00	1	08/13/2024 20:20	WG2331568

Method Blank (MB)

(MB) R4099046-1 07/23/24 12:00

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

L1758817-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1758817-01 07/23/24 12:00 • (DUP) R4099046-3 07/23/24 12:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	270000	271000	1	0.370		10

L1758817-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1758817-02 07/23/24 12:00 • (DUP) R4099046-4 07/23/24 12:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	271000	275000	1	1.47		10

Laboratory Control Sample (LCS)

(LCS) R4099046-2 07/23/24 12:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8800000	100	85.0-115	

Method Blank (MB)

(MB) R4099729-1 07/26/24 01:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1758817-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1758817-02 07/26/24 03:52 • (DUP) R4099729-3 07/26/24 04:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1030	1010	1	1.82		15
Fluoride	214	212	1	0.798		15
Sulfate	6840	6910	1	0.969		15

L1758861-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1758861-02 07/26/24 04:56 • (DUP) R4099729-5 07/26/24 05:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	22500	22200	1	1.07		15
Fluoride	80.7	66.1	1	19.9	J P1	15
Sulfate	5980	5950	1	0.443		15

Laboratory Control Sample (LCS)

(LCS) R4099729-2 07/26/24 01:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38900	97.2	80.0-120	
Fluoride	8000	7980	99.8	80.0-120	
Sulfate	40000	37700	94.3	80.0-120	

L1758817-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1758817-02 07/26/24 03:52 • (MS) R4099729-4 07/26/24 04:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1030	39100	95.2	1	80.0-120	
Fluoride	8000	214	7870	95.7	1	80.0-120	
Sulfate	40000	6840	43500	91.7	1	80.0-120	

L1758861-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1758861-02 07/26/24 04:56 • (MS) R4099729-6 07/26/24 05:21 • (MSD) R4099729-7 07/26/24 05:34

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	40000	22500	57000	56500	86.4	85.0	1	80.0-120			0.957	15
Fluoride	8000	80.7	7640	7520	94.5	93.0	1	80.0-120			1.63	15
Sulfate	40000	5980	42100	41500	90.3	88.8	1	80.0-120			1.43	15

Method Blank (MB)

(MB) R4097243-1 07/23/24 10:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4097243-2 07/23/24 10:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	3.02	101	80.0-120	

L1758735-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1758735-03 07/23/24 10:48 • (MS) R4097243-4 07/23/24 10:57 • (MSD) R4097243-5 07/23/24 11:00

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 %
Mercury	3.00	U	3.26	3.01	109	100	1	75.0-125			7.92	20

Method Blank (MB)

(MB) R4100560-1 07/30/24 23:54

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

Laboratory Control Sample (LCS)

(LCS) R4100560-2 07/30/24 23:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	982	98.2	80.0-120	
Calcium	10000	9420	94.2	80.0-120	

L1758502-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1758502-15 07/31/24 00:00 • (MS) R4100560-4 07/31/24 00:05 • (MSD) R4100560-5 07/31/24 00:08

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 %
Boron	1000	525	1490	1500	96.9	97.7	1	75.0-125			0.500	20
Calcium	10000	28600	38100	38100	95.6	95.3	1	75.0-125			0.104	20

Method Blank (MB)

(MB) R4106332-1 08/13/24 18:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4106332-2 08/13/24 18:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	54.1	108	80.0-120	
Arsenic	50.0	53.5	107	80.0-120	
Barium	50.0	50.2	100	80.0-120	
Beryllium	50.0	49.7	99.5	80.0-120	
Cadmium	50.0	54.6	109	80.0-120	
Chromium	50.0	55.2	110	80.0-120	
Cobalt	50.0	54.7	109	80.0-120	
Lead	50.0	50.4	101	80.0-120	
Molybdenum	50.0	51.4	103	80.0-120	
Selenium	50.0	53.1	106	80.0-120	
Thallium	50.0	49.7	99.3	80.0-120	
Lithium	50.0	47.9	95.7	80.0-120	

L1758660-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1758660-02 08/13/24 19:01 • (MS) R4106332-4 08/13/24 19:07 • (MSD) R4106332-5 08/13/24 19:10

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 %
Antimony	50.0	U	54.9	54.2	110	108	1	75.0-125			1.44	20
Arsenic	50.0	0.299	53.2	52.7	106	105	1	75.0-125			0.875	20
Barium	50.0	22.7	74.4	70.5	103	95.8	1	75.0-125			5.25	20

L1758660-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1758660-02 08/13/24 19:01 • (MS) R4106332-4 08/13/24 19:07 • (MSD) R4106332-5 08/13/24 19:10

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 %
Beryllium	50.0	U	47.5	46.0	95.0	91.9	1	75.0-125			3.35	20
Cadmium	50.0	U	53.4	54.0	107	108	1	75.0-125			1.12	20
Chromium	50.0	U	52.4	52.6	105	105	1	75.0-125			0.278	20
Cobalt	50.0	0.108	52.5	52.2	105	104	1	75.0-125			0.443	20
Lead	50.0	U	51.6	51.8	103	104	1	75.0-125			0.354	20
Molybdenum	50.0	0.654	53.0	52.2	105	103	1	75.0-125			1.57	20
Selenium	50.0	U	50.9	51.2	102	102	1	75.0-125			0.685	20
Thallium	50.0	U	51.0	50.7	102	101	1	75.0-125			0.464	20
Lithium	50.0	9.75	54.7	53.1	90.0	86.7	1	75.0-125			3.05	20

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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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

Report to:
Heather Ferguson

Email To:
hferguson@olsson.com;mvaught@olsson.com;

Project Description:
Plum Point Energy Station

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project #
14590-3336-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print): Michael Chastain

Collected by (signature): Michael Chastain

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. #
2024-00048

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres	Pres Chk	Remarks	Sample # (lab only)
MW-120	Grab	GW		7/18/24	1425	5	X	X	X	X	X	X			-01
MW-120 DUP	↓	GW		↓	1430	5	X	X	X	X	X	X			-02
EPA-EB-BG		GW			1715	5	X	X	X	X	X	X			-03
		GW				5	X	X	X	X	X	X			
		GW				5	X	X	X	X	X	X			

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L1758817
B163

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1087675**
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:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7315 3209 4034

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)	Date:	Time:	Received by: (Signature)
Michael Chastain	7/19/24	1530	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			CRoberts

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 3.1+0.3=3.4 °C EDA9
Bottles Received: 15

Date: 07.20.24 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

August 16, 2024

Plum Point Services Co., LLC

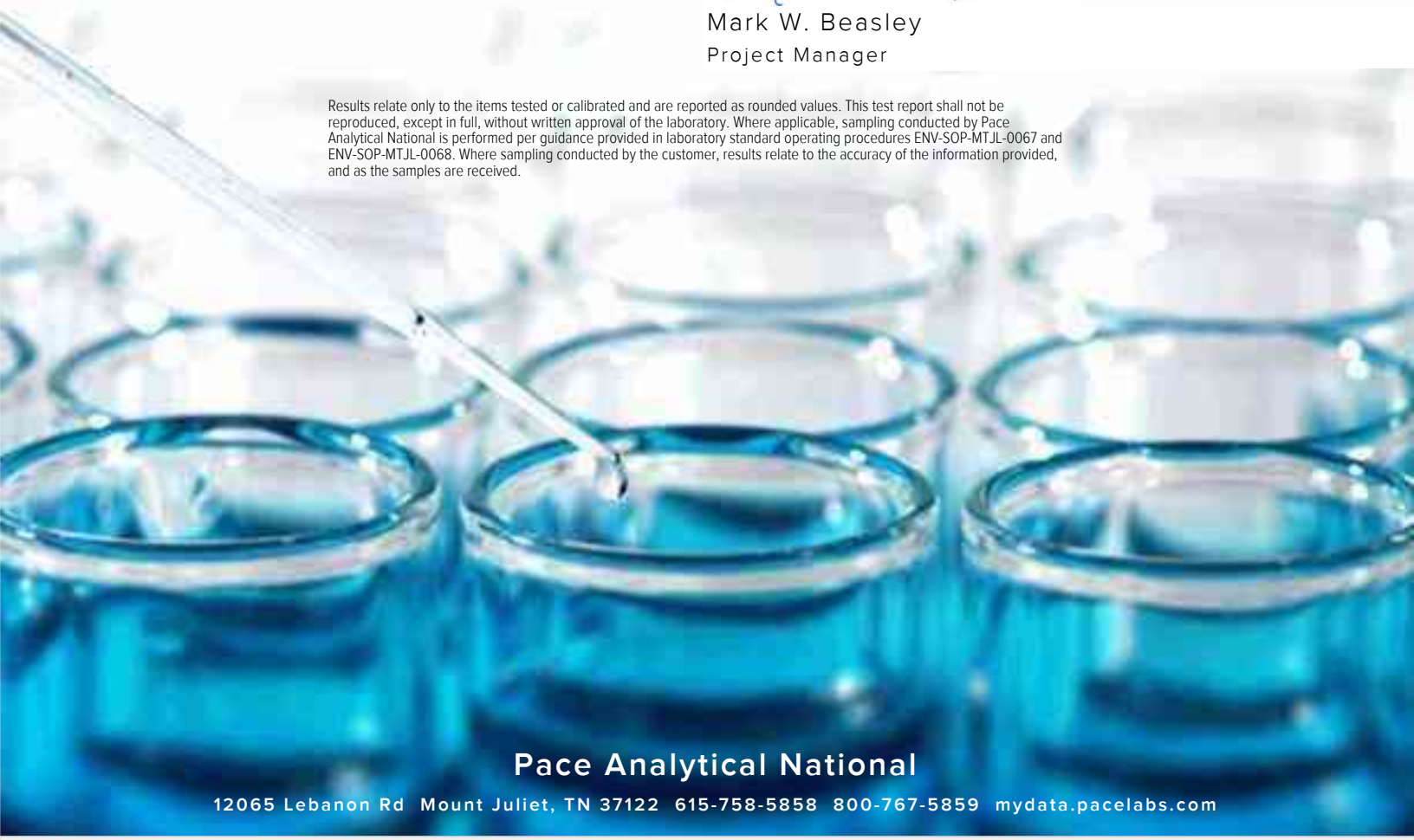
Sample Delivery Group:	L1758818
Samples Received:	07/20/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-120 L1758818-01 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 07/18/24 14:25 | Received date/time: 07/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2337816	1	08/07/24 10:28	08/15/24 19:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2328654	1	07/24/24 12:16	08/15/24 19:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2328654	1	07/24/24 12:16	07/29/24 23:28	ZRG	Mt. Juliet, TN

MW-120 DUP L1758818-02 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 07/18/24 14:30 | Received date/time: 07/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2337816	1	08/07/24 10:28	08/15/24 19:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2328654	1	07/24/24 12:16	08/15/24 19:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2328654	1	07/24/24 12:16	07/29/24 23:28	ZRG	Mt. Juliet, TN

EPA-EB-BG L1758818-03 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 07/18/24 17:15 | Received date/time: 07/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2337816	1	08/07/24 10:28	08/15/24 19:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2332445	1	07/30/24 12:52	08/15/24 19:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2332445	1	07/30/24 12:52	08/05/24 23:32	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.542		0.201	0.399	0.366	0.194	08/15/2024 19:00	WG2337816
(T) Barium	*107*					*30.0-143*	*08/15/2024 19:00*	WG2337816
(T) Yttrium	*116*					*30.0-136*	*08/15/2024 19:00*	WG2337816

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.73		0.607	0.592	08/15/2024 19:00	WG2328654

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	1.19		0.573	0.743	0.465	0.325	07/29/2024 23:28	WG2328654
(T) Barium-133	*61.9*					*30.0-143*	*07/29/2024 23:28*	WG2328654

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.793		0.226	0.439	0.403	0.213	08/15/2024 19:00	WG2337816
(T) Barium	*88.9*					*30.0-143*	*08/15/2024 19:00*	WG2337816
(T) Yttrium	*97.3*					*30.0-136*	*08/15/2024 19:00*	WG2337816

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.56		0.632	0.523	08/15/2024 19:00	WG2328654

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	1.77		0.590	0.737	0.334	0.240	07/29/2024 23:28	WG2328654
(T) Barium-133	*80.8*					*30.0-143*	*07/29/2024 23:28*	WG2328654

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

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.102	U	0.441	0.904	0.855	0.452	08/15/2024 19:00	WG2337816
(T) Barium	*120*					*30.0-143*	*08/15/2024 19:00*	WG2337816
(T) Yttrium	*115*					*30.0-136*	*08/15/2024 19:00*	WG2337816

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.439	J	0.556	0.905	08/15/2024 19:00	WG2332445

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.439		0.339	0.536	0.298	0.246	08/05/2024 23:32	WG2332445
(T) Barium-133	*52.8*					*30.0-143*	*08/05/2024 23:32*	WG2332445

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

QUALITY CONTROL SUMMARY

L1758818-01,02,03

Method Blank (MB)

(MB) R4107598-1 08/15/24 14:46

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.196	J	0.147	0.274	0.145
(T) Barium	*93.1*		*93.1*		
(T) Yttrium	*98.5*		*98.5*		

L1764224-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1764224-02 08/15/24 19:00 • (DUP) R4107598-5 08/15/24 14:46

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.285	0.432	0.807	0.420	1.24	0.344	0.614	0.324	125	1.73		20	3
(T) Barium	*104*				*111*	*111*							
(T) Yttrium	*84.6*				*83.4*	*83.4*							

Laboratory Control Sample (LCS)

(LCS) R4107598-2 08/15/24 14:46

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.93	119	80.0-120	
(T) Barium			*103*		
(T) Yttrium			*92.4*		

L1761175-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1761175-01 08/15/24 19:00 • (MS) R4107598-3 08/15/24 14:46 • (MSD) R4107598-4 08/15/24 14:46

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.53	18.9	20.0	104	111	1	70.0-130			5.97		20
(T) Barium		*102*			*88.0*	*113*							
(T) Yttrium		*99.7*			*96.0*	*92.5*							

Method Blank (MB)

(MB) R4100201-1 07/26/24 13:45

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.00940	U	0.0451	0.0879	0.0535
(T) Barium-133	*55.4*		*55.4*		

L1755790-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1755790-06 07/29/24 23:28 • (DUP) R4100201-5 07/29/24 23:28

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	14.5	1.84	0.434	0.307	17.6	2.26	0.494	0.360	19.2	1.06		20	3
(T) Barium-133	*65.9*				*51.1*	*51.1*							

Laboratory Control Sample (LCS)

(LCS) R4100201-2 07/29/24 23:28

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.57	111	75.0-125	
(T) Barium-133			*71.8*		

L1759346-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1759346-04 07/29/24 23:28 • (MS) R4100201-3 07/29/24 23:28 • (MSD) R4100201-4 07/29/24 23:28

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.211	18.8	19.9	93.0	98.4	1	75.0-125			5.63		20
(T) Barium-133		*55.6*			*56.4*	*54.9*							

Method Blank (MB)

(MB) R4103049-2 08/01/24 13:54

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.139		0.0849	0.0765	0.0557
(T) Barium-133	*84.3*		*84.3*		

L1761235-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1761235-08 08/01/24 12:16 • (DUP) R4103049-1 08/01/24 10:58

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.173	0.203	0.279	0.192	0.310	0.224	0.214	0.162	57.0	0.455		20	3
(T) Barium-133	*85.1*				*90.5*	*90.5*							

Laboratory Control Sample (LCS)

(LCS) R4103049-3 08/01/24 13:54

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.03	101	75.0-125	
(T) Barium-133			*59.3*		

L1758818-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1758818-03 08/05/24 23:32 • (MS) R4103049-4 08/05/24 23:32 • (MSD) R4103049-5 08/05/24 23:32

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.439	18.6	17.8	90.6	86.8	1	75.0-125			4.18		20
(T) Barium-133		*52.8*			*97.5*	*74.5*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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/A
Plum Point Services Co., LLC

2739 SCR 623
Osceola, AR 72370

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

Pres Chk

Report to:
Heather Ferguson

Email To:
hferguson@olsson.com;mvaught@olsson.com;

Project Description:
Plum Point Energy Station

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project #
14590-3336-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Chaffin

Collected by (signature):
Michael Chaffin

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. #
2024-00048

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres				Remarks	Sample # (lab only)
							✓2	✓2	✓2	✓2	✓2						
MW-120	Grab	GW		7/18/24	1425	5	X	X	X	X	X	X					-01
MW-120 DUP	↓	GW		↓	1430	5	X	X	X	X	X	X					-02
EPA-EB-BG		GW			1715	5	X	X	X	X	X	X					-03
		GW				5	X	X	X	X	X	X					
		GW				5	X	X	X	X	X	X					

Chain of Custody e 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1758818
B163

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1087675**
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:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH ____ Temp ____
Flow ____ Other ____

Samples returned via:
__ UPS __ FedEx __ Courier ____

Tracking # 7315 3209 4034

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Michael Chaffin	7/19/24	1530			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.1+0.3=3.4 °C ED49 Bottles Received: 15	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) CRoberts	Date: 07.20.24 Time: 0900	Hold: Condition: NCF / OK

MONTHLY BACKGROUND SAMPLING EVENT
AUGUST 2024

ANALYTICAL REPORT

September 10, 2024

Plum Point Services Co., LLC

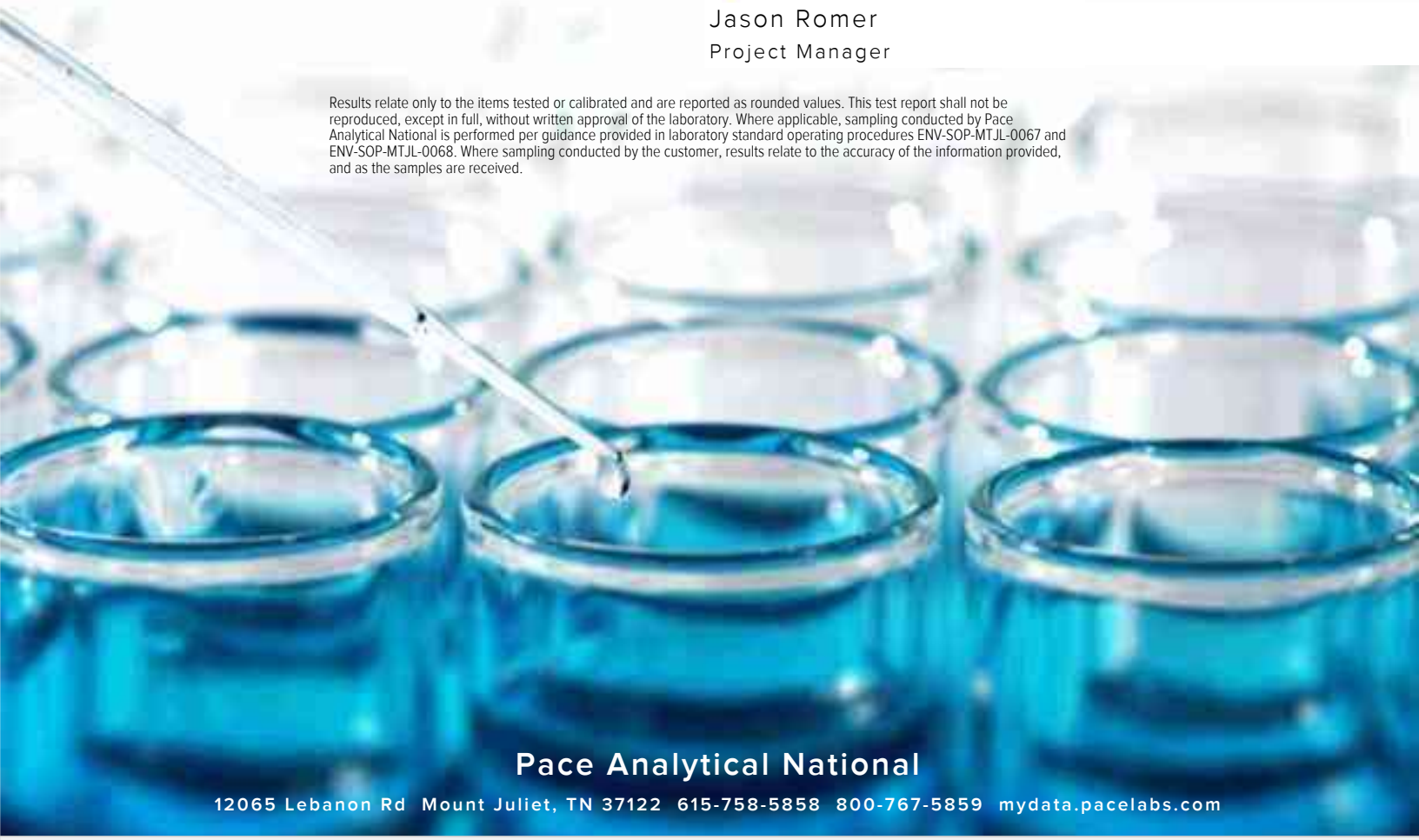
Sample Delivery Group:	L1768645
Samples Received:	08/16/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:

Jason Romer
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 mydata.pacelabs.com

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MW-120 L1768645-01 GW

Collected by: Michael Clayton | Collected date/time: 08/15/24 15:05 | Received date/time: 08/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2345995	1	08/19/24 15:11	08/20/24 13:23	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2346556	1	08/24/24 02:04	08/24/24 02:04	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2345200	1	08/19/24 12:31	08/20/24 11:46	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2347602	1	09/05/24 13:20	09/05/24 16:56	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2347562	1	09/06/24 22:52	09/09/24 02:55	LD	Mt. Juliet, TN

MW-120 DUP L1768645-02 GW

Collected by: Michael Clayton | Collected date/time: 08/15/24 15:10 | Received date/time: 08/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2345995	1	08/19/24 15:11	08/20/24 13:23	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2346556	1	08/24/24 02:21	08/24/24 02:21	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2345200	1	08/19/24 12:31	08/20/24 11:20	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349374	1	08/27/24 12:38	08/27/24 14:51	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2347562	1	09/06/24 22:52	09/09/24 02:58	LD	Mt. Juliet, TN

EPA-EB-BG L1768645-03 GW

Collected by: Michael Clayton | Collected date/time: 08/15/24 15:30 | Received date/time: 08/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2345995	1	08/19/24 15:11	08/20/24 13:23	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2346556	1	08/24/24 02:38	08/24/24 02:38	DLH	Mt. Juliet, TN
Mercury by Method 7470A	WG2345200	1	08/19/24 12:31	08/20/24 11:49	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349374	1	08/27/24 12:38	08/27/24 14:53	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2347562	1	09/06/24 22:52	09/09/24 03:02	LD	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.



Jason Romer
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	249000		10000	1	08/20/2024 13:23	WG2345995

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1090		547	1000	1	08/24/2024 02:04	WG2346556
Fluoride	210		76.1	150	1	08/24/2024 02:04	WG2346556
Sulfate	6350		637	5000	1	08/24/2024 02:04	WG2346556

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	08/20/2024 11:46	WG2345200

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	53.4	J	20.0	200	1	09/05/2024 16:56	WG2347602
Calcium	68600		79.3	1000	1	09/05/2024 16:56	WG2347602

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	09/09/2024 02:55	WG2347562
Arsenic	0.752	J	0.180	2.00	1	09/09/2024 02:55	WG2347562
Barium	154		0.381	2.00	1	09/09/2024 02:55	WG2347562
Beryllium	U		0.190	2.00	1	09/09/2024 02:55	WG2347562
Cadmium	U		0.150	1.00	1	09/09/2024 02:55	WG2347562
Chromium	U		1.24	2.00	1	09/09/2024 02:55	WG2347562
Cobalt	U		0.0596	2.00	1	09/09/2024 02:55	WG2347562
Lead	U		0.849	2.00	1	09/09/2024 02:55	WG2347562
Molybdenum	0.893	J	0.348	5.00	1	09/09/2024 02:55	WG2347562
Selenium	16.2		0.300	2.00	1	09/09/2024 02:55	WG2347562
Thallium	U		0.121	2.00	1	09/09/2024 02:55	WG2347562
Lithium	9.65		0.695	2.00	1	09/09/2024 02:55	WG2347562

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	254000		10000	1	08/20/2024 13:23	WG2345995

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1010		547	1000	1	08/24/2024 02:21	WG2346556
Fluoride	205		76.1	150	1	08/24/2024 02:21	WG2346556
Sulfate	6360		637	5000	1	08/24/2024 02:21	WG2346556

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	08/20/2024 11:20	WG2345200

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	58.5	J	20.0	200	1	08/27/2024 14:51	WG2349374
Calcium	70900		79.3	1000	1	08/27/2024 14:51	WG2349374

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	09/09/2024 02:58	WG2347562
Arsenic	0.642	J	0.180	2.00	1	09/09/2024 02:58	WG2347562
Barium	149		0.381	2.00	1	09/09/2024 02:58	WG2347562
Beryllium	U		0.190	2.00	1	09/09/2024 02:58	WG2347562
Cadmium	U		0.150	1.00	1	09/09/2024 02:58	WG2347562
Chromium	U		1.24	2.00	1	09/09/2024 02:58	WG2347562
Cobalt	U		0.0596	2.00	1	09/09/2024 02:58	WG2347562
Lead	U		0.849	2.00	1	09/09/2024 02:58	WG2347562
Molybdenum	0.867	J	0.348	5.00	1	09/09/2024 02:58	WG2347562
Selenium	14.2		0.300	2.00	1	09/09/2024 02:58	WG2347562
Thallium	U		0.121	2.00	1	09/09/2024 02:58	WG2347562
Lithium	9.12		0.695	2.00	1	09/09/2024 02:58	WG2347562

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	08/20/2024 13:23	WG2345995

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	U		547	1000	1	08/24/2024 02:38	WG2346556
Fluoride	U		76.1	150	1	08/24/2024 02:38	WG2346556
Sulfate	U		637	5000	1	08/24/2024 02:38	WG2346556

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	08/20/2024 11:49	WG2345200

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	08/27/2024 14:53	WG2349374
Calcium	U		79.3	1000	1	08/27/2024 14:53	WG2349374

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	09/09/2024 03:02	WG2347562
Arsenic	U		0.180	2.00	1	09/09/2024 03:02	WG2347562
Barium	U		0.381	2.00	1	09/09/2024 03:02	WG2347562
Beryllium	U		0.190	2.00	1	09/09/2024 03:02	WG2347562
Cadmium	U		0.150	1.00	1	09/09/2024 03:02	WG2347562
Chromium	U		1.24	2.00	1	09/09/2024 03:02	WG2347562
Cobalt	U		0.0596	2.00	1	09/09/2024 03:02	WG2347562
Lead	U		0.849	2.00	1	09/09/2024 03:02	WG2347562
Molybdenum	U		0.348	5.00	1	09/09/2024 03:02	WG2347562
Selenium	U		0.300	2.00	1	09/09/2024 03:02	WG2347562
Thallium	U		0.121	2.00	1	09/09/2024 03:02	WG2347562
Lithium	U		0.695	2.00	1	09/09/2024 03:02	WG2347562

Method Blank (MB)

(MB) R4110890-1 08/20/24 13:23

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

L1768514-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1768514-01 08/20/24 13:23 • (DUP) R4110890-3 08/20/24 13:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	567000	565000	1	0.237		10

L1768802-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1768802-01 08/20/24 13:23 • (DUP) R4110890-4 08/20/24 13:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	553000	556000	1	0.541		10

Laboratory Control Sample (LCS)

(LCS) R4110890-2 08/20/24 13:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8520000	96.8	85.0-115	

Method Blank (MB)

(MB) R4111494-1 08/23/24 20:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Fluoride	U		76.1	150
Sulfate	U		637	5000

L1768283-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1768283-01 08/23/24 20:44 • (DUP) R4111494-3 08/23/24 21:01

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	8790	8820	1	0.372		15
Fluoride	389	443	1	13.2		15
Sulfate	18900	19000	1	0.306		15

L1768459-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1768459-01 08/23/24 21:51 • (DUP) R4111494-6 08/23/24 22:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3620	3630	1	0.185		15
Fluoride	233	264	1	12.4		15
Sulfate	1060	1090	1	2.63	J	15

Laboratory Control Sample (LCS)

(LCS) R4111494-2 08/23/24 20:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38400	96.1	80.0-120	
Fluoride	8000	8020	100	80.0-120	
Sulfate	40000	38300	95.6	80.0-120	

L1768283-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768283-01 08/23/24 20:44 • (MS) R4111494-4 08/23/24 21:17 • (MSD) R4111494-5 08/23/24 21:34

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	40000	8790	47900	47900	97.7	97.7	1	80.0-120			0.0441	15
Fluoride	8000	389	8360	8370	99.6	99.7	1	80.0-120			0.159	15
Sulfate	40000	18900	56900	56800	94.9	94.8	1	80.0-120			0.123	15

L1768459-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1768459-01 08/23/24 21:51 • (MS) R4111494-7 08/23/24 22:25

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	3620	41900	95.7	1	80.0-120	
Fluoride	8000	233	8250	100	1	80.0-120	
Sulfate	40000	1060	39100	95.1	1	80.0-120	

Method Blank (MB)

(MB) R4109216-1 08/20/24 11:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4109216-2 08/20/24 11:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	3.11	104	80.0-120	

L1768645-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768645-02 08/20/24 11:20 • (MS) R4109216-4 08/20/24 11:24 • (MSD) R4109216-5 08/20/24 11:27

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 %
Mercury	3.00	U	3.09	3.14	103	105	1	75.0-125			1.49	20

Method Blank (MB)

(MB) R4116175-1 09/05/24 16:07

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

Laboratory Control Sample (LCS)

(LCS) R4116175-2 09/05/24 16:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	933	93.3	80.0-120	
Calcium	10000	10100	101	80.0-120	

L1768457-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768457-01 09/05/24 16:11 • (MS) R4116175-4 09/05/24 16:14 • (MSD) R4116175-5 09/05/24 16:16

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 %
Boron	1000	26.0	955	969	92.9	94.3	1	75.0-125			1.42	20
Calcium	10000	123000	129000	130000	60.7	68.0	1	75.0-125	V	V	0.565	20

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

Method Blank (MB)

(MB) R4112413-1 08/27/24 14:58

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

Laboratory Control Sample (LCS)

(LCS) R4112413-2 08/27/24 15:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	943	94.3	80.0-120	
Calcium	10000	10200	102	80.0-120	

L1768413-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768413-06 08/27/24 15:01 • (MS) R4112413-4 08/27/24 15:05 • (MSD) R4112413-5 08/27/24 15:06

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 %
Boron	1000	84.0	1040	1050	95.6	97.1	1	75.0-125			1.43	20
Calcium	10000	82700	91500	92500	87.8	97.3	1	75.0-125			1.04	20

Method Blank (MB)

(MB) R4117079-1 09/09/24 02:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4117079-2 09/09/24 02:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	50.1	100	80.0-120	
Arsenic	50.0	51.8	104	80.0-120	
Barium	50.0	49.3	98.6	80.0-120	
Beryllium	50.0	49.2	98.5	80.0-120	
Cadmium	50.0	59.2	118	80.0-120	
Chromium	50.0	52.3	105	80.0-120	
Cobalt	50.0	52.3	105	80.0-120	
Lead	50.0	50.4	101	80.0-120	
Molybdenum	50.0	50.1	100	80.0-120	
Selenium	50.0	51.4	103	80.0-120	
Thallium	50.0	51.5	103	80.0-120	
Lithium	50.0	50.5	101	80.0-120	

L1768641-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768641-05 09/09/24 02:09 • (MS) R4117079-4 09/09/24 02:16 • (MSD) R4117079-5 09/09/24 02:19

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 %
Antimony	50.0	U	54.1	54.3	108	109	1	75.0-125			0.417	20
Arsenic	50.0	7.98	61.1	56.9	106	97.9	1	75.0-125			7.05	20
Barium	50.0	68.0	123	120	110	104	1	75.0-125			2.23	20

L1768641-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768641-05 09/09/24 02:09 • (MS) R4117079-4 09/09/24 02:16 • (MSD) R4117079-5 09/09/24 02:19

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 %
Beryllium	50.0	U	50.4	46.1	101	92.2	1	75.0-125			8.92	20
Cadmium	50.0	U	59.2	54.5	118	109	1	75.0-125			8.30	20
Chromium	50.0	1.97	54.4	51.5	105	99.0	1	75.0-125			5.59	20
Cobalt	50.0	7.46	59.5	55.3	104	95.7	1	75.0-125			7.29	20
Lead	50.0	U	53.3	48.6	107	97.1	1	75.0-125			9.24	20
Molybdenum	50.0	10.7	64.4	65.3	107	109	1	75.0-125			1.35	20
Selenium	50.0	0.700	55.8	50.5	110	99.6	1	75.0-125			9.91	20
Thallium	50.0	U	53.7	48.6	107	97.2	1	75.0-125			9.88	20
Lithium	50.0	18.3	68.2	64.2	99.8	91.8	1	75.0-125			5.99	20

L1768641-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768641-09 09/09/24 02:22 • (MS) R4117079-6 09/09/24 02:26 • (MSD) R4117079-7 09/09/24 02:29

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 %
Antimony	50.0	U	53.6	47.4	107	94.8	1	75.0-125			12.3	20
Arsenic	50.0	242	308	299	133	115	1	75.0-125	V		2.94	20
Barium	50.0	187	250	246	126	118	1	75.0-125	J5		1.68	20
Beryllium	50.0	U	51.7	48.8	103	97.7	1	75.0-125			5.66	20
Cadmium	50.0	U	60.8	60.3	122	121	1	75.0-125			0.921	20
Chromium	50.0	2.44	55.5	54.9	106	105	1	75.0-125			0.968	20
Cobalt	50.0	0.127	53.0	52.1	106	104	1	75.0-125			1.63	20
Lead	50.0	U	52.1	51.2	104	102	1	75.0-125			1.67	20
Molybdenum	50.0	14.4	71.1	65.8	113	103	1	75.0-125			7.85	20
Selenium	50.0	U	52.4	56.2	105	112	1	75.0-125			7.01	20
Thallium	50.0	U	52.5	52.8	105	106	1	75.0-125			0.677	20
Lithium	50.0	17.4	68.8	66.8	103	98.8	1	75.0-125			2.94	20

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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
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: **Plum Point Services Co., LLC**

2739 SCR 623
Osceola, AR 72370

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

Pres Chk

Report to: **Heather Ferguson** Melissa Vaught

Email To: **hferguson@olsson.com;mvaught@olsson.com;**

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642** 210-219-2335

Client Project # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature): Immediately Packed on Ice N ___ Y X

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	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres				Remarks	Sample # (lab only)
MW-120	Grab	GW		8/15/24	1505	5	X	X	X	X	X	X					-01
MW-120 DUP	↓	GW		↓	1510	5	X	X	X	X	X	X					-02
EPA-EB-BG		GW			1530	5	X	X	X	X	X	X					-03
		GW															
		GW															

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # U760245

Table # H032

Acctnum: **NAESOAR**

Template: **T106048**

Prelogin: **P1093534**

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:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4041 0473 9450

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Michael Clayton	8/15/24	1815			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.6+0.7=0.9 °C Bottles Received: 15	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Evelyn Organ	Date: 8/16/24 Time: 0900	Hold: Condition: NCF / OK

ANALYTICAL REPORT

September 16, 2024

Plum Point Services Co., LLC

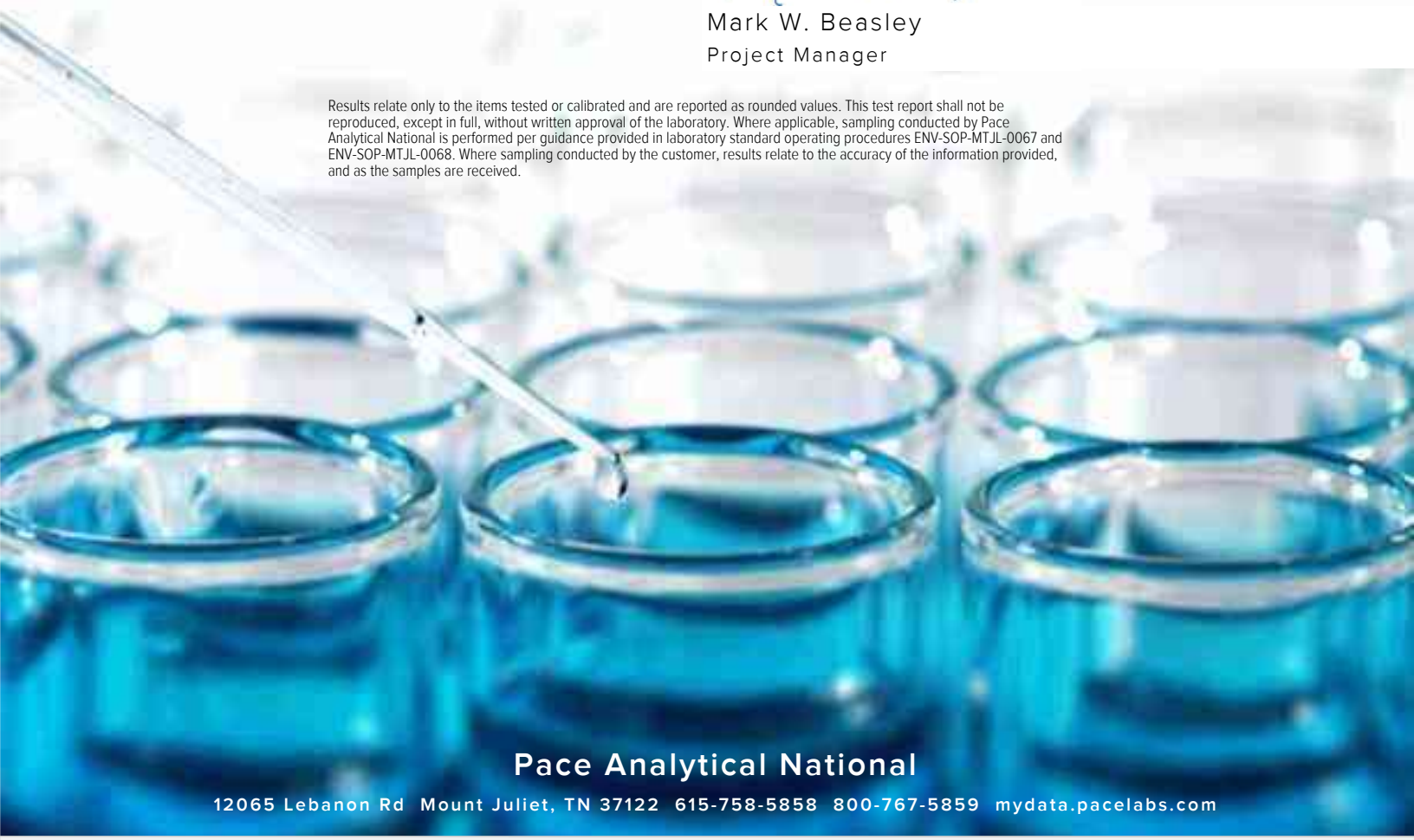
Sample Delivery Group:	L1768646
Samples Received:	08/16/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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SAMPLE SUMMARY

MW-120 L1768646-01 Non-Potable Water

Collected by: Michael Clayton
Collected date/time: 08/15/24 15:05
Received date/time: 08/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349603	1	08/27/24 11:57	09/05/24 20:15	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346440	1	08/20/24 12:19	09/05/24 20:15	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346440	1	08/20/24 12:19	08/22/24 16:19	ZRG	Mt. Juliet, TN

MW-120 DUP L1768646-03 Non-Potable Water

Collected by: Michael Clayton
Collected date/time: 08/15/24 15:10
Received date/time: 08/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349603	1	08/27/24 11:57	09/05/24 20:15	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346440	1	08/20/24 12:19	09/05/24 20:15	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346440	1	08/20/24 12:19	08/22/24 16:19	ZRG	Mt. Juliet, TN

EPA-EB-BG L1768646-04 Non-Potable Water

Collected by: Michael Clayton
Collected date/time: 08/15/24 15:30
Received date/time: 08/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2349603	1	08/27/24 11:57	09/05/24 20:15	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2346666	1	08/20/24 16:04	09/05/24 20:15	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2346666	1	08/20/24 16:04	08/22/24 14:41	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.677	U	0.229	0.427	0.415	0.218	09/05/2024 20:15	WG2349603
(T) Barium	*101*					*30.0-143*	*09/05/2024 20:15*	WG2349603
(T) Yttrium	*99.9*					*30.0-136*	*09/05/2024 20:15*	WG2349603

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.218	J	0.284	0.441	09/05/2024 20:15	WG2346440

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.218		0.168	0.303	0.148	0.122	08/22/2024 16:19	WG2346440
(T) Barium-133	*104*					*30.0-143*	*08/22/2024 16:19*	WG2346440

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.415	U	0.218	0.418	0.391	0.206	09/05/2024 20:15	WG2349603
(T) Barium	*118*					*30.0-143*	*09/05/2024 20:15*	WG2349603
(T) Yttrium	*97.8*					*30.0-136*	*09/05/2024 20:15*	WG2349603

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.433	J	0.326	0.433	09/05/2024 20:15	WG2346440

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.433		0.242	0.483	0.187	0.142	08/22/2024 16:19	WG2346440
(T) Barium-133	*103*					*30.0-143*	*08/22/2024 16:19*	WG2346440

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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.766	U	0.285	0.483	0.505	0.263	09/05/2024 20:15	WG2349603
(T) Barium	*109*					*30.0-143*	*09/05/2024 20:15*	WG2349603
(T) Yttrium	*99.2*					*30.0-136*	*09/05/2024 20:15*	WG2349603

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0634	U	0.333	0.584	09/05/2024 20:15	WG2346666

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.0634	U	0.172	0.251	0.294	0.200	08/22/2024 14:41	WG2346666
(T) Barium-133	*93.3*					*30.0-143*	*08/22/2024 14:41*	WG2346666

Method Blank (MB)

(MB) R4118638-1 09/05/24 20:15

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.570		0.199	0.325	0.171
(T) Barium	*95.9*		*95.9*		
(T) Yttrium	*82.7*		*82.7*		

Laboratory Control Sample (LCS)

(LCS) R4118638-2 09/05/24 20:15

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.22	84.4	80.0-120	
(T) Barium			*96.1*		
(T) Yttrium			*82.2*		

L1767788-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1767788-01 09/05/24 20:15 • (MS) R4118638-3 09/05/24 20:15 • (MSD) R4118638-5 09/05/24 20:15

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.0600	14.6	16.9	86.9	101	1	70.0-130			14.5		20
(T) Barium		*91.1*			*91.5*	*66.7*							
(T) Yttrium		*93.1*			*88.7*	*98.8*							

L1768791-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768791-01 09/05/24 20:15 • (MS) R4118638-4 09/05/24 20:15 • (MSD) R4118638-6 09/09/24 21:44

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	-0.234	18.0	18.0	107	108	1	70.0-130			0.111		20
(T) Barium		*108*			*83.7*	*80.1*							
(T) Yttrium		*93.9*			*95.6*	*123*							

Method Blank (MB)

(MB) R4110794-1 08/22/24 16:18

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.164		0.109	0.124	0.0788
(T) Barium-133	*88.4*		*88.4*		

L1768646-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1768646-01 08/22/24 16:19 • (DUP) R4110794-5 08/22/24 16:18

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.218	0.168	0.148	0.122	0.172	0.224	0.321	0.222	23.4	0.163	J	20	3
(T) Barium-133	*104*				*94.7*	*94.7*							

Laboratory Control Sample (LCS)

(LCS) R4110794-2 08/22/24 16:18

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.03	101	75.0-125	
(T) Barium-133			*93.7*		

L1768643-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1768643-03 08/22/24 16:19 • (MS) R4110794-3 08/22/24 16:18 • (MSD) R4110794-4 08/22/24 16:18

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.344	19.6	19.8	96.3	97.0	1	75.0-125			0.762		20
(T) Barium-133		*91.3*			*86.8*	*85.4*							

Method Blank (MB)

(MB) R4110674-1 08/22/24 14:41

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.00765	U	0.0503	0.0903	0.0596
(T) Barium-133	*93.3*		*93.3*		

L1767606-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1767606-01 08/22/24 14:41 • (DUP) R4110674-5 08/22/24 14:41

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.315	0.299	0.385	0.251	0.302	0.199	0.166	0.130	4.34	0.0373		20	3
(T) Barium-133	*99.5*				*94.3*	*94.3*							

Laboratory Control Sample (LCS)

(LCS) R4110674-2 08/22/24 14:41

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.09	102	75.0-125	
(T) Barium-133			*92.3*		

L1767788-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1767788-01 08/22/24 14:41 • (MS) R4110674-3 08/22/24 14:41 • (MSD) R4110674-4 08/22/24 14:41

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.426	18.4	17.6	89.8	86.0	1	75.0-125			4.17		20
(T) Barium-133		*101*			*91.9*	*99.9*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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	LAO000356
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: **Plum Point Services Co., LLC**

2739 SCR 623
Osceola, AR 72370

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

Report to: **Heather Ferguson** Melissa Vaught

Email To: **hferguson@olsson.com;mvaught@olsson.com;**

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**
210-219-2335

Client Project # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature): 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	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres				Remarks	Sample # (lab only)
							Pres Chk	✓2	✓2	✓2	✓2						
MW-120	Grab	GW		8/15/24	1505	5	X	X	X	X	X	X					-01
MW-120 DUP	↓	GW			1510	5	X	X	X	X	X	X					-02
EPA-EB-BG		GW		↓	1530	5	X	X	X	X	X	X					-03
		GW															
		GW															

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # U706046
Table # H032

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1093534**
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:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __UPS __FedEx __Courier _____

Tracking # 4041 0473 9450

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Michael Clayton	8/15/24	1815			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: MS38 °C Bottles Received: 0.6+0.1=0.9 15	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Colton Orgn	Date: 8/16/24 Time: 0900	Hold: Condition: NCF / OK

MONTHLY BACKGROUND SAMPLING EVENT
SEPTEMBER 2024

ANALYTICAL REPORT

October 07, 2024

Plum Point Services Co., LLC

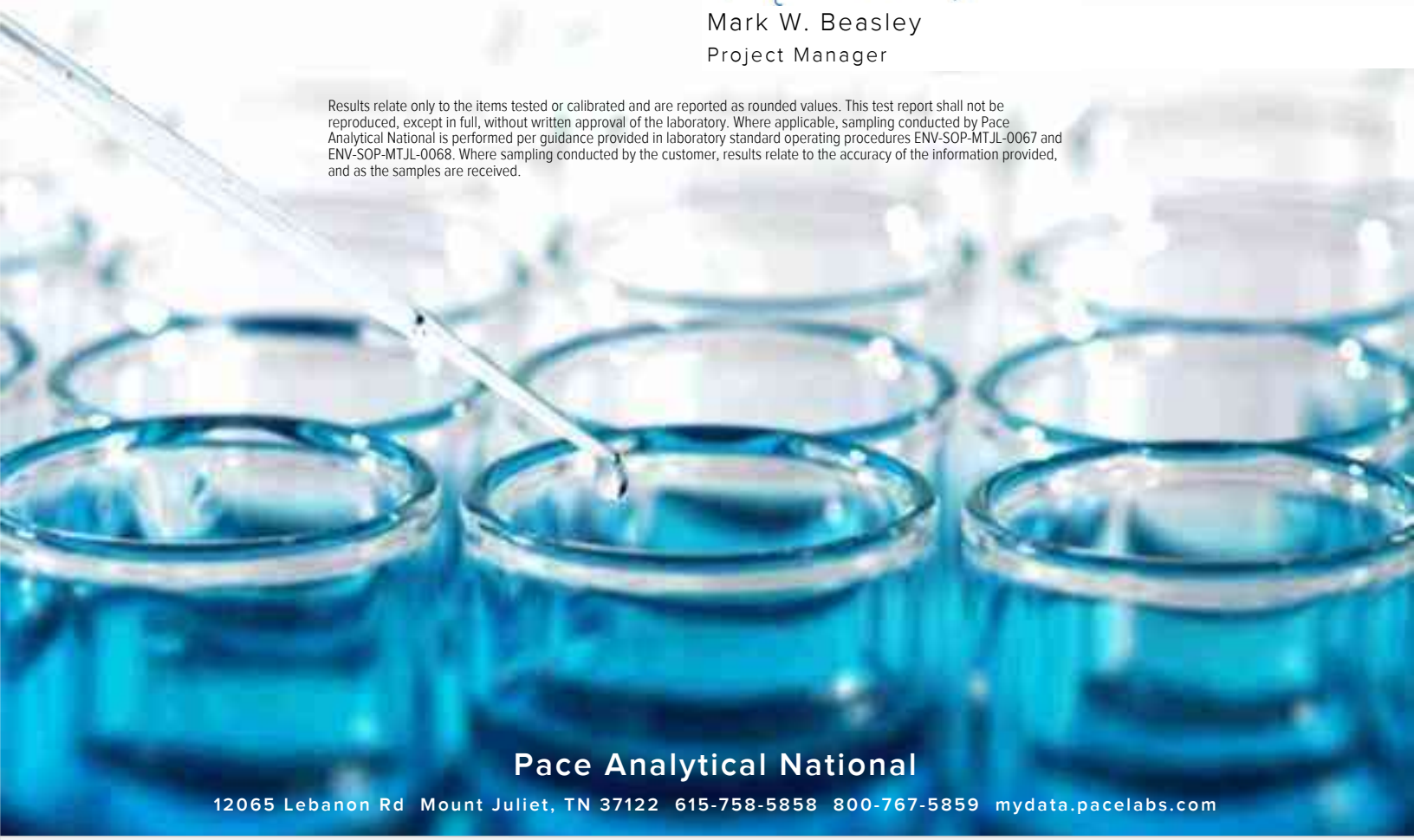
Sample Delivery Group:	L1780420
Samples Received:	09/21/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-120 L1780420-01 GW

Collected by: Michael Clayton | Collected date/time: 09/20/24 12:20 | Received date/time: 09/21/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2368007	1	09/23/24 14:35	09/24/24 14:54	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2367226	1	09/22/24 11:05	09/22/24 11:05	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2367198	1	09/22/24 18:56	09/23/24 14:11	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2370631	1	10/02/24 00:38	10/02/24 04:39	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2368492	1	10/04/24 06:19	10/07/24 00:23	LD	Mt. Juliet, TN

MW-120 DUP L1780420-02 GW

Collected by: Michael Clayton | Collected date/time: 09/20/24 12:25 | Received date/time: 09/21/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2368007	1	09/23/24 14:35	09/24/24 14:54	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2367226	1	09/22/24 11:18	09/22/24 11:18	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2367198	1	09/22/24 18:56	09/23/24 14:13	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2370631	1	10/02/24 00:38	10/02/24 04:45	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2368492	1	10/04/24 06:19	10/07/24 00:26	LD	Mt. Juliet, TN

EPA-EB-BG L1780420-03 GW

Collected by: Michael Clayton | Collected date/time: 09/20/24 13:30 | Received date/time: 09/21/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2368007	1	09/23/24 14:35	09/24/24 14:54	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2367226	1	09/22/24 11:31	09/22/24 11:31	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2367198	1	09/22/24 18:56	09/23/24 14:16	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2370631	1	10/02/24 00:38	10/02/24 04:47	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2368492	1	10/04/24 06:19	10/07/24 00:29	LD	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	261000		10000	1	09/24/2024 14:54	WG2368007

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1060		547	1000	1	09/22/2024 11:05	WG2367226
Fluoride	218		76.1	150	1	09/22/2024 11:05	WG2367226
Sulfate	6280		637	5000	1	09/22/2024 11:05	WG2367226

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/23/2024 14:11	WG2367198

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	54.0	J	20.0	200	1	10/02/2024 04:39	WG2370631
Calcium	68100		79.3	1000	1	10/02/2024 04:39	WG2370631

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	10/07/2024 00:23	WG2368492
Arsenic	0.764	J	0.180	2.00	1	10/07/2024 00:23	WG2368492
Barium	147		0.381	2.00	1	10/07/2024 00:23	WG2368492
Beryllium	U		0.190	2.00	1	10/07/2024 00:23	WG2368492
Cadmium	U		0.150	1.00	1	10/07/2024 00:23	WG2368492
Chromium	U		1.24	2.00	1	10/07/2024 00:23	WG2368492
Cobalt	0.0924	J	0.0596	2.00	1	10/07/2024 00:23	WG2368492
Lead	U		0.849	2.00	1	10/07/2024 00:23	WG2368492
Molybdenum	0.800	J	0.348	5.00	1	10/07/2024 00:23	WG2368492
Selenium	9.02		0.300	2.00	1	10/07/2024 00:23	WG2368492
Thallium	U		0.121	2.00	1	10/07/2024 00:23	WG2368492
Lithium	8.65		0.695	2.00	1	10/07/2024 00:23	WG2368492

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	259000		10000	1	09/24/2024 14:54	WG2368007

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1040		547	1000	1	09/22/2024 11:18	WG2367226
Fluoride	217		76.1	150	1	09/22/2024 11:18	WG2367226
Sulfate	5680		637	5000	1	09/22/2024 11:18	WG2367226

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	09/23/2024 14:13	WG2367198

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	52.4	J	20.0	200	1	10/02/2024 04:45	WG2370631
Calcium	68600		79.3	1000	1	10/02/2024 04:45	WG2370631

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		1.03	4.00	1	10/07/2024 00:26	WG2368492
Arsenic	0.786	J	0.180	2.00	1	10/07/2024 00:26	WG2368492
Barium	146		0.381	2.00	1	10/07/2024 00:26	WG2368492
Beryllium	U		0.190	2.00	1	10/07/2024 00:26	WG2368492
Cadmium	U		0.150	1.00	1	10/07/2024 00:26	WG2368492
Chromium	U		1.24	2.00	1	10/07/2024 00:26	WG2368492
Cobalt	0.0636	J	0.0596	2.00	1	10/07/2024 00:26	WG2368492
Lead	U		0.849	2.00	1	10/07/2024 00:26	WG2368492
Molybdenum	0.827	J	0.348	5.00	1	10/07/2024 00:26	WG2368492
Selenium	7.43		0.300	2.00	1	10/07/2024 00:26	WG2368492
Thallium	U		0.121	2.00	1	10/07/2024 00:26	WG2368492
Lithium	8.25		0.695	2.00	1	10/07/2024 00:26	WG2368492

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	09/24/2024 14:54	WG2368007

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	U		547	1000	1	09/22/2024 11:31	WG2367226
Fluoride	U		76.1	150	1	09/22/2024 11:31	WG2367226
Sulfate	U		637	5000	1	09/22/2024 11:31	WG2367226

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	09/23/2024 14:16	WG2367198

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	10/02/2024 04:47	WG2370631
Calcium	U		79.3	1000	1	10/02/2024 04:47	WG2370631

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		1.03	4.00	1	10/07/2024 00:29	WG2368492
Arsenic	U		0.180	2.00	1	10/07/2024 00:29	WG2368492
Barium	U		0.381	2.00	1	10/07/2024 00:29	WG2368492
Beryllium	U		0.190	2.00	1	10/07/2024 00:29	WG2368492
Cadmium	U		0.150	1.00	1	10/07/2024 00:29	WG2368492
Chromium	U		1.24	2.00	1	10/07/2024 00:29	WG2368492
Cobalt	U		0.0596	2.00	1	10/07/2024 00:29	WG2368492
Lead	U		0.849	2.00	1	10/07/2024 00:29	WG2368492
Molybdenum	U		0.348	5.00	1	10/07/2024 00:29	WG2368492
Selenium	U		0.300	2.00	1	10/07/2024 00:29	WG2368492
Thallium	U		0.121	2.00	1	10/07/2024 00:29	WG2368492
Lithium	U		0.695	2.00	1	10/07/2024 00:29	WG2368492

Method Blank (MB)

(MB) R4124937-1 09/24/24 14:54

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

L1780282-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1780282-01 09/24/24 14:54 • (DUP) R4124937-3 09/24/24 14:54

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	13200000	13600000	1	2.84		10

L1780498-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1780498-08 09/24/24 14:54 • (DUP) R4124937-4 09/24/24 14:54

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2970000	2950000	1	0.677		10

Laboratory Control Sample (LCS)

(LCS) R4124937-2 09/24/24 14:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8870000	101	85.0-115	

Method Blank (MB)

(MB) R4126059-1 09/22/24 06:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Fluoride	U		76.1	150
Sulfate	U		637	5000

L1780242-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1780242-08 09/22/24 07:52 • (DUP) R4126059-3 09/22/24 08:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	13700	13700	1	0.0568		15
Fluoride	191	199	1	4.20		15
Sulfate	7000	6990	1	0.169		15

L1780323-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1780323-01 09/22/24 09:22 • (DUP) R4126059-6 09/22/24 09:35

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	110000	110000	1	0.109		15
Fluoride	607	605	1	0.297		15
Sulfate	69600	69600	1	0.0297		15

Laboratory Control Sample (LCS)

(LCS) R4126059-2 09/22/24 07:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39100	97.7	80.0-120	
Fluoride	8000	8360	104	80.0-120	
Sulfate	40000	42300	106	80.0-120	

L1780242-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780242-08 09/22/24 07:52 • (MS) R4126059-4 09/22/24 08:17 • (MSD) R4126059-5 09/22/24 08:30

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	40000	13700	50400	50800	91.6	92.7	1	80.0-120			0.871	15
Fluoride	8000	191	8420	8530	103	104	1	80.0-120			1.21	15
Sulfate	40000	7000	48300	48800	103	104	1	80.0-120			1.06	15

L1780323-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1780323-01 09/22/24 09:22 • (MS) R4126059-7 09/22/24 09:48

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	110000	127000	43.9	1	80.0-120	J6
Fluoride	8000	607	8650	101	1	80.0-120	
Sulfate	40000	69600	97800	70.5	1	80.0-120	J6

Method Blank (MB)

(MB) R4123141-1 09/23/24 13:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R4123141-2 09/23/24 13:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Mercury	3.00	3.04	101	80.0-120	

L1780190-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780190-02 09/23/24 13:38 • (MS) R4123141-4 09/23/24 13:43 • (MSD) R4123141-5 09/23/24 13:45

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	%	%		%			%	%
Mercury	3.00	U	3.02	3.13	101	104	1	75.0-125			3.55	20

Method Blank (MB)

(MB) R4127064-1 10/02/24 04:00

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) R4127064-2 10/02/24 04:02

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	962	96.2	80.0-120	
Calcium	10000	9700	97.0	80.0-120	

L1780298-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780298-01 10/02/24 04:04 • (MS) R4127064-4 10/02/24 04:08 • (MSD) R4127064-5 10/02/24 04:10

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	112	1070	1100	96.1	99.0	1	75.0-125			2.66	20
Calcium	10000	54500	67000	67900	125	134	1	75.0-125		V	1.35	20

Method Blank (MB)

(MB) R4129174-1 10/06/24 22:59

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	2.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Chromium	U		1.24	2.00
Cobalt	U		0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R4129174-2 10/06/24 23:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	51.9	104	80.0-120	
Arsenic	50.0	51.7	103	80.0-120	
Barium	50.0	50.4	101	80.0-120	
Beryllium	50.0	50.1	100	80.0-120	
Cadmium	50.0	53.1	106	80.0-120	
Chromium	50.0	53.0	106	80.0-120	
Cobalt	50.0	52.3	105	80.0-120	
Lead	50.0	50.4	101	80.0-120	
Molybdenum	50.0	51.2	102	80.0-120	
Selenium	50.0	51.4	103	80.0-120	
Thallium	50.0	49.1	98.1	80.0-120	
Lithium	50.0	48.6	97.2	80.0-120	

L1780130-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780130-02 10/06/24 23:05 • (MS) R4129174-4 10/06/24 23:11 • (MSD) R4129174-5 10/06/24 23:15

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 %
Antimony	50.0	U	54.1	53.5	108	107	1	75.0-125			1.11	20
Arsenic	50.0	9.81	61.3	62.0	103	104	1	75.0-125			1.27	20
Barium	50.0	33.1	84.4	85.1	103	104	1	75.0-125			0.787	20

L1780130-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780130-02 10/06/24 23:05 • (MS) R4129174-4 10/06/24 23:11 • (MSD) R4129174-5 10/06/24 23:15

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 %
Beryllium	50.0	U	49.6	49.6	99.2	99.2	1	75.0-125			0.00867	20
Cadmium	50.0	U	51.0	52.2	102	104	1	75.0-125			2.29	20
Chromium	50.0	U	51.3	51.4	103	103	1	75.0-125			0.290	20
Cobalt	50.0	5.38	56.0	56.4	101	102	1	75.0-125			0.723	20
Lead	50.0	U	49.1	49.9	98.2	99.8	1	75.0-125			1.56	20
Molybdenum	50.0	0.810	52.1	50.8	103	100	1	75.0-125			2.61	20
Selenium	50.0	U	50.1	50.8	100	102	1	75.0-125			1.35	20
Thallium	50.0	U	47.5	48.1	95.0	96.3	1	75.0-125			1.29	20
Lithium	50.0	6.31	55.8	56.7	99.0	101	1	75.0-125			1.55	20

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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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

Report to: **Heather Ferguson**

Email To: hferguson@olsson.com;mvaught@olsson.com;

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Site/Facility ID #

P.O. # **2024-00048**

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

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres					Remarks	Sample # (lab only)
								2	2	2	2							
MW-120		GW		9/20/24	1220	6	X	X	X	X	X	X						-01
MW-120 DUP		GW		↓	1225	6	X	X	X	X	X	X						-02
EPA-EB-BG		GW			1330	6	X	X	X	X	X	X						-03
		GW																
		GW																

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1780420
B109

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1099835**
PM: 134 - Mark W. Beasley
PB: BW 9/4
Shipped Via: **FedEX Ground**

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 410291727442

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)	Date:	Time:	Received by: (Signature)
Michael Clayton	9/20/24	1530	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			CRoberts

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.0+0.3=2.9 °C TUM9 Bottles Received: 12

Date: 09.21.24 Time: 0900

PH - 108DH0941
TRC - 3327A228

Hold: Condition: NCF / OK

ANALYTICAL REPORT

October 21, 2024

Plum Point Services Co., LLC

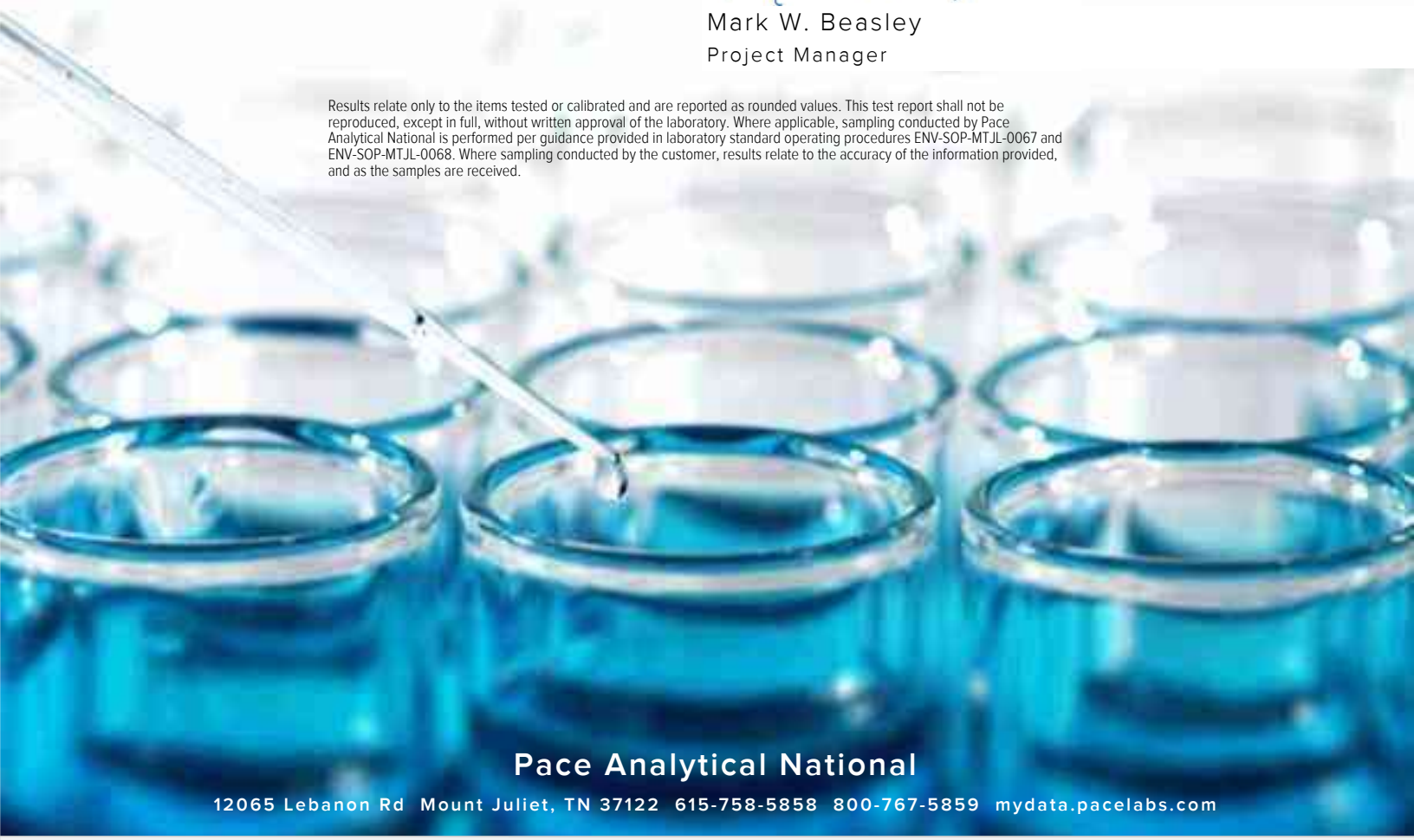
Sample Delivery Group:	L1780422
Samples Received:	09/21/2024
Project Number:	14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-120 L1780422-01 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 09/20/24 12:20 | Received date/time: 09/21/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2371578	1	09/30/24 21:38	10/17/24 19:36	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2372604	1	10/01/24 12:29	10/17/24 19:36	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2372604	1	10/01/24 12:29	10/03/24 11:58	ZRG	Mt. Juliet, TN

MW-120 DUP L1780422-02 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 09/20/24 12:25 | Received date/time: 09/21/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2371578	1	09/30/24 21:38	10/17/24 15:31	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2372604	1	10/01/24 12:29	10/17/24 15:31	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2372604	1	10/01/24 12:29	10/03/24 11:58	ZRG	Mt. Juliet, TN

EPA-EB-BG L1780422-03 Non-Potable Water

Collected by: Michael Clayton | Collected date/time: 09/20/24 13:30 | Received date/time: 09/21/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2371580	1	09/30/24 23:36	10/14/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2372604	1	10/01/24 12:29	10/14/24 21:56	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2372604	1	10/01/24 12:29	10/03/24 11:58	ZRG	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.244	J	0.252	0.467	0.482	0.253	10/17/2024 19:36	WG2371578
(T) Barium	*87.7*					*30.0-143*	*10/17/2024 19:36*	WG2371578
(T) Yttrium	*96.9*					*30.0-136*	*10/17/2024 19:36*	WG2371578

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.577		0.361	0.548	10/17/2024 19:36	WG2372604

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.334		0.259	0.491	0.261	0.198	10/03/2024 11:58	WG2372604
(T) Barium-133	*74.7*					*30.0-143*	*10/03/2024 11:58*	WG2372604

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.395	J	0.303	0.594	0.583	0.307	10/17/2024 15:31	WG2371578
(T) Barium	*91.0*					*30.0-143*	*10/17/2024 15:31*	WG2371578
(T) Yttrium	*101*					*30.0-136*	*10/17/2024 15:31*	WG2371578

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.574	J	0.366	0.640	10/17/2024 15:31	WG2372604

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.179	J	0.205	0.352	0.263	0.207	10/03/2024 11:58	WG2372604
(T) Barium-133	*78.9*					*30.0-143*	*10/03/2024 11:58*	WG2372604

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0754	U	0.260	0.458	0.488	0.255	10/14/2024 21:56	WG2371580
(T) Barium	*109*					*30.0-143*	*10/14/2024 21:56*	WG2371580
(T) Yttrium	*103*					*30.0-136*	*10/14/2024 21:56*	WG2371580

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.0920	U	0.302	0.580	10/14/2024 21:56	WG2372604

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0166	U	0.154	0.199	0.313	0.219	10/03/2024 11:58	WG2372604
(T) Barium-133	*83.2*					*30.0-143*	*10/03/2024 11:58*	WG2372604

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

QUALITY CONTROL SUMMARY

L1780422-01,02

Method Blank (MB)

(MB) R4134678-1 10/17/24 15:31

Analyte	MB Result	MB Qualifier	MB 2 sigma CE	MB MDA	MB Lc
	pCi/l		+ / -	pCi/l	pCi/l
Radium-228	0.304		0.133	0.252	0.133
(T) Barium	*92.2*		*92.2*		
(T) Yttrium	*123*		*123*		

L1780422-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1780422-02 10/17/24 15:31 • (DUP) R4134678-4 10/17/24 15:31

Analyte	Original Result	Original 2 sigma CE	Original MDA	Original Lc	DUP Result	DUP 2 sigma CE	DUP MDA	DUP Lc	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	pCi/l	+ / -	pCi/l	pCi/l	%			%	
Radium-228	0.395	0.303	0.583	0.307	0.561	0.379	0.725	0.379	34.8	0.343	J	20	3
(T) Barium	*91.0*				*83.9*	*83.9*							
(T) Yttrium	*101*				*99.4*	*99.4*							

Laboratory Control Sample (LCS)

(LCS) R4134678-2 10/17/24 15:31

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	4.72	94.4	80.0-120	
(T) Barium			*88.6*		
(T) Yttrium			*115*		

L1780403-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780403-17 10/17/24 15:31 • (MS) R4134678-5 10/17/24 19:36 • (MSD) R4134678-3 10/17/24 15:31

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-228	16.7	0.158	13.8	13.1	81.4	77.2	1	70.0-130			5.30		20
(T) Barium		*86.3*			*96.5*	*102*							
(T) Yttrium		*111*			*109*	*108*							

QUALITY CONTROL SUMMARY

L1780422-03

Method Blank (MB)

(MB) R4133760-1 10/14/24 21:56

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.254	J	0.182	0.335	0.176
(T) Barium	*118*		*118*		
(T) Yttrium	*100*		*100*		

L1780439-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1780439-14 10/14/24 21:56 • (DUP) R4133760-5 10/14/24 21:56

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.215	0.377	0.702	0.365	1.03	0.287	0.506	0.269	131	1.73		20	3
(T) Barium	*109*				*90.6*	*90.6*							
(T) Yttrium	*98.4*				*103*	*103*							

Laboratory Control Sample (LCS)

(LCS) R4133760-2 10/14/24 21:56

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.98	99.5	80.0-120	
(T) Barium			*108*		
(T) Yttrium			*82.2*		

L1780403-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780403-17 10/14/24 21:56 • (MS) R4133760-3 10/14/24 21:56 • (MSD) R4133760-4 10/14/24 21:56

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.70	13.8	13.9	72.6	72.8	1	70.0-130			0.289		20
(T) Barium		*98.2*			*100*	*117*							
(T) Yttrium		*103*			*94.9*	*105*							

Method Blank (MB)

(MB) R4128420-1 10/02/24 22:31

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.000	U	0.0112	0.0285	0.0204
(T) Barium-133	*96.9*		*96.9*		

L1774709-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1774709-06 10/02/24 22:31 • (DUP) R4128420-5 10/02/24 22:31

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	15.6	1.51	0.250	0.182	14.6	1.44	0.194	0.152	6.89	0.498		20	3
(T) Barium-133	*83.2*				*92.4*	*92.4*							

Laboratory Control Sample (LCS)

(LCS) R4128420-2 10/02/24 22:31

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	4.90	98.0	75.0-125	
(T) Barium-133			*92.4*		

L1780422-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780422-03 10/03/24 11:58 • (MS) R4128420-3 10/02/24 22:31 • (MSD) R4128420-4 10/02/24 22:31

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.0166	19.6	17.6	97.7	88.0	1	75.0-125			10.4		20
(T) Barium-133		*83.2*			*92.3*	*95.8*							

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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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

Report to:
Heather Ferguson

Email To:
hferguson@olsson.com;mvaught@olsson.com;

Project Description:
Plum Point Energy Station

City/State Collected: **Osceola AR**

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project #
14590-3336-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Clayton

Site/Facility ID #

P.O. #
2024-00048

Collected by (signature):
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

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 250mlHDPE-NoPres	Metals 250mlHDPE-HNO3	RA-226 1L-HDPE-Add HNO3	RA-226/228COMB 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add HNO3	TDS 1L-HDPE NoPres					Remarks	Sample # (lab only)
MW-120		GW		9/20/24	1220	6	X	X	X	X	X	X						-01
MW-120 DUP		GW		↓	1225	6	X	X	X	X	X	X						-02
EPA-EB-BG		GW			1330	6	X	X	X	X	X	X						-03
		GW																
		GW																

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L1780422
B109

Acctnum: **NAESOAR**
Template: **T106048**
Prelogin: **P1099835**
PM: 134 - Mark W. Beasley
PB: BW 9/4
Shipped Via: **FedEx Ground**

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

Remarks:Metals: As,Ba,Be,B,Ca,Cd,Co,Cr,Hg,Li,Mo,Pb,Sb,Se,Tl

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 410291727442

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Michael Clayton	9/20/24	1530		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.6+0.3=2.9 °C TUP9 Bottles Received: 12
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) CRoberts	Date: 09.21.24 Time: 0900

PH - 10BDH0941
TRC - 3327A228

Date/Time

Hold:

Condition: NCF / OK

SECOND HALF 2024 DETECTION MONITORING SAMPLING EVENT
OCTOBER 2024

ANALYTICAL REPORT

November 04, 2024

Plum Point Services Co., LLC

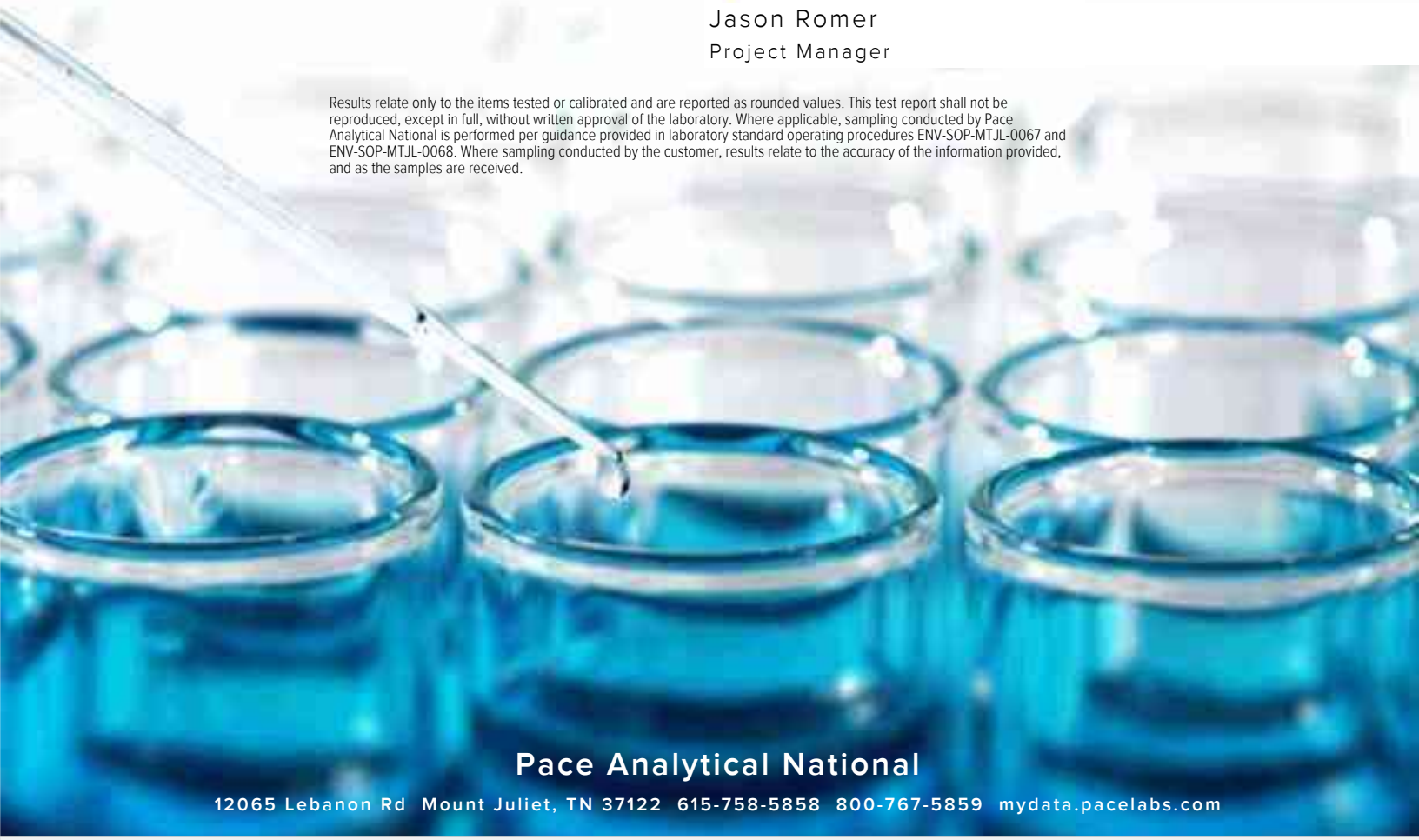
Sample Delivery Group:	L1790581
Samples Received:	10/18/2024
Project Number:	R14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:

Jason Romer
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 mydata.pacelabs.com

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MW-101 L1790581-01 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 13:40 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385399	1	10/23/24 02:20	10/23/24 02:20	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:47	MAP	Mt. Juliet, TN

MW-102 L1790581-02 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 14:45 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385399	1	10/23/24 03:12	10/23/24 03:12	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:48	MAP	Mt. Juliet, TN

MW-103 L1790581-03 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 11:15 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 20:09	10/20/24 20:09	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 15:29	10/25/24 15:29	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:50	MAP	Mt. Juliet, TN

MW-104 L1790581-04 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 16:20 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 20:26	10/20/24 20:26	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 15:46	10/25/24 15:46	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:55	MAP	Mt. Juliet, TN

MW-108 L1790581-05 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 12:05 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 20:44	10/20/24 20:44	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 16:04	10/25/24 16:04	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:57	MAP	Mt. Juliet, TN

MW-110 L1790581-06 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 14:35 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 21:01	10/20/24 21:01	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 16:21	10/25/24 16:21	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:58	MAP	Mt. Juliet, TN

MW-113 L1790581-07 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 10:55 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 21:18	10/20/24 21:18	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 16:39	10/25/24 16:39	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 18:00	MAP	Mt. Juliet, TN

MW-115 L1790581-08 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 10:00 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 21:36	10/20/24 21:36	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 16:56	10/25/24 16:56	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 18:02	MAP	Mt. Juliet, TN

MW-116 L1790581-09 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 15:55 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 21:53	10/20/24 21:53	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:08	JTM	Mt. Juliet, TN

MW-117 L1790581-10 GW

Collected by: Michael Clayton | Collected date/time: 10/17/24 12:30 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2387845	1	10/23/24 12:36	10/23/24 18:21	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 22:11	10/20/24 22:11	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 17:13	10/25/24 17:13	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:19	JTM	Mt. Juliet, TN

MW-118 L1790581-11 GW

Collected by: Michael Clayton | Collected date/time: 10/17/24 11:25 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 22:28	10/20/24 22:28	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 18:06	10/25/24 18:06	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:21	JTM	Mt. Juliet, TN

MW-119 L1790581-12 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 12:20 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 22:46	10/20/24 22:46	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 18:23	10/25/24 18:23	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:24	JTM	Mt. Juliet, TN

MW-120 L1790581-13 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 10:20 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 23:38	10/20/24 23:38	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 18:40	10/25/24 18:40	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:27	JTM	Mt. Juliet, TN

MW-121 L1790581-14 GW

Collected by: Michael Clayton | Collected date/time: 10/17/24 10:30 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 23:55	10/20/24 23:55	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 18:58	10/25/24 18:58	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:35	JTM	Mt. Juliet, TN

MW-108 DUP L1790581-15 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 12:10 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/21/24 00:13	10/21/24 00:13	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 19:15	10/25/24 19:15	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:38	JTM	Mt. Juliet, TN

EPA EB-1 L1790581-16 GW

Collected by: Michael Clayton | Collected date/time: 10/17/24 12:50 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/21/24 00:30	10/21/24 00:30	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:41	JTM	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.



Jason Romer
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	357000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2170		547	1000	1	10/23/2024 02:20	WG2385399
Fluoride	292		76.1	150	1	10/23/2024 02:20	WG2385399
Sulfate	3810	J	637	5000	1	10/23/2024 02:20	WG2385399

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	55.3	J	20.0	200	1	10/31/2024 17:47	WG2387901
Calcium	103000		79.3	1000	1	10/31/2024 17:47	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	542000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	3570		547	1000	1	10/23/2024 03:12	WG2385399
Fluoride	243		76.1	150	1	10/23/2024 03:12	WG2385399
Sulfate	128000		637	5000	1	10/23/2024 03:12	WG2385399

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	275		20.0	200	1	10/31/2024 17:48	WG2387901
Calcium	138000		79.3	1000	1	10/31/2024 17:48	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	306000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	894	J	547	1000	1	10/20/2024 20:09	WG2385400
Fluoride	242	B P1	76.1	150	1	10/25/2024 15:29	WG2388621
Sulfate	13600		637	5000	1	10/20/2024 20:09	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	64.4	J	20.0	200	1	10/31/2024 17:50	WG2387901
Calcium	84200		79.3	1000	1	10/31/2024 17:50	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	315000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	906	J	547	1000	1	10/20/2024 20:26	WG2385400
Fluoride	334	B	76.1	150	1	10/25/2024 15:46	WG2388621
Sulfate	3820	J	637	5000	1	10/20/2024 20:26	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	54.8	J	20.0	200	1	10/31/2024 17:55	WG2387901
Calcium	87000		79.3	1000	1	10/31/2024 17:55	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	472000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1700		547	1000	1	10/20/2024 20:44	WG2385400
Fluoride	235	B	76.1	150	1	10/25/2024 16:04	WG2388621
Sulfate	46600		637	5000	1	10/20/2024 20:44	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	98.5	J	20.0	200	1	10/31/2024 17:57	WG2387901
Calcium	134000		79.3	1000	1	10/31/2024 17:57	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	340000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	950	J	547	1000	1	10/20/2024 21:01	WG2385400
Fluoride	256	B	76.1	150	1	10/25/2024 16:21	WG2388621
Sulfate	6050		637	5000	1	10/20/2024 21:01	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	62.6	J	20.0	200	1	10/31/2024 17:58	WG2387901
Calcium	89600		79.3	1000	1	10/31/2024 17:58	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	288000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	953	J	547	1000	1	10/20/2024 21:18	WG2385400
Fluoride	147	B J	76.1	150	1	10/25/2024 16:39	WG2388621
Sulfate	4560	J	637	5000	1	10/20/2024 21:18	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	76.9	J	20.0	200	1	10/31/2024 18:00	WG2387901
Calcium	70200		79.3	1000	1	10/31/2024 18:00	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	414000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1080		547	1000	1	10/20/2024 21:36	WG2385400
Fluoride	275	B	76.1	150	1	10/25/2024 16:56	WG2388621
Sulfate	4680	J	637	5000	1	10/20/2024 21:36	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	53.0	J	20.0	200	1	10/31/2024 18:02	WG2387901
Calcium	115000		79.3	1000	1	10/31/2024 18:02	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	533000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2150		547	1000	1	10/20/2024 21:53	WG2385400
Fluoride	U		76.1	150	1	10/20/2024 21:53	WG2385400
Sulfate	42500		637	5000	1	10/20/2024 21:53	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	96.3	J	20.0	200	1	11/01/2024 13:08	WG2387904
Calcium	136000		79.3	1000	1	11/01/2024 13:08	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	342000		10000	1	10/23/2024 18:21	WG2387845

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1060		547	1000	1	10/20/2024 22:11	WG2385400
Fluoride	174	B	76.1	150	1	10/25/2024 17:13	WG2388621
Sulfate	20100		637	5000	1	10/20/2024 22:11	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	78.0	J	20.0	200	1	11/01/2024 13:19	WG2387904
Calcium	92600		79.3	1000	1	11/01/2024 13:19	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	308000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1070		547	1000	1	10/20/2024 22:28	WG2385400
Fluoride	222	B	76.1	150	1	10/25/2024 18:06	WG2388621
Sulfate	13800		637	5000	1	10/20/2024 22:28	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	73.3	J	20.0	200	1	11/01/2024 13:21	WG2387904
Calcium	81100		79.3	1000	1	11/01/2024 13:21	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	410000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1070		547	1000	1	10/20/2024 22:46	WG2385400
Fluoride	341	B	76.1	150	1	10/25/2024 18:23	WG2388621
Sulfate	22600		637	5000	1	10/20/2024 22:46	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	69.9	J	20.0	200	1	11/01/2024 13:24	WG2387904
Calcium	111000		79.3	1000	1	11/01/2024 13:24	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	244000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	983	J	547	1000	1	10/20/2024 23:38	WG2385400
Fluoride	273	B	76.1	150	1	10/25/2024 18:40	WG2388621
Sulfate	8020		637	5000	1	10/20/2024 23:38	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	60.5	J	20.0	200	1	11/01/2024 13:27	WG2387904
Calcium	61300		79.3	1000	1	11/01/2024 13:27	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	181000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1020		547	1000	1	10/20/2024 23:55	WG2385400
Fluoride	184	B	76.1	150	1	10/25/2024 18:58	WG2388621
Sulfate	10300		637	5000	1	10/20/2024 23:55	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	62.8	J	20.0	200	1	11/01/2024 13:35	WG2387904
Calcium	41200		79.3	1000	1	11/01/2024 13:35	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	468000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1740		547	1000	1	10/21/2024 00:13	WG2385400
Fluoride	187	B	76.1	150	1	10/25/2024 19:15	WG2388621
Sulfate	49100		637	5000	1	10/21/2024 00:13	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	103	J	20.0	200	1	11/01/2024 13:38	WG2387904
Calcium	133000		79.3	1000	1	11/01/2024 13:38	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	U		547	1000	1	10/21/2024 00:30	WG2385400
Fluoride	90.5	J	76.1	150	1	10/21/2024 00:30	WG2385400
Sulfate	U		637	5000	1	10/21/2024 00:30	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	43.1	J	20.0	200	1	11/01/2024 13:41	WG2387904
Calcium	U		79.3	1000	1	11/01/2024 13:41	WG2387904

Method Blank (MB)

(MB) R4136131-1 10/19/24 16:59

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

L1790326-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1790326-06 10/19/24 16:59 • (DUP) R4136131-3 10/19/24 16:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	438000	428000	1	2.31		10

L1790519-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1790519-05 10/19/24 16:59 • (DUP) R4136131-4 10/19/24 16:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	811000	799000	1	1.49		10

Laboratory Control Sample (LCS)

(LCS) R4136131-2 10/19/24 16:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8490000	96.5	85.0-115	

Method Blank (MB)

(MB) R4137749-1 10/23/24 18:21

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

L1791488-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1791488-01 10/23/24 18:21 • (DUP) R4137749-3 10/23/24 18:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1240000	1250000	1	0.806		10

L1791657-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1791657-01 10/23/24 18:21 • (DUP) R4137749-4 10/23/24 18:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	394000	420000	1	6.39		10

Laboratory Control Sample (LCS)

(LCS) R4137749-2 10/23/24 18:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8320000	94.5	85.0-115	

Method Blank (MB)

(MB) R4136979-1 10/22/24 18:12

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Fluoride	U		76.1	150
Sulfate	U		637	5000

L1790559-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1790559-09 10/22/24 18:47 • (DUP) R4136979-3 10/22/24 19:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5800	6340	1	9.05		15
Fluoride	175	176	1	0.569		15
Sulfate	108000	112000	1	2.92		15

L1790559-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1790559-10 10/22/24 19:57 • (DUP) R4136979-6 10/22/24 20:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1070	965	1	10.3		15
Fluoride	121	98.3	1	20.6	J3	15
Sulfate	19400	19000	1	2.15		15

Laboratory Control Sample (LCS)

(LCS) R4136979-2 10/22/24 18:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	37800	94.5	80.0-120	
Fluoride	8000	7730	96.6	80.0-120	
Sulfate	40000	38600	96.6	80.0-120	

L1790559-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790559-09 10/22/24 18:47 • (MS) R4136979-4 10/22/24 19:22 • (MSD) R4136979-5 10/22/24 19:40

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	40000	5800	42500	43600	91.9	94.5	1	80.0-120			2.41	15
Fluoride	8000	175	7840	8210	95.8	100	1	80.0-120			4.67	15
Sulfate	40000	108000	125000	128000	41.3	50.4	1	80.0-120	J6	J6	2.86	15

L1790559-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790559-10 10/22/24 19:57 • (MS) R4136979-7 10/22/24 20:32

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1070	39500	96.0	1	80.0-120	
Fluoride	8000	121	7950	97.9	1	80.0-120	
Sulfate	40000	19400	55000	89.1	1	80.0-120	

Method Blank (MB)

(MB) R4136946-1 10/20/24 19:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Fluoride	150		76.1	150
Sulfate	U		637	5000

L1790581-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1790581-03 10/20/24 20:09 • (DUP) R4136946-3 10/21/24 03:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	894	829	1	7.58		15
Fluoride	191	172	1	10.8		15
Sulfate	13600	13700	1	0.785		15

L1790581-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1790581-04 10/20/24 20:26 • (DUP) R4136946-6 10/21/24 04:51

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	906	884	1	2.48		15
Fluoride	262	280	1	6.60		15
Sulfate	3820	3850	1	0.641		15

Laboratory Control Sample (LCS)

(LCS) R4136946-2 10/20/24 19:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	36600	91.4	80.0-120	
Fluoride	8000	7470	93.4	80.0-120	
Sulfate	40000	37300	93.2	80.0-120	

L1790581-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790581-03 10/20/24 20:09 • (MS) R4136946-4 10/21/24 04:16 • (MSD) R4136946-5 10/21/24 04:34

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	40000	894	36900	36900	90.0	90.1	1	80.0-120			0.117	15
Fluoride	8000	191	7530	7650	91.7	93.2	1	80.0-120			1.51	15
Sulfate	40000	13600	48200	47700	86.7	85.3	1	80.0-120			1.17	15

L1790581-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790581-04 10/20/24 20:26 • (MS) R4136946-7 10/21/24 05:08

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	906	38100	93.0	1	80.0-120	
Fluoride	8000	262	7820	94.5	1	80.0-120	
Sulfate	40000	3820	41200	93.5	1	80.0-120	

Method Blank (MB)

(MB) R4138274-1 10/25/24 14:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Fluoride	115	J	76.1	150

L1790581-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1790581-03 10/25/24 15:29 • (DUP) R4138274-3 10/25/24 22:27

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	242	296	1	20.0	P1	15

L1790581-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1790581-04 10/25/24 15:46 • (DUP) R4138274-6 10/25/24 23:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	334	345	1	3.36		15

Laboratory Control Sample (LCS)

(LCS) R4138274-2 10/25/24 15:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	8000	8150	102	80.0-120	

L1790581-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790581-03 10/25/24 15:29 • (MS) R4138274-4 10/25/24 22:44 • (MSD) R4138274-5 10/25/24 23:02

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 %
Fluoride	8000	242	8120	8410	98.4	102	1	80.0-120			3.54	15

L1790581-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790581-04 10/25/24 15:46 • (MS) R4138274-7 10/25/24 23:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Fluoride	8000	334	8450	101	1	80.0-120	

Method Blank (MB)

(MB) R4140516-1 10/31/24 17:14

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

Laboratory Control Sample (LCS)

(LCS) R4140516-2 10/31/24 17:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	981	98.1	80.0-120	
Calcium	10000	10100	101	80.0-120	

L1790559-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790559-06 10/31/24 17:18 • (MS) R4140516-4 10/31/24 17:21 • (MSD) R4140516-5 10/31/24 17:23

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 %
Boron	1000	102	1070	1080	97.0	97.7	1	75.0-125			0.662	20
Calcium	10000	136000	143000	142000	69.1	62.5	1	75.0-125	V	V	0.465	20

Method Blank (MB)

(MB) R4140880-1 11/01/24 13:03

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) R4140880-2 11/01/24 13:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	991	99.1	80.0-120	
Calcium	10000	10100	101	80.0-120	

L1790581-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790581-09 11/01/24 13:08 • (MS) R4140880-4 11/01/24 13:13 • (MSD) R4140880-5 11/01/24 13:16

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	96.3	1080	1090	98.3	99.1	1	75.0-125			0.740	20
Calcium	10000	136000	143000	143000	76.8	76.4	1	75.0-125			0.0273	20

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
B	The same analyte is found in the associated blank.
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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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	LAO000356
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/Addr

Plum Point Services Co., LLC

2739 SCR 623
Osceola, AR 72370

Billing Information:

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

Report to: **Heather Ferguson**

Email To: **hferguson@olsson.com;mvaught@olsson.com;**

Project Description: **Plum Point Energy Station**

City/State Collected: **Osceola AR**

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): **Michael Clayton**

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature): **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

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	Remarks	Sample # (lab only)
MW-101	Grab	GW		10/16/24	1340	3	X	X	X		-01
MW-102		GW		10/16/24	1445	3	X	X	X		-02
MW-103		GW		10/16/24	1115	3	X	X	X		-03
MW-104		GW		10/15/24	1620	3	X	X	X		-04
MW-108		GW		10/15/24	1205	3	X	X	X		-05
MW-110		GW		10/15/24	1435	3	X	X	X		-06
MW-113		GW		10/15/24	1055	3	X	X	X		-07
MW-115		GW		10/15/24	1000	3	X	X	X		-08
MW-116		GW		10/16/24	1555	3	X	X	X		-09
MW-117		GW		10/17/24	1230	3	X	X	X		-10

* 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 # 4041 0437 7578

Relinquished by : (Signature) — Date: 10/17/24 — Time: 1630

Relinquished by : (Signature) — Date: — Time:

Relinquished by : (Signature) — Date: — Time:

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR
TLAG

Temp: °C Bottles Received:
0.8 +0.3 = 1.1 45

Date: 10/18/24 Time: 0900

If preservation required by Login: Date/Time

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

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L790581
1073

Acctnum: **NAESOAR**
Template: **T175308**
Prelogin: **P1107084**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEX Ground**

Company Name/Addre

Plum Point Services Co., LLC

2739 SCR 623
Osceola, AR 72370

Billing Information:

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

Pres Chk

Report to: **Heather Ferguson**

Email To: hferguson@olsson.com;mvaught@olsson.com;

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature):

Quote #

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

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	<2	Remarks	Sample # (lab only)
MW-118	Grab	GW		10/17/24	1125	3	X	X	X			-11
MW-119		GW		10/16/24	1220	3	X	X	X			-12
MW-120		GW		10/16/24	1020	3	X	X	X			-13
MW-121		GW		10/17/24	1030	3	X	X	X			-14
MW-108 DUP		GW		10/16/24	1210	3	X	X	X			-15
EPA EB-1		GW		10/17/24	1250	3	X	X	X			-16
		GW				3	X	X	X			
		GW				3	X	X	X			
		GW				3	X	X	X			

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # U790581

Table #

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P1107084**

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 # 4104 0487 7578

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

	Date:	Time:	
Relinquished by : (Signature)	10/17/24	1630	Received by: (Signature)
Relinquished by : (Signature)			Received by: (Signature)
Relinquished by : (Signature)			Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 0.3+0.3=1.1 °C Bottles Received:

Date: 10-18-24 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

November 18, 2024

Plum Point Services Co., LLC

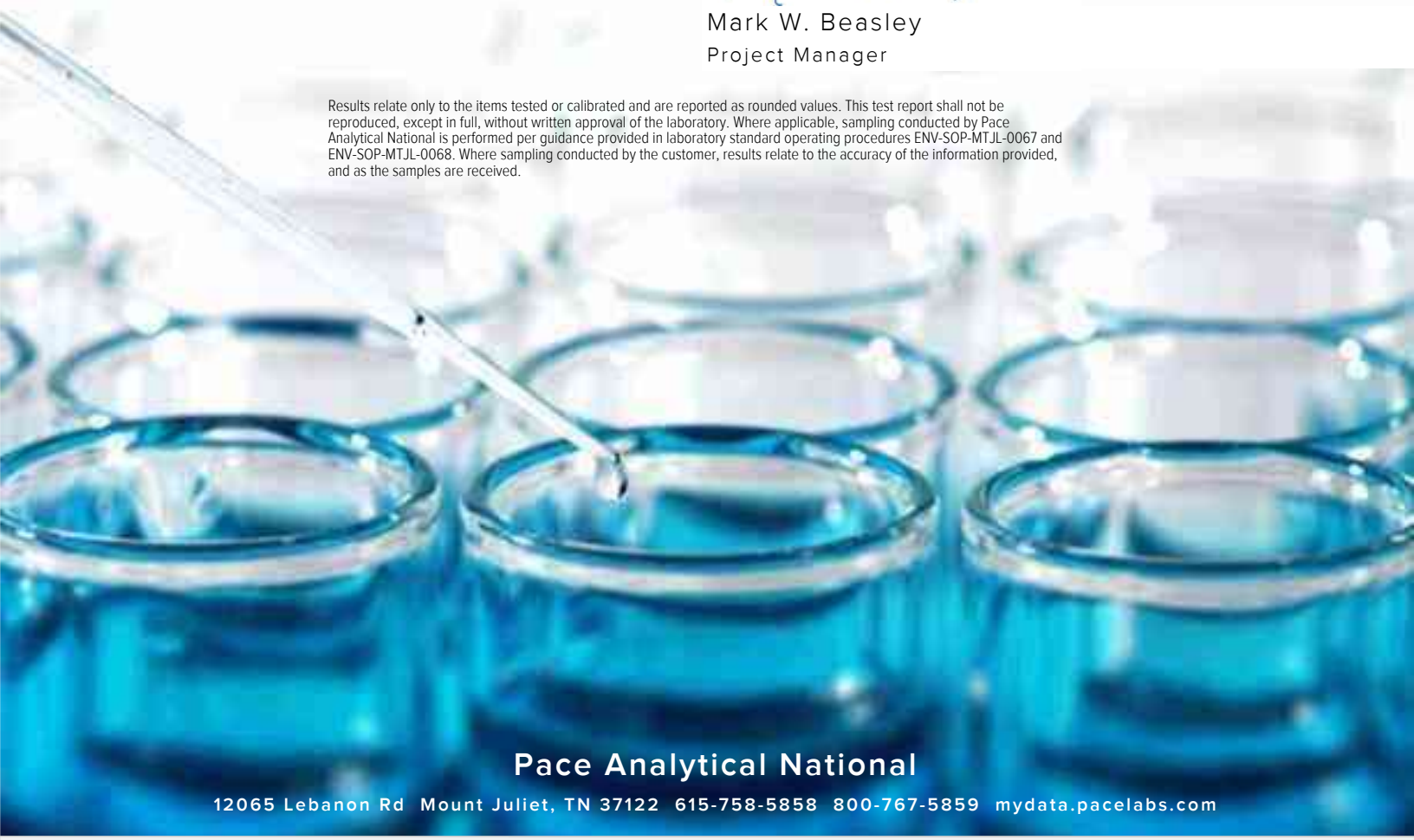
Sample Delivery Group:	L1798992
Samples Received:	10/18/2024
Project Number:	R14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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SAMPLE SUMMARY

MW-102 L1798992-01 GW

Collected by: Michael Clayton
Collected date/time: 10/16/24 14:45
Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2402567	1	11/16/24 16:15	11/16/24 16:15	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2402567	5	11/16/24 16:28	11/16/24 16:28	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2401694	1	11/15/24 08:01	11/15/24 12:25	JTM	Mt. Juliet, TN

MW-115 L1798992-02 GW

Collected by: Michael Clayton
Collected date/time: 10/15/24 10:00
Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2402567	1	11/16/24 16:42	11/16/24 16:42	ZSA	Mt. Juliet, TN

MW-118 L1798992-03 GW

Collected by: Michael Clayton
Collected date/time: 10/17/24 11:25
Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2402567	1	11/16/24 16:55	11/16/24 16:55	ZSA	Mt. Juliet, TN

MW-119 L1798992-04 GW

Collected by: Michael Clayton
Collected date/time: 10/16/24 12:20
Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2402567	1	11/16/24 17:09	11/16/24 17:09	ZSA	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

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	167		76.1	150	1	11/16/2024 16:15	WG2402567
Sulfate	128000		3180	25000	5	11/16/2024 16:28	WG2402567

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	290		20.0	200	1	11/15/2024 12:25	WG2401694

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	186		76.1	150	1	11/16/2024 16:42	WG2402567

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	155		76.1	150	1	11/16/2024 16:55	WG2402567

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	226		76.1	150	1	11/16/2024 17:09	WG2402567

Method Blank (MB)

(MB) R4146999-1 11/16/24 12:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Fluoride	U		76.1	150
Sulfate	U		637	5000

Laboratory Control Sample (LCS)

(LCS) R4146999-2 11/16/24 13:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	8000	7990	99.9	80.0-120	
Sulfate	40000	39200	98.1	80.0-120	

Method Blank (MB)

(MB) R4146582-1 11/15/24 12:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		20.0	200

Laboratory Control Sample (LCS)

(LCS) R4146582-2 11/15/24 12:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	1050	105	80.0-120	

L1798992-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1798992-01 11/15/24 12:25 • (MS) R4146582-4 11/15/24 12:28 • (MSD) R4146582-5 11/15/24 12:30

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 %
Boron	1000	290	1290	1270	100	98.0	1	75.0-125			1.85	20

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.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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	LAO000356
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/Addr: **Plum Point Services Co., LLC**

2739 SCR 623
Osceola, AR 72370

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

Report to: **Heather Ferguson**

Email To: hferguson@olsson.com;mvaught@olsson.com;

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. # **2024-00048**

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	Pres Chk: N ✓	Remarks	Sample # (lab only)
MW-101	Grab	GW		10/16/24	1340	3	X	X	X			~~-01~~
MW-102		GW		10/16/24	1445	3	X	X	X			~~-02~~ -01
MW-103		GW		10/16/24	1115	3	X	X	X			~~-03~~
MW-104		GW		10/15/24	1620	3	X	X	X			~~-04~~
MW-108		GW		10/15/24	1205	3	X	X	X			~~-05~~
MW-110		GW		10/15/24	1435	3	X	X	X			~~-06~~
MW-113		GW		10/15/24	1055	3	X	X	X			-07
MW-115		GW		10/15/24	1000	3	X	X	X			~~-08~~ -02
MW-116		GW		10/16/24	1555	3	X	X	X			~~-09~~
MW-117		GW		10/17/24	1230	3	X	X	X			~~-10~~

* 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 # 4041 0487 7578

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/17/24	1630	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Oz

Trip Blank Received: Yes / (No) HCL / MeoH TBR
TLAG

Temp: 0.8 °C Bottles Received: 45

Date: 10/18/24 Time: 0900

If preservation required by Login: Date/Time

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

Chain of Custody Page 1 of 2

Pace
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MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
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SDG # ~~L1790581~~ 1073 L1798992 11/13/24

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P1107084**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEx Ground**

Company Name/Addr

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:
Heather Ferguson

Email To:
hferguson@olsson.com;mvaught@olsson.com;

Project Description:
Plum Point Energy Station

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project #
R14590-3336-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Clayton

Site/Facility ID #

P.O. #
2024-00048

Collected by (signature):

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	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	<2	Remarks	Sample # (lab only)
MW-118	Grab	GW		10/17/24	1125	3	X	X	X			-03
MW-119		GW		10/16/24	1320	3	X	X	X			-04
MW-120		GW		10/16/24	1020	3	X	X	X			
MW-121		GW		10/17/24	1030	3	X	X	X			
MW-108 DUP		GW		10/16/24	1210	3	X	X	X			
EPA EB-1		GW		10/17/24	1250	3	X	X	X			
		GW				3	X	X	X			
		GW				3	X	X	X			
		GW				3	X	X	X			

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # ~~L1798581~~
Table # L1798792
Acctnum: **NAESOAR**
Template: **T175308**
Prelogin: **P1107084**
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 # 4104 0487 7570

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	10/17/24	1630		TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				0.0+0.3=1.1
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				10-18-24 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Relog the following as EX due 11/15:

L1790581-02 BICP, FLUORIDE, SULFATE

L1790581-08 FLUORIDE

L1790581-11 FLUORIDE

L1790581-12 FLUORIDE

From: Melissa Vaught <mvaught@olsson.com>

Sent: Wednesday, November 13, 2024 10:05 AM

To: Mark Beasley <Mark.Beasley@pacelabs.com>

Cc: Heather Ferguson <hferguson@olsson.com>

Subject: RE: Pace Analytical National Level II Report for R14590-3336-001 Plum Point Energy Station L1790581

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the content is safe.

Mark – Good morning. Please double-check the calculations for the following well/parameter pairs and if confirmed, rerun the samples if they are within hold.

I think we are close to the hold time for the fluoride and sulfate samples. If the fluoride reruns need to be expediated to meet the hold time, that is fine. The sulfate rerun
(MW-102) will need to be resampled anyways, so that rerun is less important.

MW-102: boron, fluoride, sulfate

MW-115: fluoride

MW-118: fluoride

MW-119: fluoride

Questions, please let me know.

Thank you,

Melissa Vaught, P.E.

***Olsson** *Project Engineer / Environmental

C 210.219.2335

View Legal Disclaimer

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the intended recipient, please contact the sender immediately and delete any copies.

P Please consider the environment before printing this email

Time estimate: oh **Time spent:** oh

SECOND HALF 2024 VERIFICATION SAMPLING EVENT
DECEMBER 2024

ANALYTICAL REPORT

December 20, 2024

Plum Point Services Co., LLC

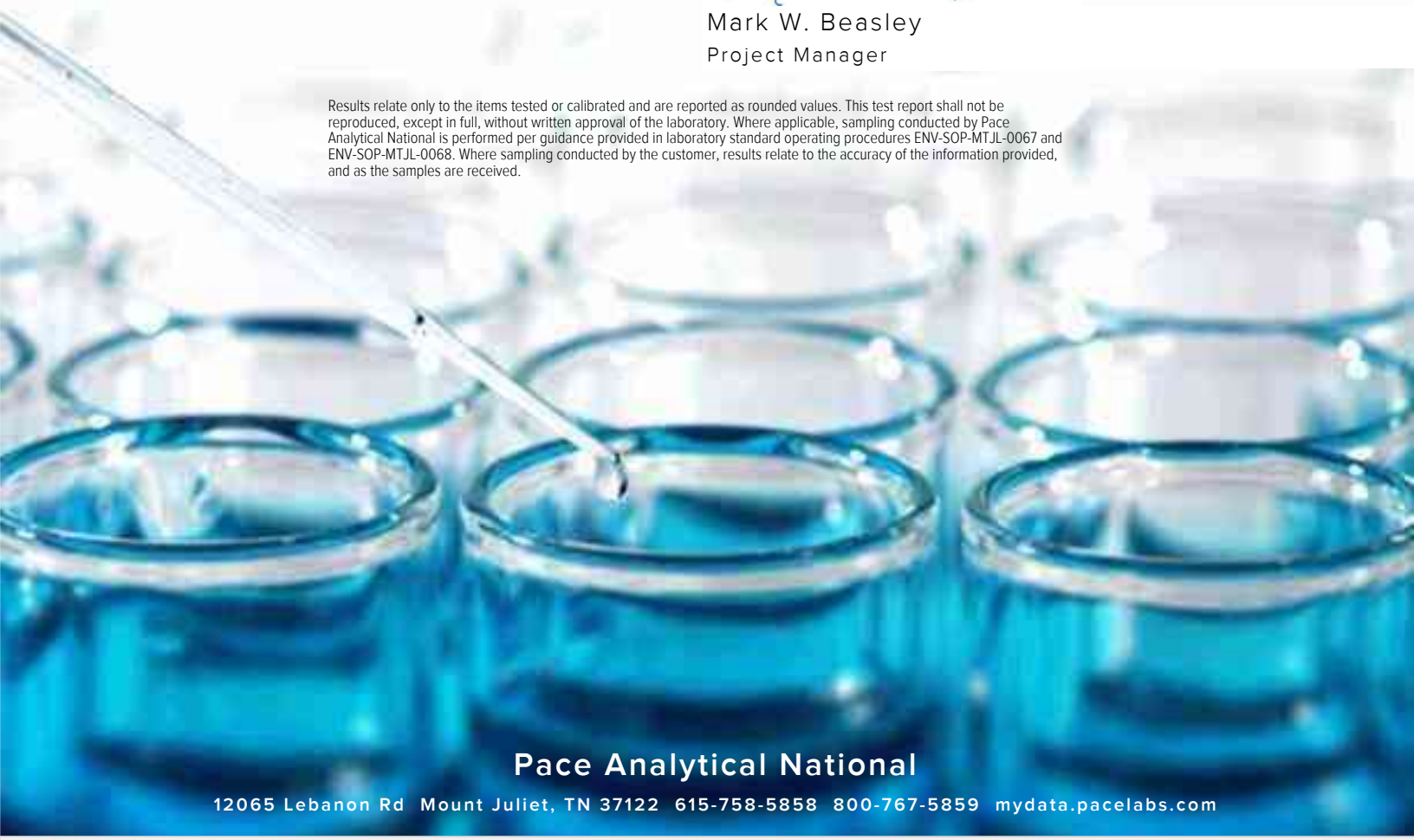
Sample Delivery Group:	L1808844
Samples Received:	12/12/2024
Project Number:	R14590-3336-001
Description:	

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-102 L1808844-01 GW

Collected by: Michael Clayton | Collected date/time: 12/10/24 15:45 | Received date/time: 12/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2418226	1	12/16/24 09:44	12/16/24 10:35	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2418334	10	12/17/24 15:28	12/17/24 15:28	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2420723	1	12/18/24 12:18	12/18/24 20:32	MAP	Mt. Juliet, TN

MW-102 DUP L1808844-02 GW

Collected by: Michael Clayton | Collected date/time: 12/10/24 15:45 | Received date/time: 12/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2418226	1	12/16/24 09:44	12/16/24 10:35	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2418334	10	12/17/24 15:45	12/17/24 15:45	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2420723	1	12/18/24 12:18	12/18/24 20:34	MAP	Mt. Juliet, TN

EPA EB-2 L1808844-03 GW

Collected by: Michael Clayton | Collected date/time: 12/10/24 15:45 | Received date/time: 12/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2418226	1	12/16/24 09:44	12/16/24 10:35	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2418334	1	12/17/24 16:03	12/17/24 16:03	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2420723	1	12/18/24 12:18	12/18/24 20:39	MAP	Mt. Juliet, TN

MW-116 L1808844-04 GW

Collected by: Michael Clayton | Collected date/time: 12/10/24 14:25 | Received date/time: 12/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2418794	1	12/14/24 09:18	12/15/24 08:19	DLS	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

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	12/16/2024 10:35	WG2418226

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	78400		6370	50000	10	12/17/2024 15:28	WG2418334

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	132	J	23.2	200	1	12/18/2024 20:32	WG2420723

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	441000		10000	1	12/16/2024 10:35	WG2418226

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	79000		6370	50000	10	12/17/2024 15:45	WG2418334

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	132	J	23.2	200	1	12/18/2024 20:34	WG2420723

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND	P1	10000	1	12/16/2024 10:35	WG2418226

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	U		637	5000	1	12/17/2024 16:03	WG2418334

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		23.2	200	1	12/18/2024 20:39	WG2420723

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	480000		10000	1	12/15/2024 08:19	WG2418794

Method Blank (MB)

(MB) R4160153-1 12/16/24 10:35

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

L1808796-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1808796-03 12/16/24 10:35 • (DUP) R4160153-3 12/16/24 10:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	605000	650000	1	7.17		10

L1808844-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1808844-03 12/16/24 10:35 • (DUP) R4160153-4 12/16/24 10:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	ND	ND	1	200	P1	10

Laboratory Control Sample (LCS)

(LCS) R4160153-2 12/16/24 10:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8860000	101	85.0-115	

Method Blank (MB)

(MB) R4158806-1 12/15/24 08:19

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

L1808449-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1808449-01 12/15/24 08:19 • (DUP) R4158806-3 12/15/24 08:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	11700000	11500000	1	1.72		10

L1809252-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1809252-02 12/15/24 08:19 • (DUP) R4158806-4 12/15/24 08:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	283000	277000	1	2.14		10

Laboratory Control Sample (LCS)

(LCS) R4158806-2 12/15/24 08:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8850000	101	85.0-115	

QUALITY CONTROL SUMMARY

L1808844-01,02,03

Method Blank (MB)

(MB) R4159252-1 12/17/24 10:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	U		637	5000

L1808803-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1808803-01 12/17/24 15:11 • (DUP) R4159252-3 12/17/24 20:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	9370	9420	1	0.571		15

L1808964-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1808964-02 12/17/24 16:55 • (DUP) R4159252-5 12/17/24 20:41

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	1960	1910	1	2.25	J	15

Laboratory Control Sample (LCS)

(LCS) R4159252-2 12/17/24 10:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	38000	95.0	80.0-120	

L1808803-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1808803-01 12/17/24 15:11 • (MS) R4159252-4 12/17/24 20:24

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	9370	47300	94.8	1	80.0-120	

L1808964-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1808964-02 12/17/24 16:55 • (MS) R4159252-6 12/17/24 20:59 • (MSD) R4159252-7 12/17/24 21:16

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 %
Sulfate	40000	1960	41300	41100	98.3	97.7	1	80.0-120			0.558	15

Method Blank (MB)

(MB) R4159517-6 12/18/24 19:59

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		23.3	200

Laboratory Control Sample (LCS)

(LCS) R4159517-7 12/18/24 20:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	969	96.9	80.0-120	

L1808796-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1808796-04 12/18/24 20:02 • (MS) R4159517-9 12/18/24 20:06 • (MSD) R4159517-10 12/18/24 20:07

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 %
Boron	1000	131	1090	1110	96.4	98.4	1	75.0-125			1.75	20

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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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

Report to: **Heather Ferguson**

Email To: **hferguson@olsson.com;mvaught@olsson.com;**

Project Description:

City/State Collected: Osceola, AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

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

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Boron 6010 250mlHDPE-HNO3	SULFATE 125mlHDPE-NoPres	TDS 1L-HDPE NoPres								Remarks	Sample # (lab only)
MW-102	Grab	GW		12/10/24	1545	3	X	X	X									-01
MW-102 DUP	↓	GW		↓	1550	3	X	X	X									-02
MW-116	↓	GW		↓	1425	~~X~~0			X									
EPA EB-2		GW			1630	3	X	X	X									-03
		~~GW~~				~~3~~	~~X~~	~~X~~	~~X~~									
		~~GW~~				~~1~~			~~X~~									

12/12/24

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # 180884
J212

Acctnum: **NAESOAR**
Template: **T264685**
Prelogin: **P1118238**
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 # 428709346630

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Michael Clayton	12/11/24	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 0.4+0=0.4 Bottles Received: 9	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/12/24 Time: 0900	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-104	MW-108	MW-110	MW-113	MW-115	MW-116	MW-117	MW-118	MW-119	MW-120	MW-121
10/7/2015	221.51	219.73	220.71	NA*	216.68	NA*	216.87	216.17	220.40	219.48	220.12	NA*	NA*	NA*
1/28/2016	226.07	226.58	225.16	NA*	227.39	NA*	226.53	225.03	226.14	225.78	225.22	NA*	NA*	NA*
4/26/2016	229.97	229.24	229.48	NA*	227.53	NA*	228.30	227.80	229.43	229.23	229.33	NA*	NA*	NA*
7/25/2016	225.79	225.38	225.41	NA*	223.87	NA*	224.87	224.78	225.33	225.45	222.53	NA*	NA*	NA*
10/4/2016	223.76	223.00	223.33	NA*	221.47	NA*	222.23	222.34	223.10	222.99	223.23	NA*	NA*	NA*
1/24/2017	223.08	222.09	222.79	NA*	222.66	NA*	222.03	222.54	222.12	222.00	222.34	223.14	NA*	NA*
4/24/2017	226.04	226.33	226.33	NA*	226.71	NA*	226.65	226.53	226.07	226.11	225.98	226.22	NA*	NA*
7/17/2017	228.89	228.74	228.48	NA*	227.77	NA*	228.65	228.41	228.53	228.77	228.65	228.86	NA*	NA*
9/19/2017	224.21	223.23	223.82	NA*	220.80	NA*	222.03	222.32	223.42	223.33	223.67	224.04	NA*	NA*
1/29/2018	222.35	221.12	222.14	NA*	220.01	NA*	219.32	220.74	221.33	221.18	221.71	222.39	NA*	NA*
4/10/2018	232.63	233.50	232.34	NA*	234.99	NA*	234.23	234.15	232.89	233.19	232.76	232.52	NA*	NA*
7/9/2018	228.52	228.81	228.50	NA*	228.72	NA*	229.03	228.95	228.49	228.87	228.73	228.49	NA*	NA*
9/24/2018	225.29	224.15	224.16	NA*	224.89	NA*	224.08	224.29	223.83	223.71	223.72	225.11	NA*	NA*
11/19/2018	228.54	228.80	228.16	NA*	230.16	NA*	229.57	229.62	228.31	228.71	228.46	228.33	NA*	NA*
2/18/2019	NM	NM	NM	NA*	NM	NA*	NM	NM	NM	NM	NM	236.90	NA*	NA*
5/14/2019	237.60	238.28	237.17	NA*	237.13	NA*	238.03	236.89	237.76	237.55	237.08	237.35	NA*	NA*
7/31/2019	232.75	233.02	232.22	NA*	232.39	NA*	232.66	231.26	232.55	232.75	232.40	232.48	NA*	NA*
10/21/2019	226.32	225.29	225.52	NA*	224.14	NA*	223.95	223.78	225.08	224.77	224.98	226.16	NA*	NA*
4/6/2020	238.06	239.09	237.46	NA*	240.81	NA*	239.83	239.08	238.49	238.51	237.83	238.76	NA*	NA*
10/7/2020	223.12	221.96	222.96	NA*	219.05	NA*	220.58	221.09	222.58	222.19	222.70	223.03	NA*	NA*
4/12/2021	231.65	232.06	233.51	NA*	233.90	NA*	233.12	233.15	231.38	231.81	231.53	231.69	NA*	NA*
6/29/2021	227.90	227.49	227.88	NA*	225.64	NA*	227.00	226.99	227.42	227.80	227.97	227.85	NA*	NA*
10/4/2021	222.14	221.32	221.94	NA*	219.28	NA*	220.25	220.53	221.49	221.37	221.7	222.04	NA*	NA*
12/14/2021	219.78	218.27	219.23	NA*	216.11	NA*	215.99	215.18	218.62	218.08	218.56	219.70	NA*	NA*
4/4/2022	226.11	225.81	225.29	NA*	226.97	NA*	226.00	225.89	225.36	225.22	225.03	226.33	NA*	NA*

Historical water levels (continued).

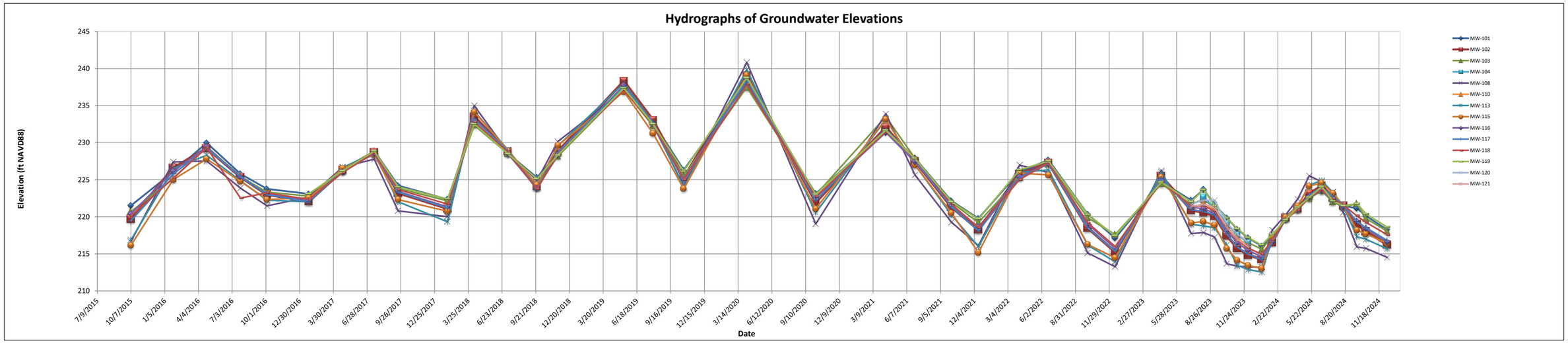
Date	Water Surface Elevation (ft, North American Vertical Datum of 1988)													
	MW-101	MW-102	MW-103	MW-104	MW-108	MW-110	MW-113	MW-115	MW-116	MW-117	MW-118	MW-119	MW-120	MW-121
6/20/2022	227.66	227.28	227.27	NA*	225.96	NA*	226.32	225.66	227.24	227.16	227.28	227.52	NA*	NA*
10/3/2022	220.34	218.49	219.86	NA*	215.12	NA*	216.16	216.27	219.01	218.52	219.17	220.32	NA*	NA*
12/15/2022	217.12	215.27	217.61	NA*	213.26	NA*	213.93	214.45	215.73	215.34	216.00	217.43	NA*	NA*
4/17/2023	224.71	225.47	224.42	NA*	226.24	NA*	225.99	225.34	224.99	225.15	224.73	224.66	NA*	NA*
7/6/2023	222.22	220.91	221.70	NA*	217.74	NA*	218.98	219.16	221.29	220.96	221.43	222.03	221.71	221.42
8/8/2023	223.69	220.59	222.37	222.63	217.87	221.83	218.76	219.38	221.09	220.74	221.48	223.70	222.23	221.68
9/6/2023	221.64	220.13	221.15	221.23	217.26	220.89	218.52	218.86	220.47	220.25	220.78	221.52	222.22	221.27
10/9/2023	219.85	217.47	219.06	219.07	213.67	218.66	216.16	215.73	218.10	217.68	218.49	219.82	219.15	218.61
11/6/2023	218.33	215.78	217.53	217.57	213.33	217.13	213.44	214.13	216.47	215.93	216.81	218.41	217.64	216.99
12/5/2023	217.14	214.85	216.51	216.50	213.25	216.09	212.88	213.44	215.47	214.97	215.78	217.18	216.59	215.96
1/10/2024	216.06	214.28	215.63	215.71	213.19	215.30	212.54	213.03	214.61	214.20	214.94	216.19	215.72	215.13
2/7/2024	217.34	216.57	217.35	218.01	218.20	217.38	216.97	217.25	216.60	216.52	216.85	217.65	217.49	217.10
3/14/2024	219.62	219.92	219.73	219.83	220.27	219.75	220.06	219.89	NA**	219.77	219.71	219.60	219.78	219.77
4/15/2024	221.07	221.11	221.04	221.50	222.39	221.15	221.42	221.49	220.92	220.91	220.90	221.28	221.10	221.03
5/16/2024	222.56	223.11	222.50	222.84	225.53	222.80	224.28	224.15	222.63	222.93	222.68	222.61	222.57	222.75
6/18/2024	223.48	224.17	223.51	221.54	224.71	223.50	224.89	224.55	223.57	224.00	223.62	224.07	223.27	223.68
7/18/2024	222.15	222.62	221.98	222.28	223.32	222.44	223.24	223.19	222.18	222.66	222.42	222.12	222.12	222.48
8/15/2024	221.46	221.52	221.33	221.48	220.56	220.48	221.44	221.49	221.34	221.65	221.59	221.47	221.40	221.65
9/20/2024	221.15	219.03	221.77	221.16	215.93	220.54	217.31	218.19	219.44	219.31	220.11	221.80	221.34	220.35
10/14/2024	220.12	218.04	219.77	220.11	215.74	219.70	216.97	217.70	218.41	218.54	219.25	220.38	219.90	219.53
12/10/2024	218.24	216.25	218.05	218.59	214.52	218.20	215.68	216.41	216.60	216.80	217.57	218.59	218.37	217.92

*Monitoring well not added to EPA CCR program yet.

**Omitted due to likely field error.

NM=not measured

Hydrographs of Groundwater Elevations



APPENDIX D
GROUNDWATER QUALITY HISTORICAL DATABASE

Well ID	Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)
MW-101	d										
	10/7/2015	0.000363(J)	0.00138(J)	0.173	<0.002	0.0858(J)	<0.001	116	3.02	0.000612(J)	<0.002
	1/28/2016	0.000382(J)	0.00128(J)	0.175	<0.002	0.114(J)	<0.001	117	2.74	0.000744(J)	<0.002
	4/27/2016	0.000273(J)	0.000885(J)	0.197	<0.002	0.105(J)	<0.001	120	6.61	<0.002	<0.002
	7/26/2016	<0.01	<0.01	0.192	<0.002	0.0877(J)	<0.002	115	3.41	<0.01	<0.01
	10/6/2016	<0.002	0.000708(J)	0.164	<0.002	0.089(J)	<0.001	110	1.93	0.000593(BJ)	<0.002
	1/25/2017	<0.002	0.000872(J)	0.172(B)	<0.002	0.0681(J)	<0.001	109	1.67	<0.002	<0.002
	4/26/2017	<0.002	0.000893(J)	0.172	<0.002	<1.8(O)	<0.001	80.5	2.14	<0.002	<0.002
	7/20/2017	<0.002	0.000786(J)	0.168	<0.002	0.0903(BJ)	<0.001	110	1.98	<0.002	<0.002
	9/20/2017	<0.002	0.000858(J)	0.167	<0.002	0.0718(J)	<0.001	153	1.57	<0.002	<0.002
	12/11/2017	n/a	n/a	n/a	n/a	n/a	n/a	120	n/a	n/a	n/a
	4/12/2018	n/a	n/a	n/a	n/a	0.084(BJ)	n/a	121	2.75	n/a	n/a
	9/26/2018	n/a	n/a	n/a	n/a	0.0981(BJ)	n/a	115	1.94(B)	n/a	n/a
	5/16/2019	n/a	n/a	n/a	n/a	0.118(J)	n/a	103	1.01	n/a	n/a
	10/23/2019	n/a	n/a	n/a	n/a	0.0491(J)	n/a	109	1.37	n/a	n/a
	4/8/2020	n/a	n/a	n/a	n/a	0.078(J)	n/a	105	0.823(J)	n/a	n/a
	10/9/2020	n/a	n/a	n/a	n/a	0.0556(J)	n/a	107	1.75	n/a	n/a
	4/15/2021	n/a	n/a	n/a	n/a	0.0608(J)	n/a	96.9	0.855(J)	n/a	n/a
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/7/2021	n/a	n/a	n/a	n/a	0.0555(J)	n/a	113	0.975(J)	n/a	n/a
	4/7/2022	n/a	n/a	n/a	n/a	0.0597(J)	n/a	105	0.848(J)	n/a	n/a
	10/5/2022	n/a	n/a	n/a	n/a	0.0526(J)	n/a	110	0.86(J)	n/a	n/a
	4/19/2023	n/a	n/a	n/a	n/a	0.0606(J)	n/a	108	3.15	n/a	n/a
	10/11/2023	n/a	n/a	n/a	n/a	0.053(J)	n/a	101	8.76	n/a	n/a
	4/19/2024	n/a	n/a	n/a	n/a	0.0584(BJ)	n/a	108	4.96	n/a	n/a
	10/16/2024	n/a	n/a	n/a	n/a	0.0553(J)	n/a	103	2.17	n/a	n/a

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)
MW-102	d										
	11/10/2015	<0.002	0.000833(J)	0.176	<0.002	0.0818(J)	<0.001	121	5.53	<0.002	<0.002
	1/28/2016	0.000324(J)	0.00138(J)	0.176	<0.002	0.125(J)	<0.001	123	5.33	0.000909(J)	<0.002
	4/27/2016	0.00029(J)	0.000869(J)	0.199	<0.002	0.135(J)	<0.001	131	6.32	<0.002	<0.002
	7/26/2016	<0.01	<0.01	0.189	<0.002	0.122(J)	<0.002	122	5.42	0.00144(J)	<0.01
	10/6/2016	<0.002	0.00066(J)	0.165	<0.002	0.0999(J)	<0.001	120	5.18	<0.002	<0.002
	1/25/2017	<0.002	0.000764(J)	0.173(B)	<0.002	0.0938(J)	<0.001	118	4.5	0.000579(J)	<0.002
	4/27/2017	<0.002	0.000775(J)	0.175	<0.002	0.12(J)	<0.001	121	4.85	<0.002	<0.002
	7/19/2017	<0.002	0.000738(J)	0.182	<0.002	0.108(BJ)	<0.001	126	4.28	<0.002	<0.002
	9/20/2017	<0.002	0.000578(J)	0.16	<0.002	0.0536(J)	<0.001	25.9(O)	4.29	<0.002	<0.002
	4/11/2018	n/a	n/a	n/a	n/a	0.144(BJ)	n/a	136	1.77	n/a	n/a
	7/9/2018	n/a	n/a	n/a	n/a	n/a	n/a	124	n/a	n/a	n/a
	9/27/2018	n/a	n/a	n/a	n/a	0.121(BJ)	n/a	121	3.84	n/a	n/a
	5/16/2019	n/a	n/a	n/a	n/a	0.15(J)	n/a	121	2.87	n/a	n/a
	10/23/2019	n/a	n/a	n/a	n/a	0.0602(J)	n/a	117	3.62	n/a	n/a
	4/7/2020	n/a	n/a	n/a	n/a	0.089(J)	n/a	116	2.79	n/a	n/a
	10/9/2020	n/a	n/a	n/a	n/a	0.0699(J)	n/a	115	3.3	n/a	n/a
	4/15/2021	n/a	n/a	n/a	n/a	0.0966(J)	n/a	118	2.31	n/a	n/a
	10/6/2021	n/a	n/a	n/a	n/a	0.0784(J)	n/a	116	2.48	n/a	n/a
	4/6/2022	n/a	n/a	n/a	n/a	0.0838(J)	n/a	110	1.91	n/a	n/a
	10/5/2022	n/a	n/a	n/a	n/a	0.0769(J)	n/a	116	2.45	n/a	n/a
	4/19/2023	n/a	n/a	n/a	n/a	0.0884(J)	n/a	101	2.75	n/a	n/a
	10/12/2023	n/a	n/a	n/a	n/a	0.0777(J)	n/a	106	2.68	n/a	n/a
	4/19/2024	n/a	n/a	n/a	n/a	0.101(BJ)	n/a	109	3.57	n/a	n/a
	10/16/2024	n/a	n/a	n/a	n/a	0.275	n/a	138	3.57	n/a	n/a
	12/10/2024	n/a	n/a	n/a	n/a	0.132(J)	n/a	n/a	n/a	n/a	n/a

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R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)
MW-103	d										
	10/7/2015	0.00028(J)	0.00113(J)	0.188	<0.002	0.119(J)	<0.001	168	3.92	<0.002	<0.002
	1/28/2016	0.000339(J)	0.00104(J)	0.165	<0.002	0.149(J)	<0.001	153	2.66	0.0007(J)	<0.002
	4/27/2016	<0.002	0.000691(J)	0.172	<0.002	0.166(J)	<0.001	147	4.06	<0.002	<0.002
	7/26/2016	<0.01	<0.01	0.177	<0.002	0.142(J)	<0.002	148	3.63	0.00216(J)	<0.01
	10/6/2016	<0.002	0.000905(J)	0.183	<0.002	0.137(J)	0.000302(J)	152	2.69	<0.002	0.000324(J)
	1/26/2017	<0.002	0.000536(J)	0.153(B)	<0.002	0.138(J)	<0.001	135	2.82	<0.002	<0.002
	4/27/2017	<0.002	0.000521(J)	0.159	<0.002	0.137(J)	<0.001	136	2.89	<0.002	<0.002
	7/20/2017	<0.002	0.000515(J)	0.151	<0.002	0.124(BJ)	<0.001	136	2.28	<0.002	<0.002
	9/20/2017	<0.002	0.000517(J)	0.151	<0.002	0.134(J)	<0.001	141	1.79	<0.002	<0.002
	4/11/2018	n/a	n/a	n/a	n/a	0.122(BJ)	n/a	128	3.24	n/a	n/a
	9/26/2018	n/a	n/a	n/a	n/a	0.145(BJ)	n/a	129	1.36(B)	n/a	n/a
	5/15/2019	n/a	n/a	n/a	n/a	0.154(J)	n/a	106	1.1	n/a	n/a
	10/22/2019	n/a	n/a	n/a	n/a	0.0816(J)	n/a	107	1.29	n/a	n/a
	4/8/2020	n/a	n/a	n/a	n/a	0.0541(J)	n/a	88.2	0.726(J)	n/a	n/a
	10/8/2020	n/a	n/a	n/a	n/a	0.0763(J)	n/a	91.9	3.55	n/a	n/a
	4/15/2021	n/a	n/a	n/a	n/a	0.0726(J)	n/a	85.9	0.976(J)	n/a	n/a
	10/7/2021	n/a	n/a	n/a	n/a	0.0681(J)	n/a	89.7	1.16	n/a	n/a
	4/7/2022	n/a	n/a	n/a	n/a	0.0552(J)	n/a	71.6	0.926(J)	n/a	n/a
	10/5/2022	n/a	n/a	n/a	n/a	0.0727(J)	n/a	79.8	0.949(J)	n/a	n/a
	4/18/2023	n/a	n/a	n/a	n/a	0.0622(J)	n/a	84.8	1	n/a	n/a
	10/11/2023	n/a	n/a	n/a	n/a	0.0743(J)	n/a	88	1.08	n/a	n/a
	4/19/2024	n/a	n/a	n/a	n/a	0.0636(BJ)	n/a	90.8	1.07	n/a	n/a
	10/16/2024	n/a	n/a	n/a	n/a	0.0644(J)	n/a	84.2	0.894(J)	n/a	n/a
MW-104	d										
	8/8/2023	<0.004	0.00204	0.159	<0.002	0.0568(J)	<0.001	76.1	0.857(J)	<0.002	<0.002

B: analyte was detected in associated blank sample.

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O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)
MW-104	9/7/2023	<0.004	0.00284	0.157	<0.002	0.0548(J)	<0.001	85.1	1.03	0.002(BJ)	).000112(J)
(cont.)	10/11/2023	<0.004	0.00465	0.159	<0.002	0.0516(J)	<0.001	83.2	0.993(J)	<0.002	).000246(J)
	11/7/2023	<0.004	0.00524	0.161	<0.002	0.0632(J)	<0.001	83.3	1.06	<0.002	).000369(J)
	12/5/2023	<0.004	0.00671	0.179	<0.002	0.0725(J)	<0.001	85.7	1.09	<0.002	).000733(J)
	1/10/2024	<0.004	0.0052	0.161	<0.002	0.0533(J)	<0.001	87.6	1.05	<0.002	).000699(J)
	2/7/2024	<0.004	0.00492	0.158	<0.002	0.0614(J)	<0.001	87.8	1.28	<0.002	9.36E-05(J)
	3/14/2024	0.00122(J)	0.00728	0.18	<0.002	0.0597(BJ)	<0.001	88.4	1.14	<0.002	).000118(J)
	4/18/2024	<0.004	0.00485	0.161	<0.002	0.0542(BJ)	<0.001	84.7	1.03(B)	<0.002	).000138(J)
	5/16/2024	<0.004	0.0157	0.25	<0.002	0.0511(J)	<0.001	84.5	1.25	<0.002	).000176(J)
	6/18/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/15/2024	n/a	n/a	n/a	n/a	0.0548(J)	n/a	87	0.906(J)	n/a	n/a
MW-108	u										
	1/28/2016	0.000353(J)	0.00128(J)	0.263	<0.002	0.164(J)	<0.001	166	5.34	0.000802(J)	<0.002
	4/28/2016	0.000428(J)	0.00101(J)	0.296	<0.002	0.194(J)	<0.001	178	2.81	<0.002	<0.002
	7/26/2016	<0.01	0.00651(J)	0.246	<0.002	0.158(J)	<0.002	144	2.43	<0.01	<0.01
	10/6/2016	<0.002	0.000646(J)	0.241	<0.002	0.174(J)	0.000194(J)	158	2.48	<0.002	<0.002
	1/26/2017	<0.002	0.000751(J)	0.244(B)	<0.002	0.164(J)	<0.001	154	2.64	<0.002	<0.002
	4/25/2017	<0.002	0.000856(J)	0.234	<0.002	0.147(J)	<0.001	151	3.1	<0.002	<0.002
	7/18/2017	<0.002	0.000931(J)	0.263	<0.002	0.162(J)	0.000186(J)	167	3.03	<0.002	<0.002
	9/19/2017	<0.002	0.00104(J)	0.259	<0.002	0.158(J)	<0.001	170	2.06	<0.002	<0.002
	4/10/2018	n/a	n/a	n/a	n/a	0.171(BJ)	n/a	183	3.03	n/a	n/a
	9/25/2018	n/a	n/a	n/a	n/a	0.183(BJ)	n/a	163	3.11	n/a	n/a
	5/14/2019	n/a	n/a	n/a	n/a	0.224(BR)	n/a	169	2.44	n/a	n/a
	8/1/2019	n/a	n/a	n/a	n/a	0.127(BJ)	n/a	n/a	n/a	n/a	n/a
	10/22/2019	n/a	n/a	n/a	n/a	0.11(J)	n/a	153	1.95	n/a	n/a
	4/6/2020	n/a	n/a	n/a	n/a	0.143(J)	n/a	160	1.87	n/a	n/a

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MW-108	10/7/2020	n/a	n/a	n/a	n/a	0.111(J)	n/a	151	2.23	n/a	n/a
(cont.)	4/13/2021	n/a	n/a	n/a	n/a	0.125(J)	n/a	149	2.67	n/a	n/a
	10/5/2021	n/a	n/a	n/a	n/a	0.111(J)	n/a	149	1.37	n/a	n/a
	4/5/2022	n/a	n/a	n/a	n/a	0.132(J)	n/a	151	1.38	n/a	n/a
	10/4/2022	n/a	n/a	n/a	n/a	0.0941(J)	n/a	138	1.24	n/a	n/a
	1/11/2023	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	4/18/2023	n/a	n/a	n/a	n/a	0.128(J)	n/a	146	1.23	n/a	n/a
	4/17/2024	n/a	n/a	n/a	n/a	0.115(BJ)	n/a	139	2.52	n/a	n/a
	6/19/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/15/2024	n/a	n/a	n/a	n/a	0.0985(J)	n/a	134	1.7	n/a	n/a
MW-110	d										
	8/8/2023	<0.004	0.00884	0.253	<0.002	0.0609(J)	<0.001	82.8	0.862(J)	<0.002	).000602(J)
	9/7/2023	<0.004	0.00537	0.256	<0.002	0.0694(J)	<0.001	86.8	0.932(J)	0.00197(BJ)	).000691(J)
	10/10/2023	<0.004	0.00589	0.254	<0.002	0.062(J)	<0.001	79.6	0.954(J)	<0.002	).000742(J)
	11/7/2023	<0.004	0.00421	0.249	<0.002	0.0641(J)	<0.001	82.7	1.52	<0.002	).000669(J)
	12/5/2023	<0.004	0.00616	0.249	<0.002	0.0763(J)	<0.001	85.2	1.01	<0.002	).000431(J)
	1/10/2024	<0.004	0.00414	0.224	<0.002	0.0548(J)	<0.001	88.9	1.01	<0.002	).000405(J)
	2/7/2024	<0.004	0.0065	0.207	<0.002	0.0543(J)	<0.001	68.6	1.16	<0.002	).000704(J)
	3/14/2024	<0.004	0.00667	0.212	<0.002	0.0542(BJ)	<0.001	68.7	1.19	<0.002	).000485(J)
	4/18/2024	<0.004	0.00615	0.215	<0.002	0.0507(BJ)	<0.001	68.5	1.2(B)	<0.002	).000303(J)
	5/16/2024	<0.004	0.0145	0.307	<0.002	0.0496(J)	<0.001	68	1.45	<0.002	).000964(J)
	6/18/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/15/2024	n/a	n/a	n/a	n/a	0.0626(J)	n/a	89.6	0.95(J)	n/a	n/a
MW-113	u										
	1/28/2016	0.000378(J)	0.00151(J)	0.159	<0.002	0.102(J)	<0.001	84.7	3.61	0.000724(J)	<0.002
	4/28/2016	<0.002	0.00166(J)	0.152	<0.002	0.127(J)	<0.001	72.5	2.05	0.000774(J)	<0.002

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MW-113	7/26/2016	<0.01	0.00706(J)	0.152	<0.002	0.144(J)	<0.002	69.8	0.856(J)	0.00194(J)	<0.01
(cont.)	10/5/2016	<0.002	0.00114(J)	0.157	<0.002	0.0963(J)	<0.001	84.7	2.63	0.000598(BJ)	<0.002
	1/26/2017	<0.002	0.00093(J)	0.157(B)	<0.002	0.0891(J)	<0.001	88.9	5.81	<0.002	<0.002
	4/25/2017	<0.002	0.001(J)	0.159	<0.002	0.089(J)	<0.001	87.9	5.49	<0.002	<0.002
	7/18/2017	<0.002	0.00133(J)	0.157	<0.002	0.0982(BJ)	<0.001	82.5	3.96	<0.002	<0.002
	9/19/2017	<0.002	0.00125(J)	0.149	<0.002	0.0998(J)	<0.001	84.1	2.19	<0.002	<0.002
	4/10/2018	n/a	n/a	n/a	n/a	0.0899(BJ)	n/a	92	2.94	n/a	n/a
	9/25/2018	n/a	n/a	n/a	n/a	0.111(BJ)	n/a	90	2.84(B)	n/a	n/a
	5/14/2019	n/a	n/a	n/a	n/a	0.168(J)	n/a	87.2	1.58	n/a	n/a
	10/22/2019	n/a	n/a	n/a	n/a	0.0881(J)	n/a	75.9	1.73	n/a	n/a
	4/6/2020	n/a	n/a	n/a	n/a	0.131(J)	n/a	77.1	1.08	n/a	n/a
	10/7/2020	n/a	n/a	n/a	n/a	0.0879(J)	n/a	70.6	1.62	n/a	n/a
	4/13/2021	n/a	n/a	n/a	n/a	0.0673(J)	n/a	95.4	2.5	n/a	n/a
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/5/2021	n/a	n/a	n/a	n/a	0.0817(J)	n/a	67.5	0.877(J)	n/a	n/a
	4/5/2022	n/a	n/a	n/a	n/a	0.0747(J)	n/a	81.8	1.32	n/a	n/a
	10/4/2022	n/a	n/a	n/a	n/a	0.0747(J)	n/a	73.1	0.709(J)	n/a	n/a
	4/17/2023	n/a	n/a	n/a	n/a	0.084(J)	n/a	74.6	0.995(J)	n/a	n/a
	10/10/2023	n/a	n/a	n/a	n/a	0.0782(J)	n/a	64.5	0.751(J)	n/a	n/a
	4/17/2024	n/a	n/a	n/a	n/a	0.0728(BJ)	n/a	83.9	1.18	n/a	n/a
	10/15/2024	n/a	n/a	n/a	n/a	0.0769(J)	n/a	70.2	0.953(J)	n/a	n/a
MW-115	u										
	11/10/2015	<0.002	0.000428(J)	0.187	<0.002	0.0473(J)	<0.001	109	2.14	<0.002	<0.002
	1/28/2016	0.000271(J)	0.001(J)	0.183	<0.002	0.0617(J)	<0.001	103	7.55(O)	0.000651(J)	<0.002
	4/28/2016	<0.002	0.000498(J)	0.211	<0.002	0.0863(J)	<0.001	115	1.83	0.000668(J)	<0.002
	7/26/2016	<0.01	<0.01	0.213	<0.002	0.0604(J)	<0.002	114	1.22	0.00197(J)	<0.01

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MW-115	10/5/2016	<0.002	0.000385(J)	0.184	<0.002	0.0737(J)	<0.001	114	1.31	0.000866(BJ)	<0.002
(cont.)	1/27/2017	<0.002	0.000425(J)	0.184(B)	<0.002	0.0602(J)	<0.001	110	1.77	0.000557(J)	<0.002
	4/25/2017	<0.002	0.000398(J)	0.182	<0.002	0.0641(J)	<0.001	106	2.71	<0.002	<0.002
	7/18/2017	<0.002	0.000376(J)	0.178	<0.002	0.0608(BJ)	<0.001	105	2.32	<0.002	<0.002
	9/19/2017	<0.002	0.000363(J)	0.181	<0.002	0.0609(J)	<0.001	116	0.835(J)	0.000628(J)	<0.002
	4/10/2018	n/a	n/a	n/a	n/a	0.0666(BJ)	n/a	111	1.34	n/a	n/a
	9/25/2018	n/a	n/a	n/a	n/a	0.0764(BJ)	n/a	121	1.18(B)	n/a	n/a
	5/14/2019	n/a	n/a	n/a	n/a	0.0751(J)	n/a	128	0.598(J)	n/a	n/a
	8/1/2019	n/a	n/a	n/a	n/a	n/a	n/a	125	n/a	n/a	n/a
	10/23/2019	n/a	n/a	n/a	n/a	0.0224(J)	n/a	114	1.23	n/a	n/a
	4/6/2020	n/a	n/a	n/a	n/a	0.0525(J)	n/a	108	0.922(J)	n/a	n/a
	10/7/2020	n/a	n/a	n/a	n/a	0.0704(J)	n/a	99.4	0.864(J)	n/a	n/a
	4/13/2021	n/a	n/a	n/a	n/a	0.0379(J)	n/a	117	0.789(J)	n/a	n/a
	10/5/2021	n/a	n/a	n/a	n/a	0.0655(J)	n/a	109	0.964(J)	n/a	n/a
	4/5/2022	n/a	n/a	n/a	n/a	0.0424(J)	n/a	102	0.976(J)	n/a	n/a
	10/3/2022	n/a	n/a	n/a	n/a	0.037(J)	n/a	109	0.742(J)	n/a	n/a
	4/17/2023	n/a	n/a	n/a	n/a	0.0416(J)	n/a	101	0.819(J)	n/a	n/a
	10/10/2023	n/a	n/a	n/a	n/a	0.0443(J)	n/a	107	1	n/a	n/a
	4/17/2024	n/a	n/a	n/a	n/a	0.0501(BJ)	n/a	107	1.07	n/a	n/a
	10/15/2024	n/a	n/a	n/a	n/a	0.053(J)	n/a	115	1.08	n/a	n/a
MW-116	d										
	10/8/2015	0.000349(J)	0.00172(J)	0.16	<0.002	0.108(J)	<0.001	103	5.84	0.00116(J)	).000365(J)
	1/28/2016	0.000248(J)	0.00144(J)	0.168	<0.002	0.139(J)	<0.001	111	5.67	0.000784(J)	<0.002
	4/28/2016	0.000264(J)	0.000886(J)	0.162	<0.002	0.142(J)	<0.001	106	4.8	<0.002	<0.002
	7/26/2016	<0.01	0.00653(J)	0.175	<0.002	0.115(J)	<0.002	109	5.2	0.0016(J)	<0.01
	10/6/2016	<0.002	0.00075(J)	0.159	<0.002	0.126(J)	<0.001	110	4.7	<0.002	<0.002

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MW-116	1/25/2017	<0.002	0.000832(J)	0.178(B)	<0.002	0.141(J)	<0.001	118	4.85	0.000859(J)	<0.002
(cont.)	4/27/2017	<0.002	0.000748(J)	0.159	<0.002	0.137(J)	<0.001	107	4.25	<0.002	<0.002
	7/19/2017	<0.002	0.000792(J)	0.163	<0.002	0.135(BJ)	<0.001	111	4.45	<0.002	<0.002
	9/20/2017	<0.002	0.000758(J)	0.161	<0.002	0.132(J)	<0.001	115	4.16	<0.002	).000343(J)
	1/30/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	4/11/2018	n/a	n/a	n/a	n/a	0.111(BJ)	n/a	137	4.9	n/a	n/a
	7/9/2018	n/a	n/a	n/a	n/a	n/a	n/a	125	n/a	n/a	n/a
	9/26/2018	n/a	n/a	n/a	n/a	0.153(BJ)	n/a	130	4.13	n/a	n/a
	5/16/2019	n/a	n/a	n/a	n/a	0.144(J)	n/a	93.2	1.66	n/a	n/a
	10/23/2019	n/a	n/a	n/a	n/a	0.0829(J)	n/a	109	2.75	n/a	n/a
	4/8/2020	n/a	n/a	n/a	n/a	0.0768(J)	n/a	98.3	2.5	n/a	n/a
	10/9/2020	n/a	n/a	n/a	n/a	0.0772(J)	n/a	134	7.05(R)	n/a	n/a
	4/15/2021	n/a	n/a	n/a	n/a	0.0854(J)	n/a	144(R)	9.09(R)	n/a	n/a
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	169(R)	n/a	n/a	n/a
	10/6/2021	n/a	n/a	n/a	n/a	0.0973(J)	n/a	185(R)	11.2(R)	n/a	n/a
	12/14/2021	n/a	n/a	n/a	n/a	n/a	n/a	190(R)	n/a	n/a	n/a
	4/6/2022	n/a	n/a	n/a	n/a	0.0842(J)	n/a	81.4	2.64	n/a	n/a
	10/5/2022	n/a	n/a	n/a	n/a	0.0867(J)	n/a	94.1	4.14	n/a	n/a
	4/19/2023	n/a	n/a	n/a	n/a	0.0814(J)	n/a	97.1	5.41	n/a	n/a
	10/11/2023	n/a	n/a	n/a	n/a	0.0763(J)	n/a	91.4	5.71	n/a	n/a
	4/19/2024	n/a	n/a	n/a	n/a	0.0757(BJ)	n/a	104	3.54	n/a	n/a
	10/16/2024	n/a	n/a	n/a	n/a	0.0963(J)	n/a	136	2.15	n/a	n/a
	12/10/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW-117	d										
	10/8/2015	0.000269(J)	0.00141(J)	0.118	<0.002	0.0733(J)	<0.001	80.4	1.17	0.00067(J)	<0.002
	1/28/2016	<0.002	0.00168(J)	0.107	<0.002	0.096(J)	<0.001	75.2	1.61	0.000665(J)	<0.002

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MW-117	4/27/2016	0.000892(J)	0.00133(J)	0.12	<0.002	0.13(J)	<0.001	76.9	1.3	<0.002	<0.002
(cont.)	7/26/2016	<0.01	<0.01	0.124	<0.002	0.105(J)	<0.002	78.2	1.25	0.0015(J)	<0.01
	10/5/2016	<0.002	0.00115(J)	0.121	<0.002	0.115(J)	<0.001	85.5	1.53	<0.002	<0.002
	1/26/2017	<0.002	0.00124(J)	0.114(B)	<0.002	0.097(J)	<0.001	75.7	1.34	<0.002	<0.002
	4/25/2017	<0.002	0.0012(J)	0.113	<0.002	0.0835(J)	<0.001	76.7	1.48	<0.002	<0.002
	7/18/2017	<0.002	0.00124(J)	0.112	<0.002	0.102(BJ)	<0.001	77.6	1.36	<0.002	<0.002
	9/20/2017	<0.002	0.00132(J)	0.118	<0.002	0.106(J)	<0.001	84.2	0.747(J)	<0.002	<0.002
	4/11/2018	n/a	n/a	n/a	n/a	0.0952(BJ)	n/a	82.5	1.57	n/a	n/a
	9/27/2018	n/a	n/a	n/a	n/a	0.127(BJ)	n/a	89.7	1.25(B)	n/a	n/a
	11/19/2018	n/a	n/a	n/a	n/a	n/a	n/a	85.7	n/a	n/a	n/a
	5/15/2019	n/a	n/a	n/a	n/a	0.133(J)	n/a	98.3	1.25	n/a	n/a
	8/2/2019	n/a	n/a	n/a	n/a	n/a	n/a	102	n/a	n/a	n/a
	10/22/2019	n/a	n/a	n/a	n/a	0.061(J)	n/a	80.9	0.864(J)	n/a	n/a
	4/7/2020	n/a	n/a	n/a	n/a	0.0759(J)	n/a	98.1	1.33	n/a	n/a
	6/22/2020	n/a	n/a	n/a	n/a	n/a	n/a	90.1	n/a	n/a	n/a
	10/8/2020	n/a	n/a	n/a	n/a	0.0721(J)	n/a	84.1	0.793(J)	n/a	n/a
	4/13/2021	n/a	n/a	n/a	n/a	0.0705(J)	n/a	98.8	0.976(J)	n/a	n/a
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	83.7	n/a	n/a	n/a
	10/6/2021	n/a	n/a	n/a	n/a	0.0677(J)	n/a	88.8	0.921(J)	n/a	n/a
	12/14/2021	n/a	n/a	n/a	n/a	n/a	n/a	82	n/a	n/a	n/a
	4/6/2022	n/a	n/a	n/a	n/a	0.0738(J)	n/a	93.1	0.875(J)	n/a	n/a
	6/20/2022	n/a	n/a	n/a	n/a	n/a	n/a	92.2	n/a	n/a	n/a
	10/5/2022	n/a	n/a	n/a	n/a	0.0725(J)	n/a	88	0.953(J)	n/a	n/a
	4/19/2023	n/a	n/a	n/a	n/a	0.0745(J)	n/a	90	0.808(J)	n/a	n/a
	10/12/2023	n/a	n/a	n/a	n/a	0.0736(J)	n/a	89	1.33	n/a	n/a
	12/6/2023	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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MW-117	4/19/2024	n/a	n/a	n/a	n/a	0.0744(BJ)	n/a	108	1.69	n/a	n/a
(cont.)	6/19/2024	n/a	n/a	n/a	n/a	n/a	n/a	98.7	n/a	n/a	n/a
	10/17/2024	n/a	n/a	n/a	n/a	0.078(J)	n/a	92.6	1.06	n/a	n/a
MW-118	d										
	10/9/2015	0.000406(J)	0.00158(J)	0.162	<0.002	0.0916(J)	0.000162(J)	75.1	1.08	0.000621(J)	<0.002
	1/28/2016	<0.002	0.00146(J)	0.149	<0.002	0.121(J)	<0.001	73.4	1.59	0.000624(J)	<0.002
	4/28/2016	0.000231(J)	0.00102(J)	0.205	<0.002	0.123(J)	<0.001	94.1	1.8	<0.002	<0.002
	7/26/2016	<0.01	<0.01	0.202	<0.002	0.101(J)	<0.002	85.4	2.13	0.00163(J)	<0.01
	10/5/2016	<0.002	0.000771(J)	0.166	<0.002	0.103(J)	<0.001	78.1	1.48	0.000554(BJ)	<0.002
	1/26/2017	<0.002	0.000893(J)	0.159(B)	<0.002	0.106(J)	<0.001	74.7	1.13(B)	<0.002	<0.002
	4/26/2017	<0.002	0.000854(J)	0.149	<0.002	0.0994(J)	<0.001	71.1	1.47	<0.002	<0.002
	7/20/2017	<0.002	0.00075(J)	0.156	<0.002	0.104(BJ)	<0.001	74.9	1.62	<0.002	<0.002
	9/20/2017	<0.002	0.000786(J)	0.161	<0.002	0.104(J)	<0.001	85.1	1.17	<0.002	<0.002
	4/11/2018	n/a	n/a	n/a	n/a	0.0949(BJ)	n/a	71.8	1.36	n/a	n/a
	7/10/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	9/27/2018	n/a	n/a	n/a	n/a	0.113(BJ)	n/a	80.6	1.33(B)	n/a	n/a
	5/15/2019	n/a	n/a	n/a	n/a	0.125(J)	n/a	76.4	1.44	n/a	n/a
	8/2/2019	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/22/2019	n/a	n/a	n/a	n/a	0.0459(J)	n/a	91.6	1.45	n/a	n/a
	4/8/2020	n/a	n/a	n/a	n/a	0.0739(J)	n/a	82.9	1.62	n/a	n/a
	10/8/2020	n/a	n/a	n/a	n/a	0.0596(J)	n/a	84.8	1.13	n/a	n/a
	4/15/2021	n/a	n/a	n/a	n/a	0.0663(J)	n/a	94.1	0.911(J)	n/a	n/a
	10/6/2021	n/a	n/a	n/a	n/a	0.0656(J)	n/a	82.9	1.15	n/a	n/a
	4/7/2022	n/a	n/a	n/a	n/a	0.0573(J)	n/a	85.2	0.926(J)	n/a	n/a
	10/5/2022	n/a	n/a	n/a	n/a	0.0628(J)	n/a	87.5	1.31	n/a	n/a
	4/18/2023	n/a	n/a	n/a	n/a	0.0664(J)	n/a	71.8	0.663(J)	n/a	n/a

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MW-118	10/11/2023	n/a	n/a	n/a	n/a	0.0585(J)	n/a	86.4	1.14	n/a	n/a
(cont.)	4/18/2024	n/a	n/a	n/a	n/a	0.0632(BJ)	n/a	71.9	0.843(J)	n/a	n/a
	10/17/2024	n/a	n/a	n/a	n/a	0.0733(J)	n/a	81.1	1.07	n/a	n/a
MW-119	d										
	1/25/2017	<0.002	0.000493(J)	0.157(B)	<0.002	0.0922(J)	<0.001	104	2.62	0.000775(J)	0.00144(J)
	4/27/2017	<0.002	0.000669(J)	0.163	<0.002	0.108(J)	<0.001	106	2.8	<0.002	0.00132(J)
	7/20/2017	<0.002	0.000566(J)	0.145	<0.002	0.0936(BJ)	<0.001	103	6.84(O)	<0.002	0.00186(J)
	9/20/2017	<0.002	0.000362(J)	0.123	<0.002	0.0798(J)	<0.001	92.7	2.3	<0.002	0.00177(J)
	1/30/2018	n/a	n/a	n/a	n/a	0.0805(BJ)	n/a	99.3	2.07	n/a	n/a
	4/11/2018	n/a	n/a	n/a	n/a	0.095(BJ)	n/a	85.9	2.15	n/a	n/a
	9/27/2018	n/a	n/a	n/a	n/a	0.103(BJ)	n/a	99	2.3(B)	n/a	n/a
	11/20/2018	n/a	n/a	n/a	n/a	0.0826(BJ)	n/a	94	1.96	n/a	n/a
	12/18/2018	<0.002	0.000485(J)	0.179	<0.002	n/a	<0.001	n/a	n/a	<0.002	0.00167(J)
	2/18/2019	<0.002	0.000352(J)	0.154	<0.002	0.11(J)	0.000194(J)	103	2.27	<0.002	0.00118(J)
	5/16/2019	<0.002	0.000512(J)	0.199	<0.002	0.109(J)	<0.001	135	2.86	<0.002	0.00174(J)
	8/2/2019	<0.002	0.000494(J)	0.141	<0.002	n/a	<0.001	97.4	n/a	<0.002	0.00289
	10/22/2019	n/a	n/a	n/a	n/a	0.048(J)	n/a	110	2.86	n/a	n/a
	4/8/2020	n/a	n/a	n/a	n/a	0.0639(J)	n/a	109	2.45	n/a	n/a
	10/8/2020	n/a	n/a	n/a	n/a	0.0588(J)	n/a	109	2.22	n/a	n/a
	4/15/2021	n/a	n/a	n/a	n/a	0.0687(J)	n/a	115	2.43	n/a	n/a
	10/7/2021	n/a	n/a	n/a	n/a	0.0594(J)	n/a	104	2.4	n/a	n/a
	4/7/2022	n/a	n/a	n/a	n/a	0.067(J)	n/a	107	1.82	n/a	n/a
	10/5/2022	n/a	n/a	n/a	n/a	0.0671(J)	n/a	119	1.98	n/a	n/a
	12/16/2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	4/18/2023	n/a	n/a	n/a	n/a	0.0642(J)	n/a	95.8	1.26	n/a	n/a
	10/11/2023	n/a	n/a	n/a	n/a	0.0616(J)	n/a	119	2.13	n/a	n/a

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MW-119	4/19/2024	n/a	n/a	n/a	n/a	0.0557(BJ)	n/a	89.5	1.15	n/a	n/a
(cont.)	10/16/2024	n/a	n/a	n/a	n/a	0.0699(J)	n/a	111	1.07	n/a	n/a
MW-120	d										
	7/6/2023	<0.004	.000593(BJ)	0.144	<0.002	0.0563(J)	<0.001	65.7	1.22	<0.002	000153(BJ)
	8/8/2023	<0.004	0.000686(J)	0.154	<0.002	0.0511(J)	<0.001	68.7	1.03	<0.002	).000123(J)
	9/7/2023	<0.004	0.000656(J)	0.142	<0.002	0.0511(J)	<0.001	70	0.982(J)	<0.002	9.96E-05(J)
	4/18/2024	<0.004	0.000532(J)	0.184	<0.002	0.058(BJ)	<0.001	83.3	2.13(B)	<0.002	7.28E-05(J)
	5/16/2024	<0.004	0.000571(J)	0.222	<0.002	0.0604(J)	<0.001	95.4	2.55	<0.002	<0.002
	6/18/2024	<0.004	0.00056(J)	0.186	<0.002	0.0696(J)	<0.001	87.3	2.95(Q)	<0.002	<0.002
	7/18/2024	<0.004	0.000671(J)	0.159	<0.002	0.0586(J)	<0.001	71.7	1.26	<0.002	<0.002
	8/15/2024	<0.004	0.000752(J)	0.154	<0.002	0.0534(J)	<0.001	68.6	1.09	<0.002	<0.002
	9/20/2024	<0.004	0.000764(J)	0.147	<0.002	0.054(J)	<0.001	68.1	1.06	<0.002	9.24E-05(J)
	10/16/2024	n/a	n/a	n/a	n/a	0.0605(J)	n/a	61.3	0.983(J)	n/a	n/a
MW-121	d										
	7/6/2023	<0.004	.000927(BJ)	0.104	<0.002	0.0501(J)	<0.001	38.7	0.966(J)	<0.002	.71E-05(BJ)
	8/8/2023	<0.004	0.00077(J)	0.101	<0.002	0.05(J)	<0.001	35.7	0.842(J)	<0.002	).000128(J)
	9/7/2023	<0.004	0.000916(J)	0.106	<0.002	0.0381(J)	<0.001	41.3	1.12	0.00145(BJ)	<0.002
	10/10/2023	<0.004	0.00107(J)	0.119	<0.002	0.0386(J)	<0.001	43.1	1.32	<0.002	<0.002
	11/7/2023	<0.004	0.000891(J)	0.119	<0.002	0.0328(J)	<0.001	43.4	4.31	<0.002	<0.002
	12/6/2023	<0.004	0.000925(J)	0.125	<0.002	0.0467(J)	<0.001	44.9	1.44	<0.002	8.89E-05(J)
	1/10/2024	<0.004	0.00114(J)	0.0856	<0.002	0.0244(J)	<0.001	34.9	1.08	<0.002	<0.002
	2/7/2024	<0.004	0.00116(J)	0.0762	<0.002	0.0297(J)	<0.001	30.2	1.03	<0.002	<0.002
	3/14/2024	<0.004	0.00118(J)	0.0719	<0.002	0.03(BJ)	<0.001	26.8	1.2	<0.002	).000182(J)
	4/18/2024	<0.004	0.00105(J)	0.0666	<0.002	0.0236(BJ)	<0.001	24.7	0.924(BJ)	<0.002	<0.002
	6/18/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/17/2024	n/a	n/a	n/a	n/a	0.0628(J)	n/a	41.2	1.02	n/a	n/a

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MW-101	d										
	10/7/2015	0.281	<0.002	0.0147(J)	<0.0002	<0.005	0.601	0.489	0.00831	12.4	401
	1/28/2016	0.274	<0.002	0.0117(J)	<0.0002	<0.005	0.324(J)	0.604	0.00793	11.4	421(B)
	4/27/2016	0.283	<0.002	0.0134(J)	<0.0002	<0.005	0.712(J)	0.642	0.0143	19.9	437
	7/26/2016	0.241	<0.005	0.0113(J)	<0.0002	<0.005	0.734(J)	1.1	0.0106	12.8	448(B)
	10/6/2016	0.267	<0.002	0.0121(J)	<0.0002	<0.005	0.242(J)	0.683	0.00565	8.44	387
	1/25/2017	0.3	<0.002	0.0118(J)	<0.0002	<0.005	0.031(J)	0.573	0.00326	11.5	381
	4/26/2017	0.273	<0.002	<0.135	<0.0002	<0.045	0(J)	0.569	0.00299	9.57	407
	7/20/2017	0.331	<0.002	0.00835(J)	<0.0002	<0.005	0.033(J)	0.687	0.000984(J)	13.5	414
	9/20/2017	0.328	<0.002	<0.015	<0.0002	0.00289(J)	1.17	0.771	0.000402(J)	9.68	385
	12/11/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	4/12/2018	0.307	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17.4	420
	9/26/2018	0.29(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	14.6	421
	5/16/2019	0.263(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.17	392
	10/23/2019	0.264	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.9	404
	4/8/2020	0.279	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.3	362
	10/9/2020	0.309	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.91	389
	4/15/2021	0.385	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.73	335
	6/29/2021	0.307	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/7/2021	0.312	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.2	380
	4/7/2022	0.228	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.63	388
	10/5/2022	0.258	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.93	388
	4/19/2023	0.243	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.48	376
	10/11/2023	0.283	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6.92	376(B)
	4/19/2024	0.191	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12.4	368
	10/16/2024	0.292	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.81(J)	357

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MW-102	d										
	11/10/2015	0.16	<0.002	0.0177	<0.0002	<0.005	0.339(J)	0.588	0.000656(J)	82.3	434
	1/28/2016	0.157	<0.002	0.0148(J)	<0.0002	<0.005	0.116(J)	0.777	0.00687	85.9	470
	4/27/2016	0.154	<0.002	0.017	<0.0002	<0.005	1.32	0.78	0.00397	103	478
	7/26/2016	0.15	<0.005	0.0144(J)	<0.0002	<0.005	0.336(J)	1.25	<0.01	88.1	474(B)
	10/6/2016	0.158	<0.002	0.0169	<0.0002	<0.005	0.439(J)	0.837	<0.002	83.2	458
	1/25/2017	0.182	<0.002	0.0172	<0.0002	<0.005	0.69	0.541	0.00262	88.8	435
	4/27/2017	0.175	<0.002	0.017	<0.0002	<0.005	2	0.695	0.00232	91	504
	7/19/2017	0.207	<0.002	0.0105(J)	<0.0002	<0.005	2.07	0.872	0.00119(J)	85.4	461
	9/20/2017	0.194	<0.002	<0.015	<0.0002	<0.005	0.193(J)	1.12	<0.002	88.7	454
	4/11/2018	0.206	n/a	n/a	n/a	n/a	n/a	n/a	n/a	46.7	472
	7/9/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	9/27/2018	0.183(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	88.6	453
	5/16/2019	0.196(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	75.4	466
	10/23/2019	0.201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	85.6	461
	4/7/2020	0.199	n/a	n/a	n/a	n/a	n/a	n/a	n/a	84.7	461
	10/9/2020	0.178	n/a	n/a	n/a	n/a	n/a	n/a	n/a	96.1	438
	4/15/2021	0.21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	79.4	446
	10/6/2021	0.215	n/a	n/a	n/a	n/a	n/a	n/a	n/a	95.3	415
	4/6/2022	0.142(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	79	442
	10/5/2022	0.174	n/a	n/a	n/a	n/a	n/a	n/a	n/a	93.4	439
	4/19/2023	0.158	n/a	n/a	n/a	n/a	n/a	n/a	n/a	63.5	390
	10/12/2023	0.168	n/a	n/a	n/a	n/a	n/a	n/a	n/a	74.6	411(B)
	4/19/2024	0.156	n/a	n/a	n/a	n/a	n/a	n/a	n/a	61	402
	10/16/2024	0.243	n/a	n/a	n/a	n/a	n/a	n/a	n/a	128	542
	12/10/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	78.4	446

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MW-103	d										
	10/7/2015	0.198	0.000362(J)	0.025	<0.0002	<0.005	0.93	0.634	0.00674	95	591
	1/28/2016	0.188	<0.002	0.0197	<0.0002	<0.005	0.242(J)	0.627	0.00868	60.1	539(B)
	4/27/2016	0.17	<0.002	0.0214	<0.0002	<0.005	0.735	0.558	0.00272	62	517
	7/26/2016	0.163	<0.005	0.0194	<0.0002	<0.005	1.83	1.03	0.0115	60.9	539(B)
	10/6/2016	0.201	0.000296(J)	0.0192	<0.0002	<0.005	0.547(J)	0.828	0.000541(J)	54.5	518
	1/26/2017	0.223	<0.002	0.019	<0.0002	<0.005	0.402(J)	0.533	0.000759(J)	52	477
	4/27/2017	0.2	<0.002	0.0222	<0.0002	<0.005	1.28	0.625	<0.002	49.8	513
	7/20/2017	0.24	<0.002	0.015	<0.0002	<0.005	0.735(J)	0.619	<0.002	52.2	506
	9/20/2017	0.24	<0.002	0.0192	<0.0002	<0.005	0.625(J)	0.678	<0.002	48.2	496
	4/11/2018	0.163	n/a	n/a	n/a	n/a	n/a	n/a	n/a	80.6	468
	9/26/2018	0.217(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	32.8	440
	5/15/2019	0.213(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	23.4	396
	10/22/2019	0.253	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24.4	384
	4/8/2020	0.219	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.93	318
	10/8/2020	0.234	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15	319
	4/15/2021	0.258	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.4	294
	10/7/2021	0.256	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12.6	324
	4/7/2022	0.128(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.84	278
	10/5/2022	0.188	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.8	285
	4/18/2023	0.157	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.82	322
	10/11/2023	0.201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15.9	335(B)
	4/19/2024	0.13(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8.8	308
	10/16/2024	0.242(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.6	306
MW-104	d										
	8/8/2023	0.257	<0.002	0.00878	<0.0002	0.000768(J)	1.63	0.759	0.00636	3.42(J)	296

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MW-104	9/7/2023	0.28	<0.002	0.00728	<0.0002	0.00183(J)	1.29	0.492	0.00416	3.57(J)	309
(cont.)	10/11/2023	0.307	<0.002	0.00606	<0.0002	0.00378(J)	1.07(B)	0.358(B)	0.000662(J)	4.52(J)	320
	11/7/2023	0.251	<0.002	0.00638	<0.0002	0.00405(J)	0.463(BJ)	0.211(BJ)	0.000576(J)	3.13(J)	349
	12/5/2023	0.242	<0.002	0.00596	<0.0002	0.00412(J)	0.961	0.41	0.000564(J)	3.32(J)	344
	1/10/2024	0.322	<0.002	0.00476	<0.0002	0.00348(J)	<0.659	0.323	0.000722(J)	5.28	334(Q)
	2/7/2024	0.325	<0.002	0.00673	<0.0002	0.00214(J)	0.929	0.411	0.0046	5.57	318
	3/14/2024	0.259	<0.002	0.0073	<0.0002	0.00131(J)	1.2	0.353	0.00616	3.48(J)	315
	4/18/2024	0.199	<0.002	0.0081	<0.0002	0.00174(BJ)	1.45	0.642	0.00386	3.77(J)	341(B)
	5/16/2024	0.245(B)	<0.002	0.00932	<0.0002	0.000529(J)	1.88	0.569	0.00604	3.96(J)	292
	6/18/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	321
	10/15/2024	0.334(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.82(J)	315
MW-108	u										
	1/28/2016	0.158	<0.002	0.0201	<0.0002	<0.005	1.24	0.946	0.00271	44.4	555
	4/28/2016	0.134	<0.002	0.0223	<0.0002	<0.005	0.506(J)	0.74	0.00184(J)	45.2	638(B)
	7/26/2016	0.144	<0.005	0.0167	<0.0002	<0.005	1.65(J)	1.14	<0.01	39.3	475(B)
	10/6/2016	0.169	<0.002	0.0183	<0.0002	<0.005	1.07	0.687	0.00214	41.4	539
	1/26/2017	0.202	<0.002	0.0186	<0.0002	<0.005	0.454(J)	0.541	0.00178(J)	51.6	513
	4/25/2017	0.167	<0.002	0.0197	<0.0002	<0.005	0.922	0.71	0.00337	45.7	488
	7/18/2017	0.191	<0.002	0.0122(J)	<0.0002	<0.005	0.051(J)	0.651	0.00041(J)	39.4	576
	9/19/2017	0.199	<0.002	0.0191	<0.0002	0.00169(J)	0.288(J)	0.694	0.00079(J)	43.8	578
	4/10/2018	0.177	n/a	n/a	n/a	n/a	n/a	n/a	n/a	44.5	582
	9/25/2018	0.188(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52.2	537
	5/14/2019	0.184(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	34.5	529
	8/1/2019	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/22/2019	0.205	n/a	n/a	n/a	n/a	n/a	n/a	n/a	32.9	528
	4/6/2020	0.185	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33.8	557

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MW-108	10/7/2020	0.185	n/a	n/a	n/a	n/a	n/a	n/a	n/a	42.4	515
(cont.)	4/13/2021	0.216	n/a	n/a	n/a	n/a	n/a	n/a	n/a	36.8	541
	10/5/2021	0.203	n/a	n/a	n/a	n/a	n/a	n/a	n/a	23.4	505
	4/5/2022	0.138(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	478
	10/4/2022	0.164	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	471
	1/11/2023	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	4/18/2023	0.161	n/a	n/a	n/a	n/a	n/a	n/a	n/a	34.8	493
	4/17/2024	0.111(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	71.4	498(B)
	6/19/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	67.1	n/a
	10/15/2024	0.235(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	46.6	472
MW-110	d										
	8/8/2023	0.176	<0.002	0.00541	<0.0002	0.000934(J)	0.451(J)	0.396(J)	0.000421(J)	4.72(J)	325
	9/7/2023	0.198	.00128(BJ)	0.00509	<0.0002	0.000697(J)	2.41	0.607	0.000407(J)	4.79(J)	326
	10/10/2023	0.205	<0.002	0.00523	<0.0002	0.000571(J)	0.941(B)	0.462(B)	<0.002	6.12	312
	11/7/2023	0.163	<0.002	0.00643	<0.0002	0.000914(J)	0.91(B)	0.283(B)	0.000686(J)	4.29(J)	332
	12/5/2023	0.168	<0.002	0.00546	<0.0002	0.000869(J)	1.04	0.318	<0.002	4.39(J)	316
	1/10/2024	0.236	<0.002	0.00454	<0.0002	0.000958(J)	1.52	0.479	<0.002	5.81	326(Q)
	2/7/2024	0.261	<0.002	0.00559	<0.0002	0.000883(J)	1.2	0.469	<0.002	7.78	286
	3/14/2024	0.123(J)	<0.002	0.00581	<0.0002	<0.005	0.335(J)	0.338(J)	<0.002	4.95(J)	271
	4/18/2024	0.139(J)	<0.002	0.00672	<0.0002	<0.005	1.31	0.388	0.000511(J)	5.45	300(B)
	5/16/2024	0.313(B)	<0.002	0.00739	<0.0002	0.000538(J)	0.695(J)	0.422(J)	<0.002	5.72	269
	6/18/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	293
	10/15/2024	0.256(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6.05	340
MW-113	u										
	1/28/2016	0.0808(J)	<0.002	0.00896(J)	<0.0002	<0.005	0.584(J)	0.578	0.00269	11	320(B)
	4/28/2016	0.0604(J)	<0.002	0.0102(J)	<0.0002	<0.005	0.441(J)	0.759	0.00193(J)	8.99	321(B)

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MW-113	7/26/2016	0.057(J)	<0.005	<0.015	<0.0002	<0.005	1.73	1.14	<0.01	4.97(J)	281(B)
(cont.)	10/5/2016	0.0827(J)	<0.002	0.00567(J)	<0.0002	<0.005	2.08(B)	1.2	0.00234	9.51	323
	1/26/2017	0.0901(J)	<0.002	0.00709(J)	<0.0002	<0.005	0.819	0.586	<0.002	13.3	332
	4/25/2017	0.0944(J)	<0.002	0.00619(J)	<0.0002	<0.005	0.156(J)	0.565	0.00107(J)	11.8	339
	7/18/2017	0.119	<0.002	<0.015	<0.0002	<0.005	0.092(J)	0.638	0.000678(J)	10.9	321
	9/19/2017	0.117	<0.002	0.0059(J)	<0.0002	<0.005	0.746(J)	0.694	0.00236	9.45	326
	4/10/2018	0.0562(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.1	340
	9/25/2018	0.114(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.81	337
	5/14/2019	0.12(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.15(J)	342
	10/22/2019	0.11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.88(J)	307
	4/6/2020	0.0943(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.61(J)	332
	10/7/2020	0.106(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.61(J)	274
	4/13/2021	0.102(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.83	372
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	303
	10/5/2021	0.139(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.75(J)	275
	4/5/2022	0.0846(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.7	326
	10/4/2022	0.0828(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.02(J)	291
	4/17/2023	0.0907(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.57(J)	293
	10/10/2023	0.0982(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.64(J)	247(B)
	4/17/2024	0.0704(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.01	322
	10/15/2024	0.147(BJ)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.56(J)	288
MW-115	u										
	11/10/2015	0.23	<0.002	0.00965(J)	<0.0002	<0.005	0.477(J)	0.591	0.00821	8.23	363
	1/28/2016	0.201	<0.002	0.00722(J)	<0.0002	<0.005	0.71	0.699	0.0113	14.8(O)	376
	4/28/2016	0.179	<0.002	0.00781(J)	<0.0002	<0.005	0.507(J)	0.589	0.0041	5.63	443(B)
	7/26/2016	0.2	<0.005	0.00633(J)	<0.0002	<0.005	0.761(J)	1.37	<0.01	4.79(J)	399(B)

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MW-115	10/5/2016	0.218	<0.002	0.00664(J)	<0.0002	<0.005	0.892(B)	0.599	0.00193(J)	4.59(J)	446
(cont.)	1/27/2017	0.244	<0.002	0.00789(J)	<0.0002	<0.005	0.524(J)	0.545	0.00636	6.52	406
	4/25/2017	0.203	<0.002	0.00835(J)	<0.0002	<0.005	0.624(J)	0.502	0.00304	6.75	385
	7/18/2017	0.238	<0.002	0.00579(J)	<0.0002	<0.005	0.534(J)	0.778	0.00263	7.1	369
	9/19/2017	0.243	<0.002	0.00746(J)	<0.0002	<0.005	0.134(J)	0.601	0.00213	5.37	403
	4/10/2018	0.209	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.81	368
	9/25/2018	0.216(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5(J)	417
	5/14/2019	0.184(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.63	440
	8/1/2019	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/23/2019	0.22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.83	411
	4/6/2020	0.192	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.37	398
	10/7/2020	0.18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.97(J)	334
	4/13/2021	0.239	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.67	441
	10/5/2021	0.225	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.7(J)	379
	4/5/2022	0.165	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.95(J)	374
	10/3/2022	0.208	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.68(J)	377
	4/17/2023	0.205	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.19	351
	10/10/2023	0.207	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.96(J)	383(B)
	4/17/2024	0.237	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.85(BJ)	369
	10/15/2024	0.275(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.68(J)	414
MW-116	d										
	10/8/2015	0.173	<0.002	0.015	<0.0002	<0.005	0.553(J)	0.594	0.00142(J)	45.1	367
	1/28/2016	0.165	<0.002	0.0133(J)	<0.0002	<0.005	0.219(J)	0.566	0.00387	78	426
	4/28/2016	0.148	<0.002	0.0136(J)	<0.0002	<0.005	0.16(J)	0.765	0.00233	83.5	461(B)
	7/26/2016	0.148	<0.005	0.0108(J)	<0.0002	<0.005	0.086(J)	1.52	0.00841(J)	81.8	395(B)
	10/6/2016	0.172	<0.002	0.0132(J)	<0.0002	<0.005	0.194(J)	0.489	0.00208	86.5	443

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MW-116	1/25/2017	0.201	.000358(J)	0.0151	<0.0002	<0.005	1.53	0.57	0.0026	89.2	467
(cont.)	4/27/2017	0.172	<0.002	0.0126(J)	<0.0002	<0.005	0.046(J)	0.63	0.00181(J)	95.2	443
	7/19/2017	0.208	<0.002	0.00739(J)	<0.0002	<0.005	0.132(J)	0.615	0.00119(J)	98.4	435
	9/20/2017	0.207	<0.002	0.0119(J)	<0.0002	<0.005	0.285(J)	0.718	0.000807(J)	94.2	451
	1/30/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35.5	n/a
	4/11/2018	0.166	n/a	n/a	n/a	n/a	n/a	n/a	n/a	113	511
	7/9/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	9/26/2018	0.183(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	97.5	500
	5/16/2019	0.189(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	349
	10/23/2019	0.216	n/a	n/a	n/a	n/a	n/a	n/a	n/a	63.1	417
	4/8/2020	0.184	n/a	n/a	n/a	n/a	n/a	n/a	n/a	38.7	365
	10/9/2020	0.187	n/a	n/a	n/a	n/a	n/a	n/a	n/a	103	537(R)
	4/15/2021	0.226	n/a	n/a	n/a	n/a	n/a	n/a	n/a	126(R)	541(R)
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/6/2021	0.214	n/a	n/a	n/a	n/a	n/a	n/a	n/a	166(R)	670(R)
	12/14/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	200(R)	730(R)
	4/6/2022	0.132(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	55.6	338
	10/5/2022	0.194	n/a	n/a	n/a	n/a	n/a	n/a	n/a	57.1	360
	4/19/2023	0.156	n/a	n/a	n/a	n/a	n/a	n/a	n/a	50.6	377
	10/11/2023	0.201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	50.4	361(B)
	4/19/2024	0.197	n/a	n/a	n/a	n/a	n/a	n/a	n/a	50.4	392
	10/16/2024	<0.15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	42.5	533
	12/10/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	480
MW-117	d										
	10/8/2015	0.077(J)	.000674(J)	0.00662(J)	<0.0002	<0.005	0.425(J)	0.508	0.00155(J)	5.21	281
	1/28/2016	0.126	<0.002	<0.015	<0.0002	<0.005	0.289(J)	0.499	0.00471	6.32	271(B)

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Well ID	Date	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium (pCi/L)	Radium Error Level (pCi/L)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)
MW-117	4/27/2016	0.101	.000295(J)	0.00588(J)	<0.0002	<0.005	0.196(J)	0.784	0.00229	6.19	272
(cont.)	7/26/2016	0.0971(J)	<0.005	<0.015	<0.0002	<0.005	1.54(J)	1.34	<0.01	5.48	271(B)
	10/5/2016	0.11	<0.002	0.00683(J)	<0.0002	<0.005	0.134(BJ)	0.414	0.00194(J)	5.68	287
	1/26/2017	0.12	<0.002	0.00707(J)	<0.0002	<0.005	0.546(J)	0.661	0.00378	7.46	268
	4/25/2017	0.131	<0.002	0.00688(J)	<0.0002	<0.005	0.178(J)	0.58	0.00128(J)	6.55	277
	7/18/2017	0.151	<0.002	<0.015	<0.0002	<0.005	1.29	0.737	0.00222	6.56	292
	9/20/2017	0.144	<0.002	0.00706(J)	<0.0002	<0.005	1.18	0.607	0.00219	6.43	280
	4/11/2018	0.124	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.28	290
	9/27/2018	0.144(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.19	318
	11/19/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	288
	5/15/2019	0.147(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6.66	341
	8/2/2019	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	302
	10/22/2019	0.136	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.45	322
	4/7/2020	0.144(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.47	323
	6/22/2020	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/8/2020	0.137(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.75	298
	4/13/2021	0.152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.46	351
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	314
	10/6/2021	0.162	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.09	314
	12/14/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.31	308
	4/6/2022	0.0916(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.03	341
	6/20/2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.63	318
	10/5/2022	0.122(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.3	311
	4/19/2023	0.108(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.4	309
	10/12/2023	0.121(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	14.4	325(B)
	12/6/2023	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	328

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Well ID	Date	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium (pCi/L)	Radium Error Level (pCi/L)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)
MW-117	4/19/2024	0.151	n/a	n/a	n/a	n/a	n/a	n/a	n/a	54.7	400(B)
(cont.)	6/19/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	37.8	376
	10/17/2024	0.174(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20.1	342
MW-118	d										
	10/9/2015	0.175	).000678(J)	0.00757(J)	<0.0002	<0.005	0.101(J)	0.594	0.00325	12	271
	1/28/2016	0.175	<0.002	<0.015	<0.0002	<0.005	0.355(J)	0.728	0.00732	11.5	269(B)
	4/28/2016	0.119	<0.002	0.00585(J)	<0.0002	<0.005	3.31	1.16	0.00474	26.7	378(B)
	7/26/2016	0.133	<0.005	<0.015	<0.0002	<0.005	0.921(J)	1.46	0.0132	26.6	322(B)
	10/5/2016	0.157	<0.002	<0.015	<0.0002	<0.005	0.99(B)	0.594	0.00302	15.1	294
	1/26/2017	0.188	<0.002	<0.015	<0.0002	<0.005	1.12	0.652	0.00291	13.4	275
	4/26/2017	0.163	<0.002	0.00736(J)	<0.0002	<0.005	0.051(J)	0.593	0.000678(J)	12.2	276
	7/20/2017	0.172	<0.002	<0.015	<0.0002	<0.005	0.176(J)	0.531	0.00333	20.4	313
	9/20/2017	0.187	<0.002	<0.015	<0.0002	<0.005	1.29	0.724	0.00383	18.5	305
	4/11/2018	0.157	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15.2	257
	7/10/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	9/27/2018	0.165(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	375
	5/15/2019	0.185	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16.5	286
	8/2/2019	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	10/22/2019	0.162	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17.5	335
	4/8/2020	0.152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16.6	304
	10/8/2020	0.15(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	18.3	301
	4/15/2021	0.185	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20	329
	10/6/2021	0.189	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.5	280
	4/7/2022	0.129(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17.6	320
	10/5/2022	0.124(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	19.7	329
	4/18/2023	0.147(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	268

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Well ID	Date	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium (pCi/L)	Radium Error Level (pCi/L)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)
MW-118	10/11/2023	0.154	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20.7	335(B)
(cont.)	4/18/2024	0.175	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12.8	258
	10/17/2024	0.222(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.8	308
MW-119	d										
	1/25/2017	0.255	<0.002	0.033	<0.0002	<0.005	0.545(J)	0.571	0.00174(J)	47.6	409
	4/27/2017	0.198	<0.002	0.0185	<0.0002	<0.005	1.08	0.645	0.00108(J)	39.1	403
	7/20/2017	0.256	<0.002	0.0102(J)	<0.0002	<0.005	0.708(J)	0.612	0.00114(J)	48.7	432
	9/20/2017	0.289	<0.002	0.0134(J)	<0.0002	<0.005	0.845(J)	0.685	0.00258	38.7	338
	1/30/2018	0.259	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35.5	380
	4/11/2018	0.23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	31.1	315
	9/27/2018	0.253(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	41.6	290
	11/20/2018	0.271	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33	343
	12/18/2018	n/a	<0.002	0.0246	<0.0002	<0.005	1	0.577	0.00052(J)	n/a	n/a
	2/18/2019	0.253	<0.002	0.0216	<0.0002	<0.005	0.705(J)	0.575	0.000592(J)	43	374
	5/16/2019	0.252	0.00025(J)	0.0318(B)	<0.0002	<0.005	2.35	0.774	0.000564(J)	47.4	487
	8/2/2019	n/a	<0.002	0.0131(J)	<0.0002	<0.005	0.23(J)	1.05	<0.002	n/a	n/a
	10/22/2019	0.266	n/a	n/a	n/a	n/a	n/a	n/a	n/a	47.7	400
	4/8/2020	0.229	n/a	n/a	n/a	n/a	n/a	n/a	n/a	39.4	426
	10/8/2020	0.251	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52.9	415
	4/15/2021	0.267	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33.6	413
	10/7/2021	0.269	n/a	n/a	n/a	n/a	n/a	n/a	n/a	39.1	388
	4/7/2022	0.195	n/a	n/a	n/a	n/a	n/a	n/a	n/a	37.1	397
	10/5/2022	0.23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	46.2	444
	12/16/2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	4/18/2023	0.228	n/a	n/a	n/a	n/a	n/a	n/a	n/a	18.9	350
	10/11/2023	0.237	n/a	n/a	n/a	n/a	n/a	n/a	n/a	46.5	451(B)

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Well ID	Date	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium (pCi/L)	Radium Error Level (pCi/L)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)
MW-119	4/19/2024	0.285	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.93(B)	325
(cont.)	10/16/2024	0.341(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	22.6	410
MW-120	d										
	7/6/2023	0.12(J)	<0.002	0.00888	<0.0002	0.000942(J)	0.319(J)	0.419(J)	0.0151	6.11	286
	8/8/2023	0.142(J)	<0.002	0.00889	<0.0002	0.00084(J)	0.576(J)	0.462(J)	0.00798	8.53	269
	9/7/2023	0.204	<0.002	0.00784	<0.0002	0.000819(J)	1.51	0.302	0.00567	6.82	247
	4/18/2024	0.128(J)	<0.002	0.0177	<0.0002	0.000939(BJ)	1.53	0.451	0.018	14.8	301(B)
	5/16/2024	0.175(B)	<0.002	0.0188	<0.0002	0.00109(J)	0.311(J)	0.43(J)	0.0158	19.5	336
	6/18/2024	0.194(JQ)	<0.002	0.0154	<0.0002	0.000905(J)	0.415(J)	0.433(J)	0.013	22.4(Q)	338
	7/18/2024	0.218	<0.002	0.0181(B)	<0.0002	0.000825(J)	1.73	0.607	0.0117	6.95	270
	8/15/2024	0.21	<0.002	0.00965	<0.0002	0.000893(J)	0.218(J)	0.284(J)	0.0162	6.35	249
	9/20/2024	0.218	<0.002	0.00865	<0.0002	0.0008(J)	0.577	0.361	0.00902	6.28	261
	10/16/2024	0.273(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8.02	244
MW-121	d										
	7/6/2023	0.0915(J)	<0.002	0.00328	<0.0002	<0.005	0.512(J)	0.395(J)	0.00403	6.93	174
	8/8/2023	0.121(J)	<0.002	0.00303	<0.0002	<0.005	0.768	0.295	0.00419	7.93	155
	9/7/2023	0.108(J)	0.00185(BJ)	0.003	<0.0002	<0.005	0.965	0.373	0.00586	14.6	179
	10/10/2023	0.126(J)	<0.002	0.00253	<0.0002	<0.005	0.537(BJ)	0.372(BJ)	0.00617	21.4	165
	11/7/2023	0.0799(J)	<0.002	0.00312	<0.0002	<0.005	1.01(B)	0.346(B)	0.0053	27.5	194
	12/6/2023	0.0891(J)	<0.002	0.00293	<0.0002	<0.005	1.3	0.4	0.00322	28.1	187
	1/10/2024	0.154	<0.002	0.00205	<0.0002	<0.005	1.07	0.432	0.00194(J)	12	151(Q)
	2/7/2024	0.169	<0.002	0.00189(J)	<0.0002	<0.005	0.883	0.392	0.000338(J)	10.9	139
	3/14/2024	0.0717(J)	<0.002	0.00199(J)	<0.0002	<0.005	0.189(J)	0.267(J)	<0.002	3.32(J)	120
	4/18/2024	0.11(J)	<0.002	0.00214	<0.0002	<0.005	0.231(J)	0.294(J)	<0.002	2.46(J)	116(B)
	6/18/2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	150
	10/17/2024	0.184(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.3	181

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Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-101	d					
	10/7/2015	<0.002	n/a	6.4	n/a	1
	1/28/2016	<0.002	n/a	6.6	n/a	0.9
	4/27/2016	<0.002	n/a	6.3	n/a	1.2
	7/26/2016	<0.01	n/a	6.6	n/a	2.2
	10/6/2016	<0.002	n/a	6.2(R)	n/a	1.6
	1/25/2017	<0.002	650	6.7(R)	17.8	4.2
	4/26/2017	<0.002	598	6.9	18.9	1
	7/20/2017	<0.002	631	6.7	20.4	1.4
	9/20/2017	<0.002	626	7	19.9	0
	12/11/2017	n/a	566	6.4	19.4	0.9
	4/12/2018	n/a	692	6.4	16.7	2.7
	9/26/2018	n/a	657	6.8	18.8	2.3
	5/16/2019	n/a	565	6.6	18.9	3.1
	10/23/2019	n/a	618	7	13.9	<0.02
	4/8/2020	n/a	645	6.8	17.8	2.6
	10/9/2020	n/a	578	6.7	18.9	3.6
	4/15/2021	n/a	485	7.1	17	3.6
	6/29/2021	n/a	710	6.7	18.6	2
	10/7/2021	n/a	612	6.7	18.6	1.3
	4/7/2022	n/a	531	6.8	16.5	2.9
	10/5/2022	n/a	501	6.2	18.7	2
	4/19/2023	n/a	584	6.9	17.7	2.7
	10/11/2023	n/a	522	6.8	19.2	1.1
	4/19/2024	n/a	546	6.8	17.5	2.6
	10/16/2024	n/a	535	6.8	19.4	1.6

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Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-102	d					
	11/10/2015	<0.002	n/a	6.8	n/a	5.6
	1/28/2016	<0.002	n/a	6.8	n/a	0.8
	4/27/2016	<0.002	n/a	6.7	n/a	1
	7/26/2016	<0.01	n/a	7.7(R)	n/a	3.2
	10/6/2016	<0.002	n/a	6(R)	n/a	2.5
	1/25/2017	<0.002	731	5.8(R)	17.8	4.7
	4/27/2017	<0.002	681	6.7	17.2	1.2
	7/19/2017	<0.002	705	6.6	20.3	0.8
	9/20/2017	<0.002	688	6.7	20.1	0.9
	4/11/2018	n/a	728	6.3	17.1	2.2
	7/9/2018	n/a	804	6.7	23.5	3
	9/27/2018	n/a	642	6.5	18.4	2.1
	5/16/2019	n/a	642	6.6	21.7	1
	10/23/2019	n/a	665	6.7	18	<0.02
	4/7/2020	n/a	661	6.6	17.6	0.6
	10/9/2020	n/a	614	6.5	19.4	2.8
	4/15/2021	n/a	605	6.9	16.8	3.3
	10/6/2021	n/a	630	6.8	21.1	4.3
	4/6/2022	n/a	574	6.6	16.7	3.4
	10/5/2022	n/a	526	6.3	20.7	2.7
	4/19/2023	n/a	562	6.7	18.5	3.7
	10/12/2023	n/a	529	6.6	21.1	7
	4/19/2024	n/a	557	6.6	17.8	7.2
	10/16/2024	n/a	735	6.5	19.2	7.1
	12/10/2024	n/a	684	6.6	18.2	9.3

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-103	d					
	10/7/2015	<0.002	n/a	6.5	n/a	0.4
	1/28/2016	<0.002	n/a	6.3	n/a	3
	4/27/2016	<0.002	n/a	6.5	n/a	1.7
	7/26/2016	<0.01	n/a	6.3	n/a	0.8
	10/6/2016	<0.002	n/a	6.3(R)	n/a	2.3
	1/26/2017	<0.002	761	6.8(R)	16.3	1.3
	4/27/2017	<0.002	740	6.5	17.9	0.5
	7/20/2017	<0.002	778	6.6	24.8	0.5
	9/20/2017	<0.002	781	6.6	19.9	1.5
	4/11/2018	n/a	766	6.2	17.6	1.1
	9/26/2018	n/a	705	6.6	19.4	1.3
	5/15/2019	n/a	598	6.6	18.7	2.4
	10/22/2019	n/a	634	6.7	18.7	<0.02
	4/8/2020	n/a	560	6.7	17.4	3.1
	10/8/2020	n/a	491	6.4	19.5	4.2
	4/15/2021	n/a	442	6.9	17	4.3
	10/7/2021	n/a	496	6.5	18.4	2.9
	4/7/2022	n/a	380	6.8	16.5	9.5
	10/5/2022	n/a	375	6.3	19.6	9.1
	4/18/2023	n/a	482	6.7	18.7	4.5
	10/11/2023	n/a	454	6.5	19.6	4.6
	4/19/2024	n/a	479	6.4	16.5	9.7
	10/16/2024	n/a	447	6.6	17.9	6.9
MW-104	d					
	8/8/2023	<0.002	461	6.7	18	8.2

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-104	9/7/2023	<0.002	466	6.8	19.5	6.2
(cont.)	10/11/2023	<0.002	486	6.6	17.7	4.8
	11/7/2023	<0.002	510	6.9	18.5	5.2
	12/5/2023	<0.002	581	6.8	17.7	9
	1/10/2024	<0.002	537	6.7	17.2	9.6
	2/7/2024	<0.002	480	6.8	17.8	9.1
	3/14/2024	<0.002	562	6.7	18.9	9.7
	4/18/2024	<0.002	527	6.6	17.7	7.6
	5/16/2024	<0.002	498	6.7	21	78.4
	6/18/2024	n/a	545	6.8	20.3	9.6
	10/15/2024	n/a	472	6.6	17.7	9.6
MW-108	u					
	1/28/2016	<0.002	n/a	6.7	n/a	2.4
	4/28/2016	<0.002	n/a	6.6	n/a	2.7
	7/26/2016	<0.01	n/a	9.8(R)	n/a	1.2
	10/6/2016	<0.002	n/a	6.2(R)	n/a	1
	1/26/2017	<0.002	897	7(R)	12.3	1.7
	4/25/2017	<0.002	784	6.8	19.3	1.4
	7/18/2017	<0.002	834	6.7	22.7	1.3
	9/19/2017	<0.002	939	6.7	25.2	1.3
	4/10/2018	n/a	960	6.5	16.3	1.9
	9/25/2018	n/a	867	6.7	22.9	1.9
	5/14/2019	n/a	844	6.8	20.6	3.7
	8/1/2019	n/a	936	7.1	21	2.1
	10/22/2019	n/a	862	6.7	15.3	<0.02
	4/6/2020	n/a	879	6.9	19.4	3.6

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-108	10/7/2020	n/a	810	6.8	23.6	5.8
(cont.)	4/13/2021	n/a	706	7	17.4	3.1
	10/5/2021	n/a	756	6.7	20.8	2.3
	4/5/2022	n/a	725	6.8	18.5	4
	10/4/2022	n/a	690	6.2(R)	21.5	3
	1/11/2023	n/a	708	6.8	19.5	3.1
	4/18/2023	n/a	728	6.8	20.2	4.7
	4/17/2024	n/a	725	6.7	19.4	1.2
	6/19/2024	n/a	807	6.6	21.1	3.9
	10/15/2024	n/a	687	6.5	19.8	8.6
MW-110	d					
	8/8/2023	<0.002	533	6.8	19	7.5
	9/7/2023	<0.002	490	6.8	19.5	8.8
	10/10/2023	<0.002	456	7.1	18.8	5.8
	11/7/2023	<0.002	488	7	19.4	1.5
	12/5/2023	<0.002	557	7.1	17.8	8
	1/10/2024	<0.002	525	6.9	17.1	8
	2/7/2024	<0.002	408	6.9	17.6	4
	3/14/2024	<0.002	475	6.5	18.4	6
	4/18/2024	<0.002	463	6.7	18.1	6.6
	5/16/2024	<0.002	448	6.9	19	49.3
	6/18/2024	n/a	511	6.6	18.8	3.9
	10/15/2024	n/a	511	6.7	19.6	9.7
MW-113	u					
	1/28/2016	<0.002	n/a	6.6	n/a	1.2
	4/28/2016	<0.002	n/a	6.9	n/a	0.6

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-113	7/26/2016	<0.01	n/a	8.1(R)	n/a	1.1
(cont.)	10/5/2016	<0.002	n/a	6(R)	n/a	2.2
	1/26/2017	<0.002	569	7.1(R)	16.1	0.9
	4/25/2017	<0.002	513	6.9	19	1.1
	7/18/2017	<0.002	512	6.8	20.3	0.7
	9/19/2017	<0.002	550	6.9	19.7	0.8
	4/10/2018	n/a	587	6.4	16.2	1.8
	9/25/2018	n/a	567	6.7	20.8	0.8
	5/14/2019	n/a	567	6.7	17.6	2.8
	10/22/2019	n/a	509	6.7	18.2	<0.02
	4/6/2020	n/a	551	6.7	18	2.8
	10/7/2020	n/a	458	6.5	19.5	4.3
	4/13/2021	n/a	535	7.1	16.3	2.1
	6/29/2021	n/a	550	6.2	21.9	2.3
	10/5/2021	n/a	417	6.6	20.4	1.1
	4/5/2022	n/a	476	6.6	17.7	4.4
	10/4/2022	n/a	447	6.5	20.4	2.5
	4/17/2023	n/a	516	6.8	17.1	1.8
	10/10/2023	n/a	379	6.8	19.5	2.3
	4/17/2024	n/a	496	6.8	17.9	1.2
	10/15/2024	n/a	422	6.5	18.8	5
MW-115	u					
	11/10/2015	<0.002	n/a	7	n/a	4.3
	1/28/2016	<0.002	n/a	7.1	n/a	0.5
	4/28/2016	<0.002	n/a	6.8	n/a	0.6
	7/26/2016	<0.01	n/a	9(R)	n/a	1.3

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-115	10/5/2016	<0.002	n/a	6.1(R)	n/a	0.4
(cont.)	1/27/2017	<0.002	557	7(R)	16.1	1.1
	4/25/2017	<0.002	559	6.8	18.6	0.9
	7/18/2017	<0.002	607	6.6	20.2	0.7
	9/19/2017	<0.002	678	6.8	19.9	0.6
	4/10/2018	n/a	647	6.3	15.9	0.7
	9/25/2018	n/a	701	6.7	21.8	1.1
	5/14/2019	n/a	663	6.6	17.1	3.2
	8/1/2019	n/a	712	7.1	20.9	1.5
	10/23/2019	n/a	643	6.9	17.7	<0.02
	4/6/2020	n/a	642	6.7	17.9	9
	10/7/2020	n/a	573	6.6	20.3	3.3
	4/13/2021	n/a	595	7	15.9	2.3
	10/5/2021	n/a	584	6.7	20.2	1
	4/5/2022	n/a	534	6.7	17.4	2.3
	10/3/2022	n/a	618	6.7	18.6	2.3
	4/17/2023	n/a	622	6.8	17.6	3
	10/10/2023	n/a	544	6.9	19	1.3
	4/17/2024	n/a	586	6.7	18.4	0.9
	10/15/2024	n/a	608	6.7	18.2	4.1
MW-116	d					
	10/8/2015	<0.002	n/a	6.7	n/a	2.7
	1/28/2016	<0.002	n/a	6.8	n/a	0.9
	4/28/2016	<0.002	n/a	6.6	n/a	1.3
	7/26/2016	<0.01	n/a	6.2	n/a	1.6
	10/6/2016	<0.002	n/a	5.9(R)	n/a	0.9

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-116	1/25/2017	<0.002	752	5.9(R)	18.3	2
(cont.)	4/27/2017	<0.002	624	6.7	17.6	0.7
	7/19/2017	<0.002	636	6.5	21.2	0.5
	9/20/2017	<0.002	649	6.7	20.5	0
	1/30/2018	n/a	626	6.5	17.3	0.8
	4/11/2018	n/a	768	6.4	17.6	0.9
	7/9/2018	n/a	828	6.6	23.8	3.2
	9/26/2018	n/a	732	6.6	19.5	1.5
	5/16/2019	n/a	506	6.6	21.1	1
	10/23/2019	n/a	618	6.7	17.4	<0.02
	4/8/2020	n/a	607	6.6	19.5	2.3
	10/9/2020	n/a	696	6.3	19.1	3.4
	4/15/2021	n/a	677	6.9	16.7	1.7
	6/29/2021	n/a	1052	6.5	19.5	1.8
	10/6/2021	n/a	948	6.5	19.9	1
	12/14/2021	n/a	901	6.7	19.5	1.1
	4/6/2022	n/a	478	6.9	16.3	2.6
	10/5/2022	n/a	447	6.2	19.6	2.5
	4/19/2023	n/a	554	6.8	18.7	2.7
	10/11/2023	n/a	476	6.5	19.1	1.6
	4/19/2024	n/a	543	6.6	17.4	3.4
	10/16/2024	n/a	674	6.3	18.8	2
	12/10/2024	n/a	669	6.6	19.6	5.4
MW-117	d					
	10/8/2015	<0.002	n/a	6.6	n/a	0.3
	1/28/2016	<0.002	n/a	6.5	n/a	1.8

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-117	4/27/2016	<0.002	n/a	6.6	n/a	3.5
(cont.)	7/26/2016	<0.01	n/a	7.9(R)	n/a	0.9
	10/5/2016	<0.002	n/a	5.1(R)	n/a	1
	1/26/2017	<0.002	464	6.1(R)	17	3.1
	4/25/2017	<0.002	398	6.6	19.2	1.1
	7/18/2017	<0.002	430	6.4	20.8	0.7
	9/20/2017	<0.002	491	6.5	20.3	0.5
	4/11/2018	n/a	486	6.4	17.2	1.8
	9/27/2018	n/a	484	6.4	18.5	2.2
	11/19/2018	n/a	383	6.6	17.1	1.7
	5/15/2019	n/a	528	6.5	17.9	3
	8/2/2019	n/a	506	6.3	19.3	1.2
	10/22/2019	n/a	530	6.5	19.1	<0.02
	4/7/2020	n/a	537	6.6	17.4	0.3
	6/22/2020	n/a	573	6.1	18.6	2.8
	10/8/2020	n/a	443	6.3	20.1	3.5
	4/13/2021	n/a	507	6.9	18.1	2.2
	6/29/2021	n/a	566	6.4	20	1.4
	10/6/2021	n/a	491	6.5	19.6	2.1
	12/14/2021	n/a	435	6.5	18.8	1.1
	4/6/2022	n/a	487	6.5	16.4	2.2
	6/20/2022	n/a	586	5.8	20.3	5.9
	10/5/2022	n/a	410	5.7	18.5	1.9
	4/19/2023	n/a	492	6.5	17.8	1
	10/12/2023	n/a	461	6.4	19.1	1.2
	12/6/2023	n/a	408	6.4	17.2	0.7

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-117	4/19/2024	n/a	535	6.3	17	0.7
(cont.)	6/19/2024	n/a	617	6.4	19.2	3
	10/17/2024	n/a	497	6.4	19	1.1
MW-118	d					
	10/9/2015	<0.002	n/a	6.4	n/a	2.6
	1/28/2016	<0.002	n/a	6.2	n/a	1.7
	4/28/2016	<0.002	n/a	6.2	n/a	1.3
	7/26/2016	<0.01	n/a	8(R)	n/a	0.9
	10/5/2016	<0.002	n/a	6.3(R)	n/a	0.7
	1/26/2017	<0.002	459	6.1(R)	15.4	0.5
	4/26/2017	<0.002	424	6.3	17.9	0.5
	7/20/2017	<0.002	487	6.5	22.9	0.7
	9/20/2017	<0.002	491	6.5	20.3	0.2
	4/11/2018	n/a	429	5.8	16.5	1.3
	7/10/2018	n/a	n/a	6.5	n/a	n/a
	9/27/2018	n/a	443	6.3	17.9	1
	5/15/2019	n/a	435	6	18.2	3.7
	8/2/2019	n/a	n/a	6.1	n/a	n/a
	10/22/2019	n/a	548	6.4	18.1	<0.02
	4/8/2020	n/a	530	6.1	17.8	2.7
	10/8/2020	n/a	454	6.1	19.6	3.9
	4/15/2021	n/a	484	6.6	15.7	2.4
	10/6/2021	n/a	457	6.4	18.8	1.1
	4/7/2022	n/a	437	6.6	16.2	2.2
	10/5/2022	n/a	414	6.1	17.6	2.4
	4/18/2023	n/a	404	6.5	17.7	1.3

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-118	10/11/2023	n/a	460	6.3	19.2	1.1
(cont.)	4/18/2024	n/a	422	6.2	18.1	0.6
	10/17/2024	n/a	436	6.3	18.5	2.5
MW-119	d					
	1/25/2017	<0.002	678	6.6(R)	18.8	4.6
	4/27/2017	<0.002	607	6.8	18.3	0.9
	7/20/2017	<0.002	625	6.6	20.9	1.2
	9/20/2017	<0.002	549	6.8	20.5	0.4
	1/30/2018	n/a	581	6.4	18.2	1.2
	4/11/2018	n/a	524	6.4	18	0.9
	9/27/2018	n/a	562	6.7	19.2	1.3
	11/20/2018	n/a	426	6.8	18.5	0.6
	12/18/2018	<0.002	n/a	n/a	n/a	n/a
	2/18/2019	<0.002	450	6.6	16.4	1.8
	5/16/2019	<0.002	695	6.4	18.9	1.7
	8/2/2019	<0.002	502	6.4	19.6	1.9
	10/22/2019	n/a	725	6.7	18.9	<0.02
	4/8/2020	n/a	691	6.6	19.1	2.2
	10/8/2020	n/a	594	6.5	19.6	3.2
	4/15/2021	n/a	594	6.9	17.5	2.2
	10/7/2021	n/a	579	6.7	19.7	1.5
	4/7/2022	n/a	548	6.6	17.6	2.4
	10/5/2022	n/a	549	6.2(R)	19.5	2.7
	12/16/2022	n/a	595	6.9	16.8	2.1
	4/18/2023	n/a	536	6.9	19.3	2.3
	10/11/2023	n/a	616	6.8	20.7	1.5

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

Well ID	Date	Thallium (mg/L)	Conductivity (umhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-119	4/19/2024	n/a	461	6.7	17.9	1.9
(cont.)	10/16/2024	n/a	604	6.8	18.5	2
MW-120	d					
	7/6/2023	<0.002	474	6.6	20.5	3.4
	8/8/2023	<0.002	430	6.4	19.4	1.3
	9/7/2023	<0.002	390	6.5	20.8	1.9
	4/18/2024	<0.002	524	6.3	18.6	1.1
	5/16/2024	<0.002	566	6.2	18.9	9.6
	6/18/2024	<0.002	580	6.3	20	3.9
	7/18/2024	<0.002	486	6.1	20	1.3
	8/15/2024	<0.002	998	6.1	21.9	1.3
	9/20/2024	<0.002	443	6.3	20.6	5.4
	10/16/2024	n/a	348	6.5	16.6	1.2
MW-121	d					
	7/6/2023	<0.002	294	6.4	19.9	2
	8/8/2023	<0.002	240	6.2	20.2	1.7
	9/7/2023	<0.002	249	6.2	20.9	1.4
	10/10/2023	<0.002	258	6.4	21.4	1.4
	11/7/2023	<0.002	279	6.2	21.5	0.6
	12/6/2023	<0.002	268	6.4	19.1	0.9
	1/10/2024	<0.002	215	6.4	19	5.6
	2/7/2024	<0.002	186	6.4	19.1	1.6
	3/14/2024	<0.002	189	6.1	19.5	1.8
	4/18/2024	<0.002	172	6.1	19.4	1.9
	6/18/2024	n/a	226	6.3	19.9	3.1
	10/17/2024	n/a	248	6.2	20.2	0.8

B: analyte was detected in associated blank sample.

J: analyte was detected below the RDL; value is an estimate.

O: value is a statistical outlier; not used in statistics.

R: value rejected due to suspected error; not used in statistics.

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 statistical analysis plan (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 for all wells were evaluated for an update prior to the second half of 2024 monitoring period, with the exception of well-parameter pairs that did not contain enough compliance data for comparison to the existing background data set. Background data sets used for the first half 2024 statistical analyses are included in this appendix, followed by the updated background data sets used for the second half of 2024 statistical analyses.

Initial background data sets were also established for new wells MW-104, MW-110, MW-120, and MW-121. The initial background data sets were screened using exploratory data analyses to identify potential trends, outliers, and spatial variability. Time-series plots and box-and-whiskers plots were generated for the new background data sets to identify potential excursions from normal. At this time, there is an insufficient number of values at each well to test for seasonality or auto-correlation; however, the statistical software package used to evaluate the facility's data (*Sanitas version 10*) automatically tests for seasonality and distribution and corrects for each, if necessary. Finally, the background data sets were also tested for outliers and

the presence of trends, as described below. Plots for the initial background data set evaluation are included at the end of this appendix.

Exploratory Analyses

Background data sets were screened prior to updating 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 generally 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 generally 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	4/2017	<1.8	O	Laboratory reporting detection limit was nine times higher than normal due to a sample dilution.
Boron	MW-108	5/2019	0.224	R	Suspected laboratory/sampling error; disconfirmed by verification sampling in August 2019.
Calcium	MW-102	9/2017	25.9	O	Statistically low outlier; suspected laboratory error.
Calcium	MW-116	4/2021	144	R	Data were temporarily elevated following a documented leak in the leachate transmission pipeline (LTP) near MW-116.
Calcium	MW-116	6/2021	169	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
Calcium	MW-116	10/2021	185	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
Calcium	MW-116	12/2021	190	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
Chloride	MW-115	1/2016	7.55	O	Statistically high outlier.
Chloride	MW-116	10/2020	7.05	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
Chloride	MW-116	4/2021	9.09	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
Chloride	MW-116	10/2021	11.2	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
Chloride	MW-119	7/2017	6.84	O	Statistically high outlier.
pH	All wells	10/2016	All values	R	Known equipment malfunction.
pH	All wells	1/2017	All values	R	Known equipment malfunction.
pH	MW-102	7/2016	7.7 (su)	R	Known equipment malfunction.
pH	MW-108	7/2016	9.8 (su)	R	Known equipment malfunction.
pH	MW-108	10/2022	6.2 (su)	R	Known equipment malfunction.
pH	MW-113	7/2016	8.1 (su)	R	Known equipment malfunction.
pH	MW-115	7/2016	9.0 (su)	R	Known equipment malfunction.

Parameter	Well	Date	Value (mg/L)	Flag	Note
pH	MW-117	7/2016	7.9 (su)	R	Known equipment malfunction.
pH	MW-118	7/2016	8.0 (su)	R	Known equipment malfunction.
pH	MW-119	10/2022	6.2 (su)	R	Known equipment malfunction.
Sulfate	MW-115	1/2016	14.8	O	Statistically high outlier.
Sulfate	MW-116	4/2021	126	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
Sulfate	MW-116	10/2021	166	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
Sulfate	MW-116	12/2021	200	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
TDS	MW-116	10/2020	537	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
TDS	MW-116	4/2021	541	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
TDS	MW-116	10/2021	670	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.
TDS	MW-116	12/2021	730	R	Data were temporarily elevated following a documented leak in the LTP near MW-116.

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 tends 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)
Boron	MW-101, MW-103, MW-108, MW-113, MW-116, MW-118, MW-119
Calcium	MW-102, MW-103
Chloride	MW-102, MW-103, MW-108, MW-113, MW-115
Sulfate	MW-103, MW-113
TDS	MW-103

Any well-parameter pair in Table E.2 that ceases to exhibit a statistically significant trend will be tested using a prediction limit during the following monitoring period, and the background data set will be comprised of the period-of-record data set through the previous sampling date, if appropriate.

Background Date Ranges, First Half of 2024 Monitoring Period

Date Ranges

Date: 7/26/2024 5:08 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Boron (mg/L)
- MW-101 background:10/7/2015-12/14/2021
- MW-102 background:10/7/2015-12/14/2021
- MW-103 background:10/7/2015-12/14/2021
- MW-108 background:10/7/2015-12/14/2021
- MW-113 background:10/7/2015-12/14/2021
- MW-115 background:10/7/2015-12/14/2021
- MW-116 background:10/7/2015-12/14/2021
- MW-117 background:10/7/2015-12/14/2021
- MW-118 background:10/7/2015-12/14/2021
- MW-119 background:10/7/2015-12/14/2021

Calcium (mg/L)
- MW-101 background:10/7/2015-12/14/2021
- MW-102 background:10/7/2015-12/14/2021
- MW-103 background:10/7/2015-12/14/2021
- MW-108 background:10/7/2015-12/14/2021
- MW-113 background:10/7/2015-12/14/2021
- MW-115 background:10/7/2015-12/14/2021
- MW-116 background:10/7/2015-10/23/2019
- MW-117 background:6/7/2011-2/18/2019
- MW-118 background:10/7/2015-12/14/2021
- MW-119 background:10/7/2015-12/14/2021

Chloride (mg/L)
- MW-101 background:10/7/2015-12/14/2021
- MW-102 background:10/7/2015-12/14/2021
- MW-103 background:10/7/2015-12/14/2021
- MW-108 background:10/7/2015-12/14/2021
- MW-113 background:10/7/2015-12/14/2021
- MW-115 background:10/7/2015-12/14/2021
- MW-116 background:6/7/2011-10/23/2019
- MW-117 background:10/7/2015-12/14/2021
- MW-118 background:10/7/2015-12/14/2021
- MW-119 background:10/7/2015-12/14/2021

Dissolved Solids (mg/L)
- MW-101 background:10/7/2015-12/14/2021
- MW-102 background:10/7/2015-12/14/2021
- MW-103 background:10/7/2015-12/14/2021
- MW-108 background:10/7/2015-12/14/2021
- MW-113 background:10/7/2015-12/14/2021
- MW-115 background:10/7/2015-12/14/2021
- MW-116 background:10/7/2015-10/23/2019
- MW-117 background:6/7/2011-2/18/2019
- MW-118 background:10/7/2015-12/14/2021
- MW-119 background:10/7/2015-12/14/2021

Fluoride (mg/L)
- MW-101 background:10/7/2015-12/14/2021
- MW-102 background:10/7/2015-1/11/2023
- MW-103 background:10/7/2015-1/11/2023
- MW-108 background:10/7/2015-1/11/2023
- MW-113 background:10/7/2015-12/14/2021
- MW-115 background:10/7/2015-12/14/2021
- MW-116 background:10/7/2015-1/11/2023
- MW-117 background:10/7/2015-1/11/2023
- MW-118 background:10/7/2015-12/14/2021
- MW-119 background:10/7/2015-12/14/2021

pH (su)
- MW-101 background:10/7/2015-12/14/2021
- MW-102 background:10/7/2015-12/14/2021
- MW-103 background:10/7/2015-12/14/2021
- MW-108 background:10/7/2015-12/14/2021
- MW-113 background:10/7/2015-12/14/2021
- MW-115 background:10/7/2015-12/14/2021
- MW-116 background:10/7/2015-12/14/2021
- MW-117 background:10/7/2015-12/14/2021
- MW-118 background:10/7/2015-12/14/2021
- MW-119 background:10/7/2015-12/14/2021

Sulfate (mg/L)
- MW-101 background:10/7/2015-12/14/2021
- MW-102 background:10/7/2015-12/14/2021
- MW-103 background:10/7/2015-12/14/2021

Date Ranges

Date: 7/26/2024 5:08 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

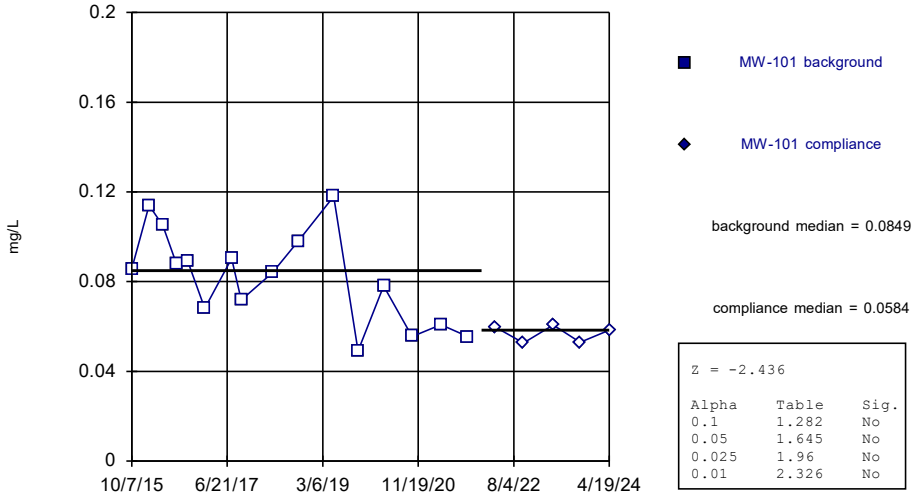
MW-108 background:10/7/2015-12/14/2021
MW-113 background:10/7/2015-12/14/2021
MW-115 background:10/7/2015-12/14/2021
MW-116 background:10/7/2015-10/23/2019
MW-117 background:10/7/2015-10/23/2019
MW-118 background:10/7/2015-12/14/2021
MW-119 background:10/7/2015-12/14/2021

Update of Background Data Sets for Existing Wells
Mann-Whitney (Wilcoxon Rank-Sum)

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-101



background median = 0.0849

compliance median = 0.0584

Z = -2.436

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

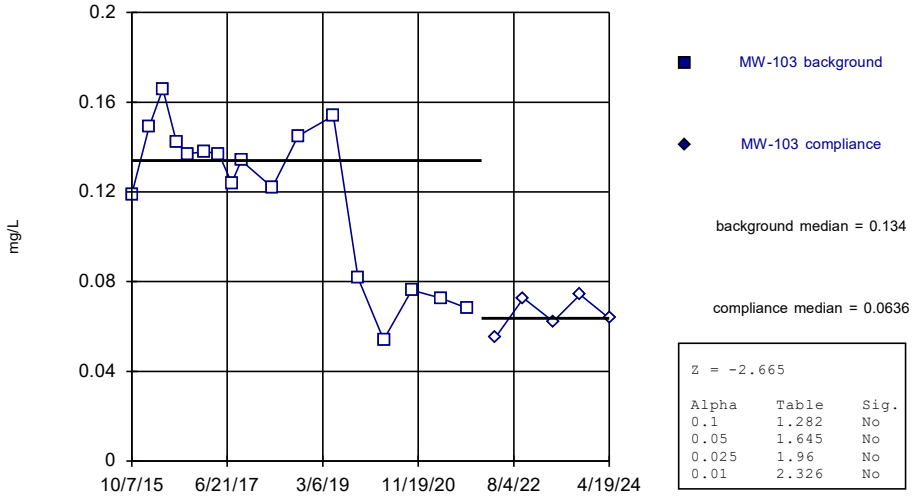
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-103



background median = 0.134

compliance median = 0.0636

Z = -2.665

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

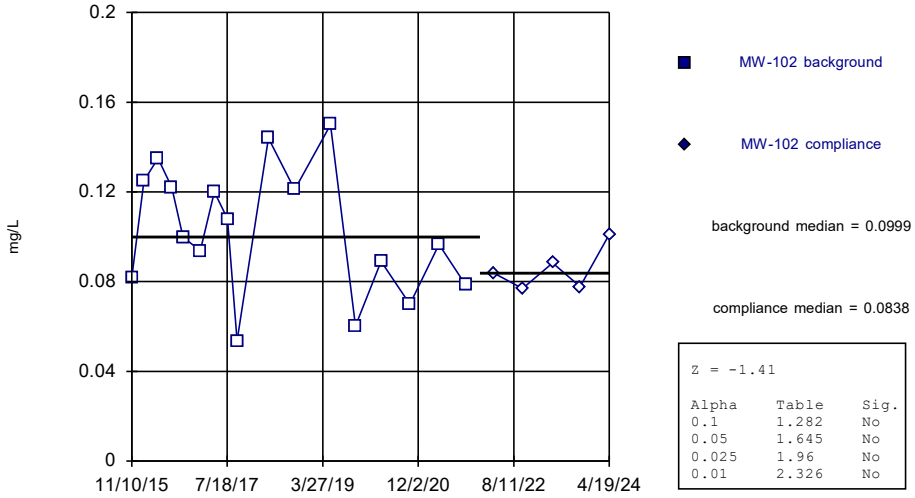
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-102



background median = 0.0999

compliance median = 0.0838

Z = -1.41

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

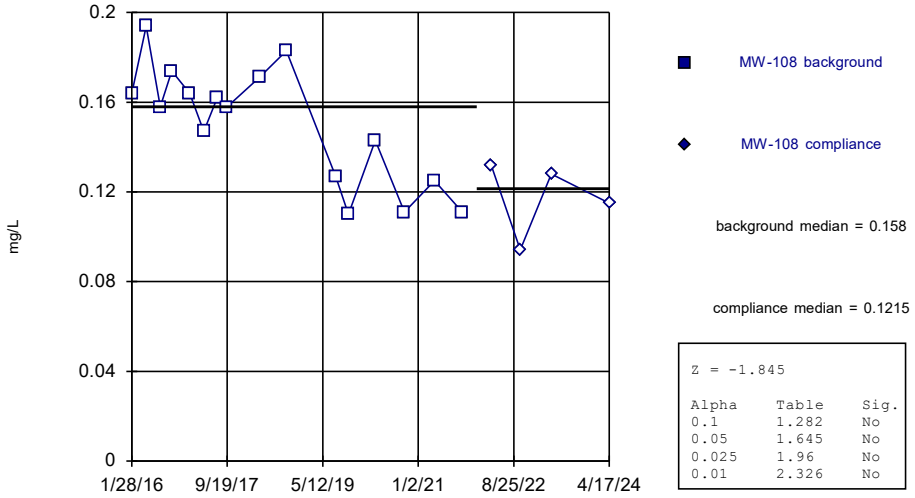
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-108 (bg)



background median = 0.158

compliance median = 0.1215

Z = -1.845

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

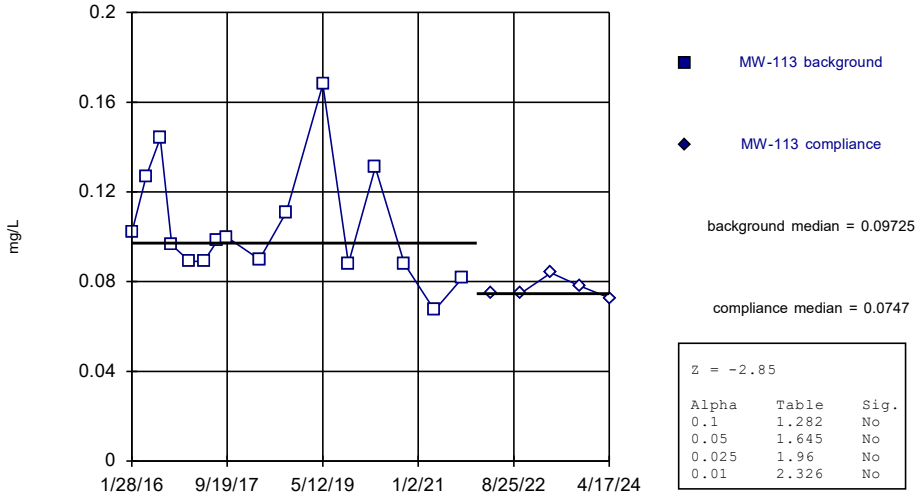
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-113 (bg)



MW-113 background

MW-113 compliance

background median = 0.09725

compliance median = 0.0747

Z = -2.85

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

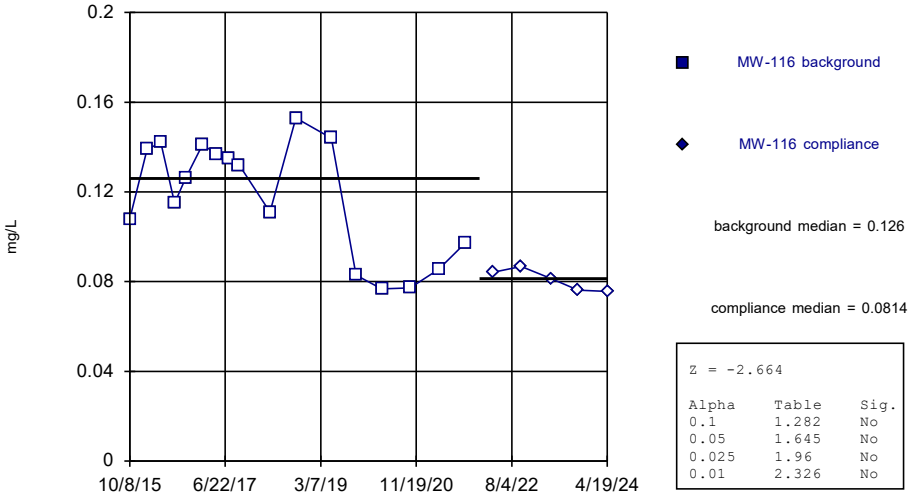
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-116



MW-116 background

MW-116 compliance

background median = 0.126

compliance median = 0.0814

Z = -2.664

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

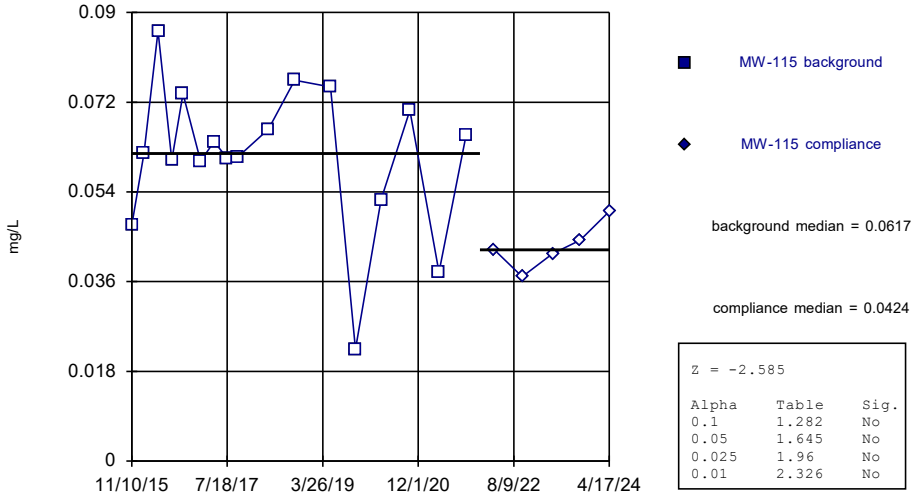
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-115 (bg)



MW-115 background

MW-115 compliance

background median = 0.0617

compliance median = 0.0424

Z = -2.585

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

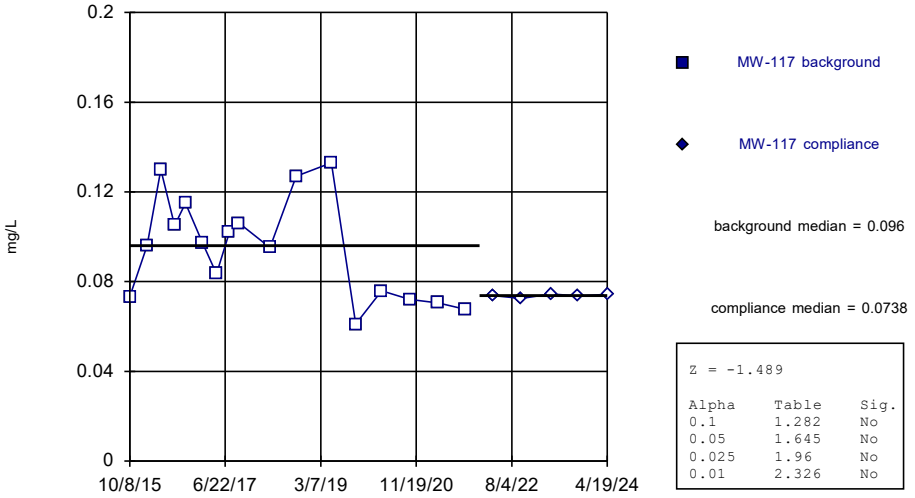
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-117



MW-117 background

MW-117 compliance

background median = 0.096

compliance median = 0.0738

Z = -1.489

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

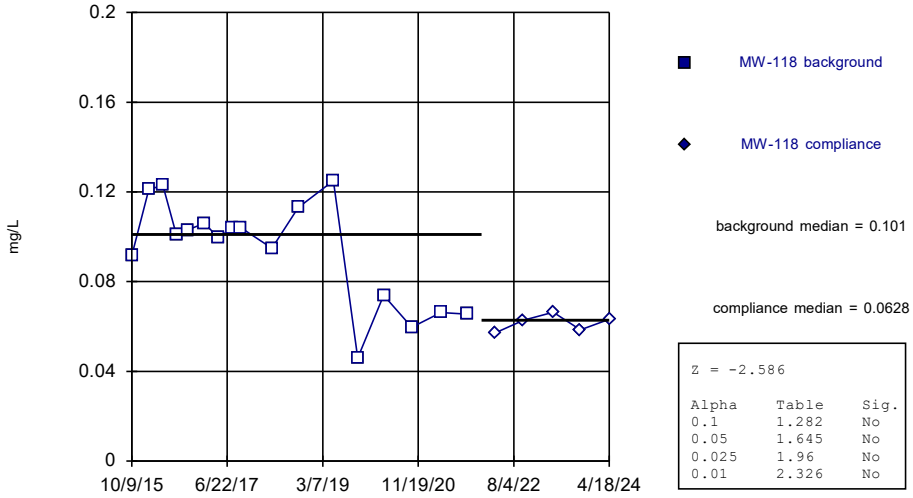
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-118



Z = -2.586

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

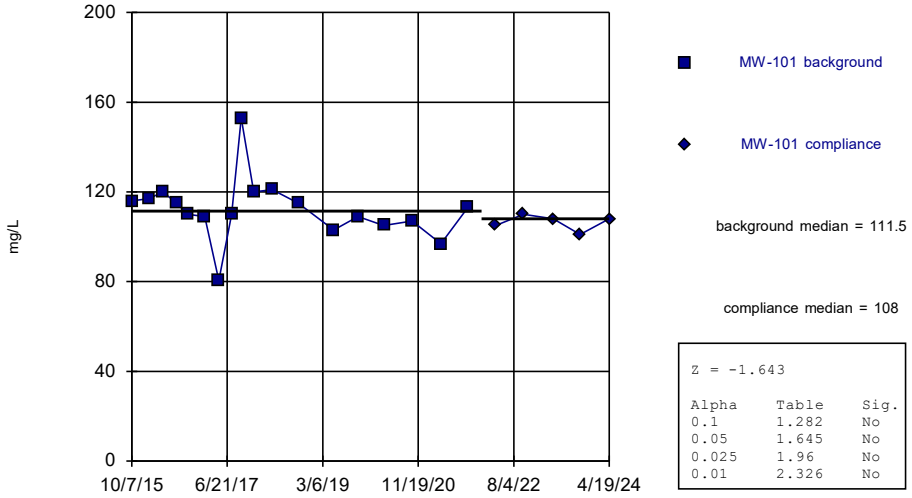
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-101



Z = -1.643

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

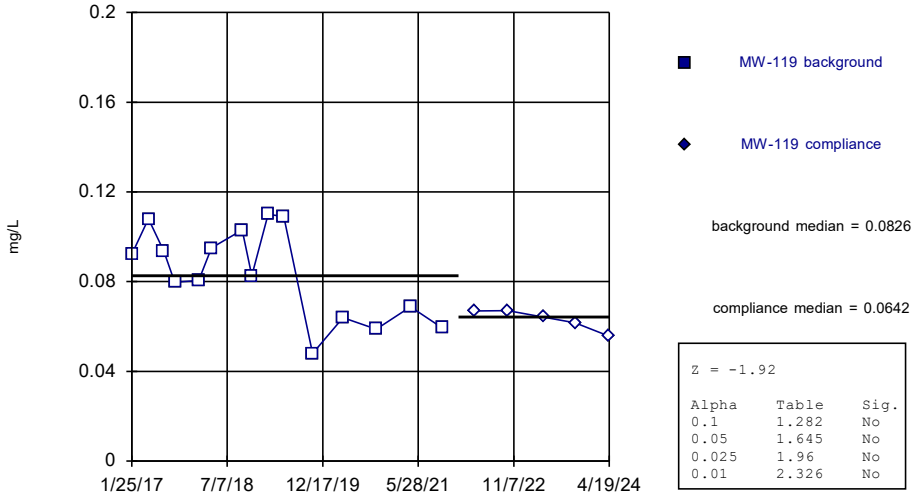
Constituent: Calcium Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-119



Z = -1.92

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

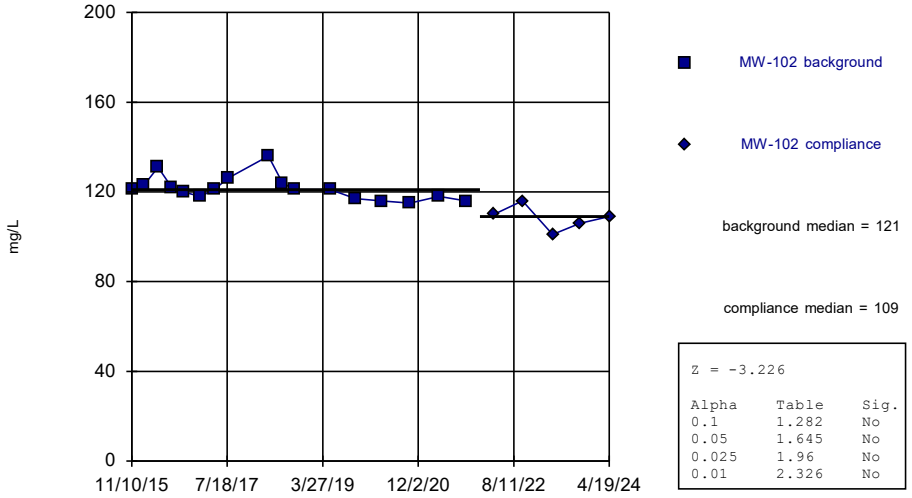
Constituent: Boron Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-102



Z = -3.226

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

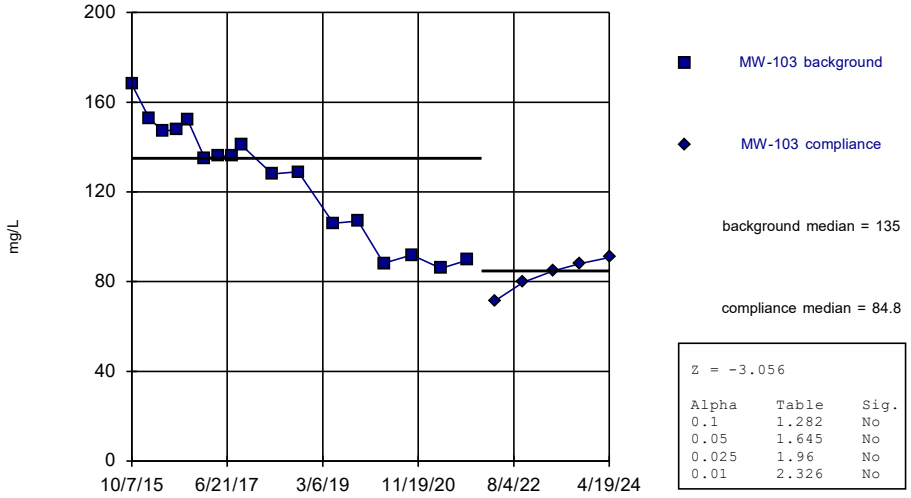
Constituent: Calcium Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-103



background median = 135

compliance median = 84.8

Z = -3.056

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

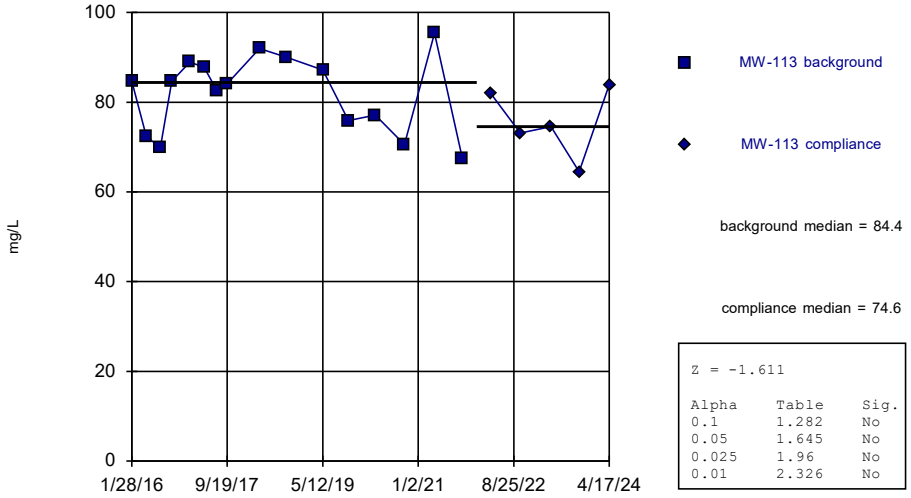
Constituent: Calcium Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-113 (bg)



background median = 84.4

compliance median = 74.6

Z = -1.611

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

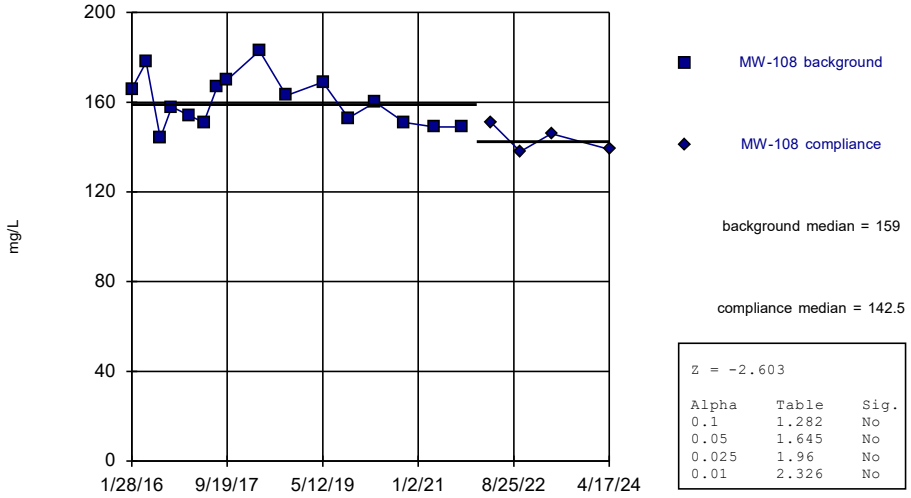
Constituent: Calcium Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-108 (bg)



background median = 159

compliance median = 142.5

Z = -2.603

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

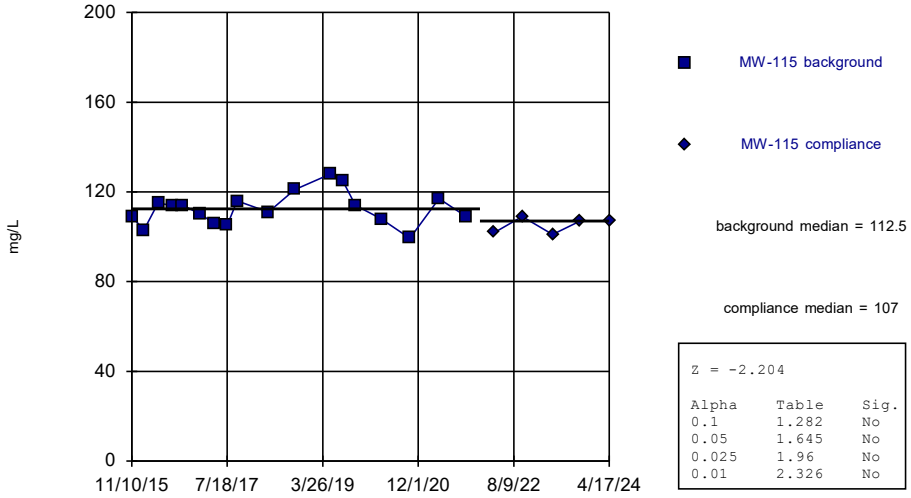
Constituent: Calcium Analysis Run 7/31/2024 3:22 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-115 (bg)



background median = 112.5

compliance median = 107

Z = -2.204

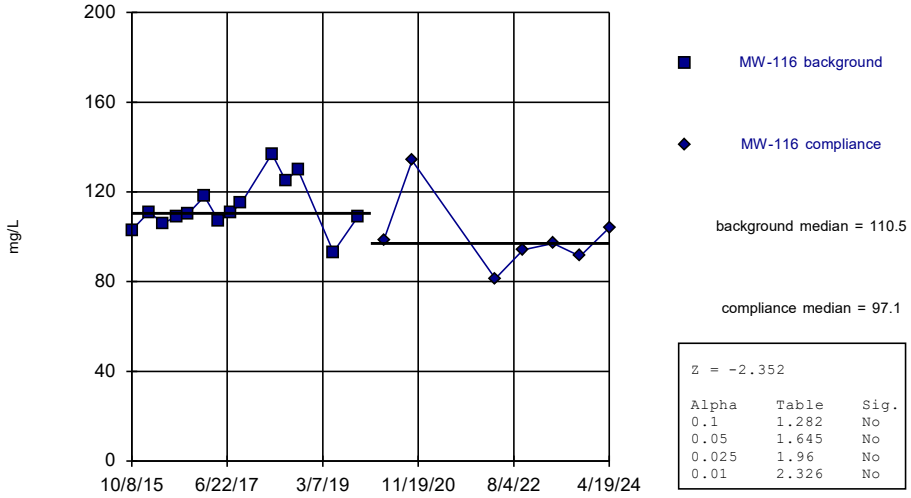
Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

Constituent: Calcium Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Mann-Whitney (Wilcoxon Rank Sum)

MW-116



background median = 110.5

compliance median = 97.1

Z = -2.352

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

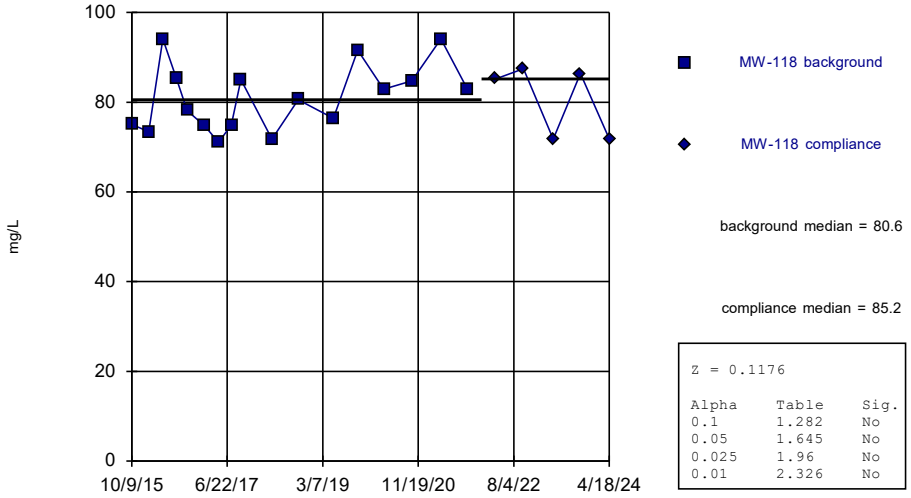
Constituent: Calcium Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-118



background median = 80.6

compliance median = 85.2

Z = 0.1176

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

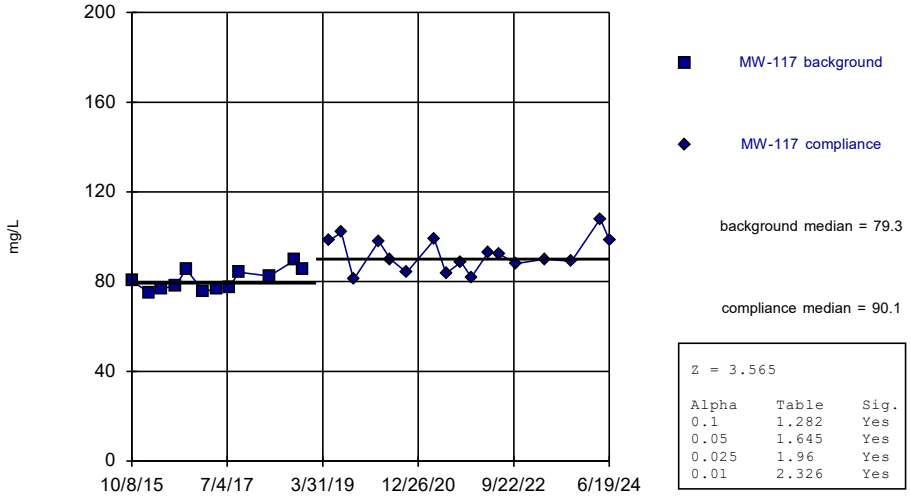
Constituent: Calcium Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-117



background median = 79.3

compliance median = 90.1

Z = 3.565

Alpha	Table	Sig.
0.1	1.282	Yes
0.05	1.645	Yes
0.025	1.96	Yes
0.01	2.326	Yes

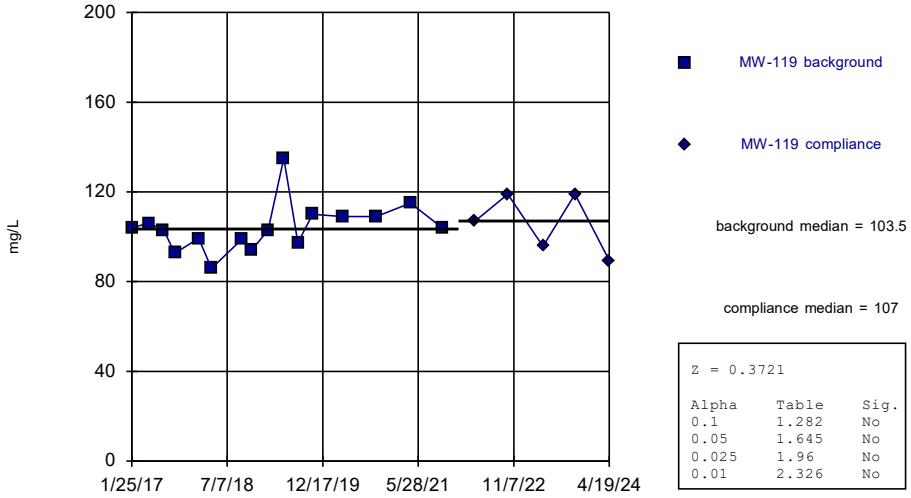
Constituent: Calcium Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-119



background median = 103.5

compliance median = 107

Z = 0.3721

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

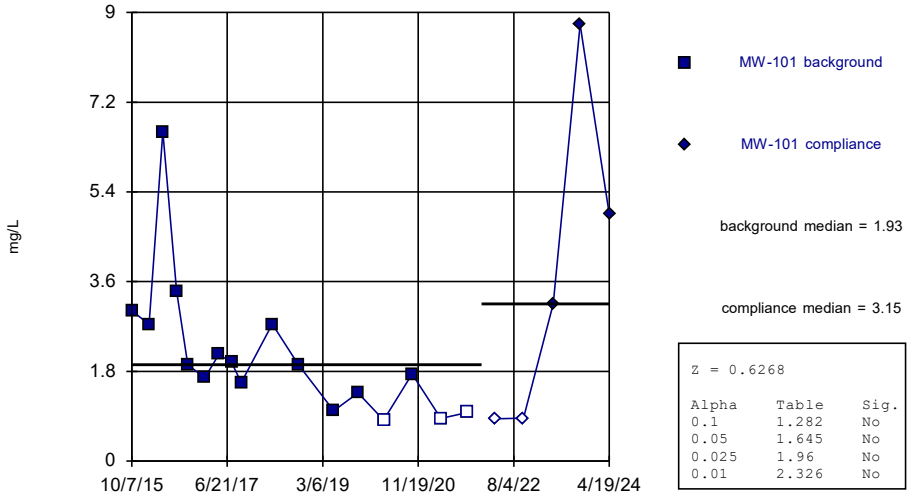
Constituent: Calcium Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-101



Z = 0.6268

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

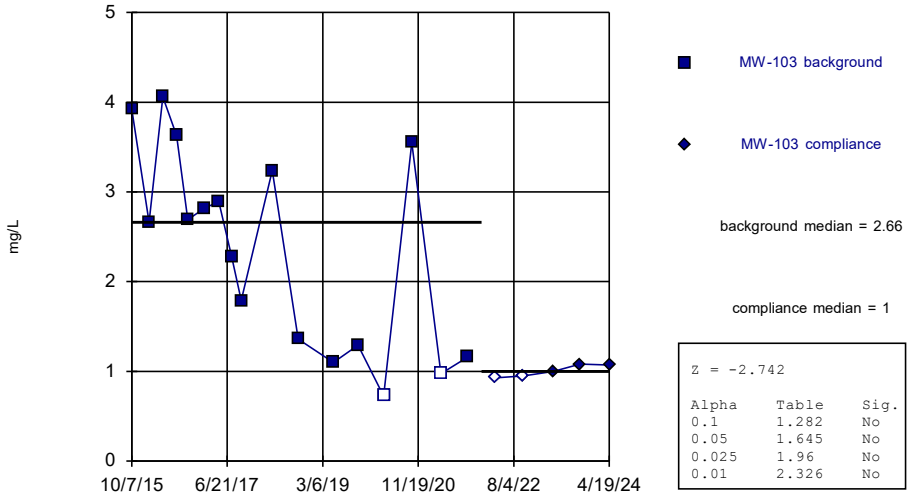
Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-103



Z = -2.742

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

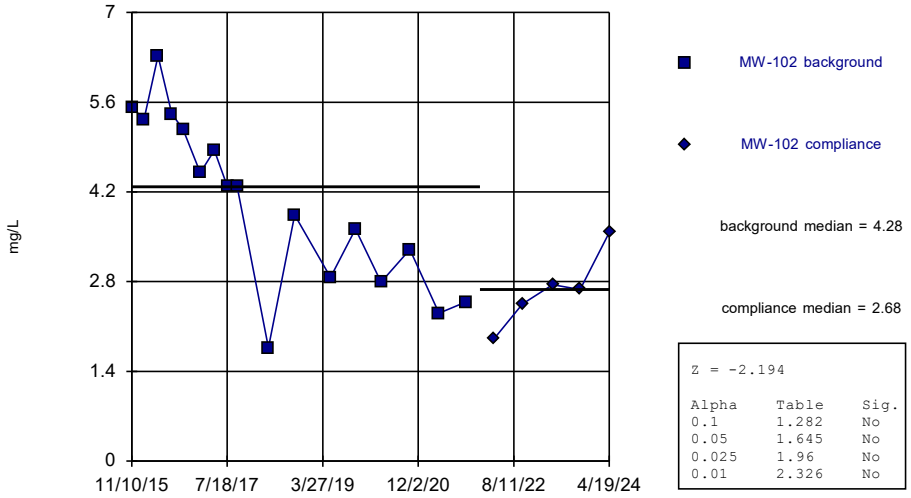
Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-102



Z = -2.194

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

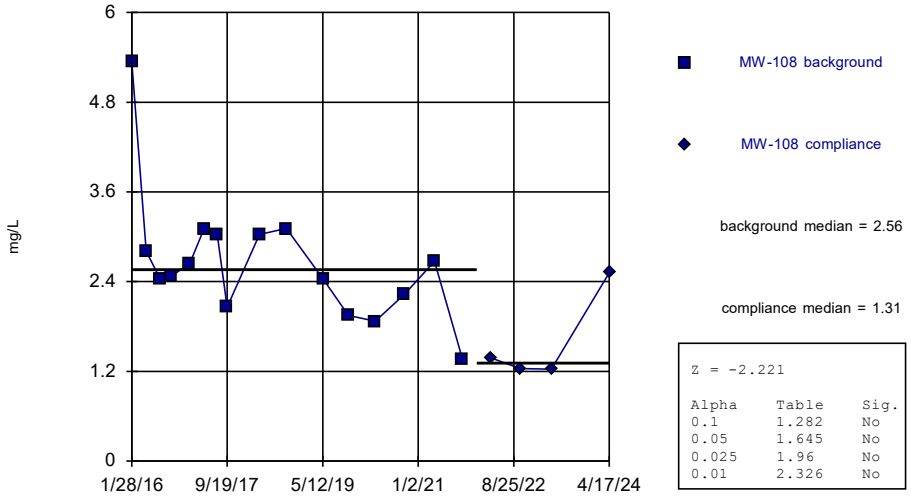
Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-108 (bg)



Z = -2.221

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

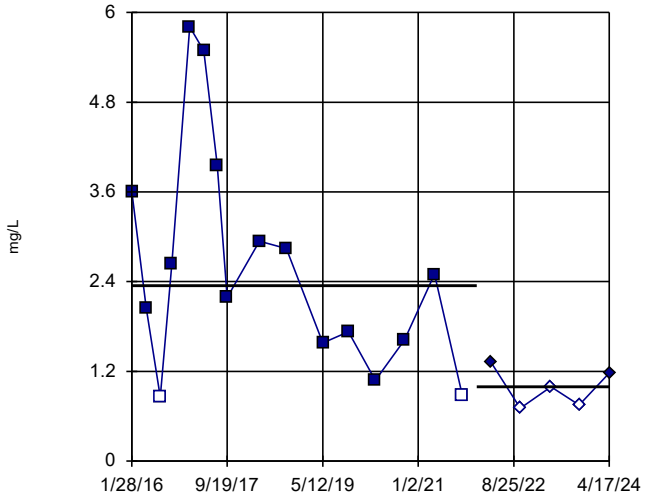
Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-113 (bg)



MW-113 background

MW-113 compliance

background median = 2.345

compliance median = 0.995

Z = -2.684

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

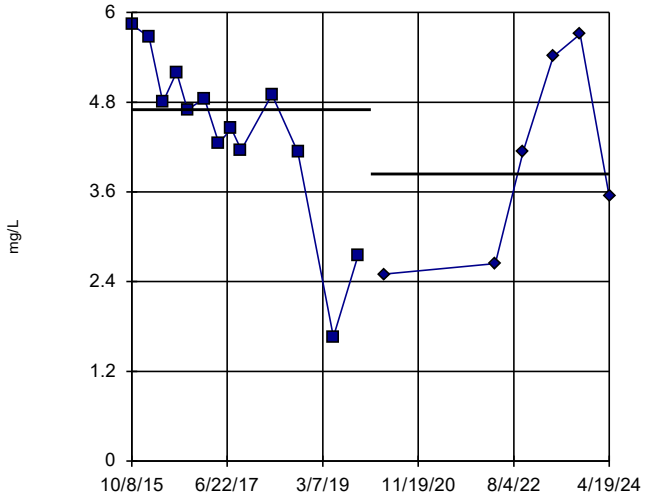
Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-116



MW-116 background

MW-116 compliance

background median = 4.7

compliance median = 3.84

Z = -0.8332

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

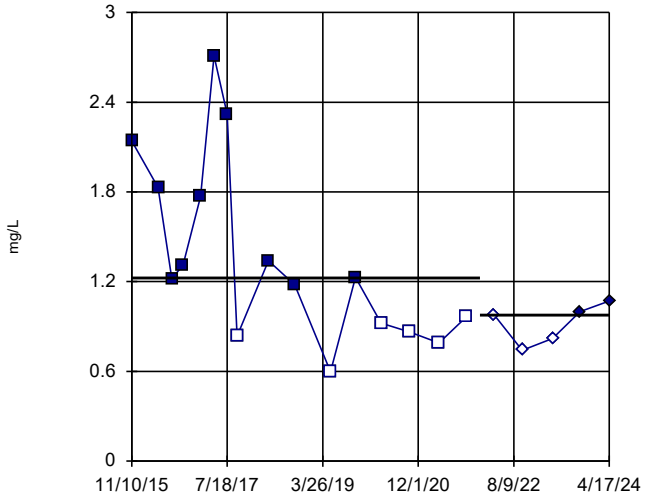
Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-115 (bg)



MW-115 background

MW-115 compliance

background median = 1.225

compliance median = 0.976

Z = -1.61

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

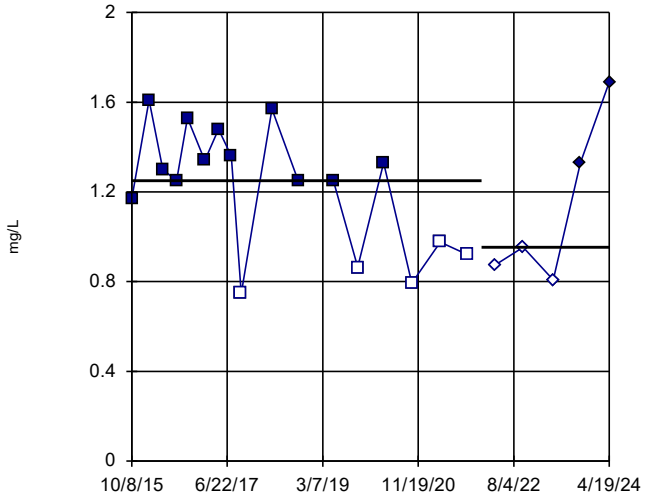
Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-117



MW-117 background

MW-117 compliance

background median = 1.25

compliance median = 0.953

Z = -0.51

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

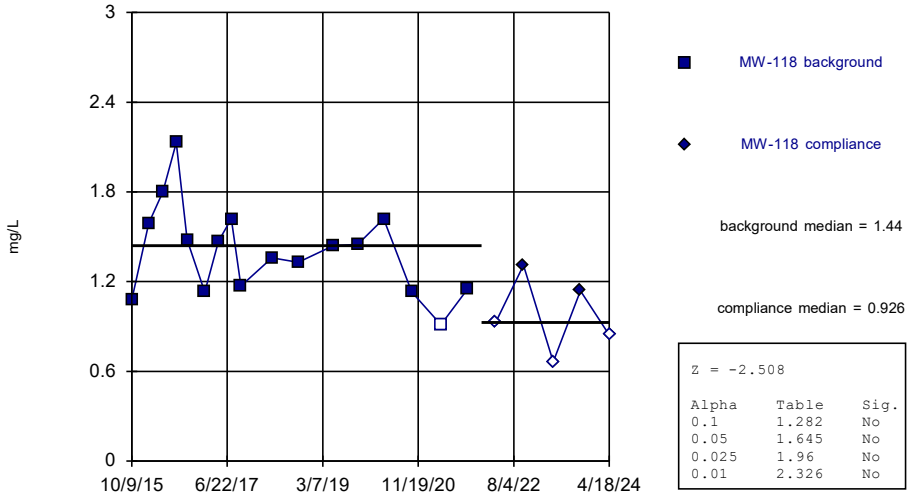
Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-118



Z = -2.508

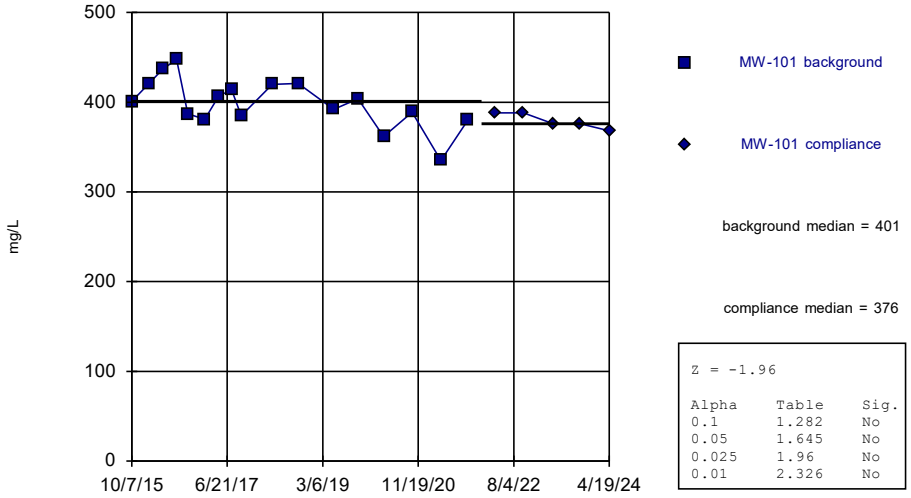
Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Mann-Whitney (Wilcoxon Rank Sum)

MW-101



Z = -1.96

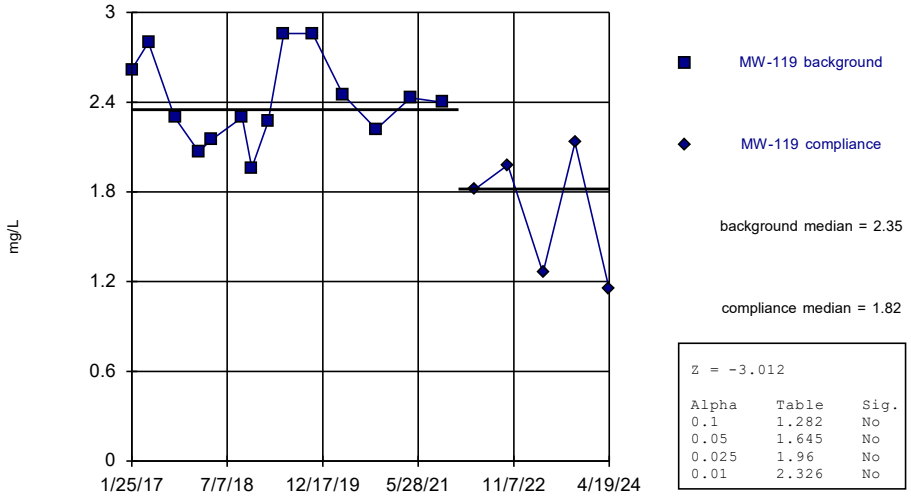
Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Mann-Whitney (Wilcoxon Rank Sum)

MW-119



Z = -3.012

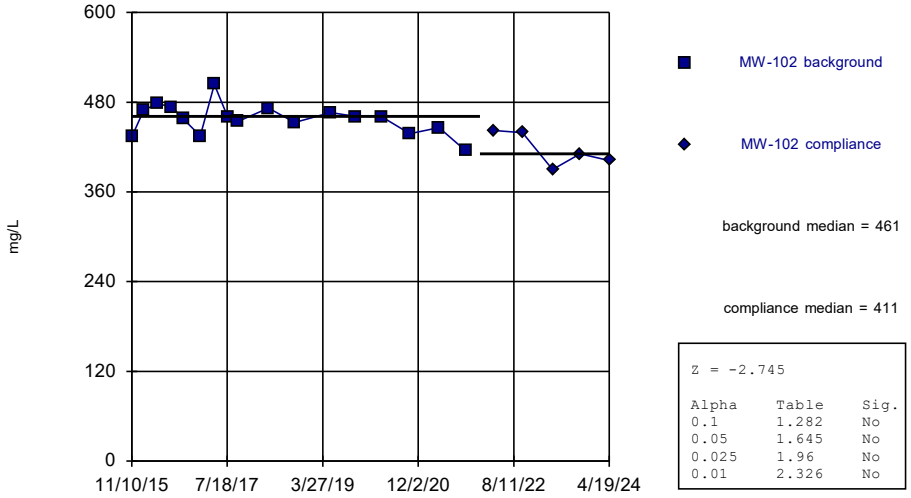
Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

Constituent: Chloride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Mann-Whitney (Wilcoxon Rank Sum)

MW-102



Z = -2.745

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

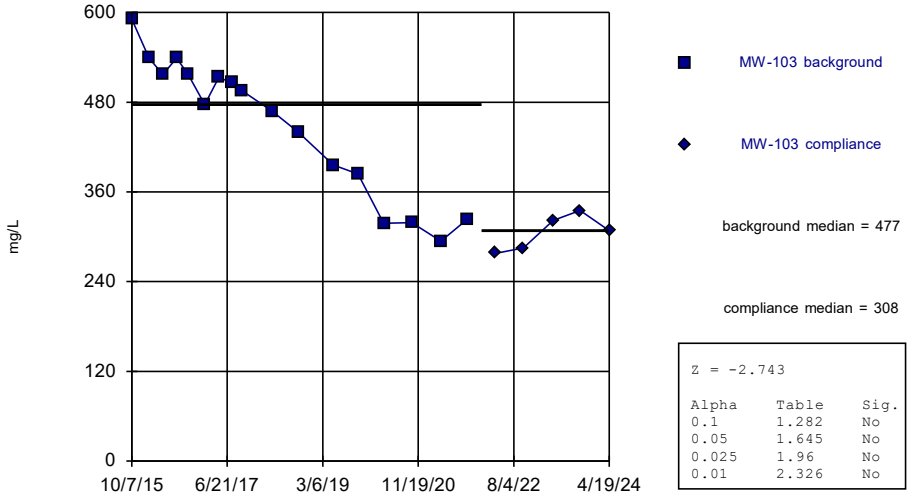
Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-103



background median = 477

compliance median = 308

Z = -2.743

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

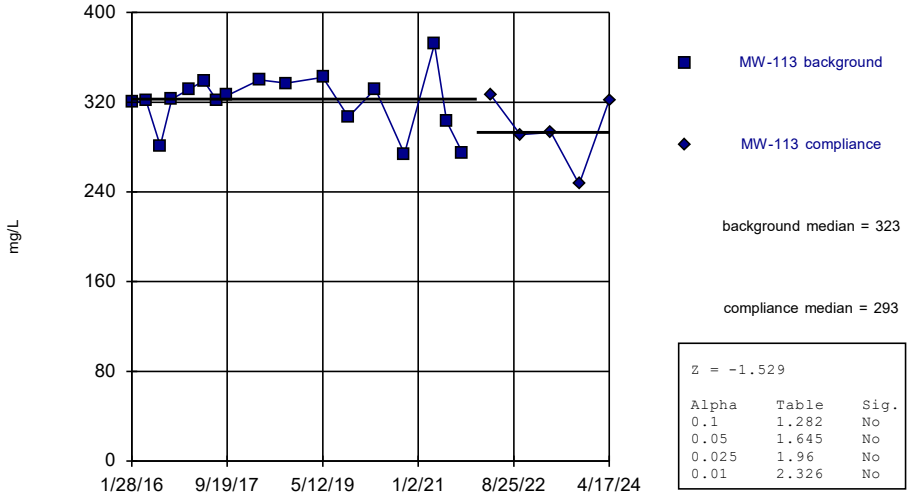
Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-113 (bg)



background median = 323

compliance median = 293

Z = -1.529

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

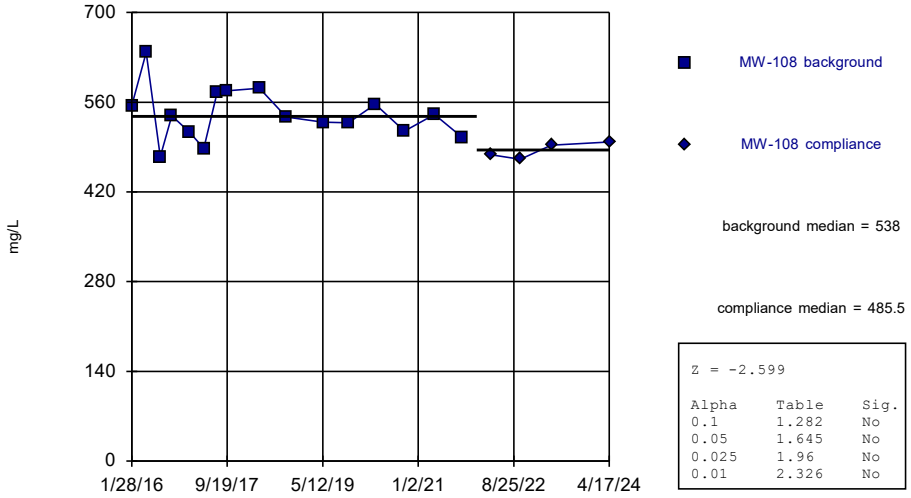
Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-108 (bg)



background median = 538

compliance median = 485.5

Z = -2.599

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

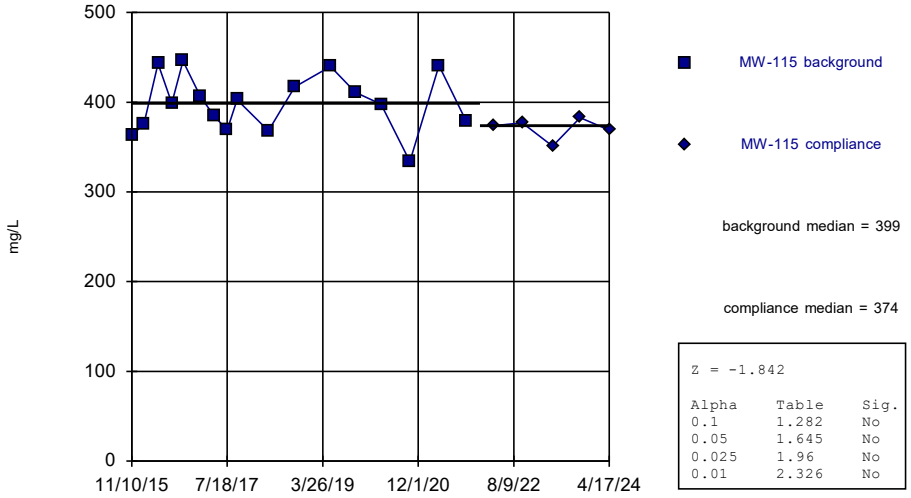
Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-115 (bg)



background median = 399

compliance median = 374

Z = -1.842

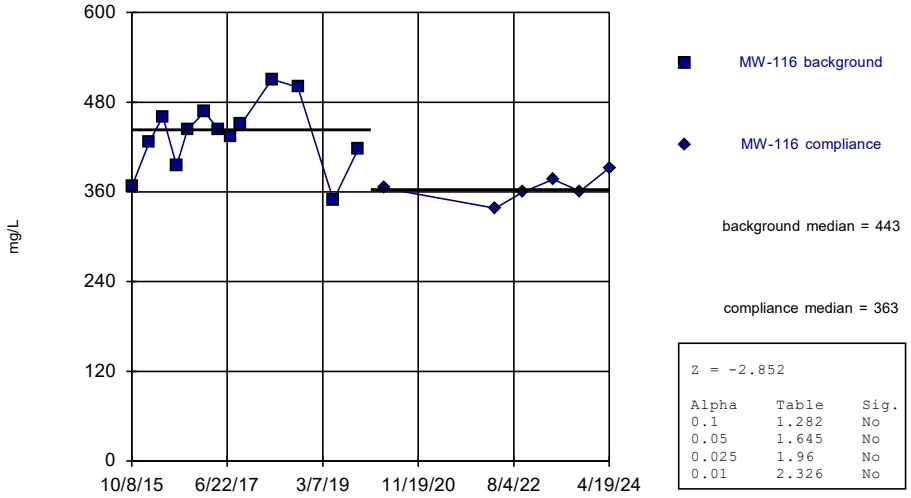
Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Mann-Whitney (Wilcoxon Rank Sum)

MW-116



background median = 443

compliance median = 363

Z = -2.852

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

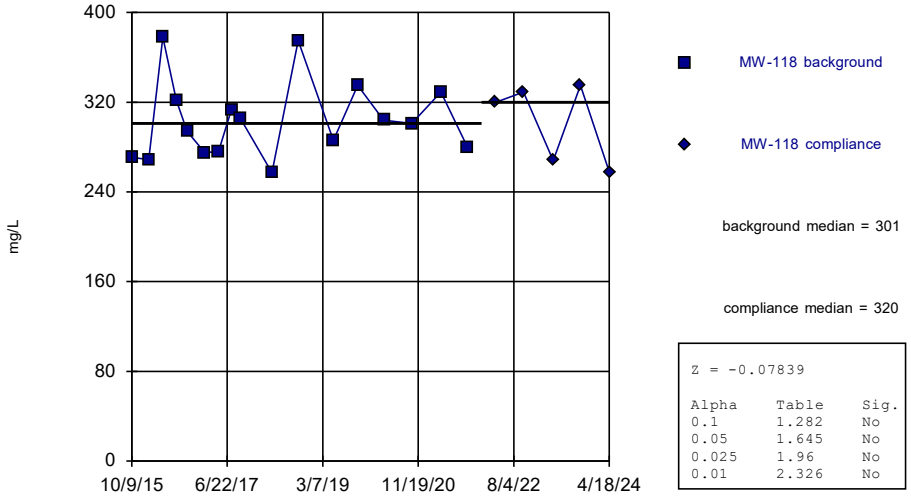
Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-118



background median = 301

compliance median = 320

Z = -0.07839

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

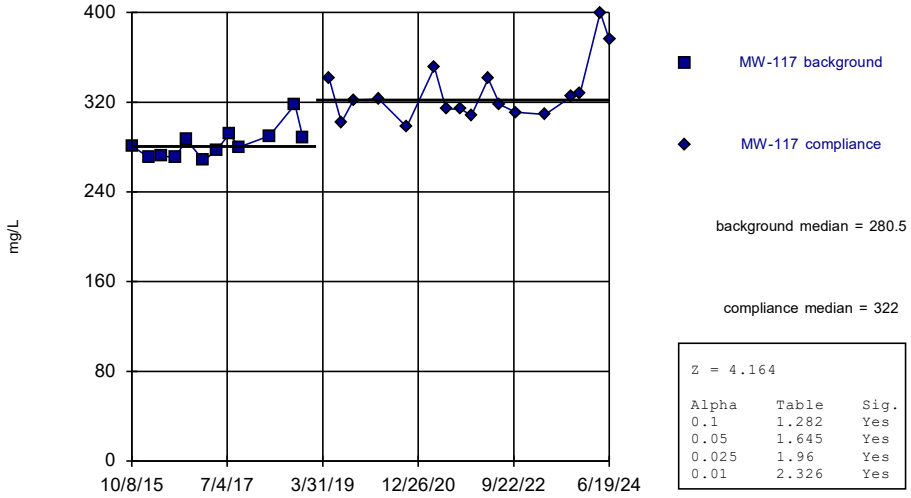
Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG

Mann-Whitney (Wilcoxon Rank Sum)

MW-117



background median = 280.5

compliance median = 322

Z = 4.164

Alpha	Table	Sig.
0.1	1.282	Yes
0.05	1.645	Yes
0.025	1.96	Yes
0.01	2.326	Yes

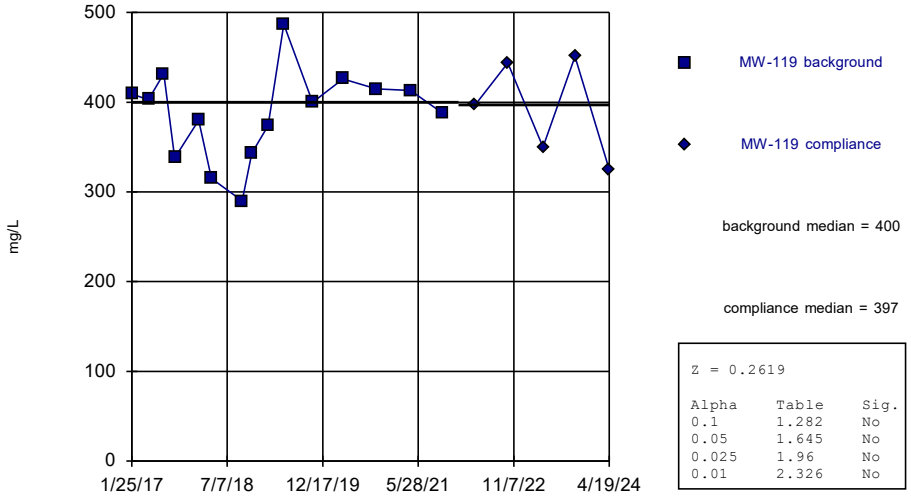
Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-119



background median = 400

compliance median = 397

Z = 0.2619

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

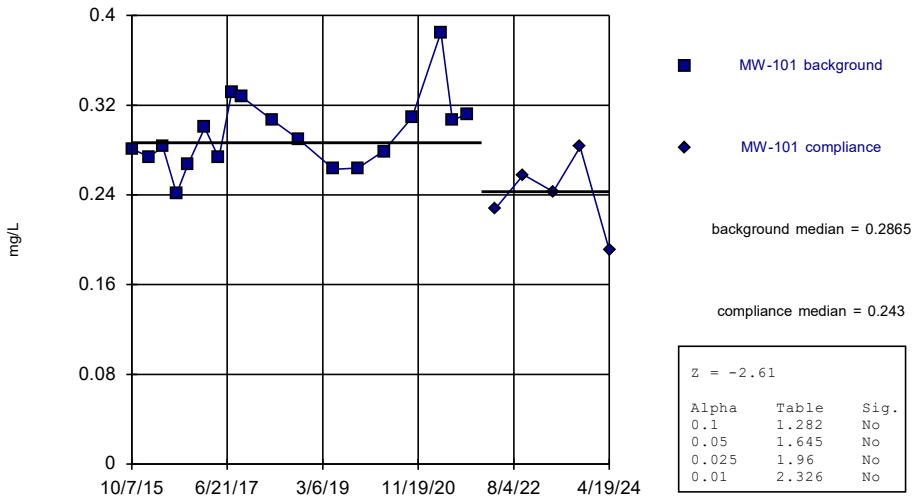
Constituent: Dissolved Solids Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-101



background median = 0.2865

compliance median = 0.243

Z = -2.61

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

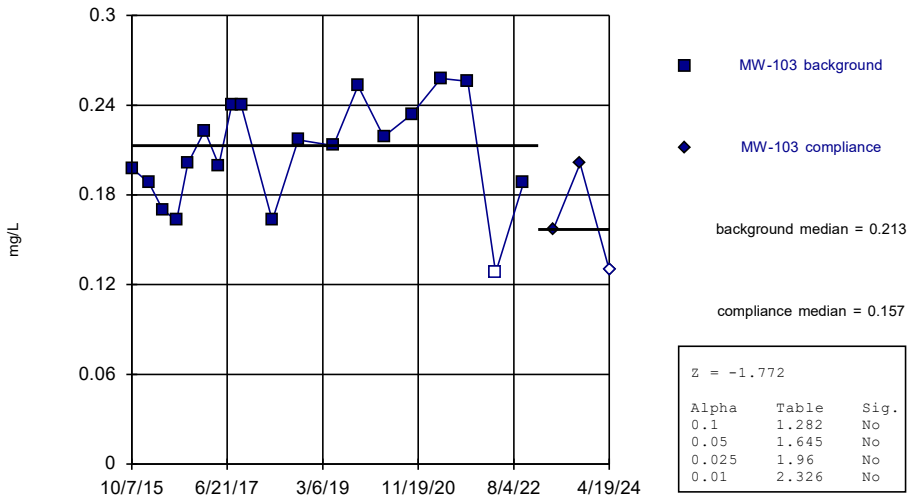
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-103



background median = 0.213

compliance median = 0.157

Z = -1.772

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

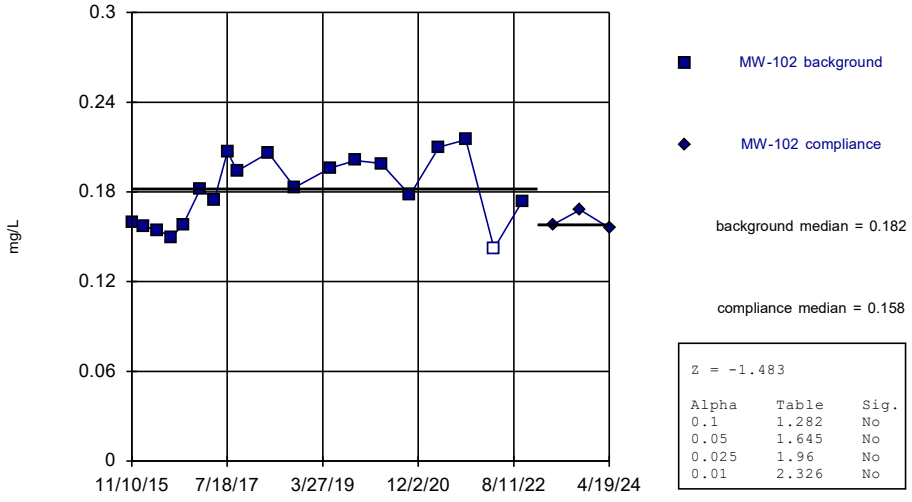
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-102



background median = 0.182

compliance median = 0.158

Z = -1.483

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

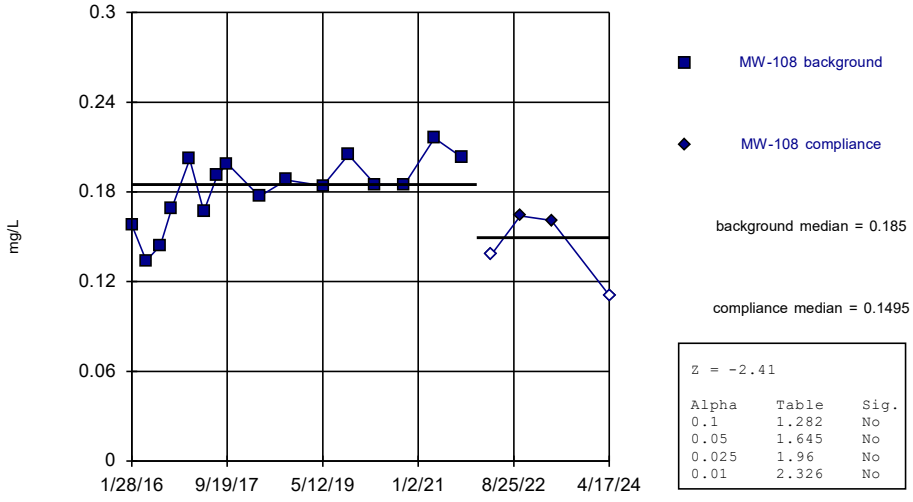
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-108 (bg)



background median = 0.185

compliance median = 0.1495

Z = -2.41

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

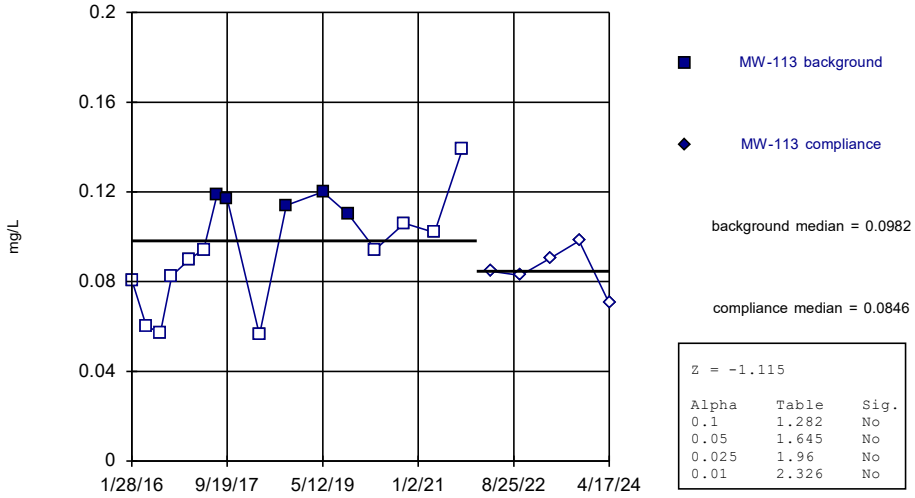
Constituent: Fluoride Analysis Run 7/31/2024 3:36 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-113 (bg)



background median = 0.0982

compliance median = 0.0846

Z = -1.115

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

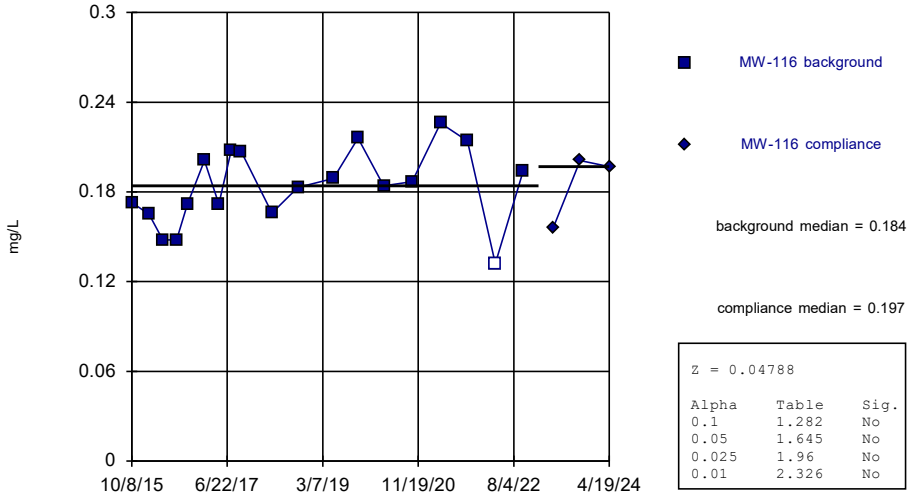
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-116



background median = 0.184

compliance median = 0.197

Z = 0.04788

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

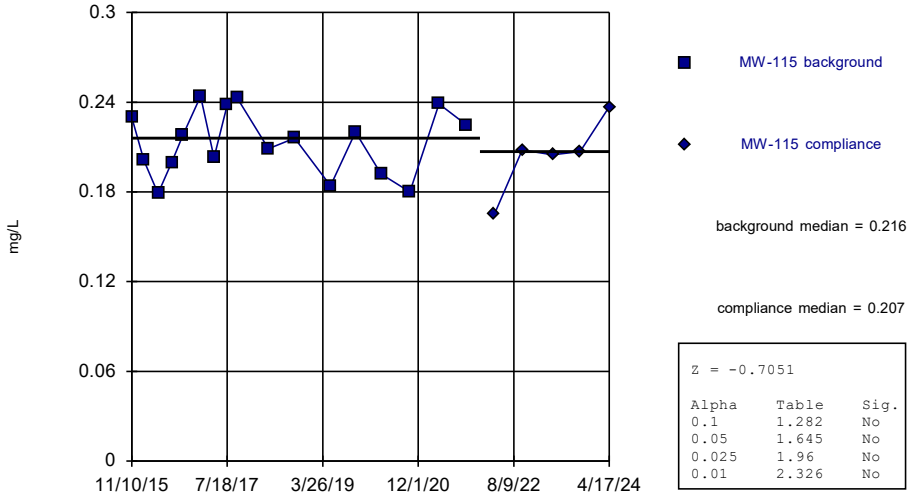
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-115 (bg)



background median = 0.216

compliance median = 0.207

Z = -0.7051

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

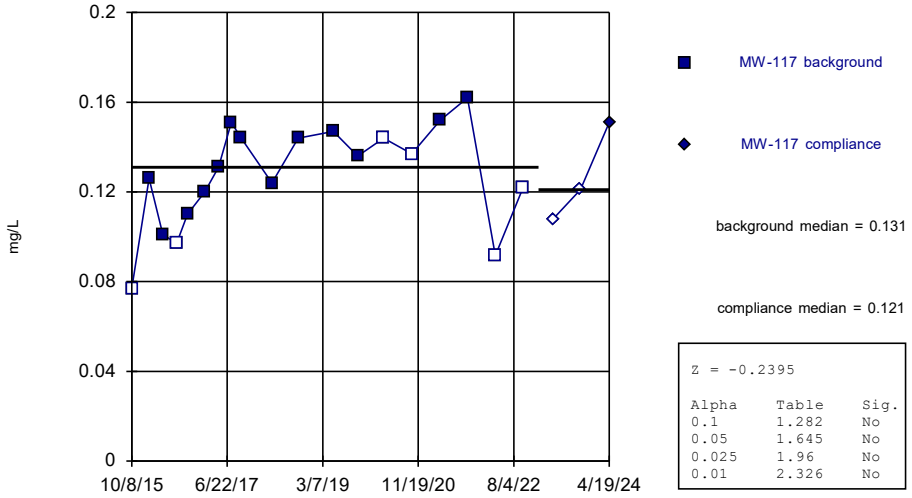
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-117



background median = 0.131

compliance median = 0.121

Z = -0.2395

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

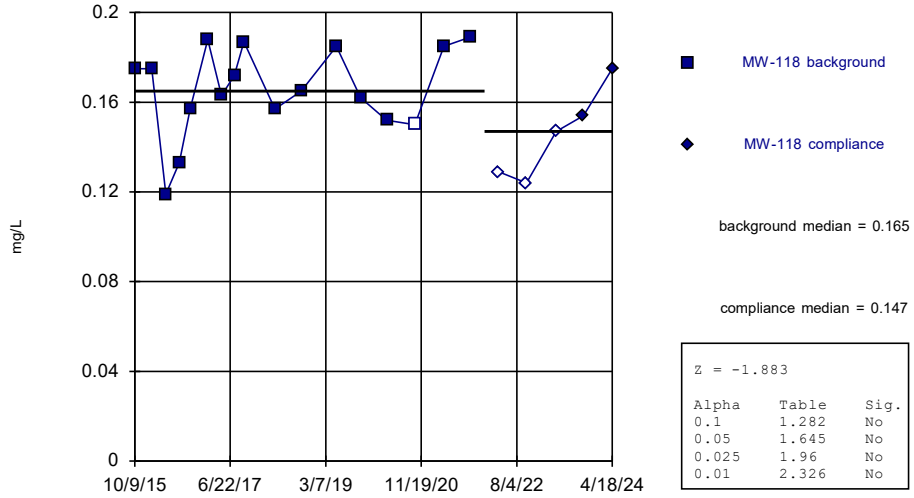
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-118



background median = 0.165

compliance median = 0.147

Z = -1.883

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

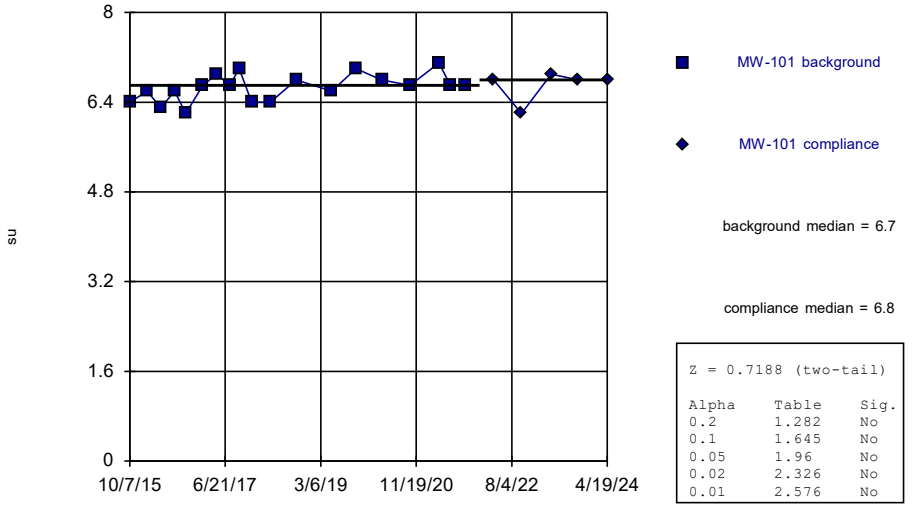
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-101



background median = 6.7

compliance median = 6.8

Z = 0.7188 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

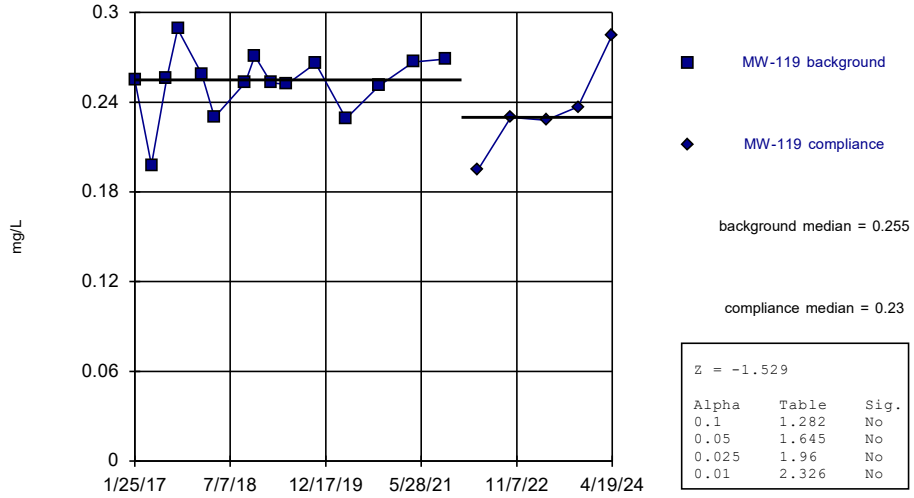
Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-119



background median = 0.255

compliance median = 0.23

Z = -1.529

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

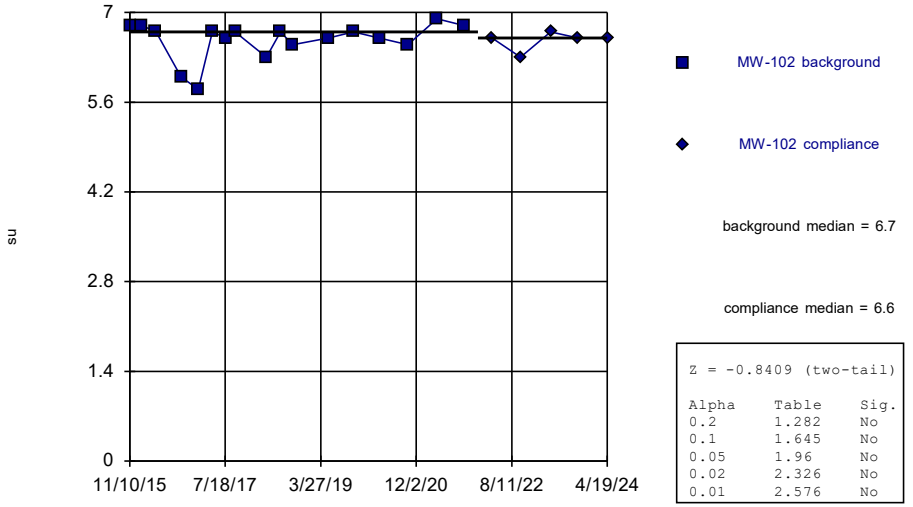
Constituent: Fluoride Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-102



background median = 6.7

compliance median = 6.6

Z = -0.8409 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

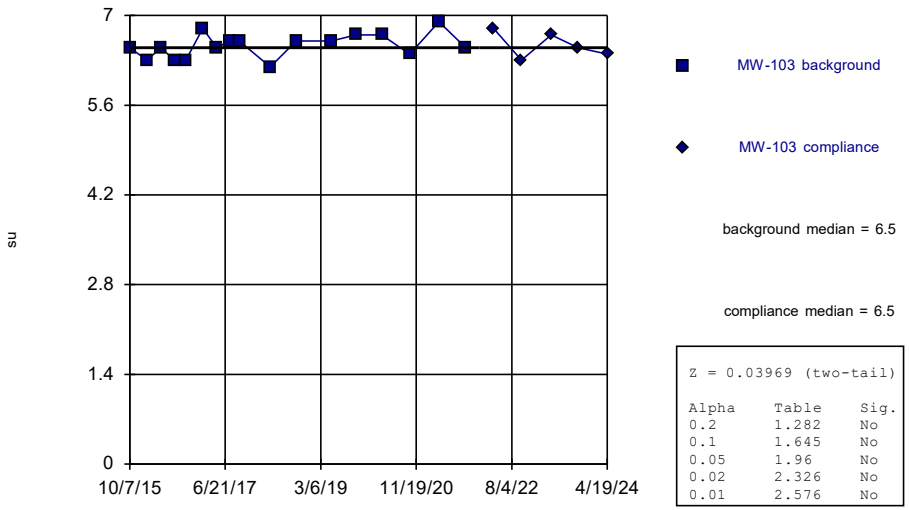
Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-103



Z = 0.03969 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

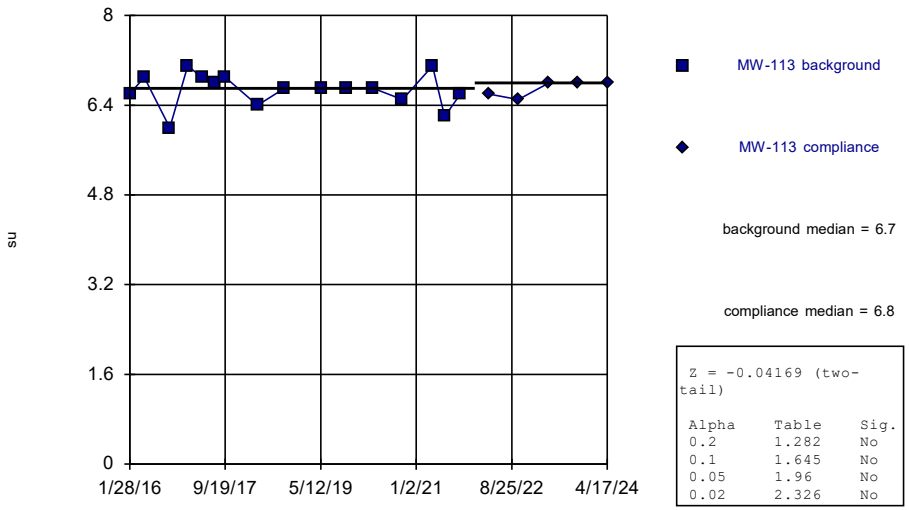
Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-113 (bg)



Z = -0.04169 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No

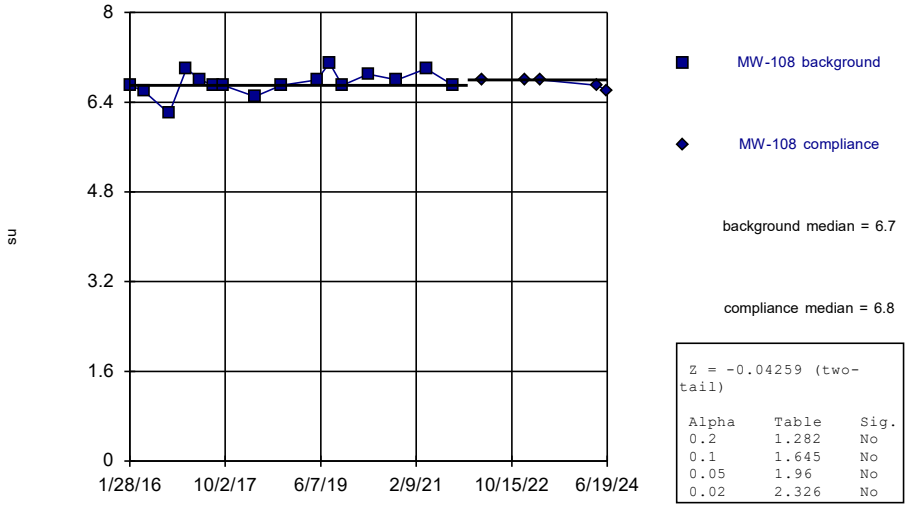
Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-108 (bg)



Z = -0.04259 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No

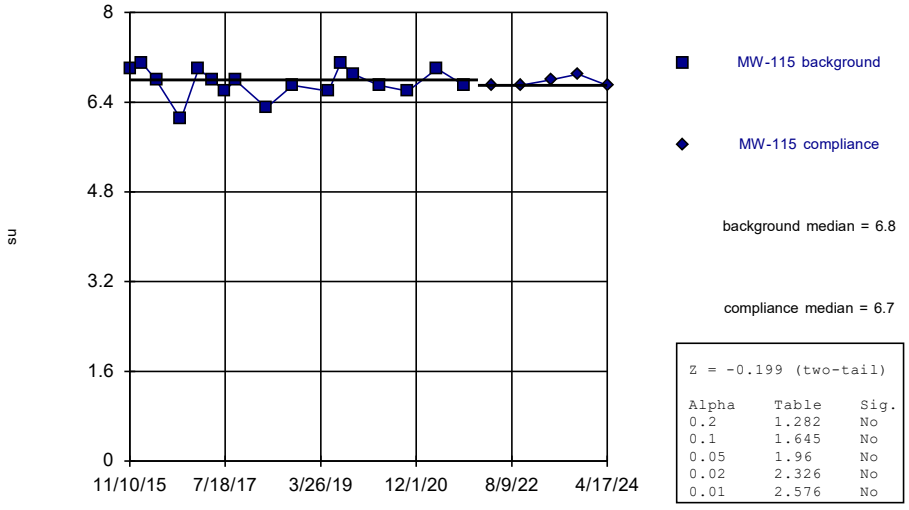
Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-115 (bg)



Z = -0.199 (two-tail)

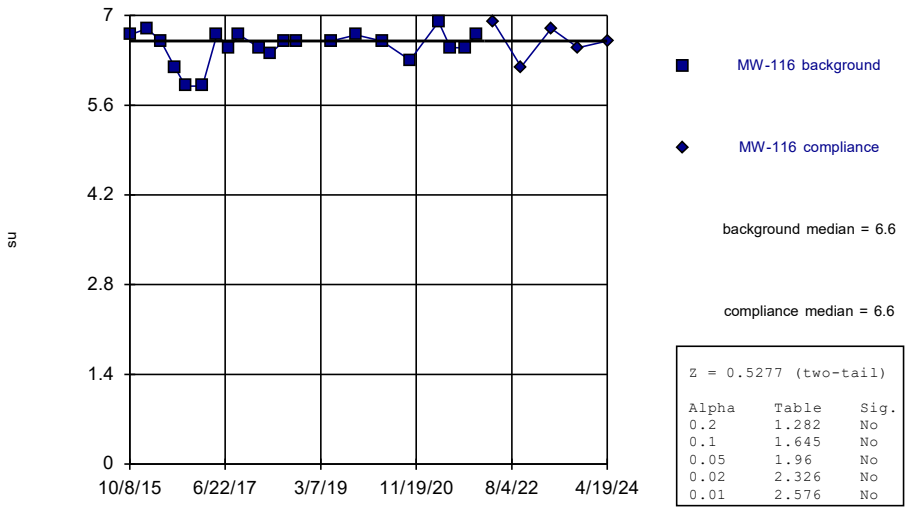
Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Mann-Whitney (Wilcoxon Rank Sum)

MW-116



Z = 0.5277 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

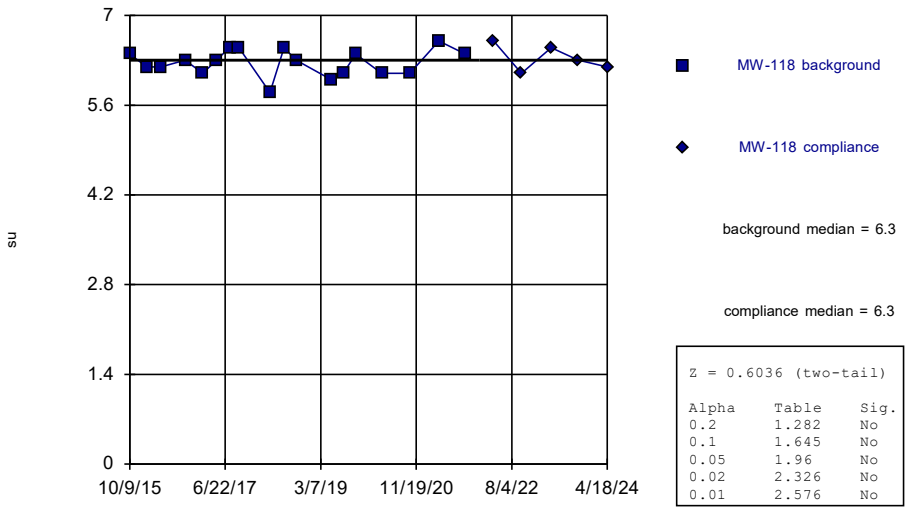
Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-118



Z = 0.6036 (two-tail)

Alpha	Table	Sig.
0.2	1.282	No
0.1	1.645	No
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

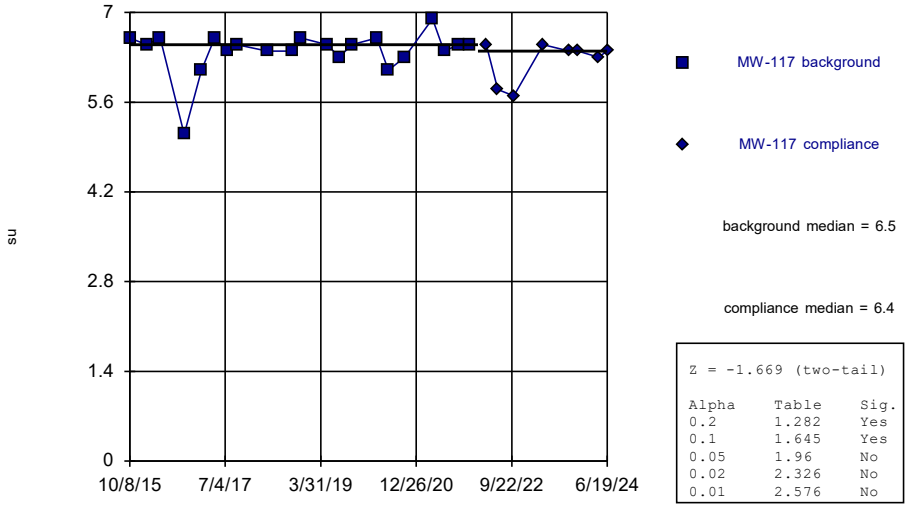
Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-117



Z = -1.669 (two-tail)

Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

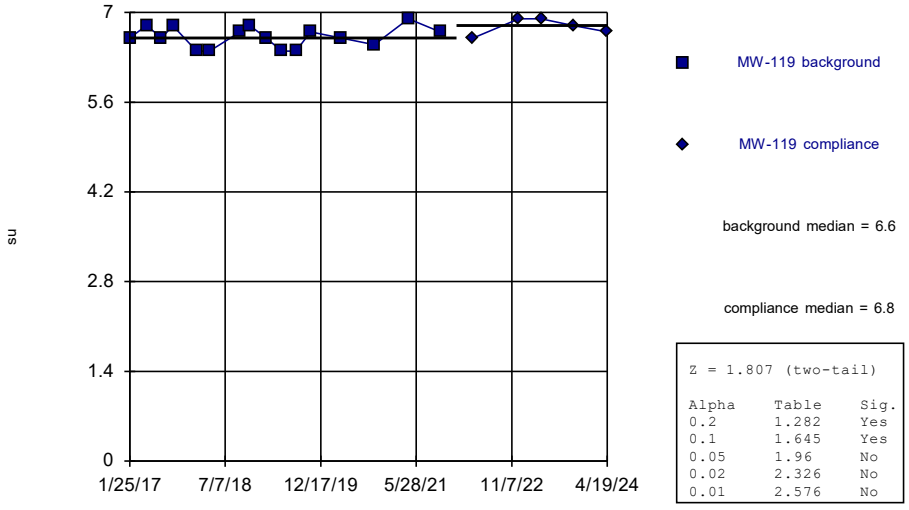
Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-119



Z = 1.807 (two-tail)

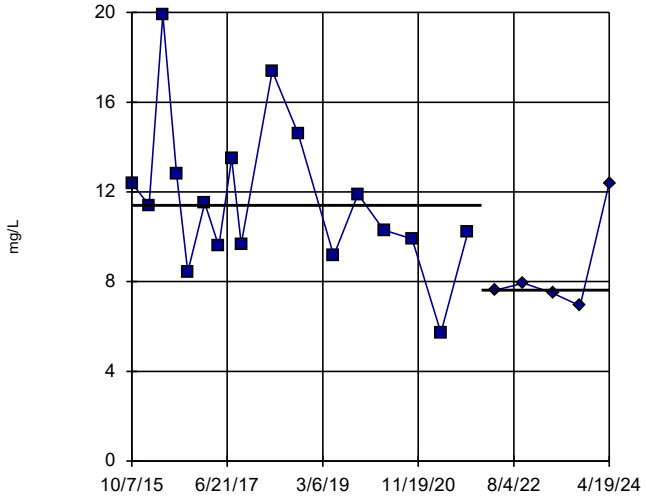
Alpha	Table	Sig.
0.2	1.282	Yes
0.1	1.645	Yes
0.05	1.96	No
0.02	2.326	No
0.01	2.576	No

Constituent: pH Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Mann-Whitney (Wilcoxon Rank Sum)

MW-101



MW-101 background

MW-101 compliance

background median = 11.4

compliance median = 7.63

Z = -2.155

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

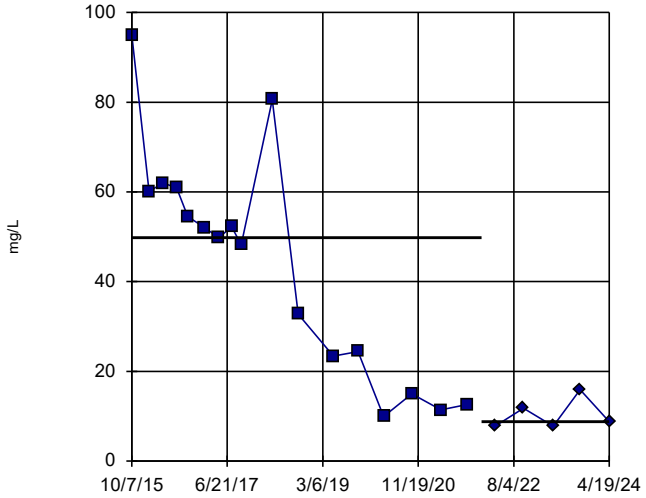
Constituent: Sulfate Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-103



MW-103 background

MW-103 compliance

background median = 49.8

compliance median = 8.8

Z = -2.899

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

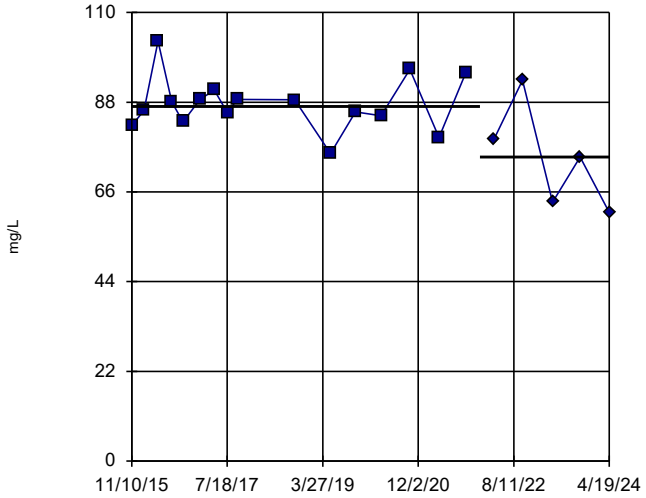
Constituent: Sulfate Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-102



MW-102 background

MW-102 compliance

background median = 87

compliance median = 74.6

Z = -2.188

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

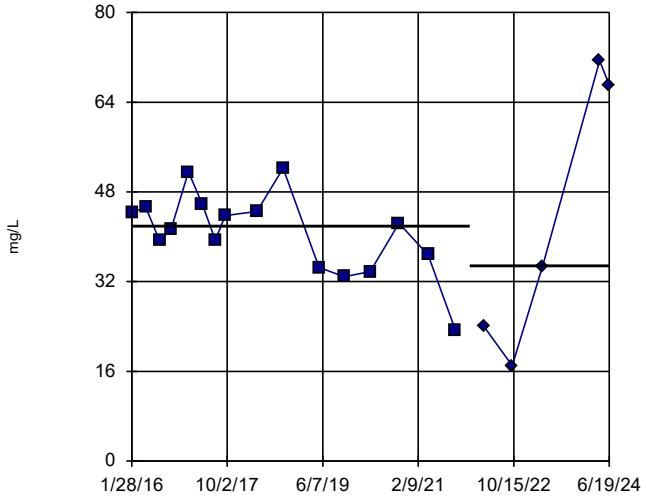
Constituent: Sulfate Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-108 (bg)



MW-108 background

MW-108 compliance

background median = 41.9

compliance median = 34.8

Z = -0.289

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

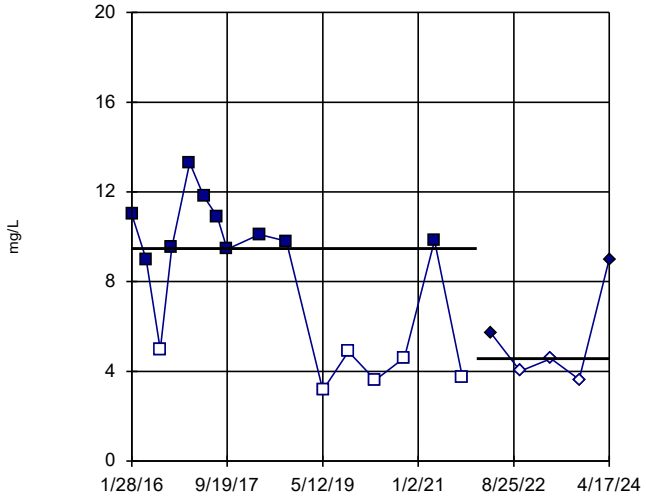
Constituent: Sulfate Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-113 (bg)



MW-113 background

MW-113 compliance

background median = 9.48

compliance median = 4.57

Z = -1.61

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

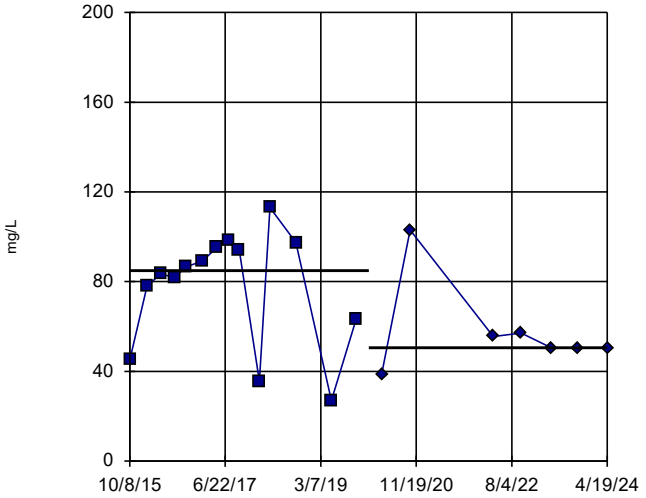
Constituent: Sulfate Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-116



MW-116 background

MW-116 compliance

background median = 85

compliance median = 50.6

Z = -1.455

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

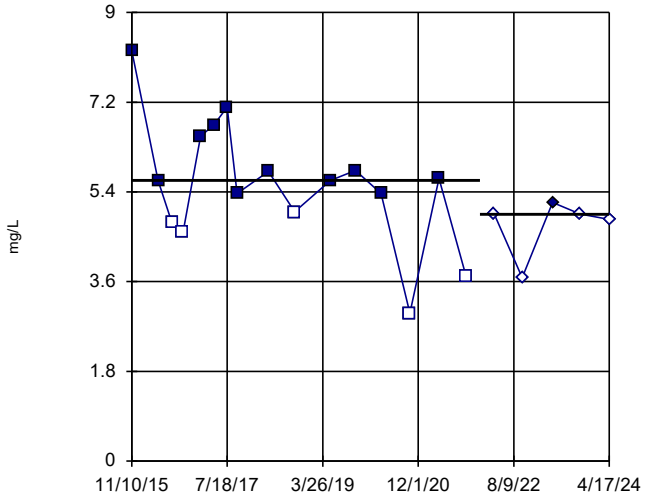
Constituent: Sulfate Analysis Run 7/31/2024 3:24 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Mann-Whitney (Wilcoxon Rank Sum)

MW-115 (bg)



MW-115 background

MW-115 compliance

background median = 5.63

compliance median = 4.95

Z = -1.859

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

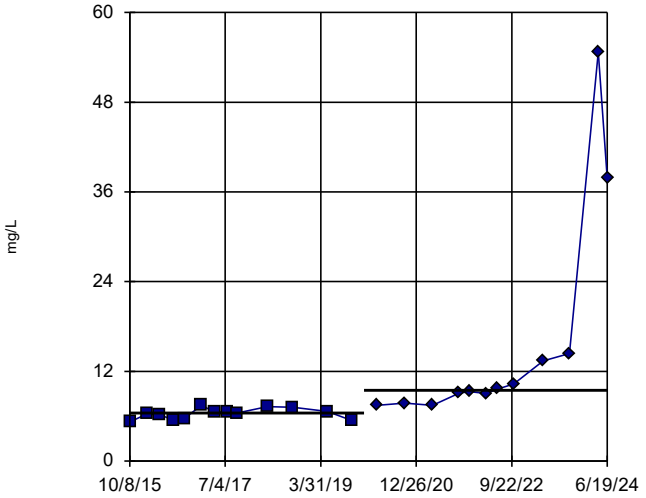
Constituent: Sulfate Analysis Run 7/31/2024 3:23 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-117



MW-117 background

MW-117 compliance

background median = 6.43

compliance median = 9.47

Z = 4.189

Alpha	Table	Sig.
0.1	1.282	Yes
0.05	1.645	Yes
0.025	1.96	Yes
0.01	2.326	Yes

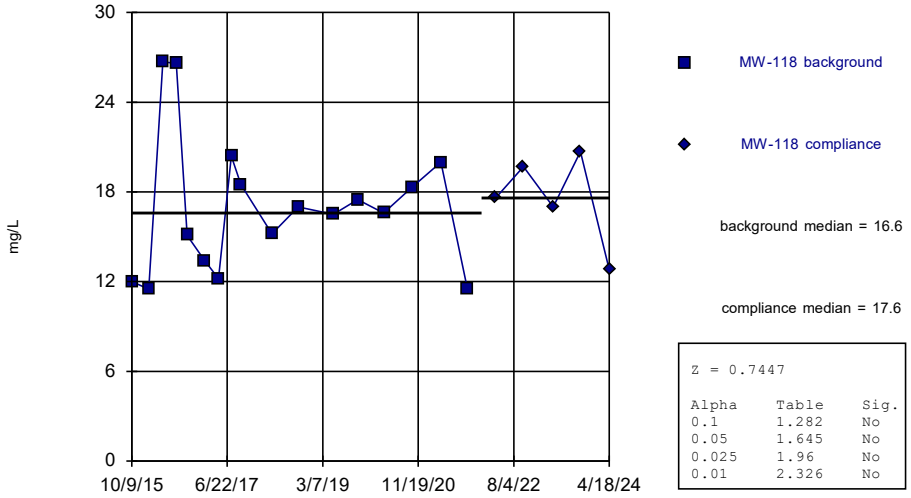
Constituent: Sulfate Analysis Run 7/31/2024 3:24 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-118



background median = 16.6

compliance median = 17.6

Z = 0.7447

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

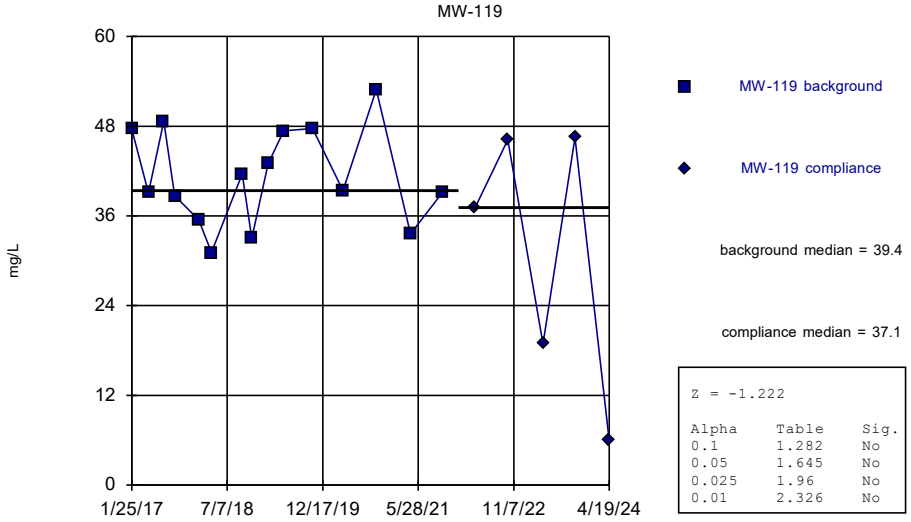
Constituent: Sulfate Analysis Run 7/31/2024 3:24 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Mann-Whitney (Wilcoxon Rank Sum)

MW-119



background median = 39.4

compliance median = 37.1

Z = -1.222

Alpha	Table	Sig.
0.1	1.282	No
0.05	1.645	No
0.025	1.96	No
0.01	2.326	No

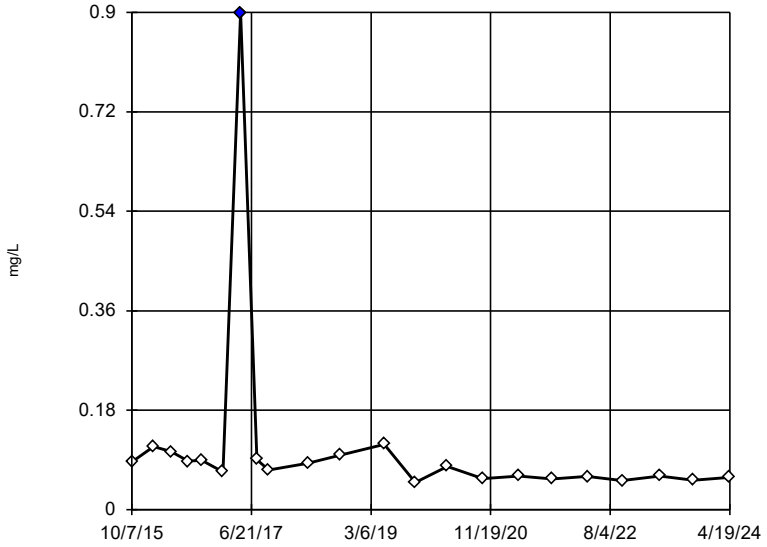
Constituent: Sulfate Analysis Run 7/31/2024 3:24 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Update of Background Data Sets for Existing Wells
Outlier Tests, Period-of-Record Data Sets

Dixon's Outlier Test

MW-101



n = 22

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 0.1134.
Std. Dev. = 0.1769.
<1.8 (O): c = 0.7296
tabl = 0.43.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9369
Critical = 0.923 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

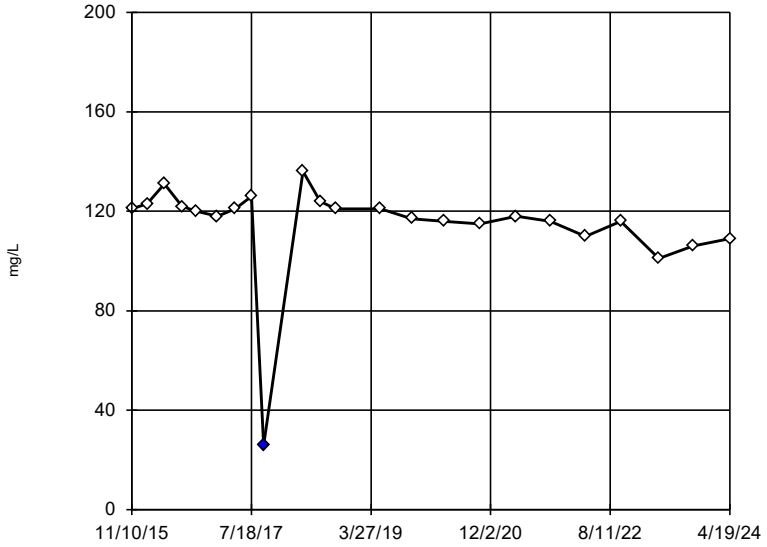
Constituent: Boron Analysis Run 7/31/2024 4:08 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Rosner's Outlier Test

MW-102



n = 23

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.

k = 1
r = 4.27
Tabulated value = 2.808
Alpha = 0.01

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9655
Critical = 0.926
The distribution, after removal of suspect value, was found to be normally distributed.

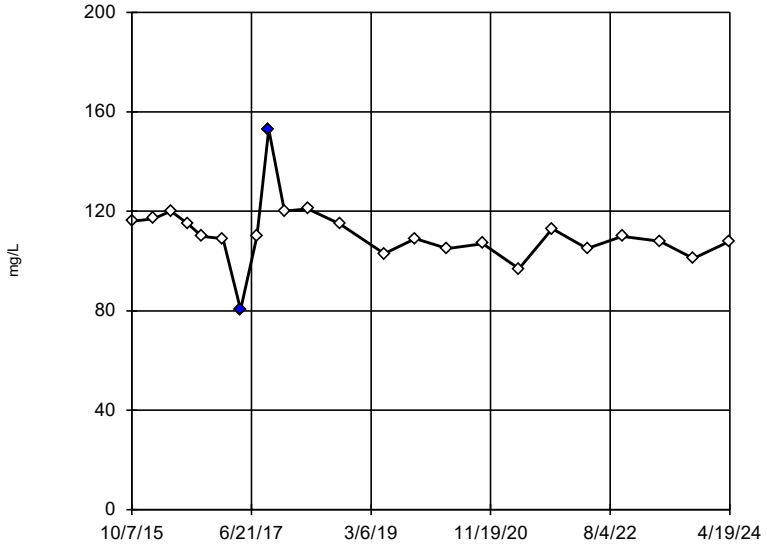
Constituent: Calcium Analysis Run 7/31/2024 4:08 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG

Rosner's Outlier Test

MW-101



n = 23

Statistical outliers are drawn as solid.

k = 2
r = 3.187
Tabulated value = 3.168
Alpha = 0.01

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9724
Critical = 0.923
The distribution, after removal of suspect values, was found to be normally distributed.

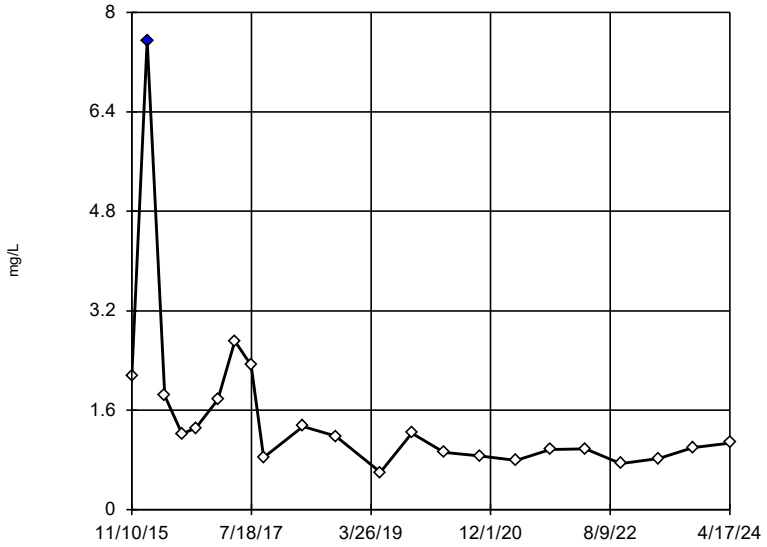
Constituent: Calcium Analysis Run 7/31/2024 4:08 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-115 (bg)



n = 22

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 1.554.
Std. Dev. = 1.449.
7.55 (O): c = 0.5225
tabl = 0.43.
Alpha = 0.05.

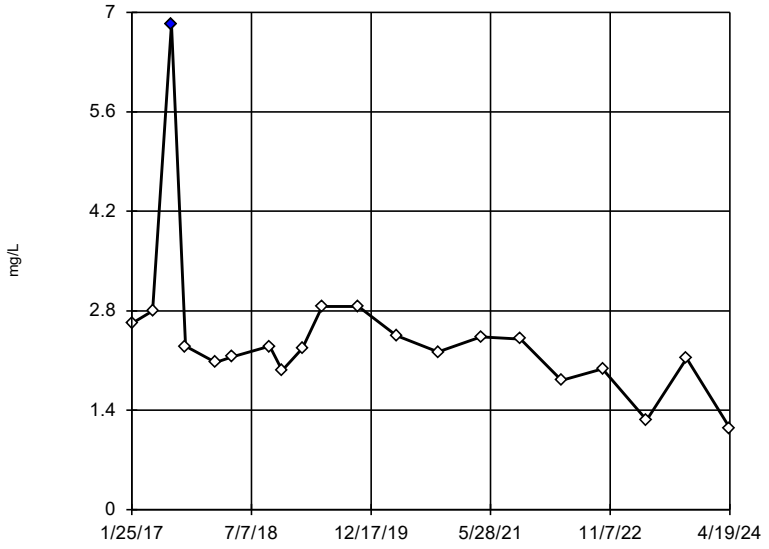
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9508
Critical = 0.923 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Chloride Analysis Run 7/31/2024 4:09 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-119



n = 20

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high and 2 low outliers.
Mean = 2.444.
Std. Dev. = 1.128.
2.86: c = 0.8156
tabl = 0.45.
1.26: c = 0.4375
tabl = 0.45.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9505
Critical = 0.91
The distribution, after removal of suspect value, was found to be normally distributed.

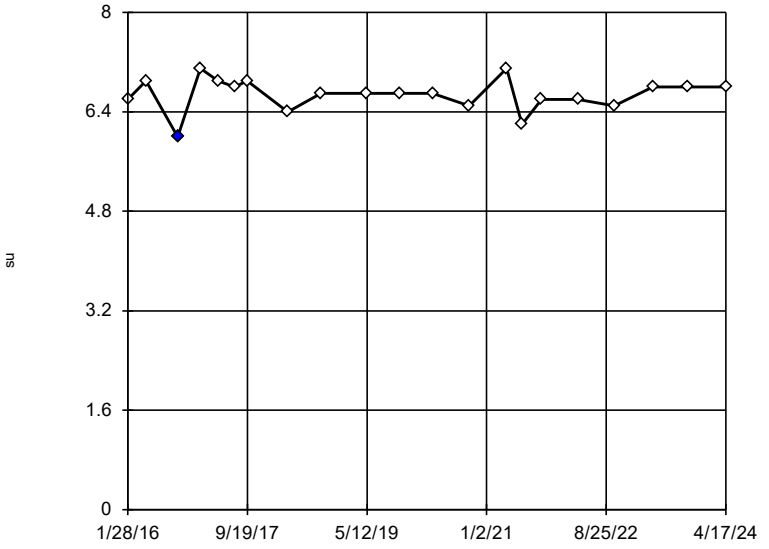
Constituent: Chloride Analysis Run 7/31/2024 4:09 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-113 (bg)



n = 21

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 6.681.
Std. Dev. = 0.2657.
6: c = 0.4444
tabl = 0.44.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9663
Critical = 0.92
The distribution, after removal of suspect value, was found to be normally distributed.

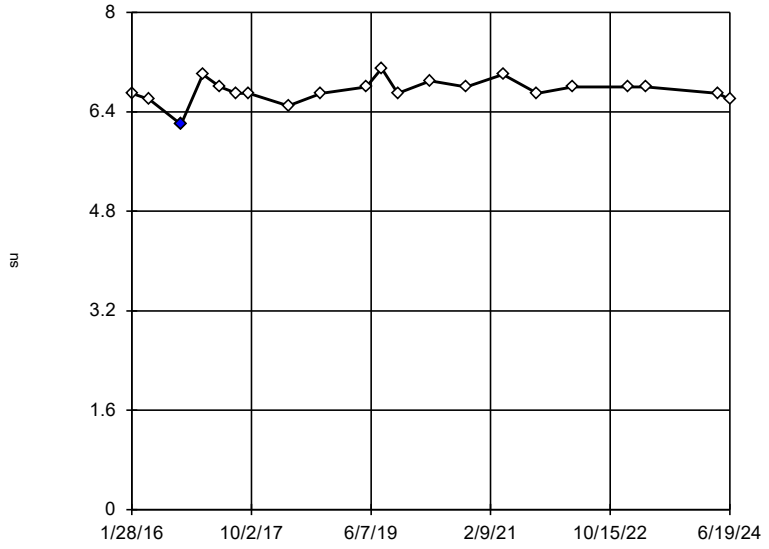
Constituent: pH Analysis Run 7/31/2024 4:09 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG

Dixon's Outlier Test

MW-108 (bg)



n = 21

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 6.743.
Std. Dev. = 0.1886.
6.2: c = 0.5
tabl = 0.44.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9251
Critical = 0.92
The distribution, after removal of suspect value, was found to be normally distributed.

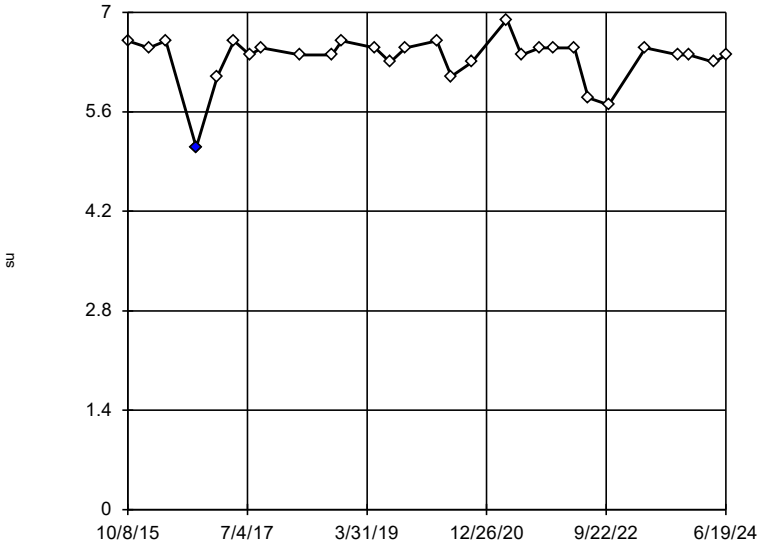
Constituent: pH Analysis Run 7/31/2024 4:09 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG

Tukey's Outlier Screening

MW-117



n = 29

Outlier is drawn as solid.
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).

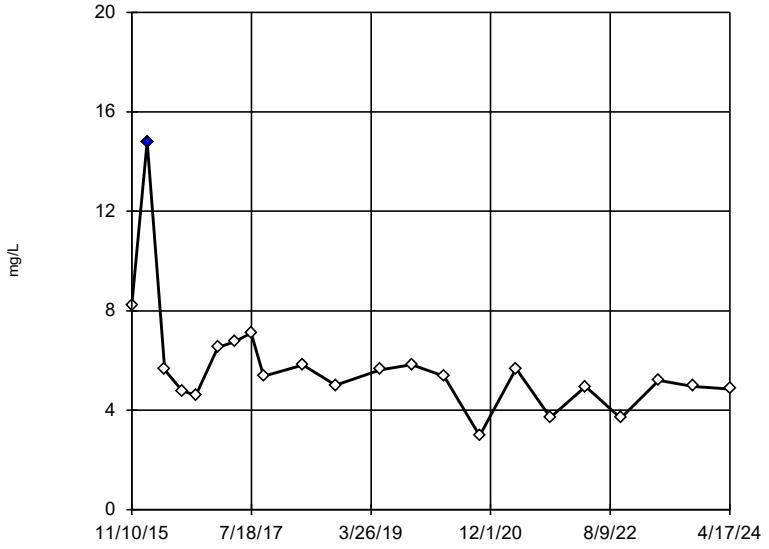
High cutoff = 6.964, low cutoff = 5.365, based on IQR multiplier of 3.

Constituent: pH Analysis Run 7/31/2024 4:09 PM View: background update

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 = 22

Statistical outlier is drawn as solid.
1 value manually flagged as an outlier.
Testing for 1 high outlier.
Mean = 5.79.
Std. Dev. = 2.322.
14.8 (O): c = 0.6937
tabl = 0.43.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9647
Critical = 0.923
The distribution, after removal of suspect value, was found to be normally distributed.

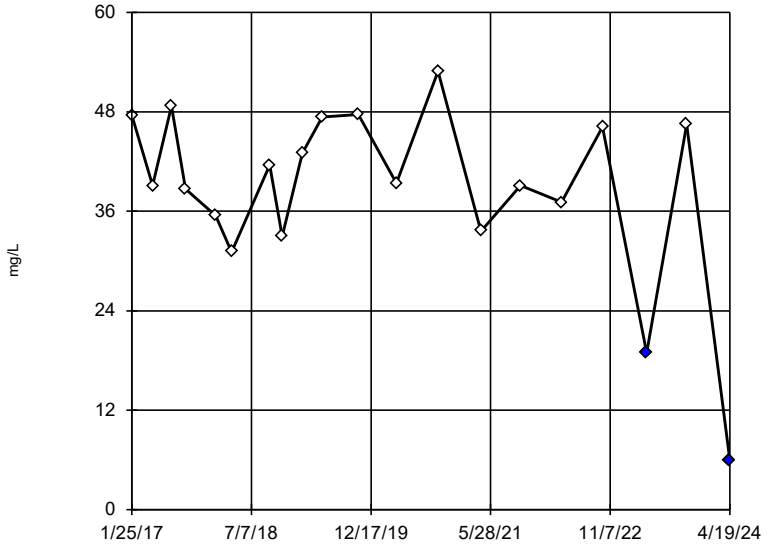
Constituent: Sulfate Analysis Run 7/31/2024 4:09 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-119



n = 20

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 38.65.
Std. Dev. = 10.95.
18.9: c = 0.4896
tabl = 0.45.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9574
Critical = 0.914
The distribution, after removal of suspect values, was found to be normally distributed.

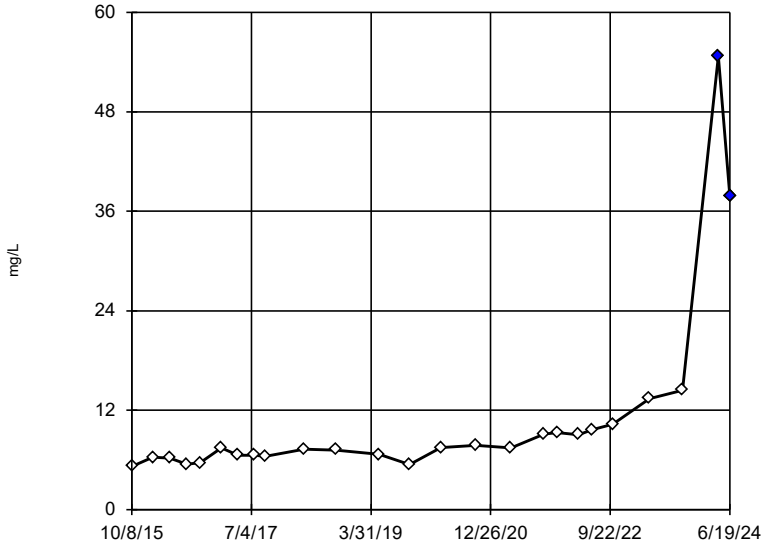
Constituent: Sulfate Analysis Run 7/31/2024 4:09 PM View: background update

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.20 Software licensed to Olsson. UG

Tukey's Outlier Screening

MW-117



n = 25

Outliers are drawn as solid.
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 = 31.03, low cutoff = 1.945, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 7/31/2024 4:09 PM View: background update

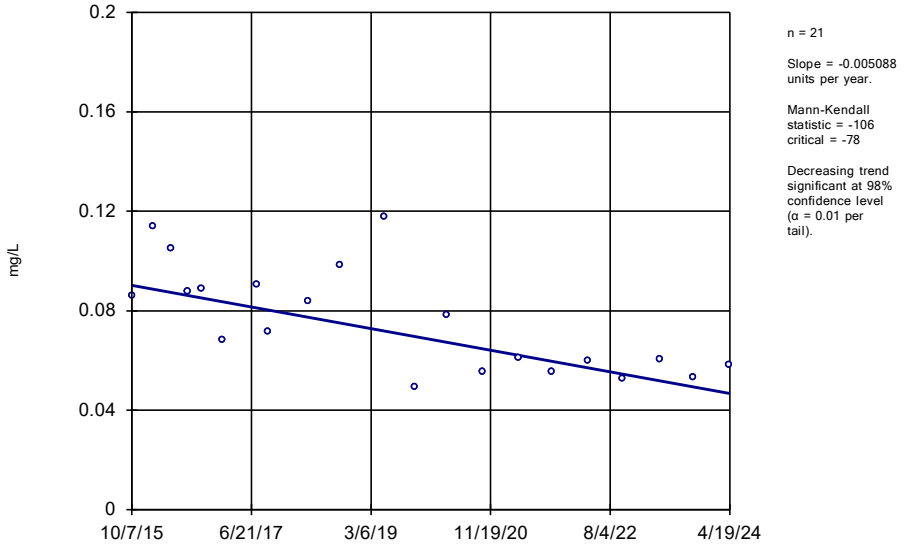
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Update of Background Data Sets for Existing Wells
Trend Tests Over Updated Background Data Sets

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-101



n = 21

Slope = -0.005088 units per year.

Mann-Kendall statistic = -106
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

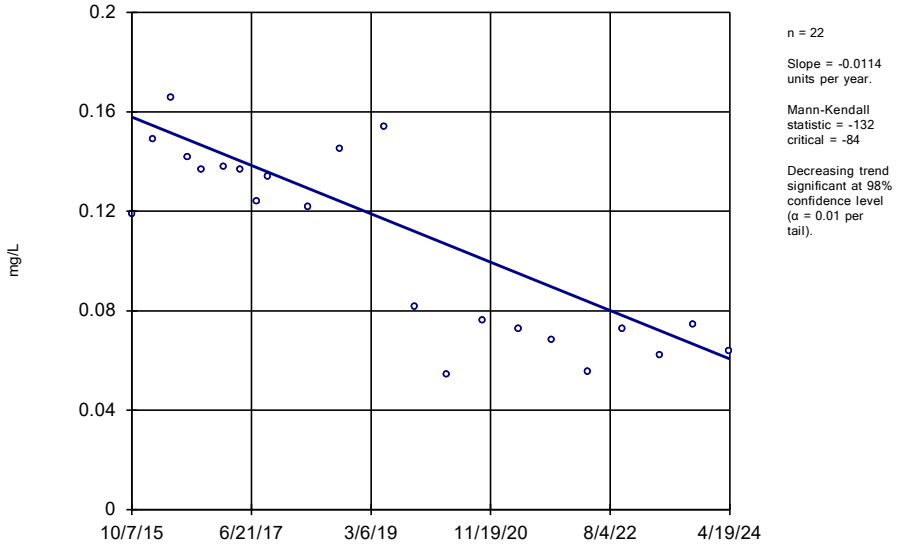
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-103



n = 22

Slope = -0.0114 units per year.

Mann-Kendall statistic = -132
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

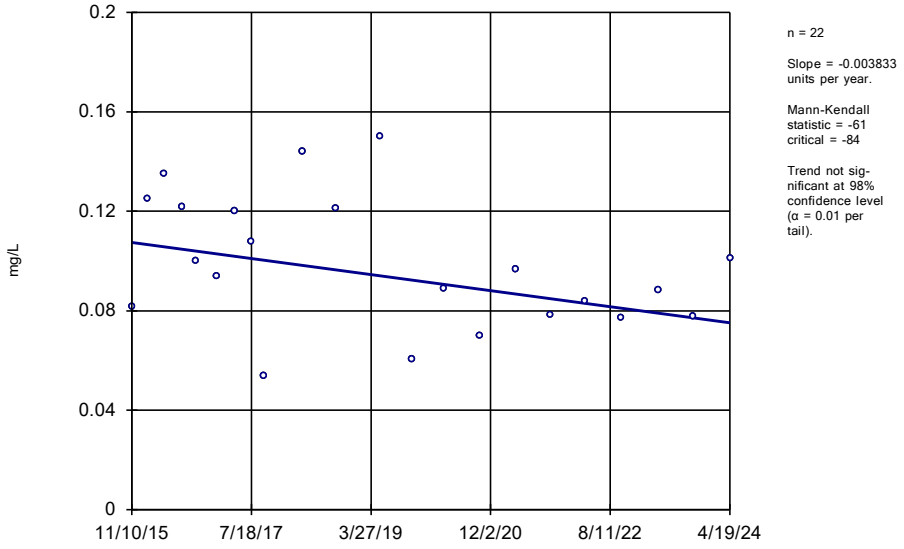
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-102



n = 22

Slope = -0.003833 units per year.

Mann-Kendall statistic = -61
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

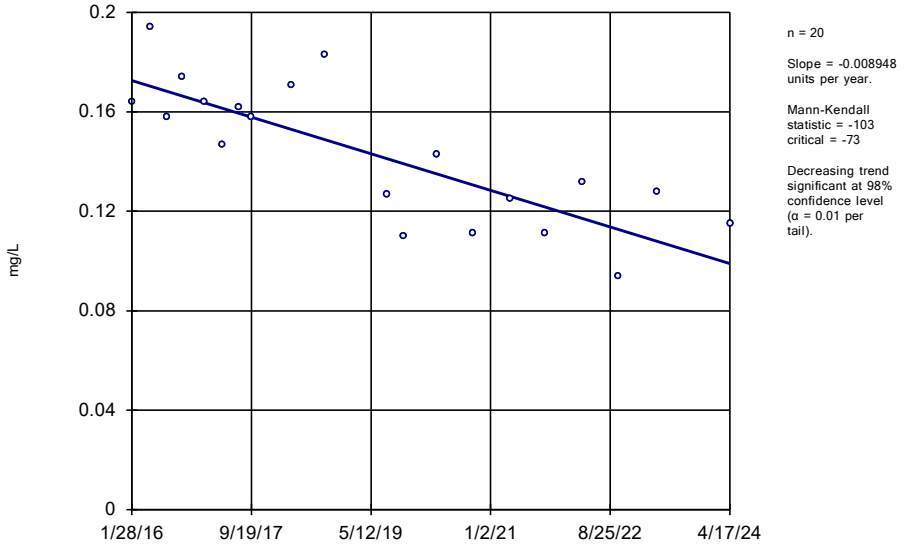
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-108 (bg)



n = 20

Slope = -0.008948 units per year.

Mann-Kendall statistic = -103
critical = -73

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

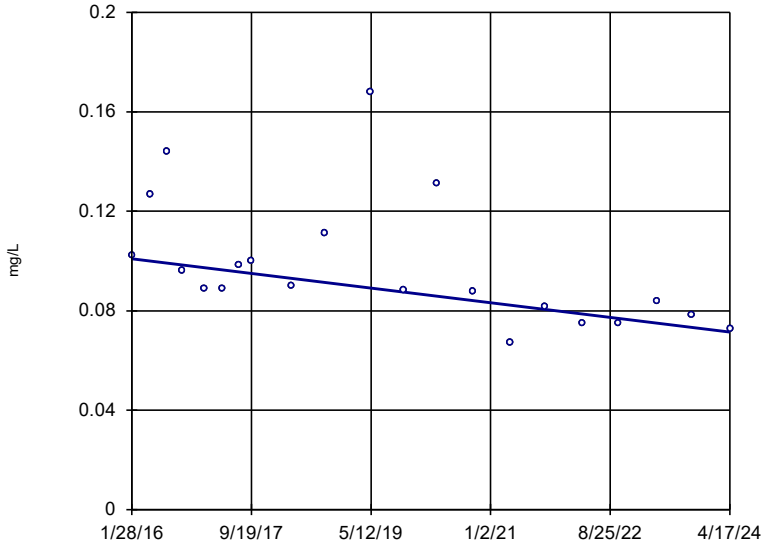
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-113 (bg)



n = 21

Slope = -0.003584 units per year.

Mann-Kendall statistic = -109
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

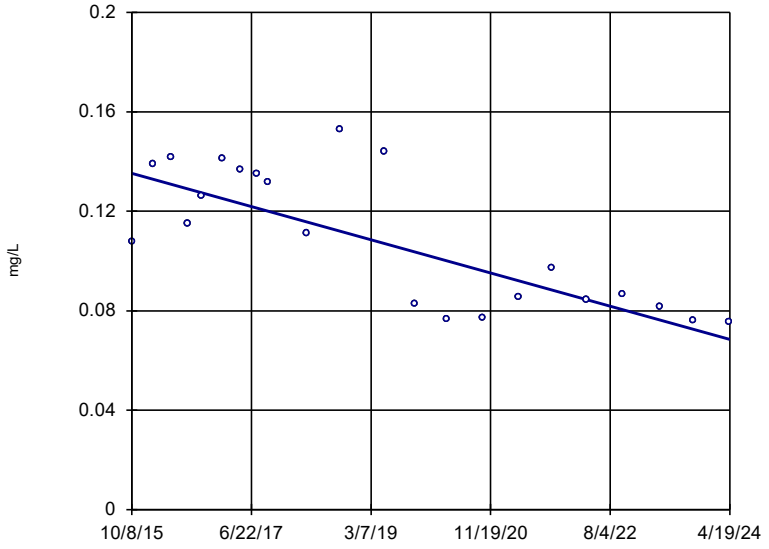
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-116



n = 22

Slope = -0.007817 units per year.

Mann-Kendall statistic = -115
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

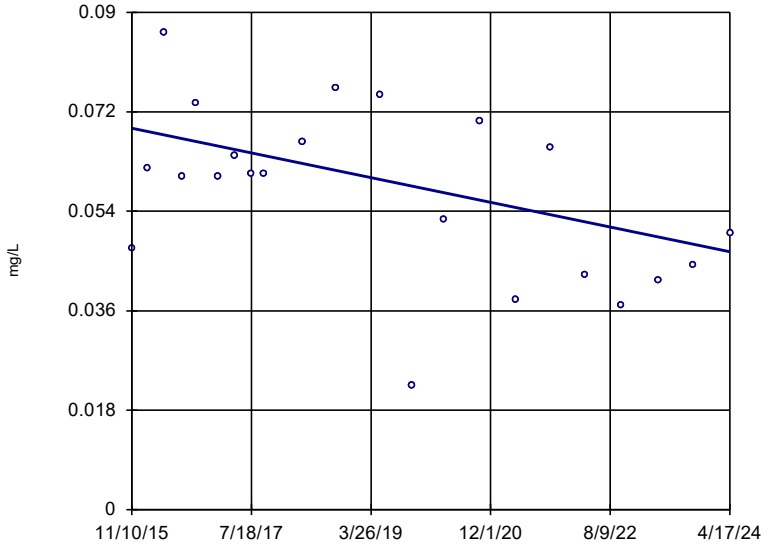
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-115 (bg)



n = 22

Slope = -0.002647 units per year.

Mann-Kendall statistic = -61
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

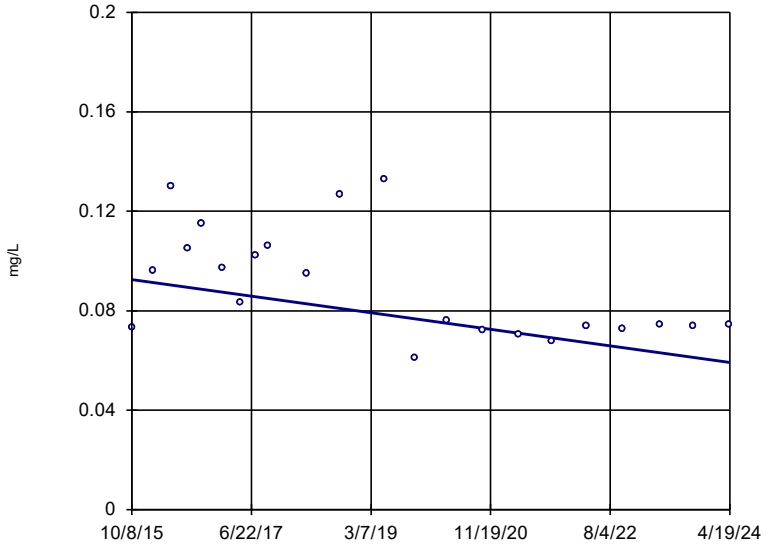
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-117



n = 22

Slope = -0.003922 units per year.

Mann-Kendall statistic = -75
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

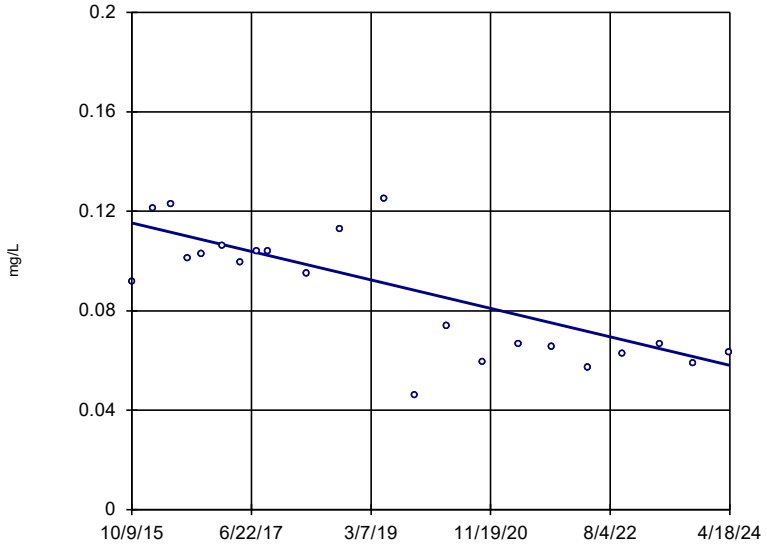
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-118



n = 22

Slope = -0.00672 units per year.

Mann-Kendall statistic = -108
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

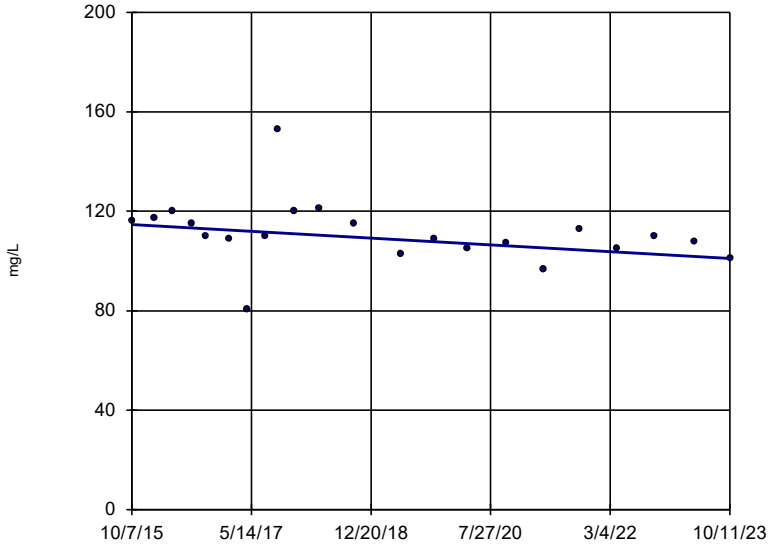
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-101



n = 22

Slope = -1.691 units per year.

Mann-Kendall statistic = -84
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

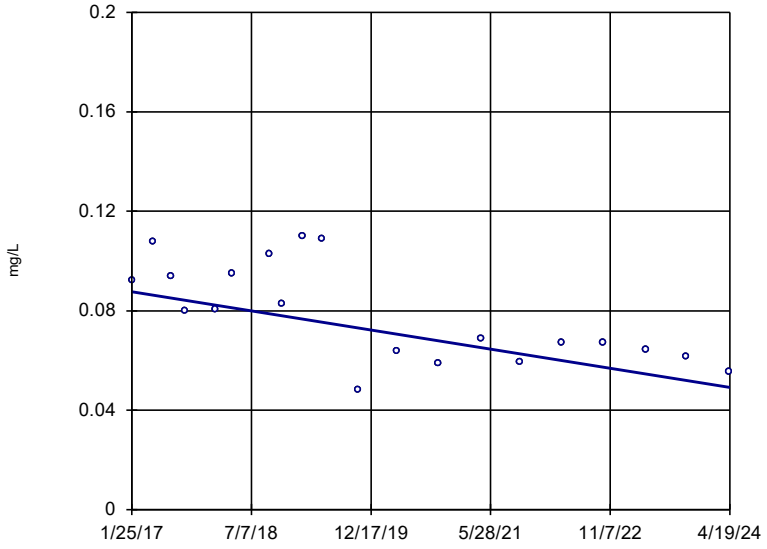
Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-119



n = 20

Slope = -0.005335 units per year.

Mann-Kendall statistic = -82
critical = -73

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

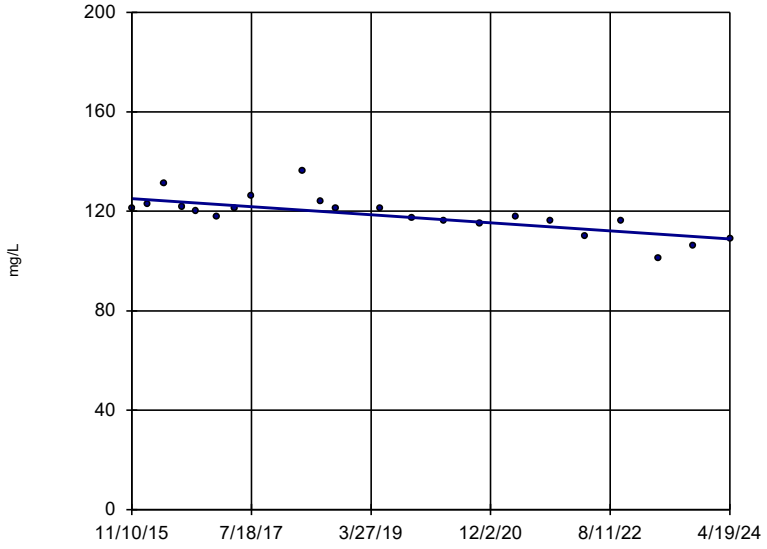
Constituent: Boron Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-102



n = 22

Slope = -1.917 units per year.

Mann-Kendall statistic = -143
critical = -84

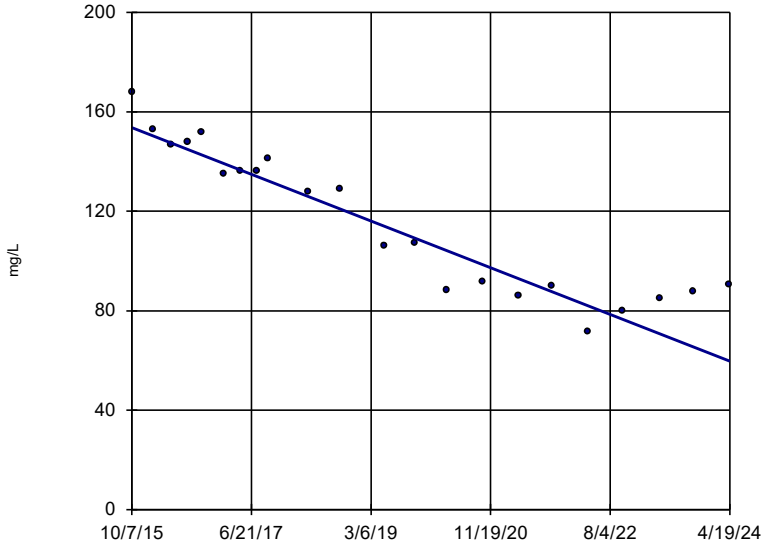
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-103



n = 22

Slope = -11 units per year.

Mann-Kendall statistic = -176
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

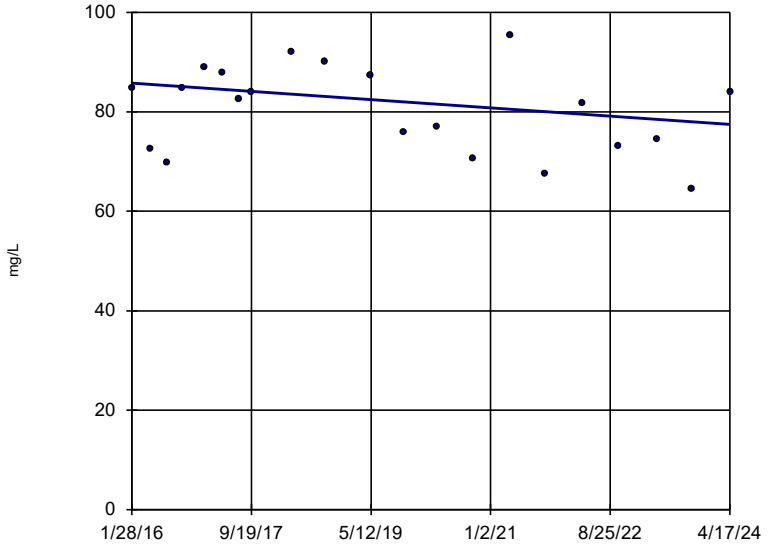
Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-113 (bg)



n = 21

Slope = -1.011 units per year.

Mann-Kendall statistic = -43
critical = -78

Trend not significant at 98% confidence level (α = 0.01 per tail).

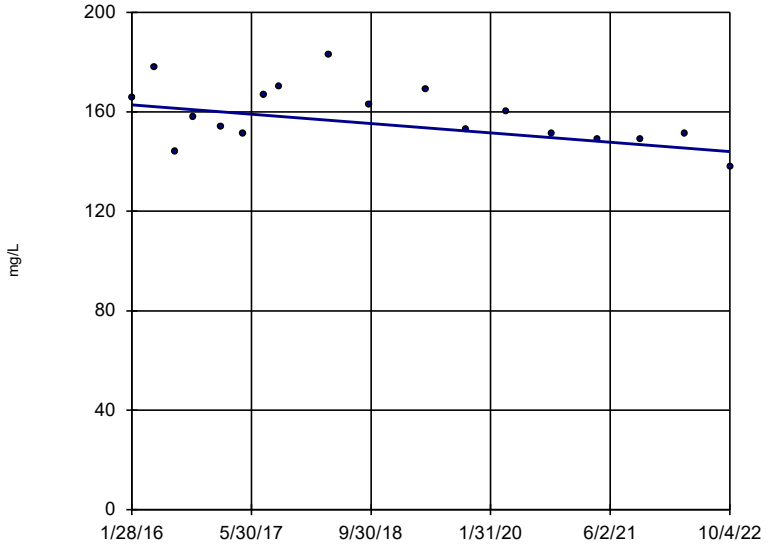
Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-108 (bg)



n = 18

Slope = -2.812 units per year.

Mann-Kendall statistic = -55
critical = -63

Trend not significant at 98% confidence level (α = 0.01 per tail).

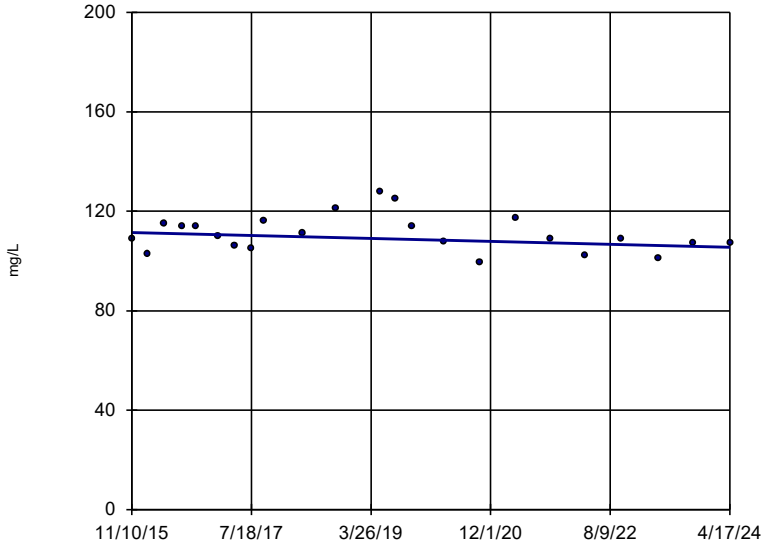
Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-115 (bg)



n = 23

Slope = -0.6956 units per year.

Mann-Kendall statistic = -42
critical = -89

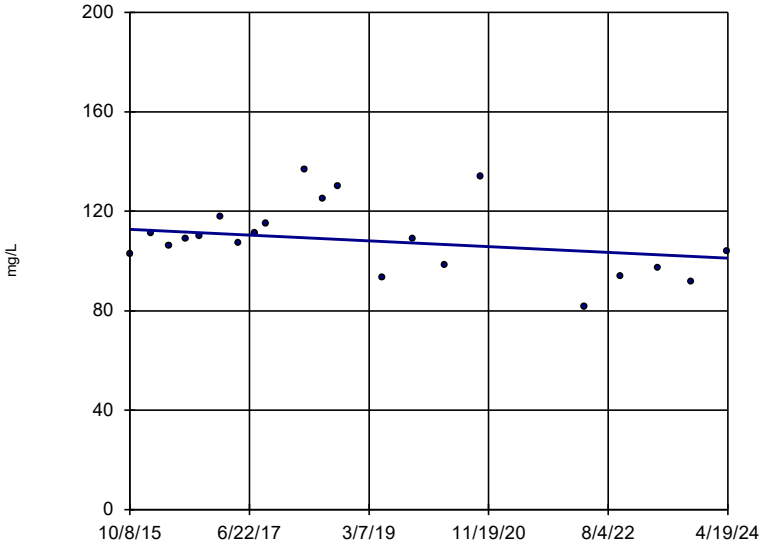
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-116



n = 21

Slope = -1.361 units per year.

Mann-Kendall statistic = -36
critical = -78

Trend not significant at 98% confidence level (α = 0.01 per tail).

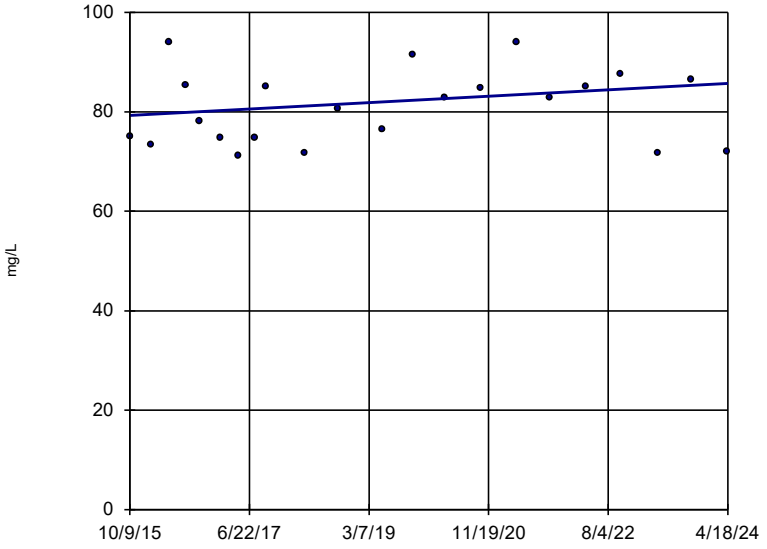
Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-118



n = 22

Slope = 0.7597 units per year.

Mann-Kendall statistic = 34
critical = 84

Trend not significant at 98% confidence level (α = 0.01 per tail).

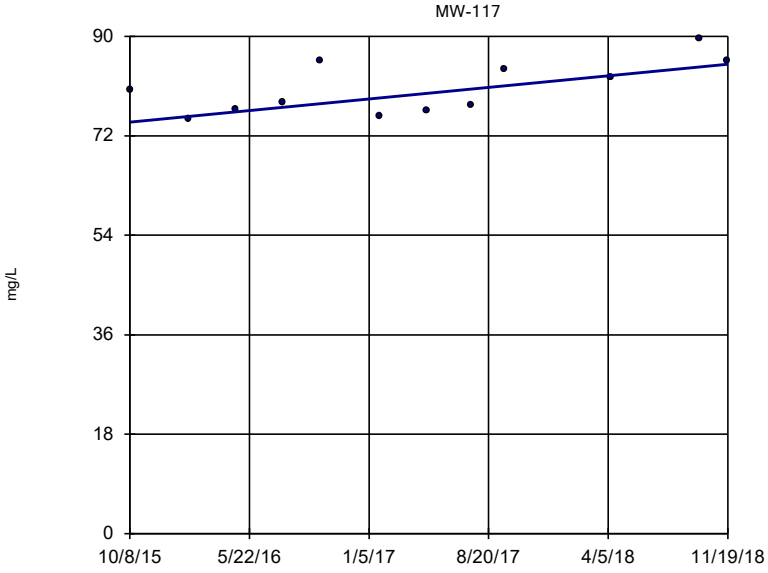
Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-117



n = 12

Slope = 3.373 units per year.

Mann-Kendall statistic = 30
critical = 35

Trend not significant at 98% confidence level (α = 0.01 per tail).

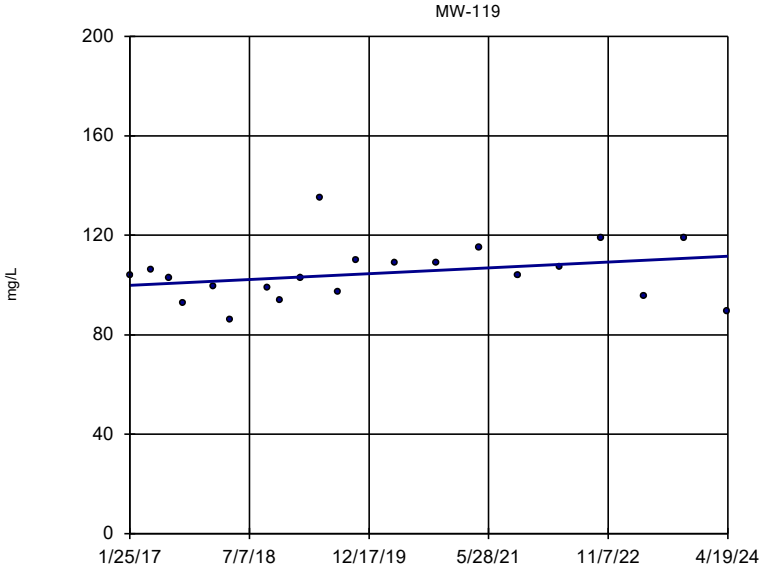
Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-119



n = 21

Slope = 1.629 units per year.

Mann-Kendall statistic = 38
critical = 78

Trend not significant at 98% confidence level (α = 0.01 per tail).

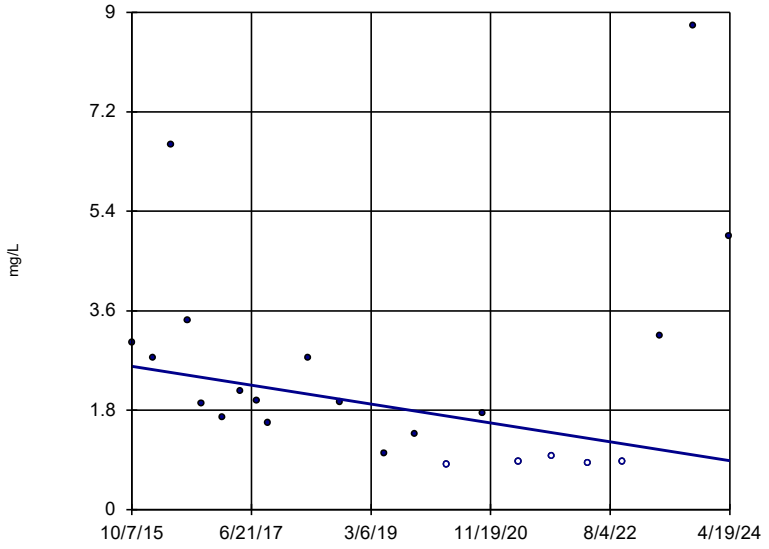
Constituent: Calcium Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-101



n = 22

Slope = -0.2003 units per year.

Mann-Kendall statistic = -59
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

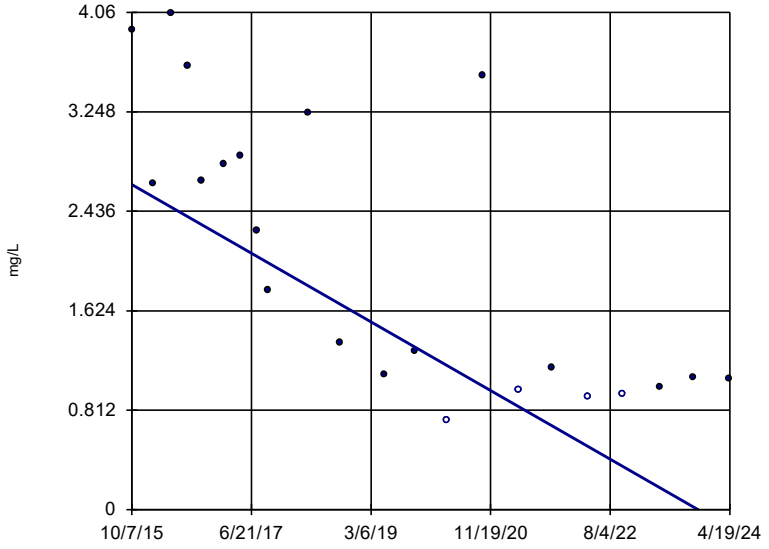
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-103



n = 22

Slope = -0.3286 units per year.

Mann-Kendall statistic = -135
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

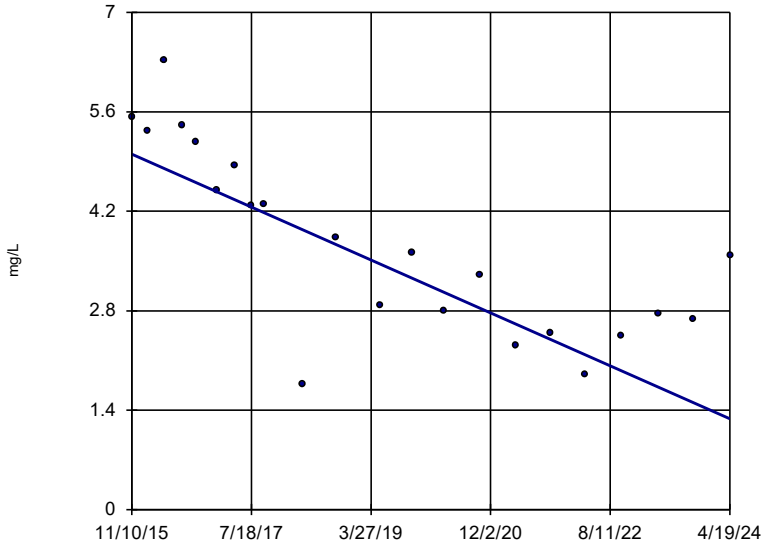
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-102



n = 22

Slope = -0.4415 units per year.

Mann-Kendall statistic = -151
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

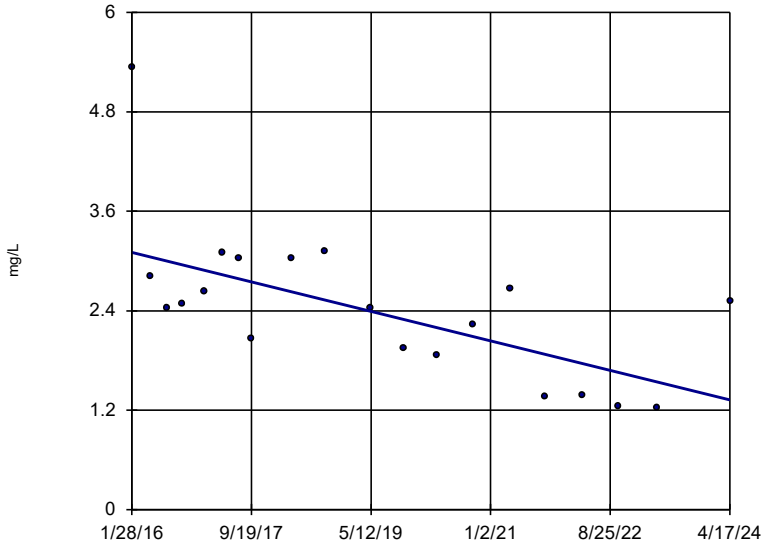
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-108 (bg)



n = 20

Slope = -0.2165 units per year.

Mann-Kendall statistic = -91
critical = -73

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

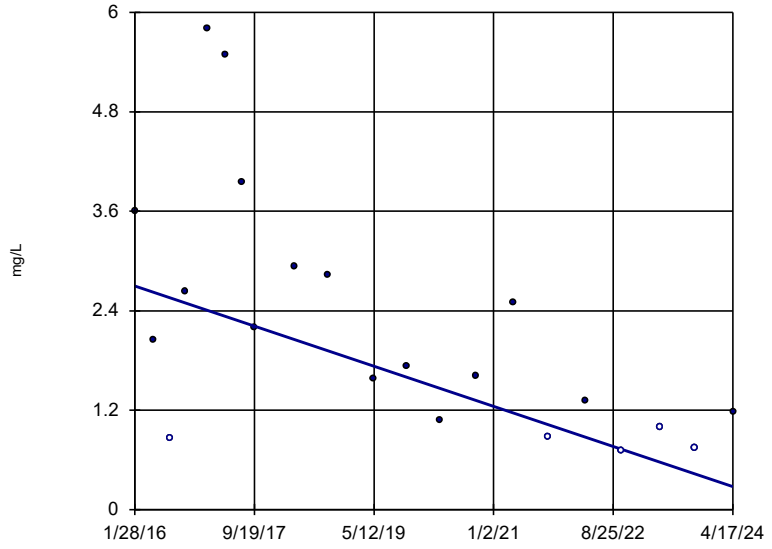
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-113 (bg)



n = 21

Slope = -0.2945 units per year.

Mann-Kendall statistic = -106
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

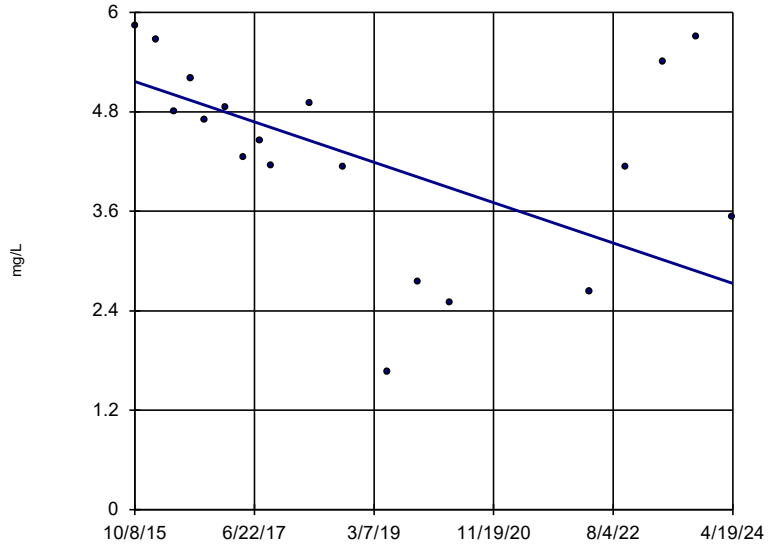
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-116



n = 19

Slope = -0.2858 units per year.

Mann-Kendall statistic = -65
critical = -68

Trend not significant at 98% confidence level (α = 0.01 per tail).

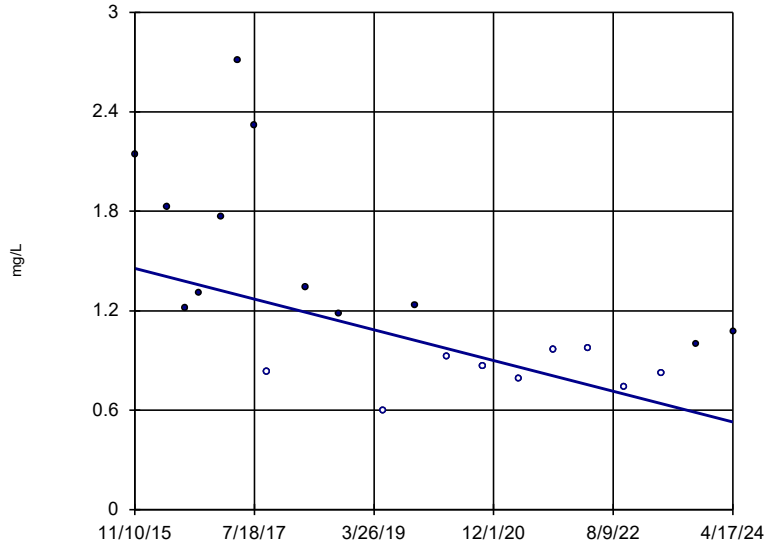
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-115 (bg)



n = 21

Slope = -0.1098 units per year.

Mann-Kendall statistic = -90
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

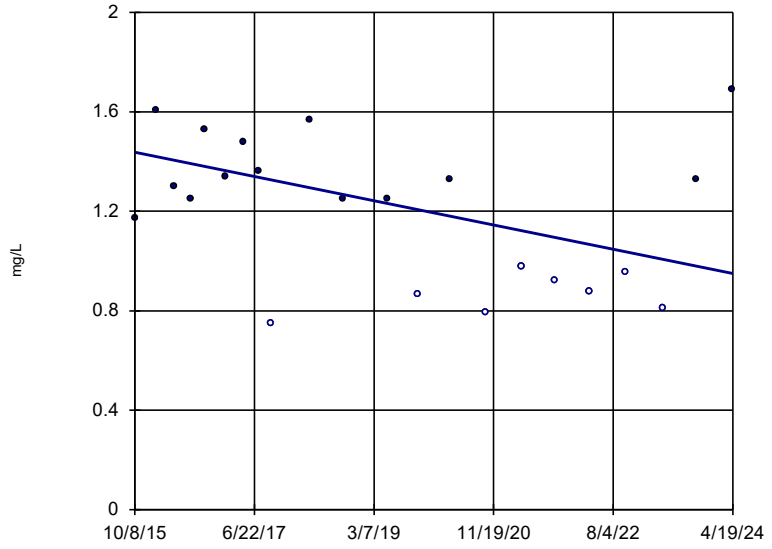
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-117



n = 22

Slope = -0.05703 units per year.

Mann-Kendall statistic = -51
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

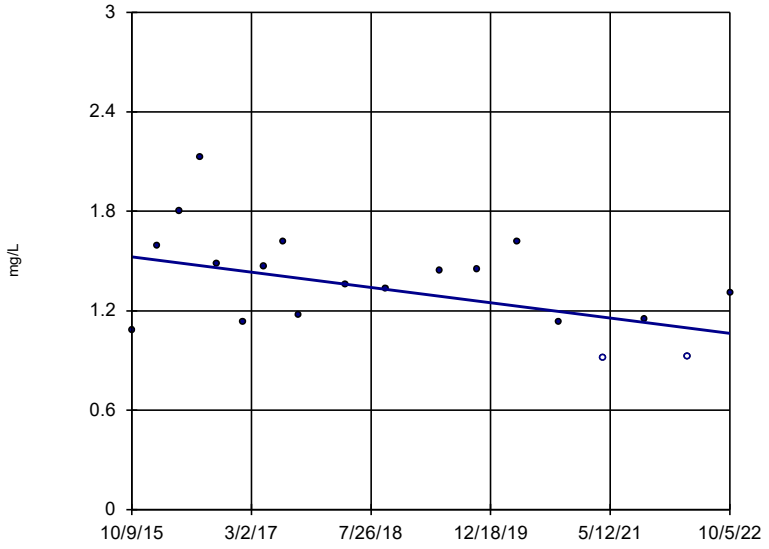
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-118



n = 19

Slope = -0.06593 units per year.

Mann-Kendall statistic = -55
critical = -68

Trend not significant at 98% confidence level (α = 0.01 per tail).

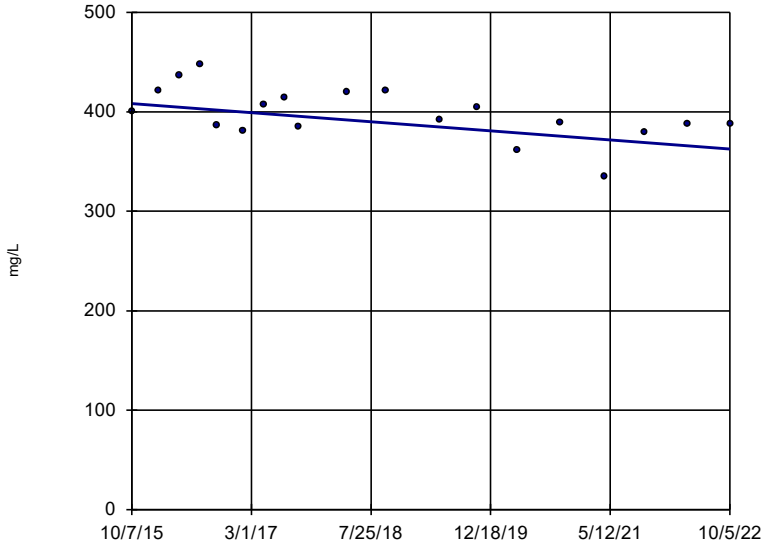
Constituent: Chloride Analysis Run 11/12/2024 3:29 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-101



n = 19

Slope = -6.511 units per year.

Mann-Kendall statistic = -63
critical = -68

Trend not significant at 98% confidence level (α = 0.01 per tail).

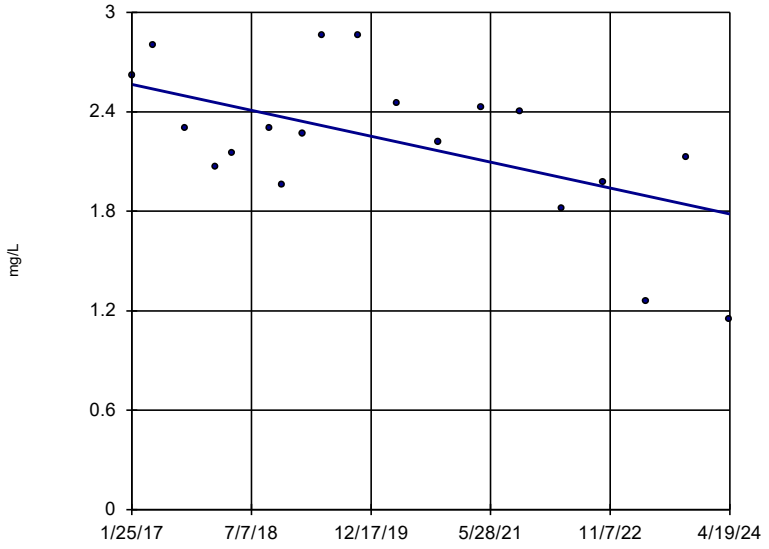
Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-119



n = 19

Slope = -0.108 units per year.

Mann-Kendall statistic = -63
critical = -68

Trend not significant at 98% confidence level (α = 0.01 per tail).

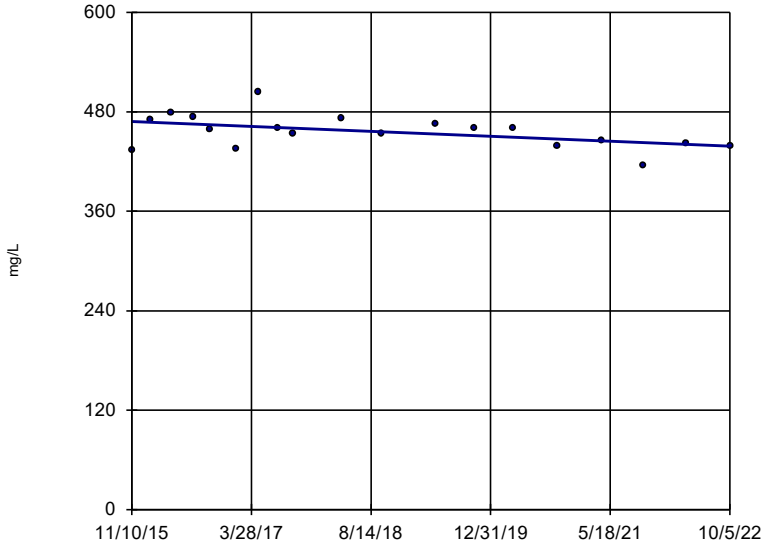
Constituent: Chloride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-102



n = 19

Slope = -4.306 units per year.

Mann-Kendall statistic = -58
critical = -68

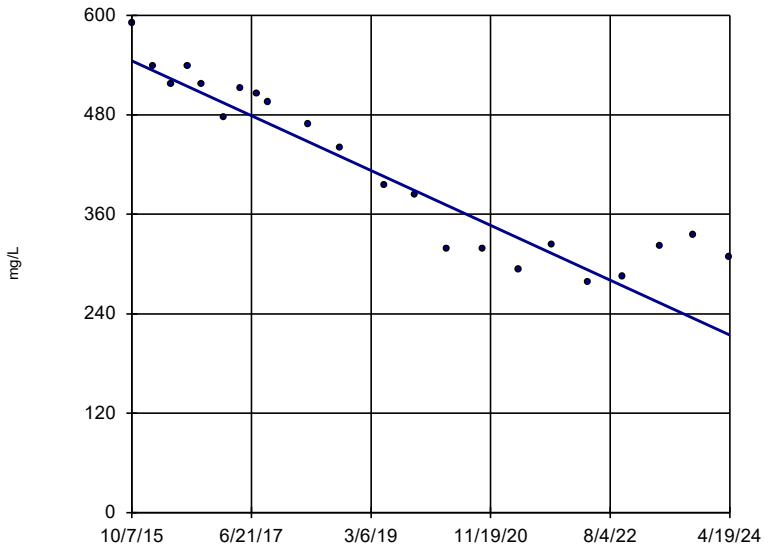
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-103



n = 22

Slope = -38.76 units per year.

Mann-Kendall statistic = -180
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

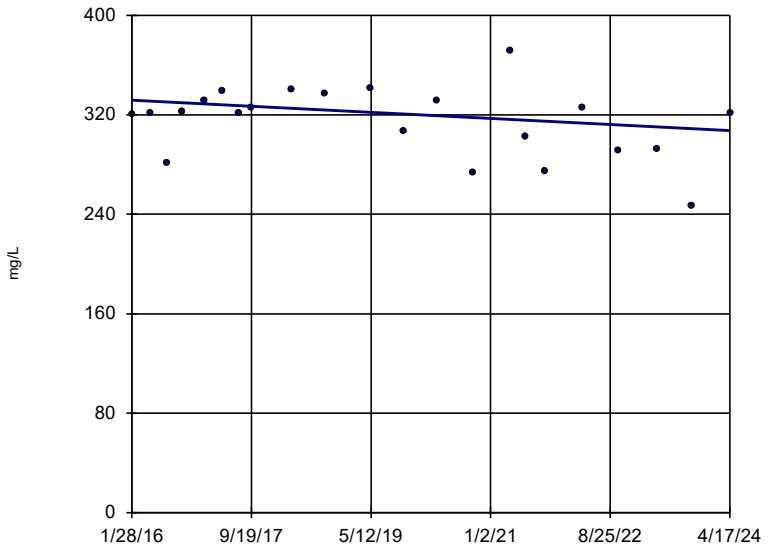
Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-113 (bg)



n = 22

Slope = -2.988 units per year.

Mann-Kendall statistic = -34
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

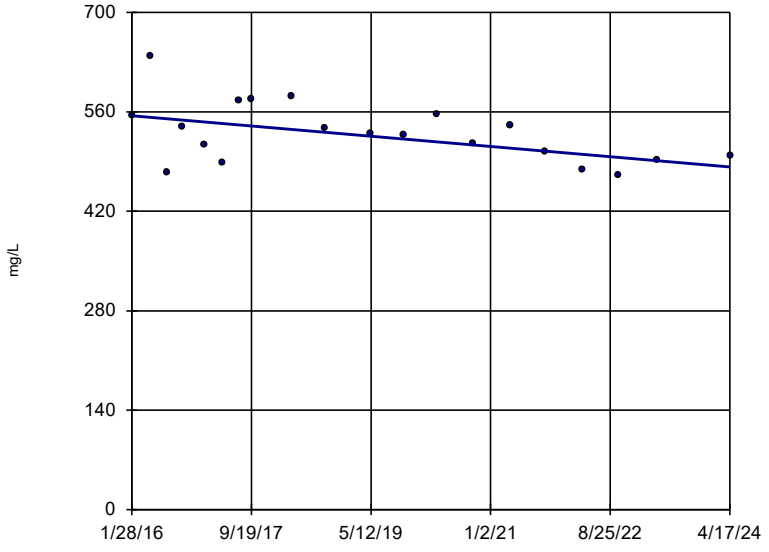
Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-108 (bg)



n = 20

Slope = -8.743 units per year.

Mann-Kendall statistic = -66
critical = -73

Trend not significant at 98% confidence level (α = 0.01 per tail).

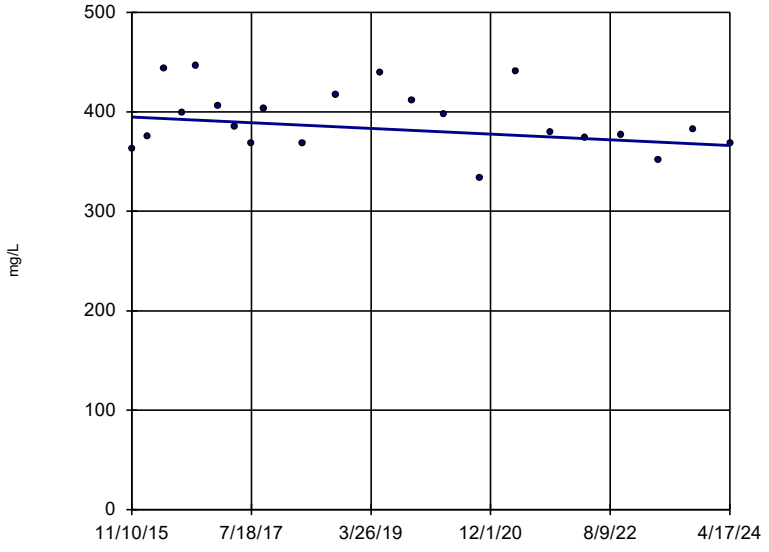
Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-115 (bg)



n = 22

Slope = -3.385 units per year.

Mann-Kendall statistic = -44
critical = -84

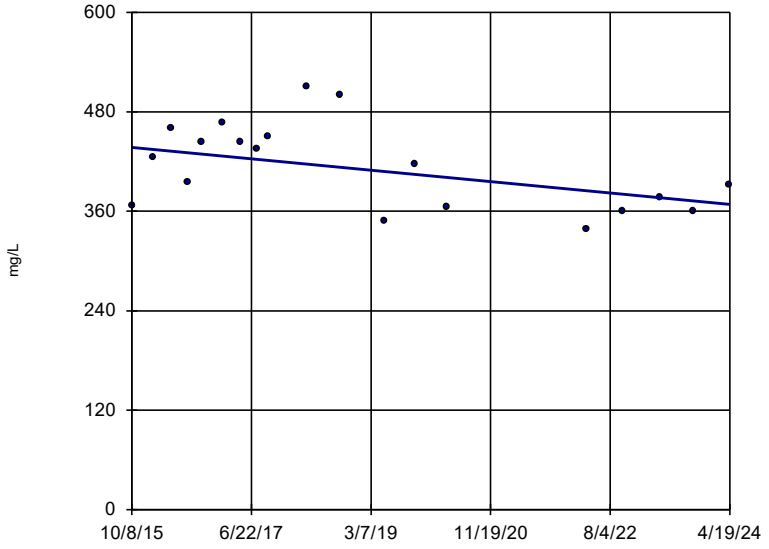
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-116



n = 19

Slope = -8.099 units per year.

Mann-Kendall statistic = -44
critical = -68

Trend not significant at 98% confidence level (α = 0.01 per tail).

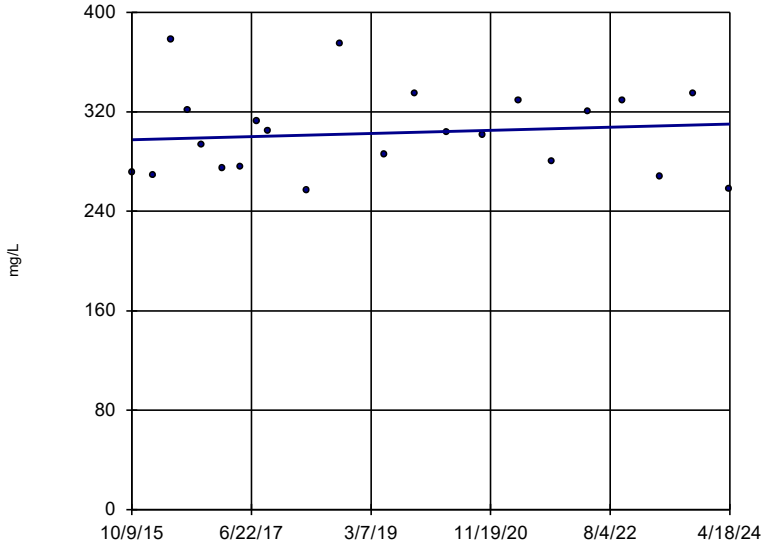
Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-118



n = 22

Slope = 1.484 units per year.

Mann-Kendall statistic = 13
critical = 84

Trend not significant at 98% confidence level (α = 0.01 per tail).

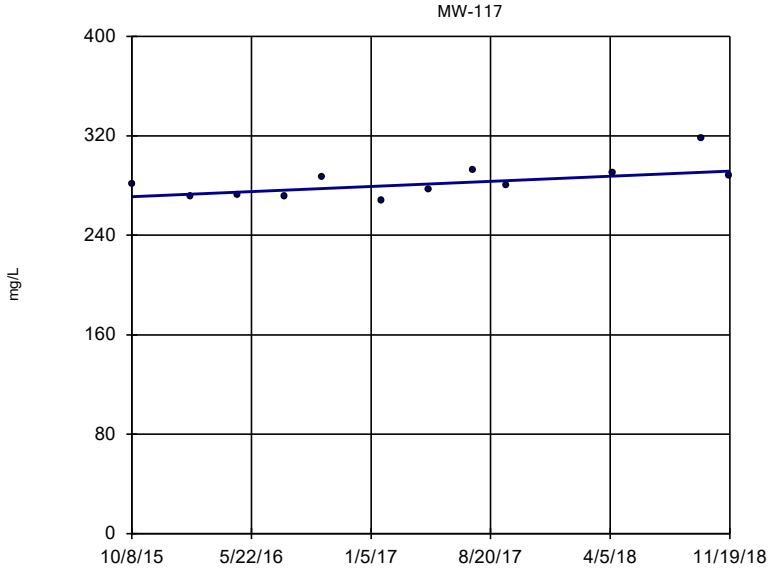
Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-117



n = 12

Slope = 6.626 units per year.

Mann-Kendall statistic = 29
critical = 35

Trend not significant at 98% confidence level (α = 0.01 per tail).

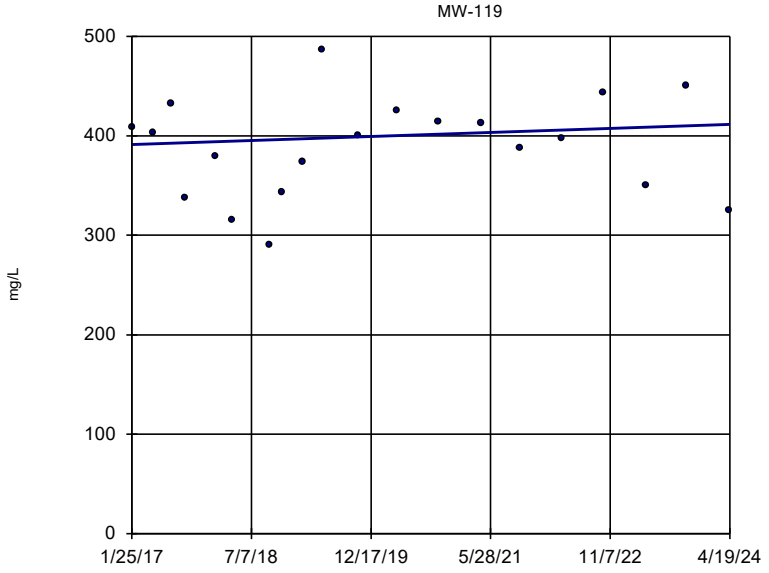
Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-119



n = 20

Slope = 2.784 units per year.

Mann-Kendall statistic = 16
critical = 73

Trend not significant at 98% confidence level (α = 0.01 per tail).

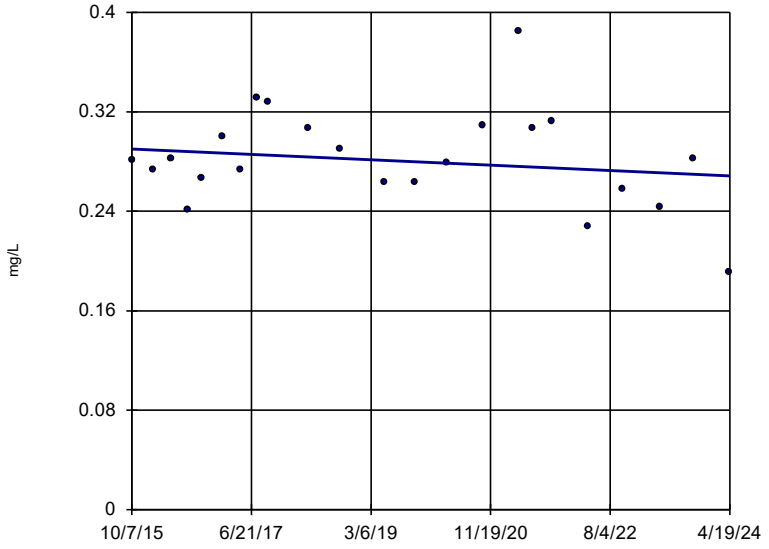
Constituent: Dissolved Solids Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-101



n = 23

Slope = -0.002533 units per year.

Mann-Kendall statistic = -25
critical = -89

Trend not significant at 98% confidence level (α = 0.01 per tail).

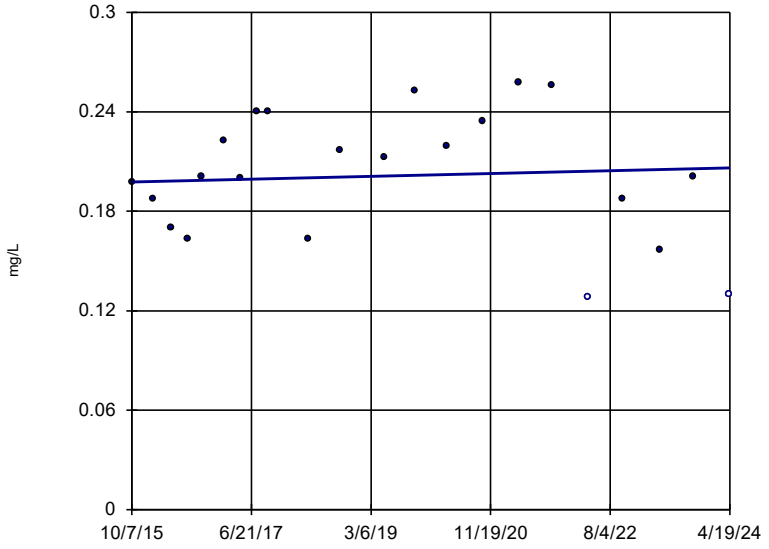
Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-103



n = 22

Slope = 0.0009825 units per year.

Mann-Kendall statistic = 9
critical = 84

Trend not significant at 98% confidence level (α = 0.01 per tail).

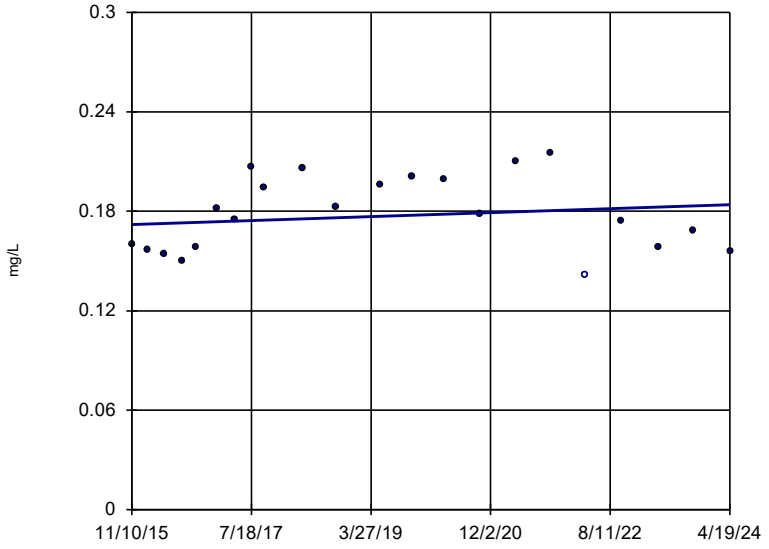
Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-102



n = 22

Slope = 0.001427 units per year.

Mann-Kendall statistic = 26
critical = 84

Trend not significant at 98% confidence level (α = 0.01 per tail).

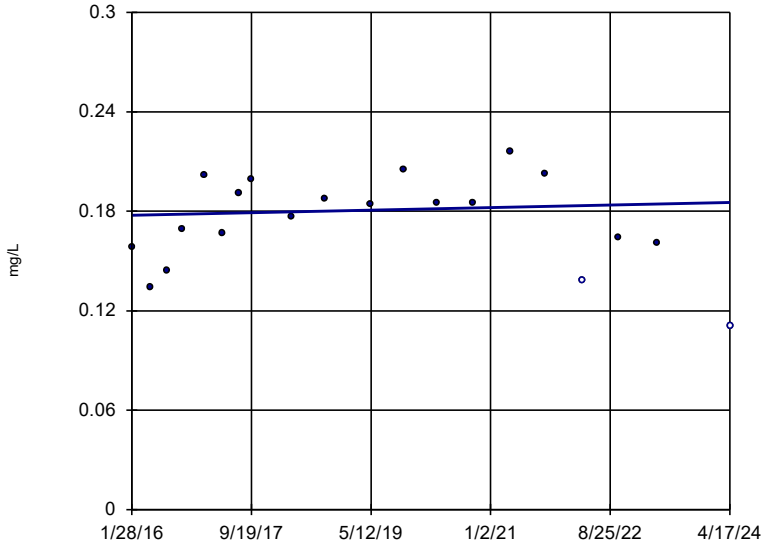
Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-108 (bg)



n = 20

Slope = 0.0009428 units per year.

Mann-Kendall statistic = 11
critical = 73

Trend not significant at 98% confidence level (α = 0.01 per tail).

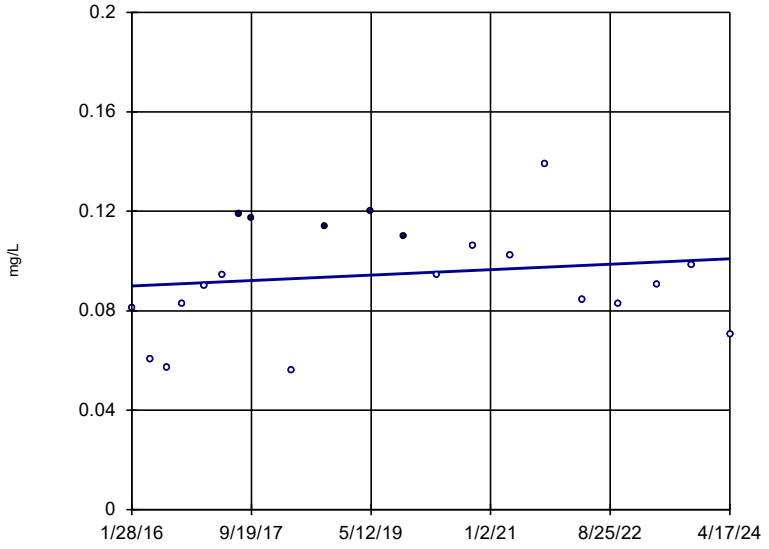
Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-113 (bg)



n = 21

Slope = 0.001343 units per year.

Mann-Kendall statistic = 24
critical = 78

Trend not significant at 98% confidence level (α = 0.01 per tail).

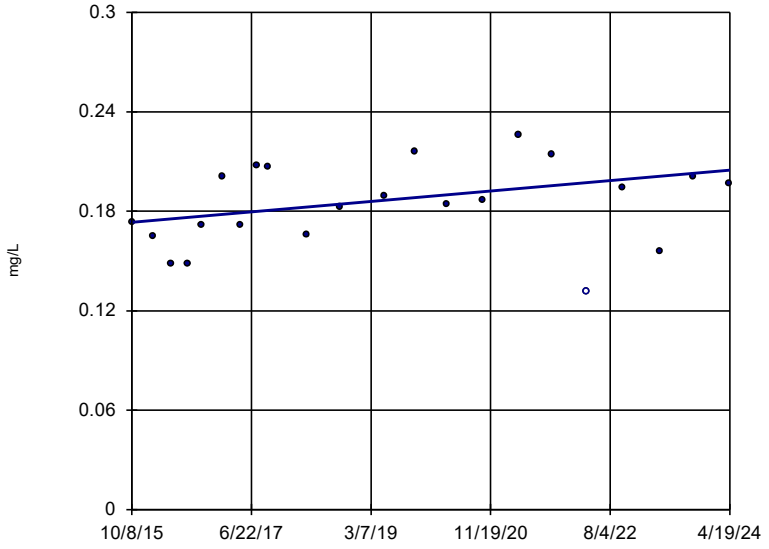
Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-116



n = 22

Slope = 0.003667 units per year.

Mann-Kendall statistic = 60
critical = 84

Trend not significant at 98% confidence level (α = 0.01 per tail).

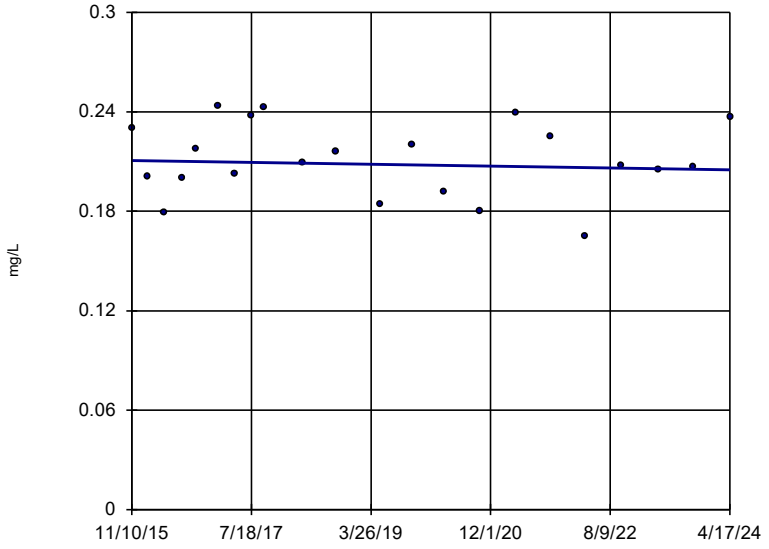
Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-115 (bg)



n = 22

Slope = -0.0006636 units per year.

Mann-Kendall statistic = -7
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

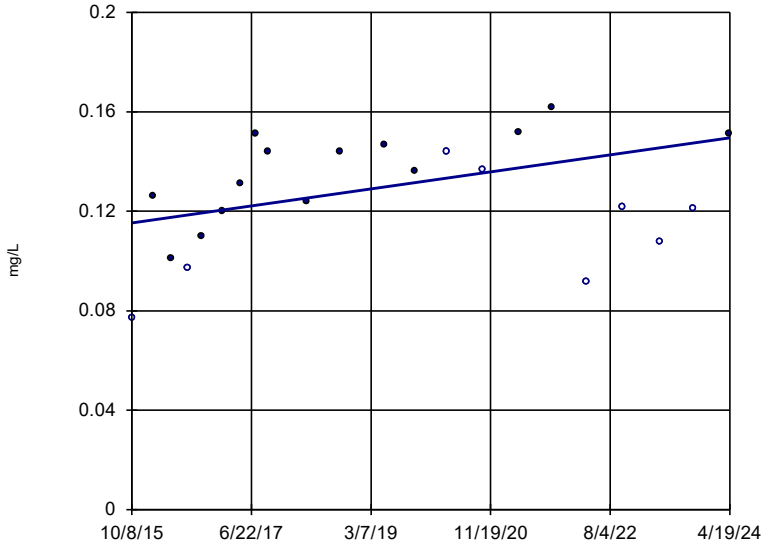
Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-117



n = 22

Slope = 0.004018 units per year.

Mann-Kendall statistic = 65
critical = 84

Trend not significant at 98% confidence level (α = 0.01 per tail).

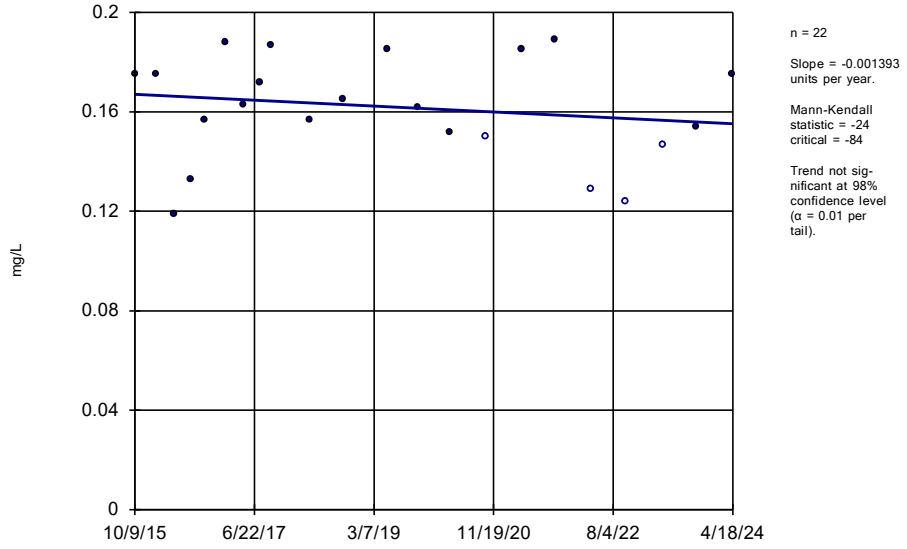
Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-118



n = 22

Slope = -0.001393 units per year.

Mann-Kendall statistic = -24
critical = -84

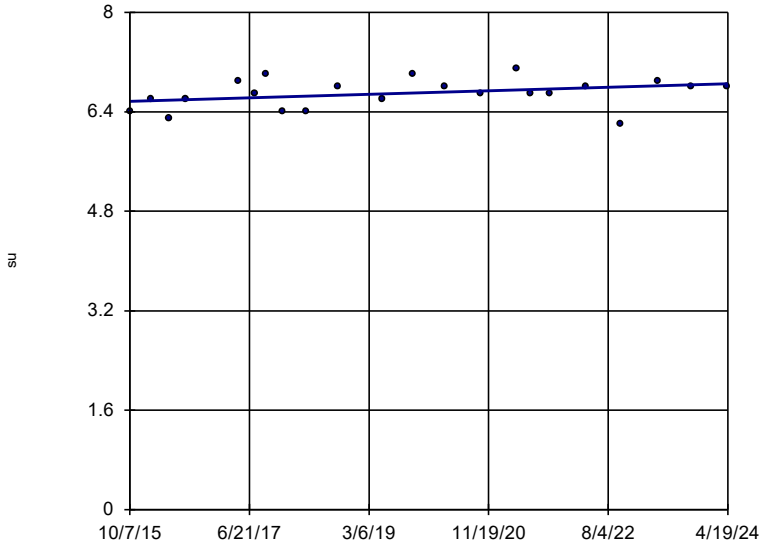
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-101



n = 22

Slope = 0.033 units per year.

Mann-Kendall statistic = 59
critical = 84

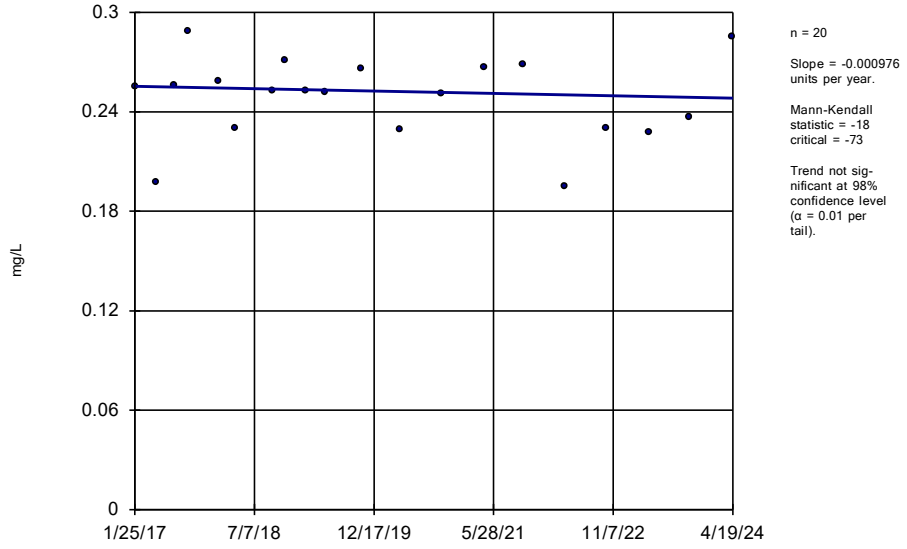
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-119



n = 20

Slope = -0.000976 units per year.

Mann-Kendall statistic = -18
critical = -73

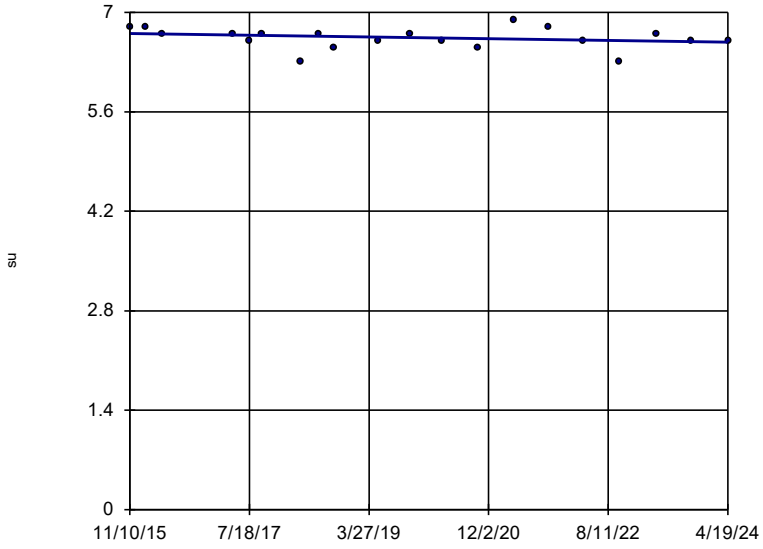
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-102



n = 20

Slope = -0.01408 units per year.

Mann-Kendall statistic = -43
critical = -73

Trend not significant at 98% confidence level (α = 0.01 per tail).

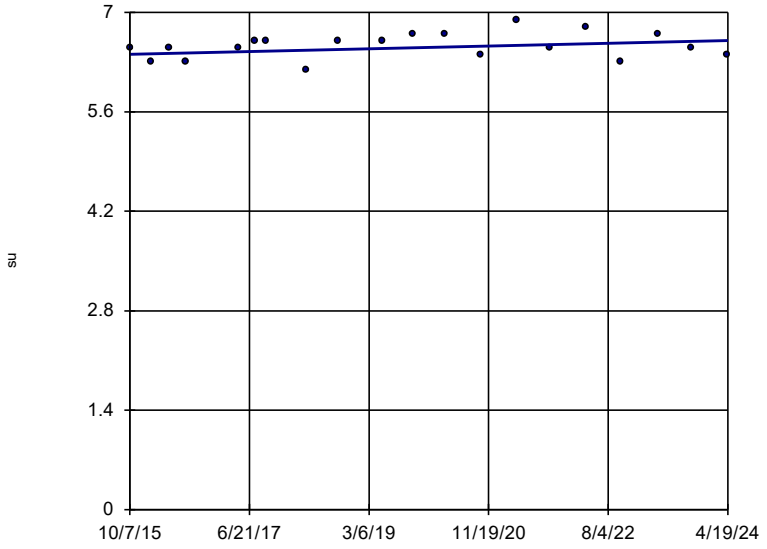
Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-103



n = 20

Slope = 0.02303 units per year.

Mann-Kendall statistic = 37
critical = 73

Trend not significant at 98% confidence level (α = 0.01 per tail).

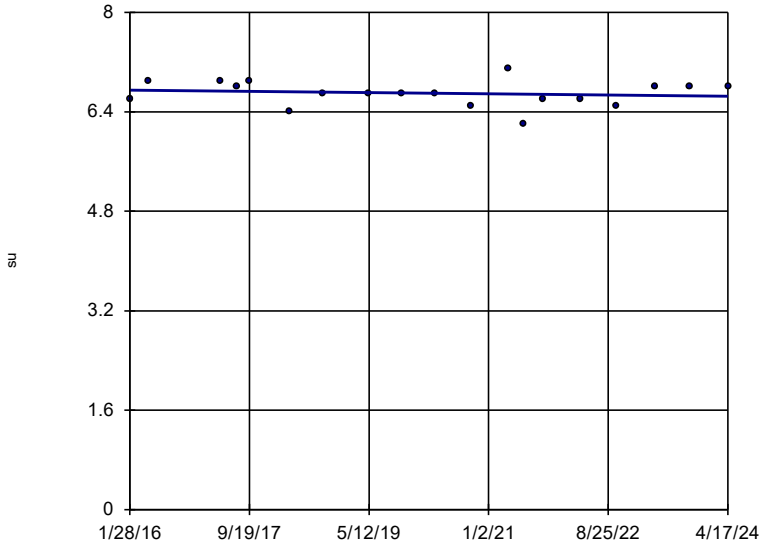
Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-113 (bg)



n = 19

Slope = -0.01254 units per year.

Mann-Kendall statistic = -20
critical = -68

Trend not significant at 98% confidence level (α = 0.01 per tail).

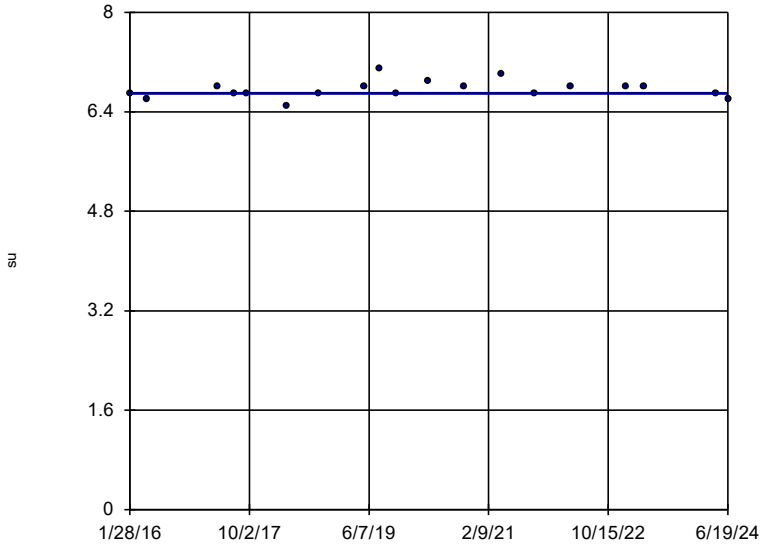
Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-108 (bg)



n = 19

Slope = 0 units per year.

Mann-Kendall statistic = 22
critical = 68

Trend not significant at 98% confidence level (α = 0.01 per tail).

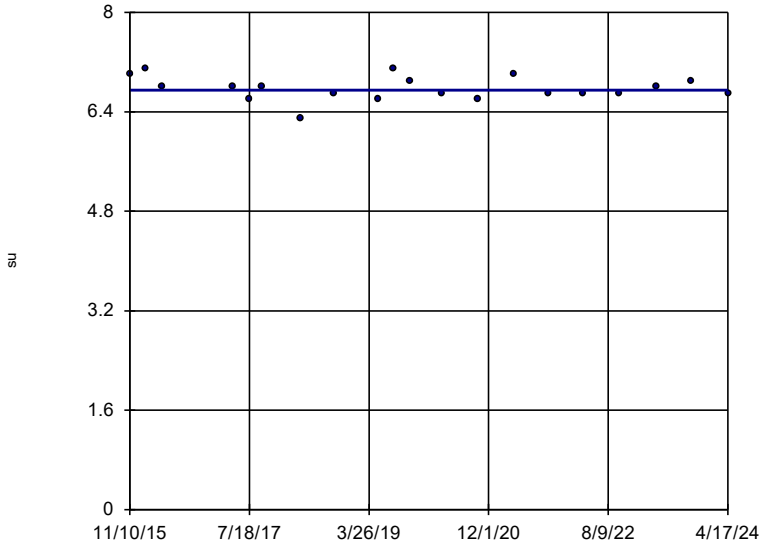
Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-115 (bg)



n = 20

Slope = 0 units per year.

Mann-Kendall statistic = -19
critical = -73

Trend not significant at 98% confidence level (α = 0.01 per tail).

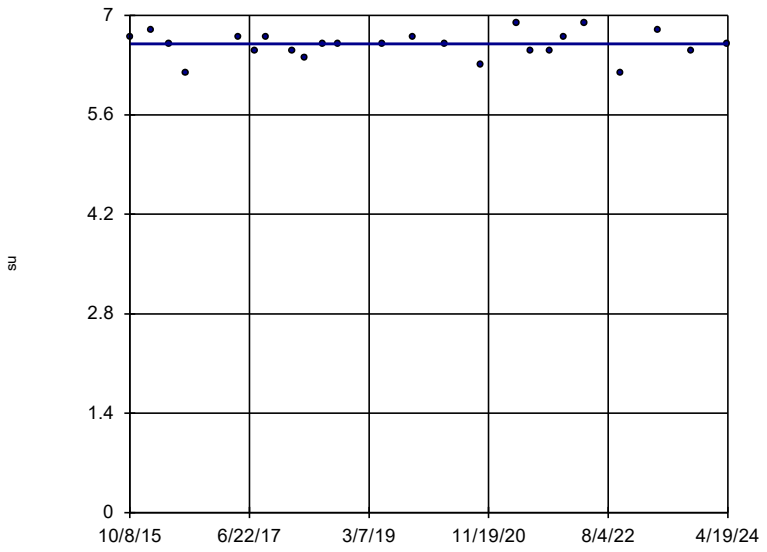
Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-116



n = 24

Slope = 0 units per year.

Mann-Kendall statistic = -6
critical = -95

Trend not significant at 98% confidence level (α = 0.01 per tail).

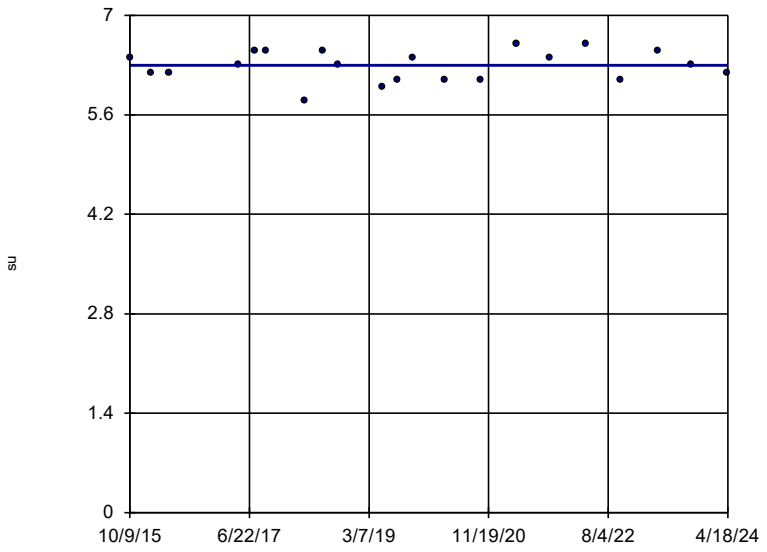
Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-118



n = 21

Slope = 0 units per year.

Mann-Kendall statistic = 10
critical = 78

Trend not significant at 98% confidence level (α = 0.01 per tail).

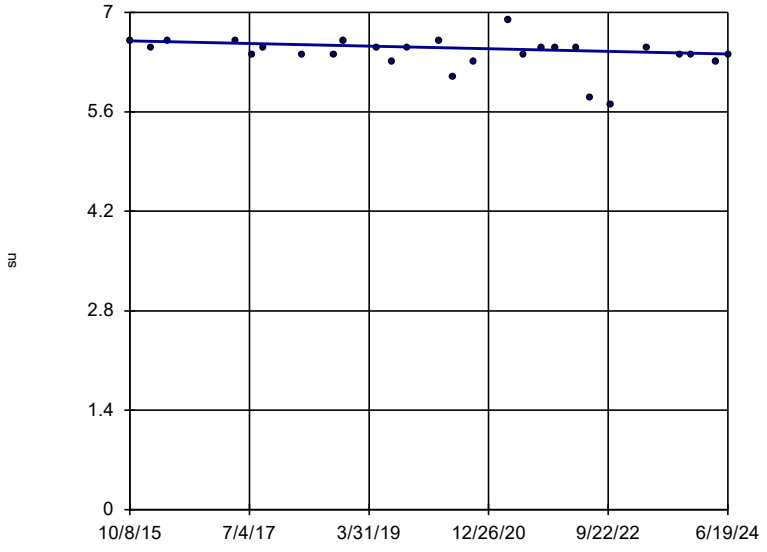
Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-117



n = 27

Slope = -0.02155 units per year.

Mann-Kendall statistic = -107
critical = -112

Trend not significant at 98% confidence level (α = 0.01 per tail).

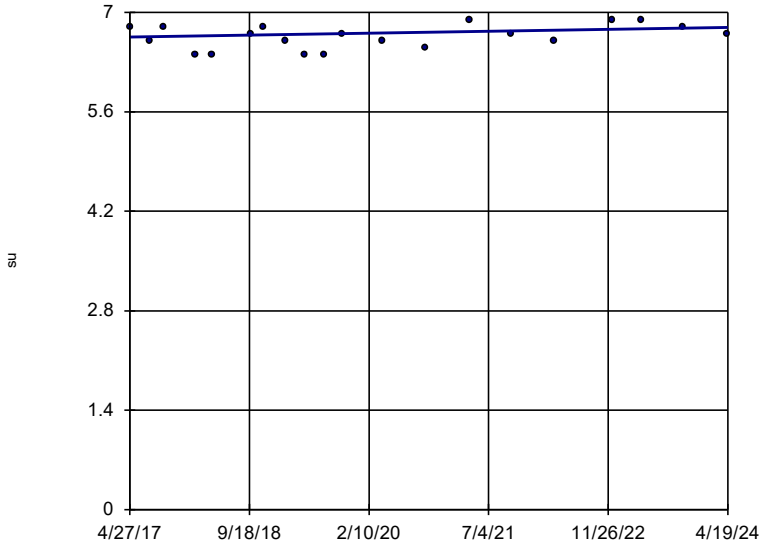
Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-119



n = 20

Slope = 0.01959 units per year.

Mann-Kendall statistic = 39
critical = 73

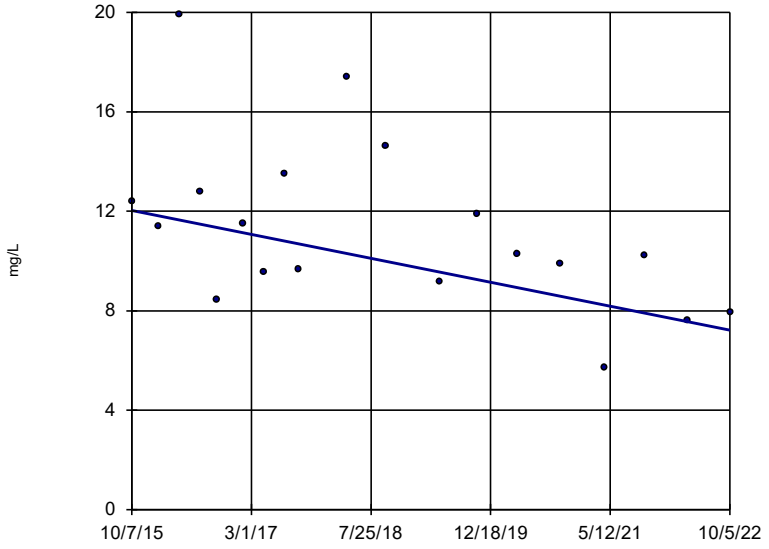
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: pH Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-101



n = 19

Slope = -0.6868 units per year.

Mann-Kendall statistic = -61
critical = -68

Trend not significant at 98% confidence level (α = 0.01 per tail).

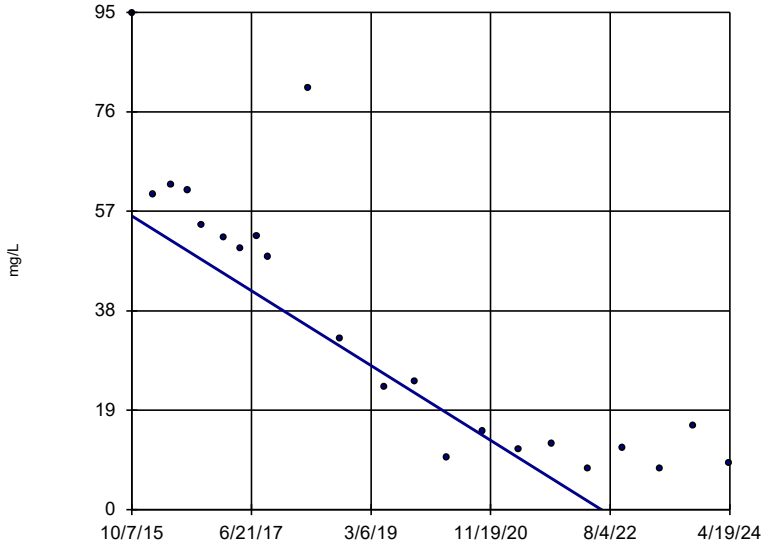
Constituent: Sulfate Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-103



n = 22

Slope = -8.371 units per year.

Mann-Kendall statistic = -173
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

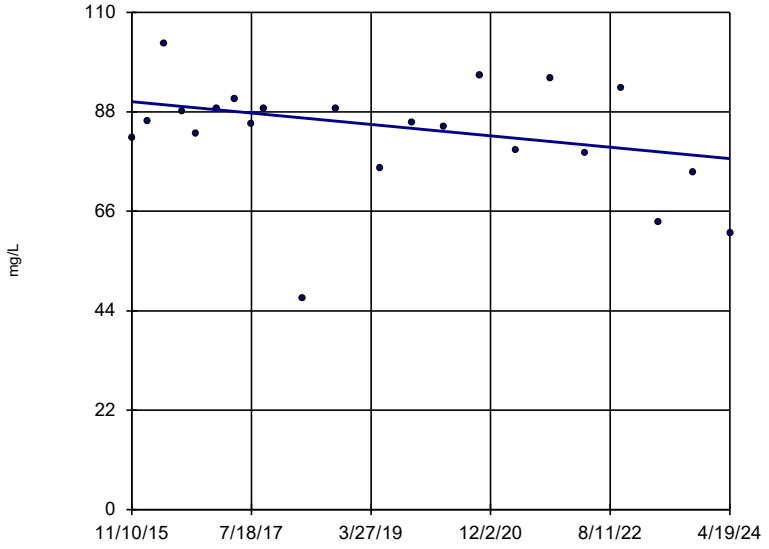
Constituent: Sulfate Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-102



n = 22

Slope = -1.49 units per year.

Mann-Kendall statistic = -55
critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

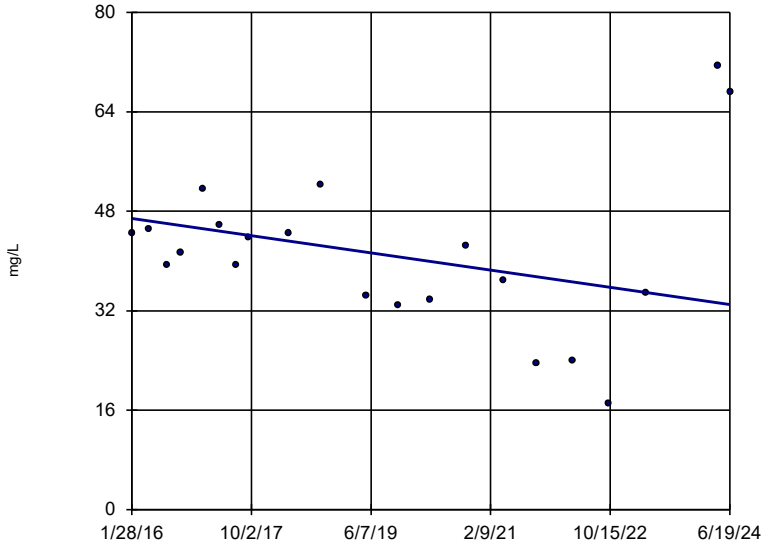
Constituent: Sulfate Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-108 (bg)



n = 21

Slope = -1.653 units per year.

Mann-Kendall statistic = -44
critical = -78

Trend not significant at 98% confidence level (α = 0.01 per tail).

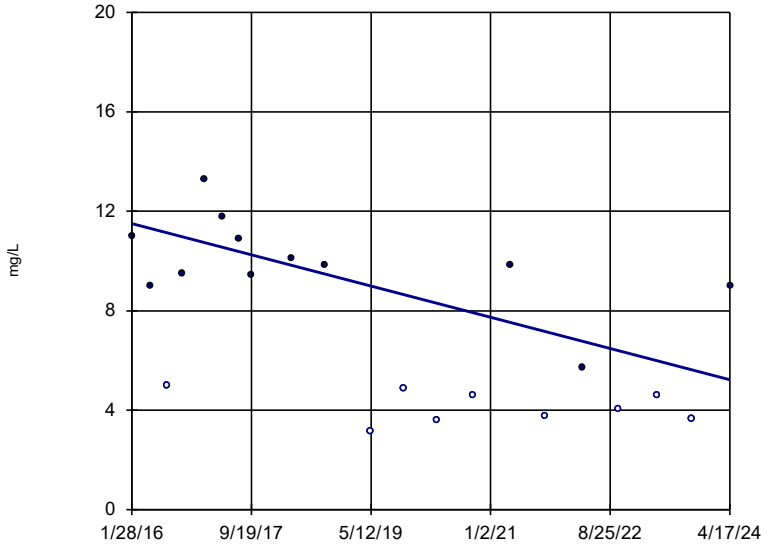
Constituent: Sulfate Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-113 (bg)



n = 21

Slope = -0.764 units per year.

Mann-Kendall statistic = -82
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

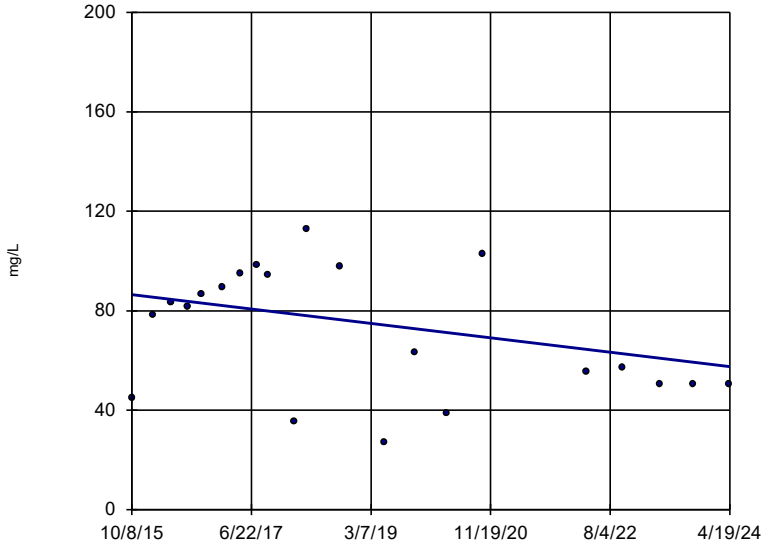
Constituent: Sulfate Analysis Run 11/12/2024 3:30 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-116



n = 21

Slope = -3.393 units per year.

Mann-Kendall statistic = -25
critical = -78

Trend not significant at 98% confidence level (α = 0.01 per tail).

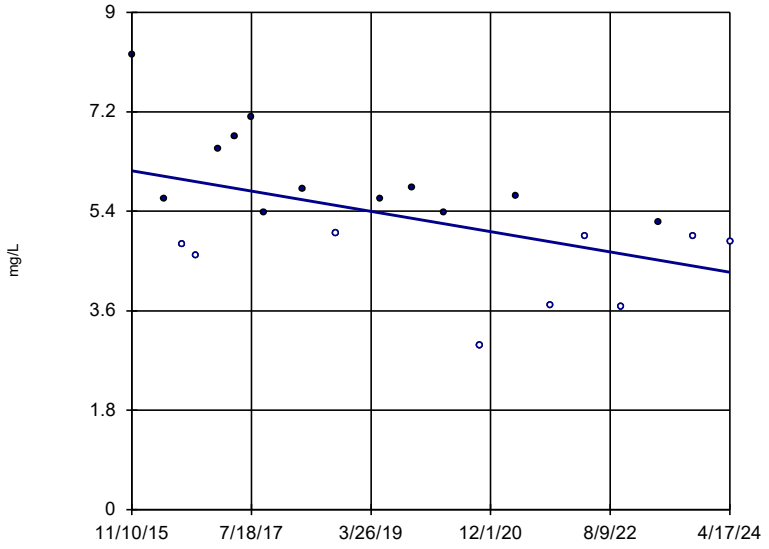
Constituent: Sulfate Analysis Run 11/12/2024 3:31 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-115 (bg)



n = 21

Slope = -0.217 units per year.

Mann-Kendall statistic = -76
critical = -78

Trend not significant at 98% confidence level (α = 0.01 per tail).

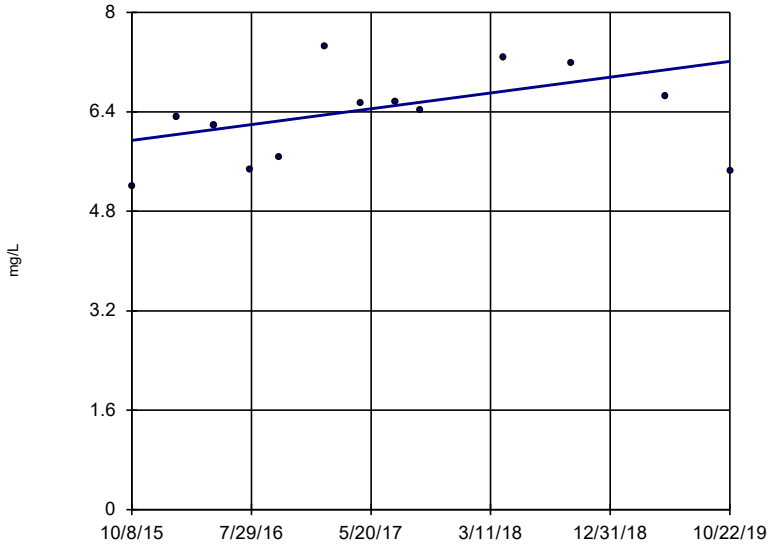
Constituent: Sulfate Analysis Run 11/12/2024 3:31 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-117



n = 13

Slope = 0.3142 units per year.

Mann-Kendall statistic = 24
critical = 39

Trend not significant at 98% confidence level (α = 0.01 per tail).

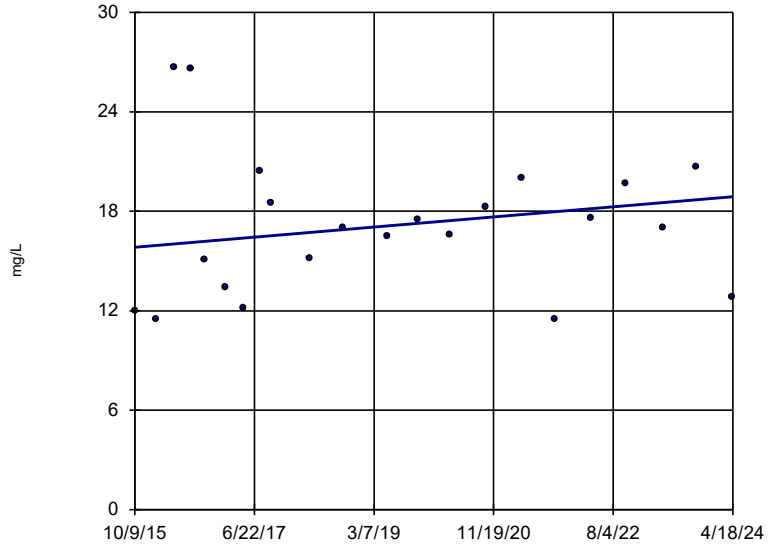
Constituent: Sulfate Analysis Run 11/12/2024 3:31 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-118



n = 22

Slope = 0.3584 units per year.

Mann-Kendall statistic = 31
critical = 84

Trend not significant at 98% confidence level (α = 0.01 per tail).

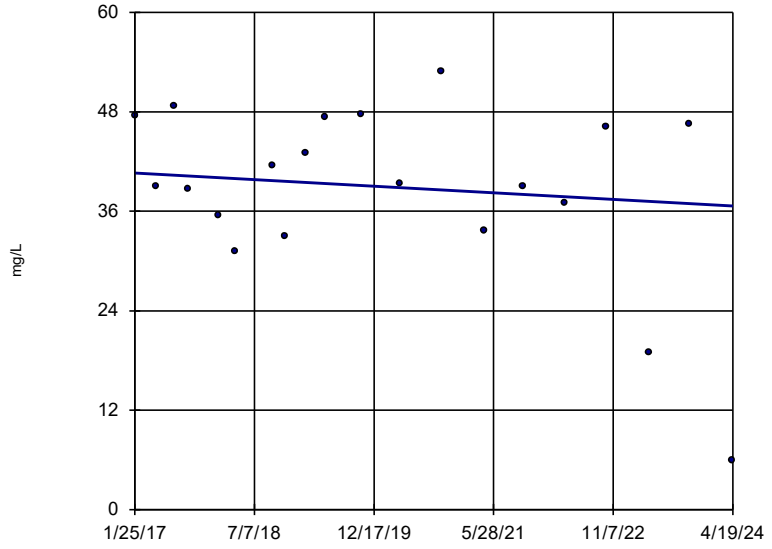
Constituent: Sulfate Analysis Run 11/12/2024 3:31 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-119



n = 20

Slope = -0.5498 units per year.

Mann-Kendall statistic = -27
critical = -73

Trend not significant at 98% confidence level (α = 0.01 per tail).

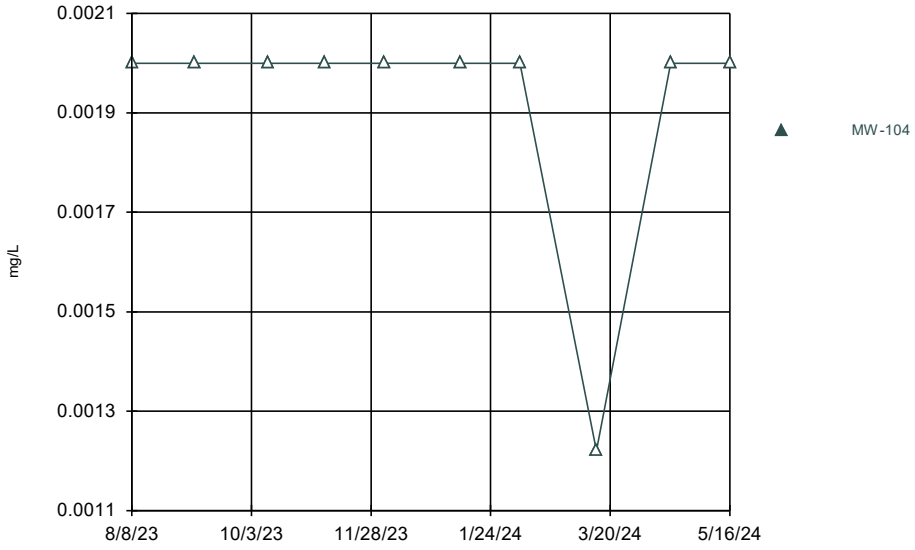
Constituent: Sulfate Analysis Run 11/12/2024 3:31 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exploratory Data Analysis of Initial Background Data Sets for New Wells
Time-Series Plots

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Hollow symbols indicate censored values.

Time Series

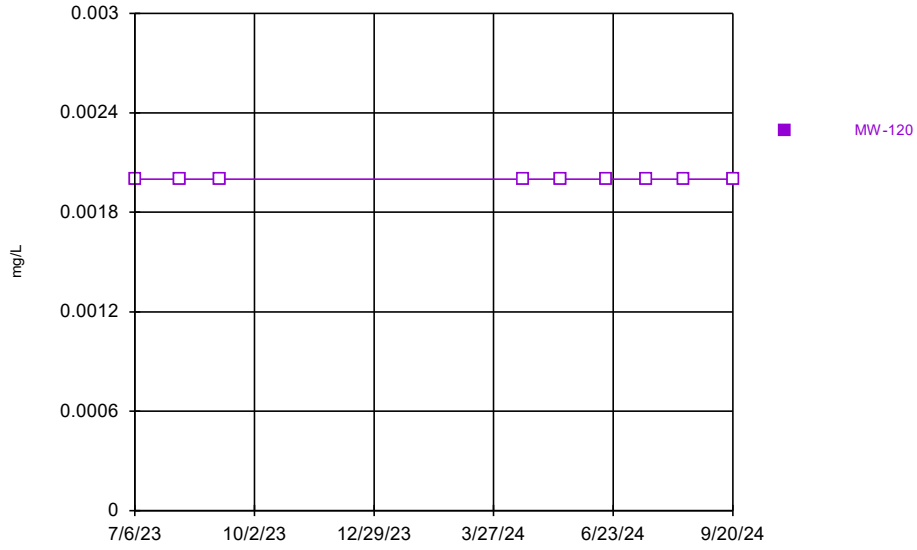


Constituent: Antimony Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

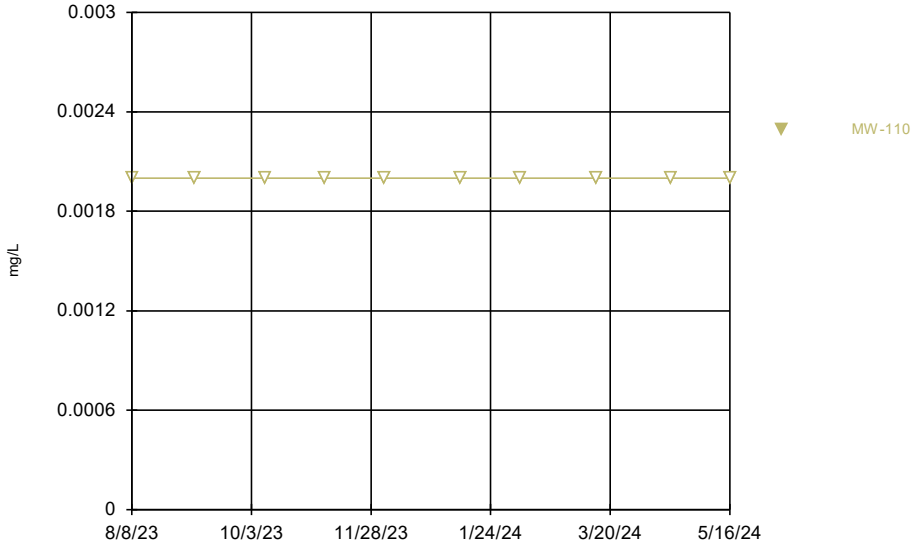


Constituent: Antimony Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

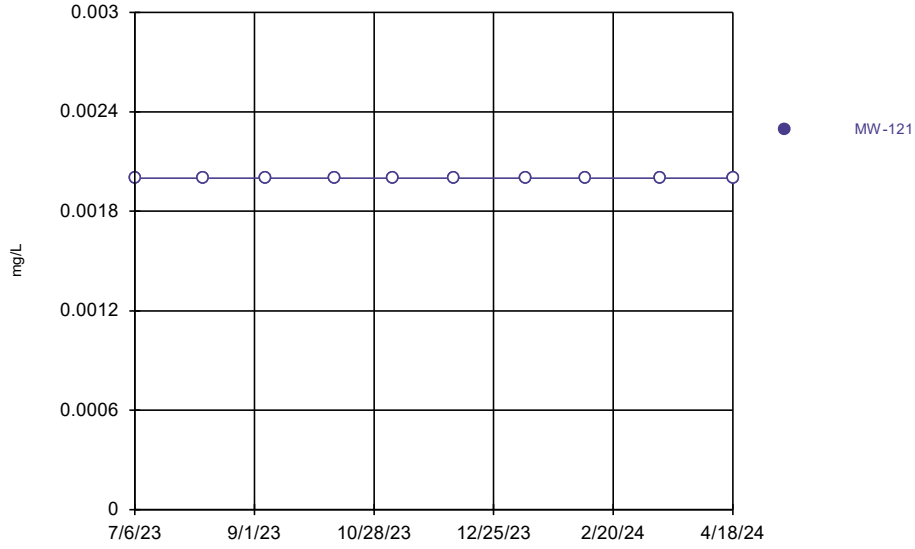


Constituent: Antimony Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

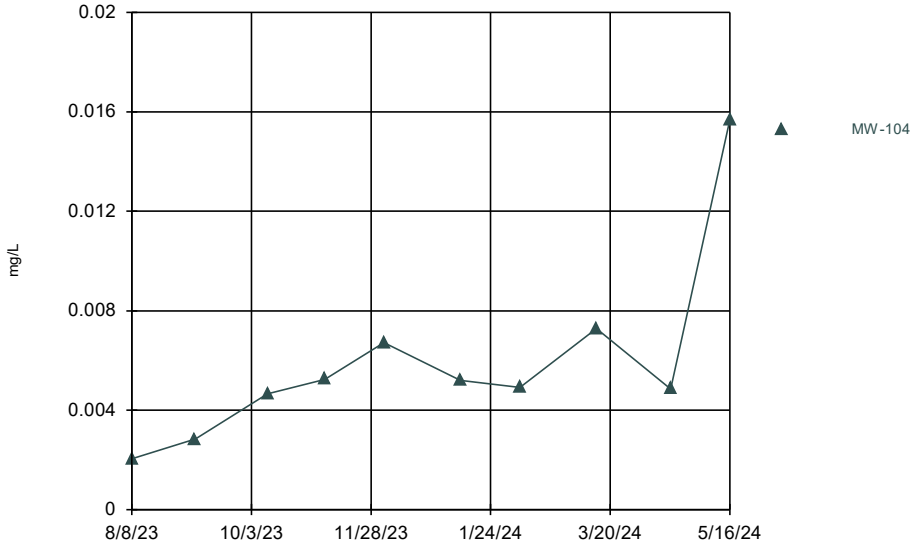


Constituent: Antimony Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series



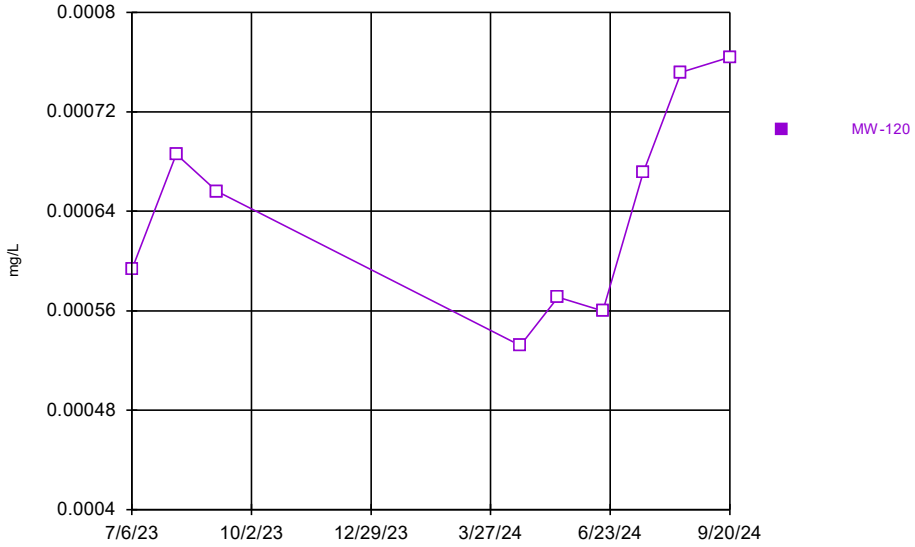
Constituent: Arsenic Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Time Series

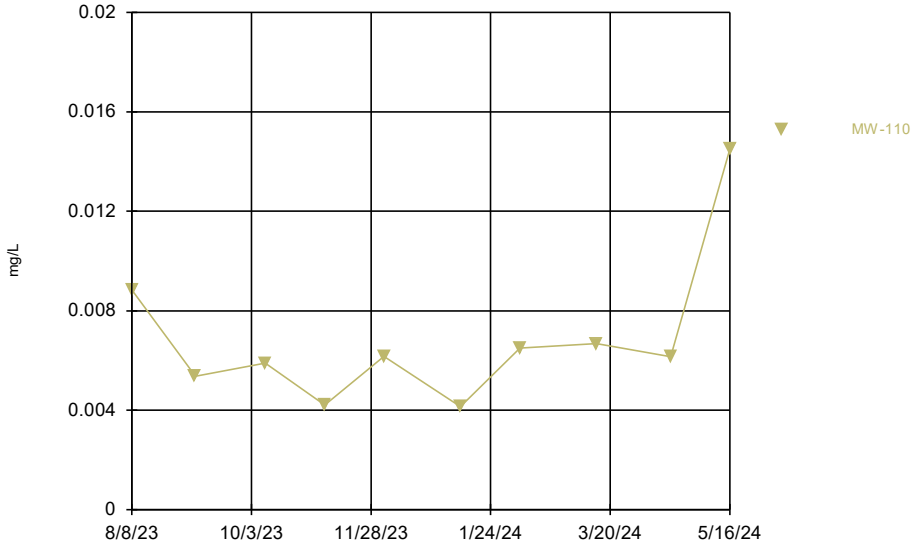


Constituent: Arsenic Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series



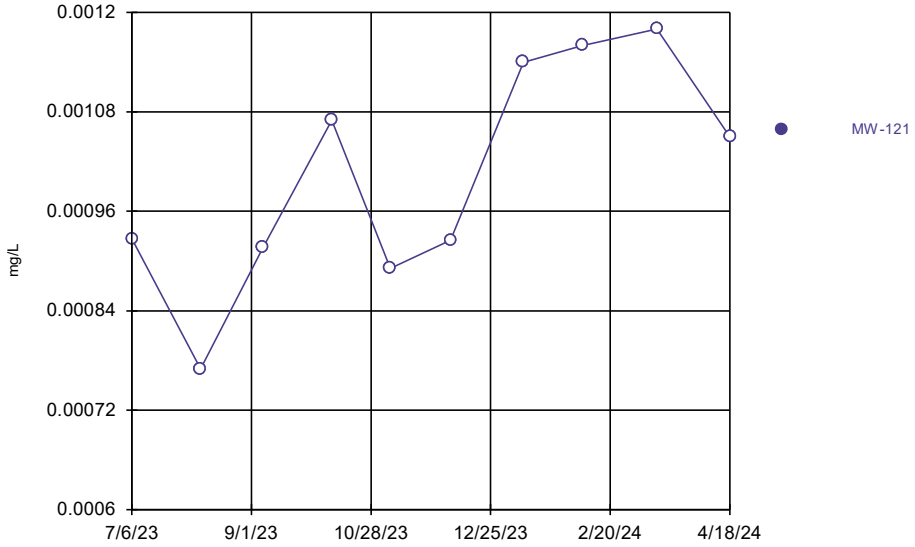
Constituent: Arsenic Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Hollow symbols indicate censored values.

Time Series

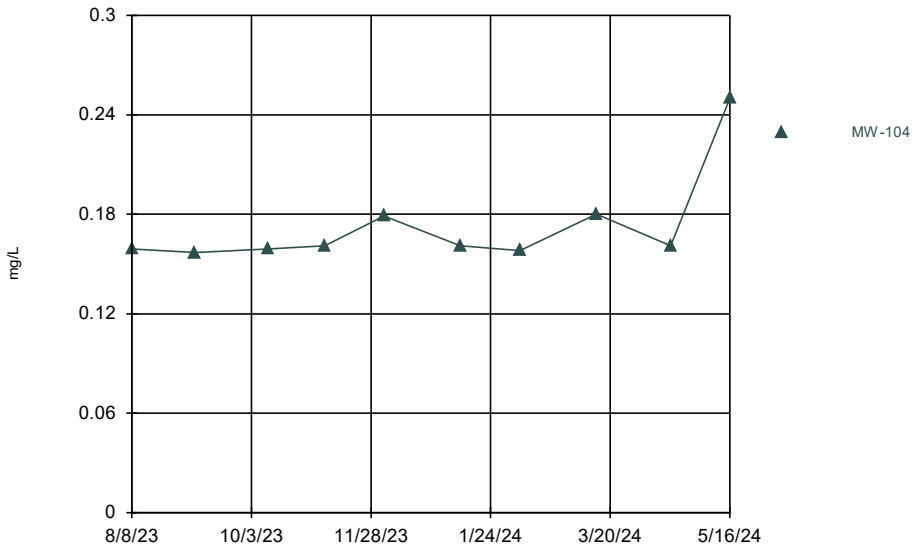


Constituent: Arsenic Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

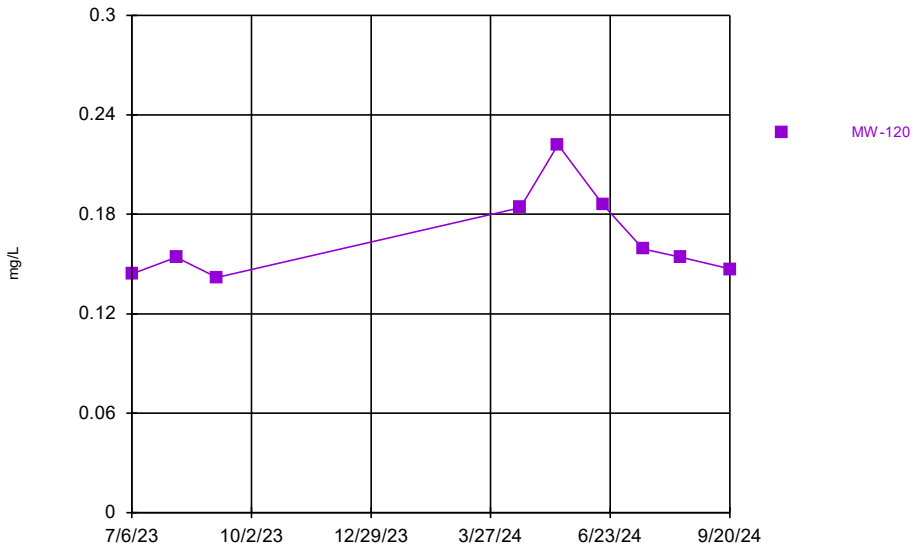


Constituent: Barium Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

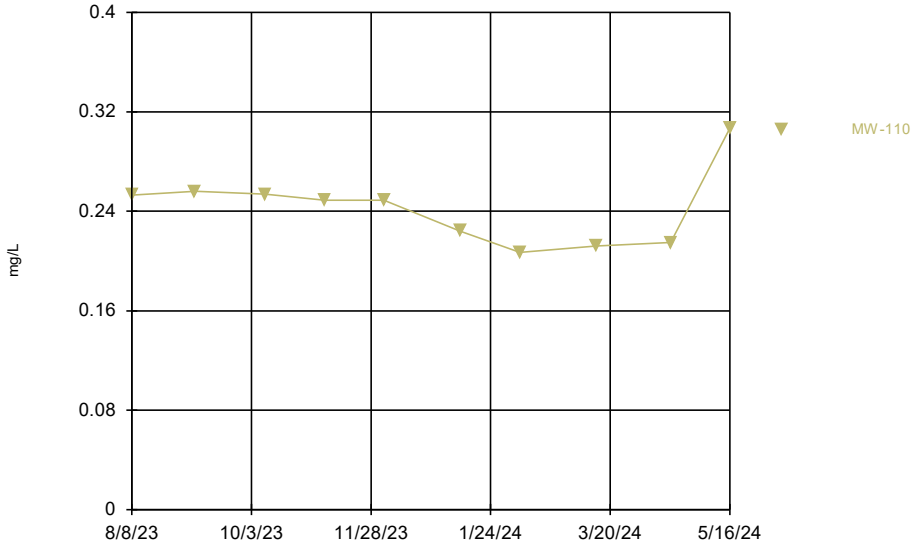


Constituent: Barium Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

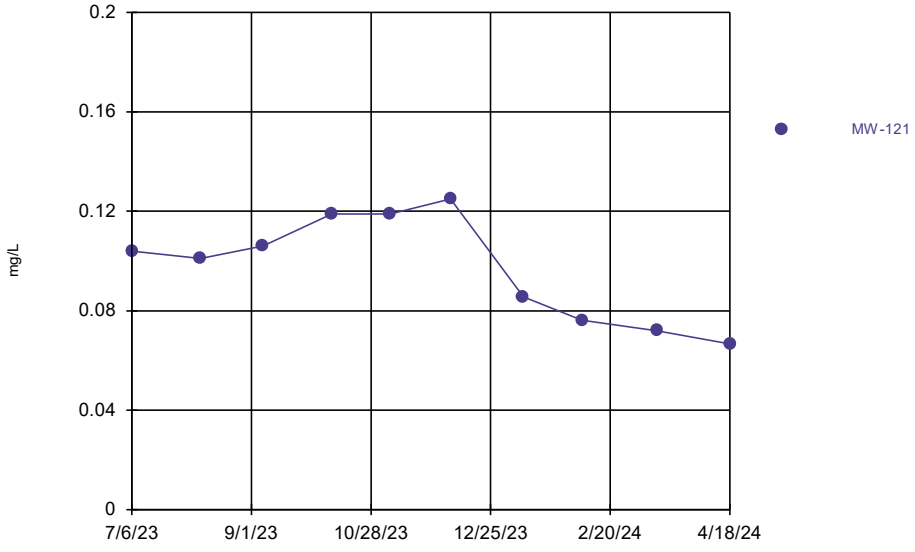


Constituent: Barium Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

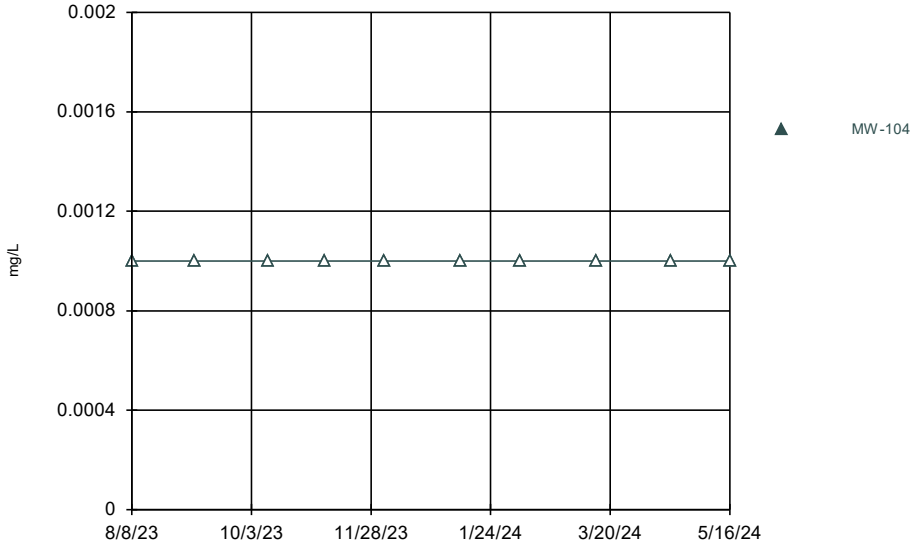


Constituent: Barium Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

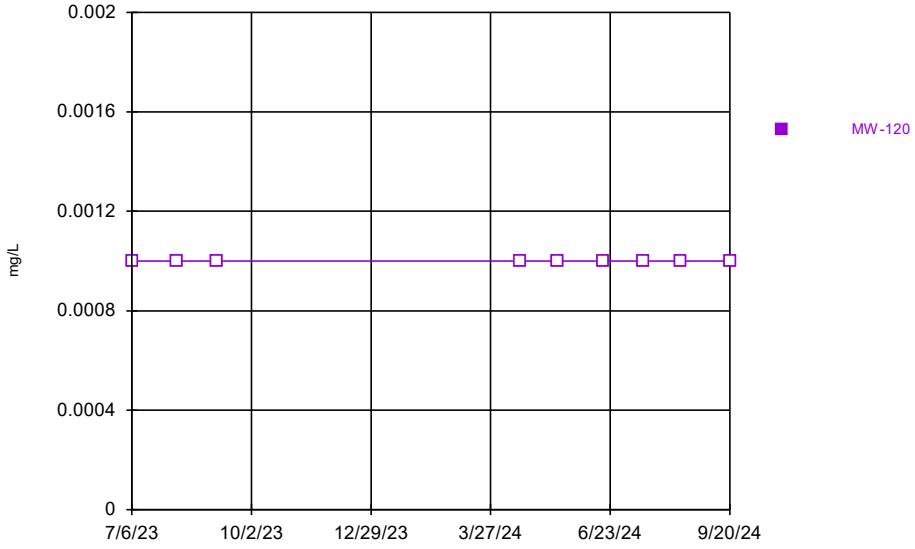


Constituent: Beryllium Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

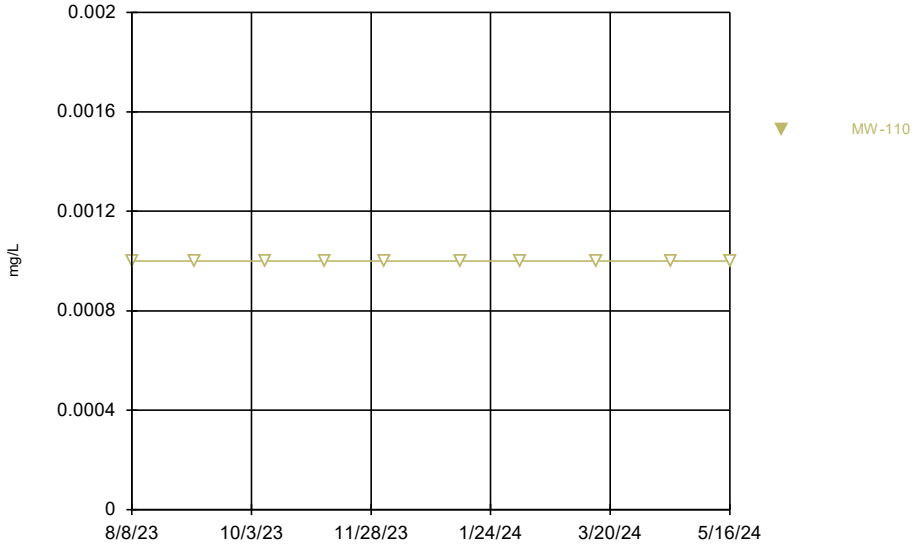


Constituent: Beryllium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

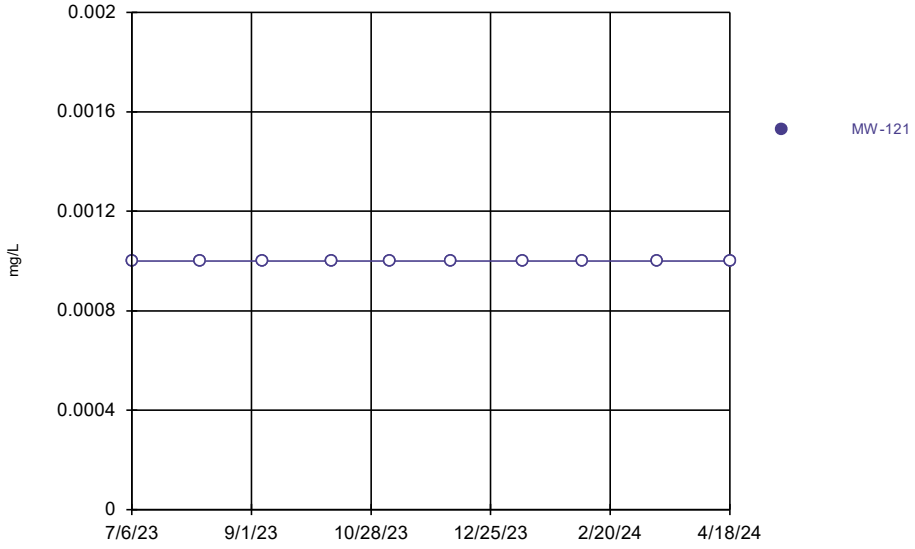


Constituent: Beryllium Analysis Run 11/13/2024 10:58 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

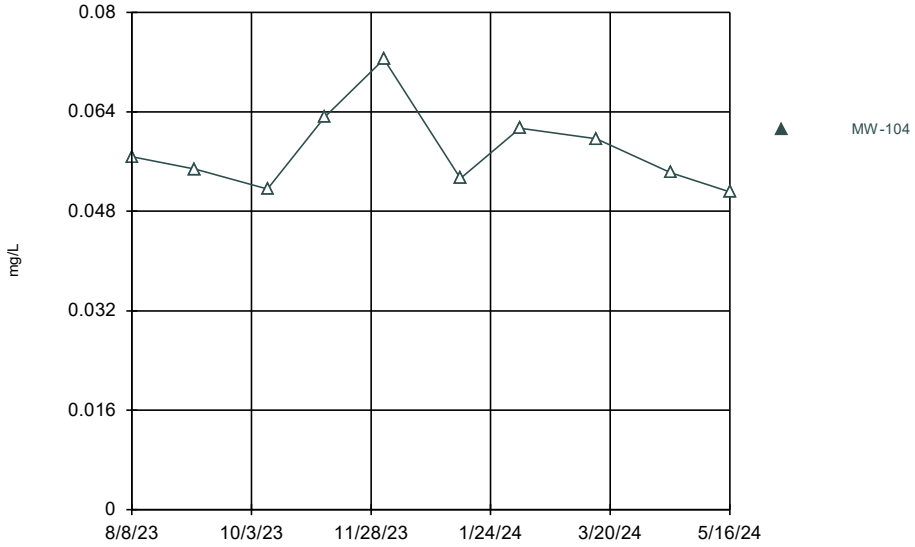


Constituent: Beryllium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

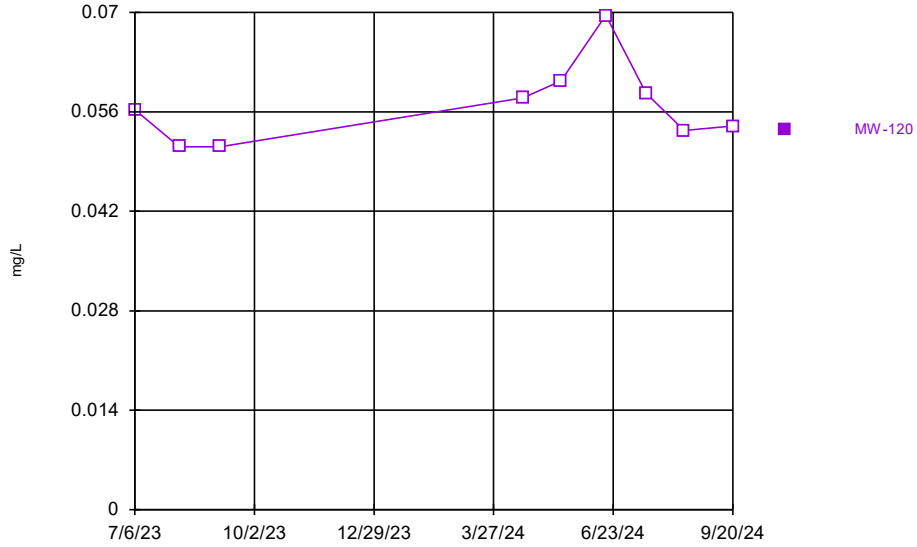


Constituent: Boron Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

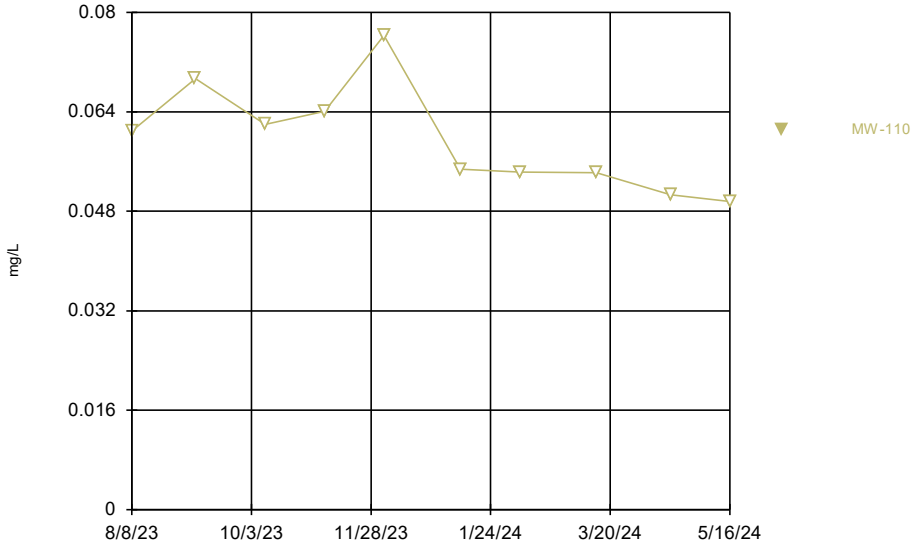


Constituent: Boron Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

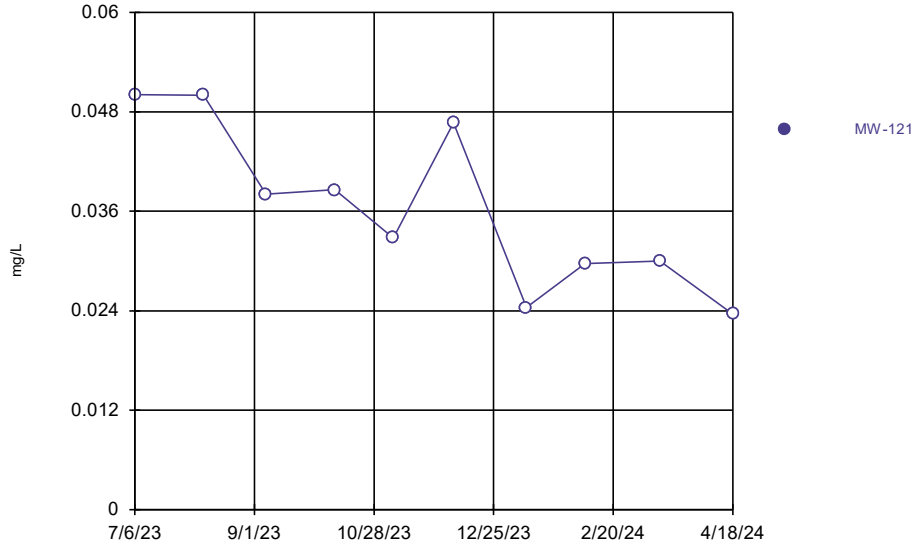


Constituent: Boron Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
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Time Series

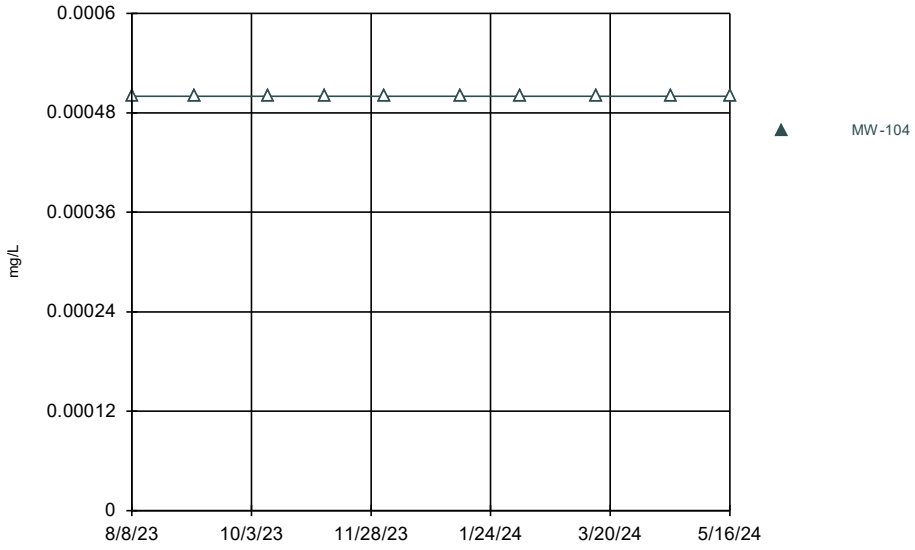


Constituent: Boron Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
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Time Series

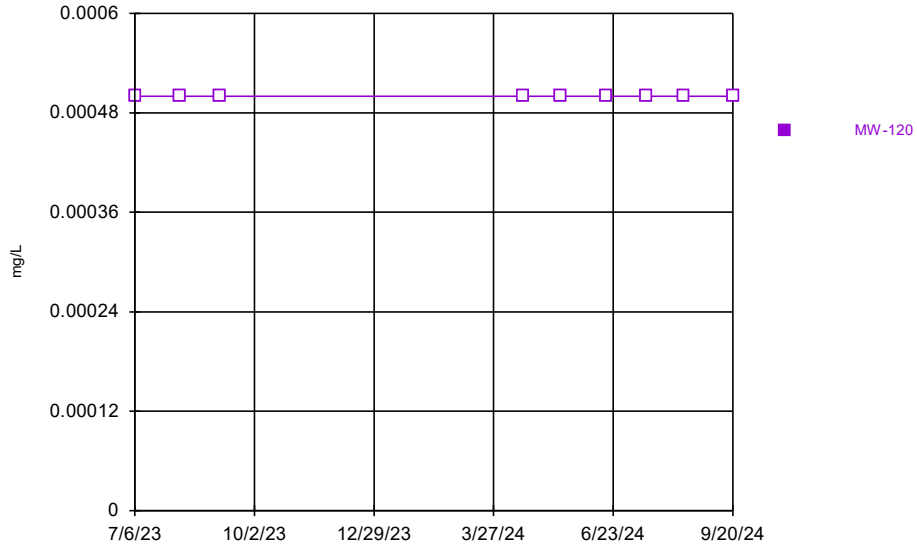


Constituent: Cadmium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Time Series

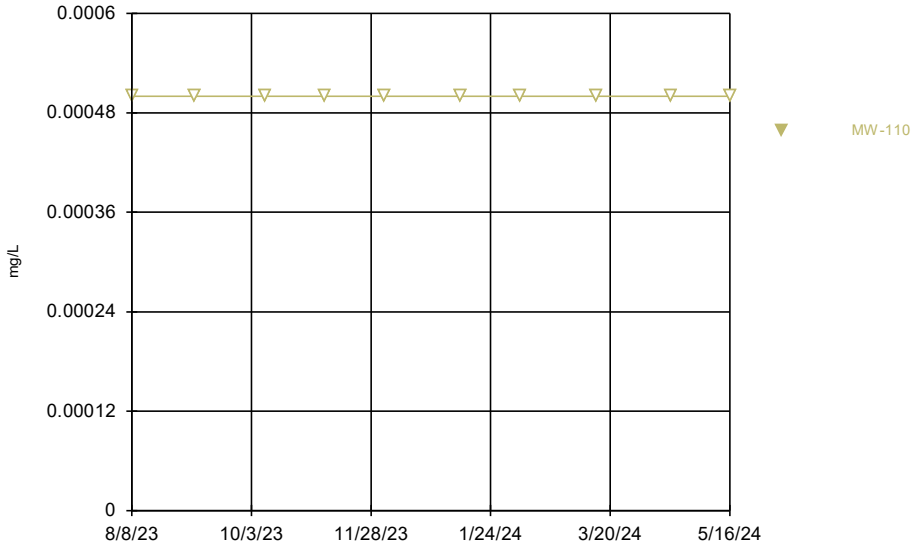


Constituent: Cadmium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

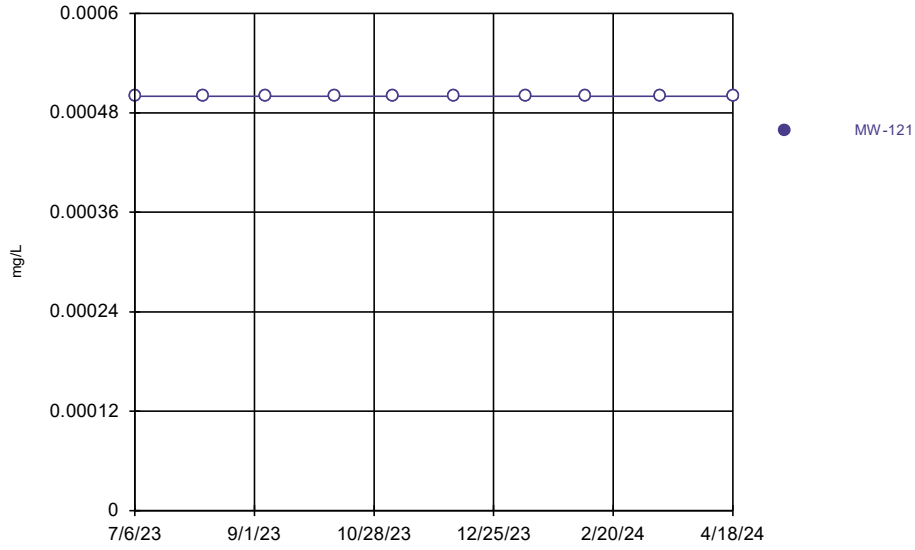


Constituent: Cadmium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

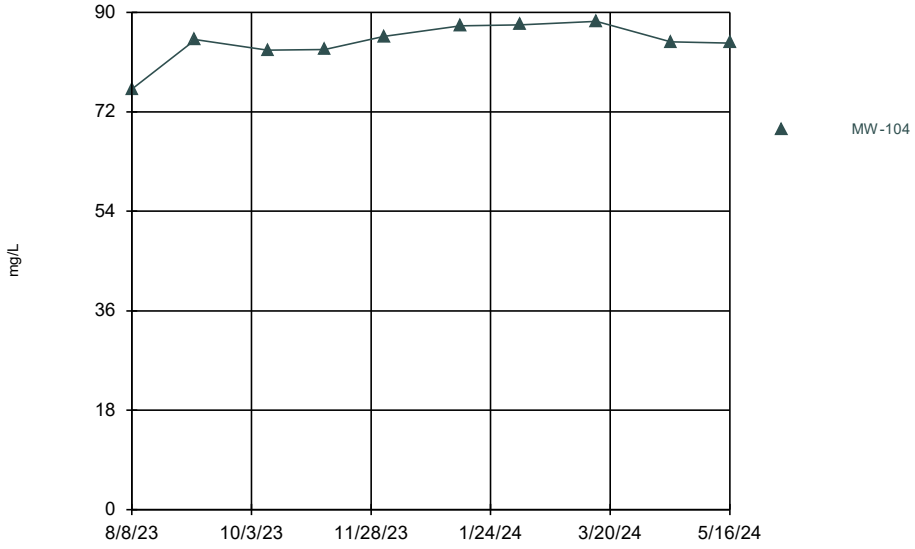
Time Series



Constituent: Cadmium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Time Series

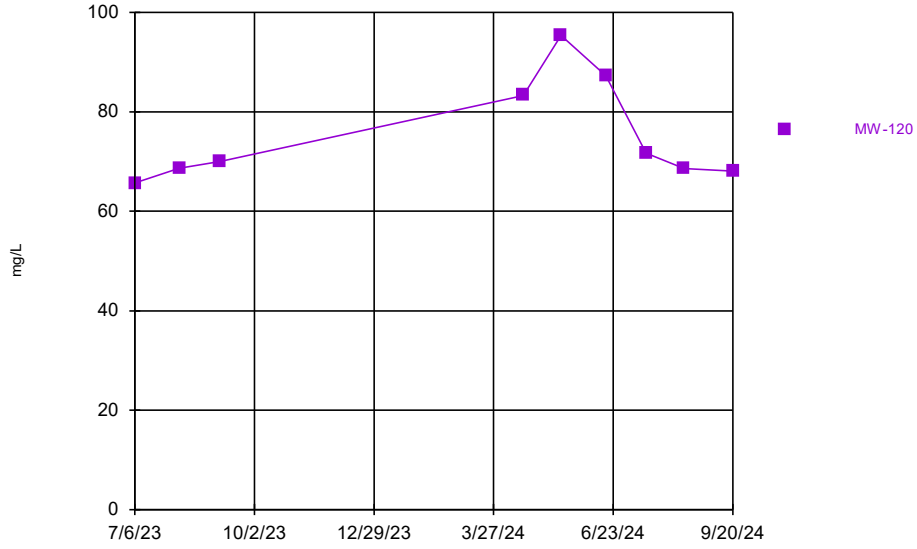


Constituent: Calcium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Time Series

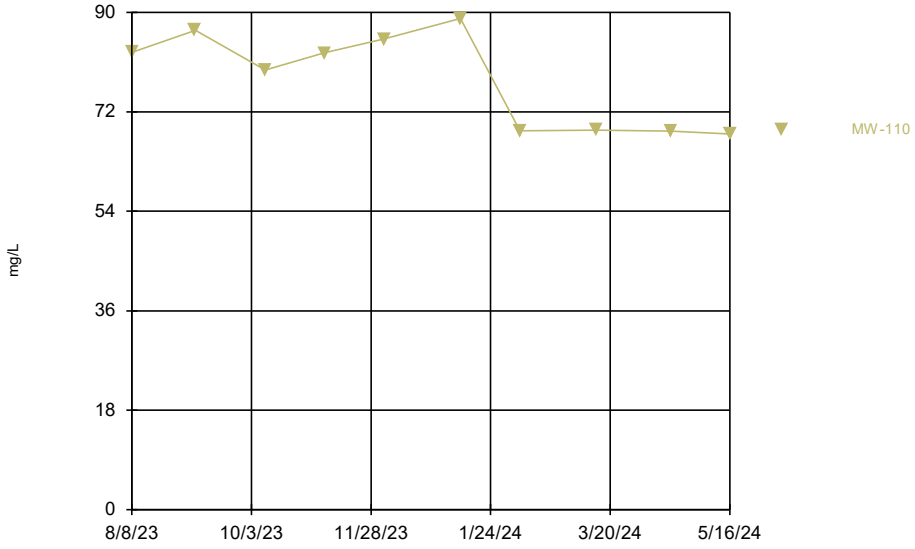


Constituent: Calcium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

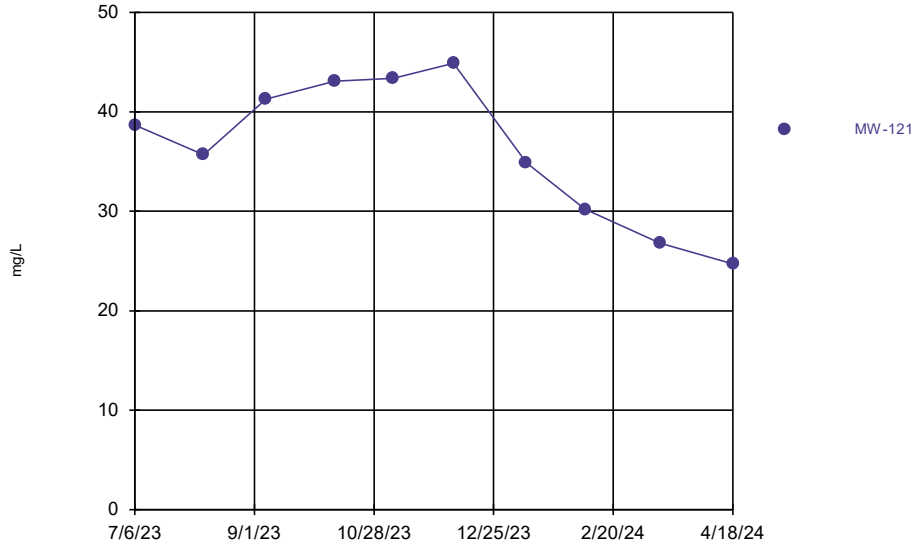


Constituent: Calcium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

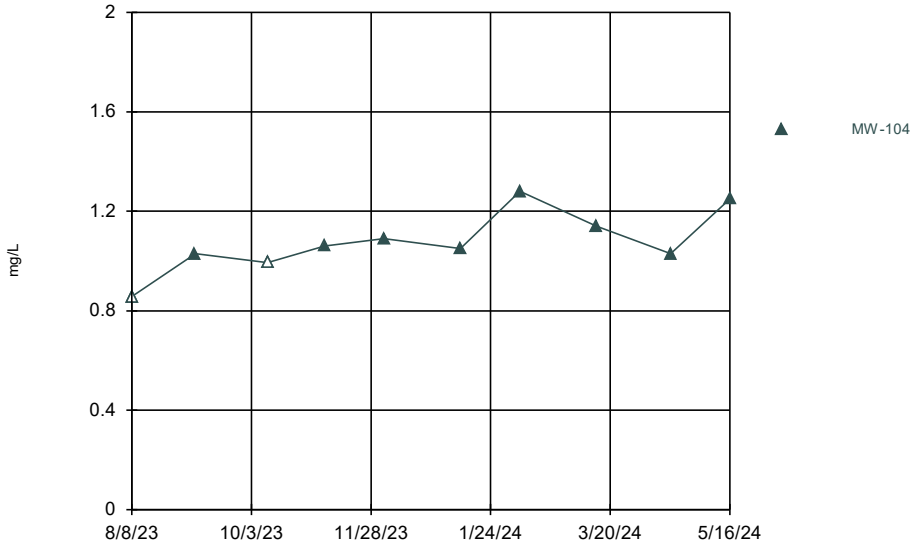


Constituent: Calcium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Time Series

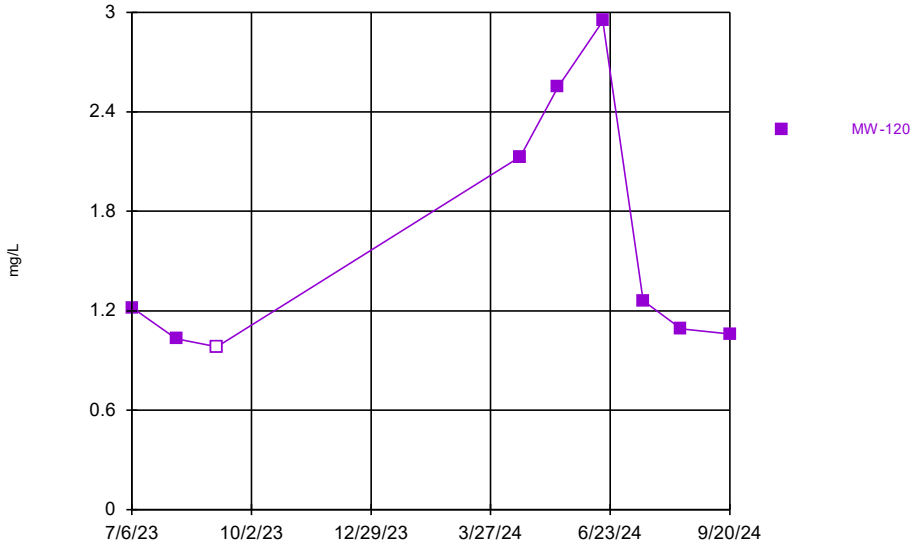


Constituent: Chloride Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

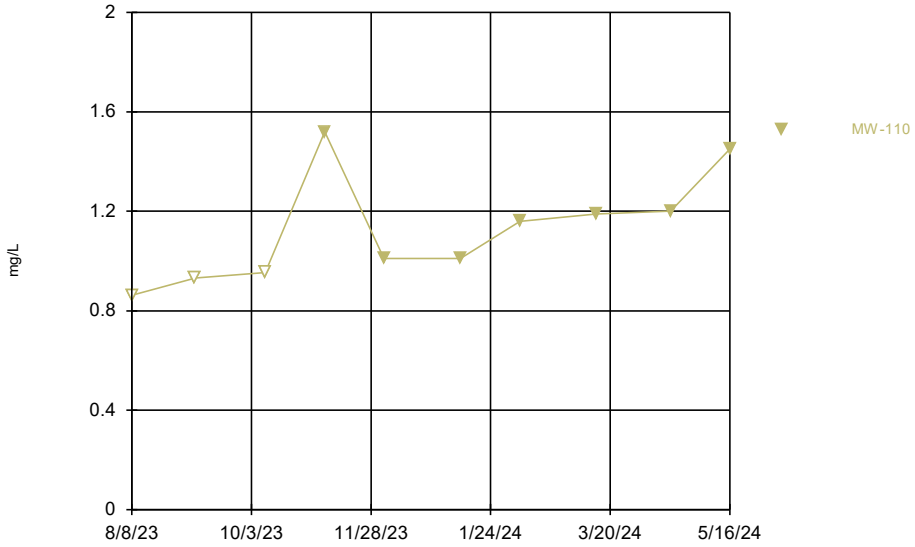


Constituent: Chloride Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

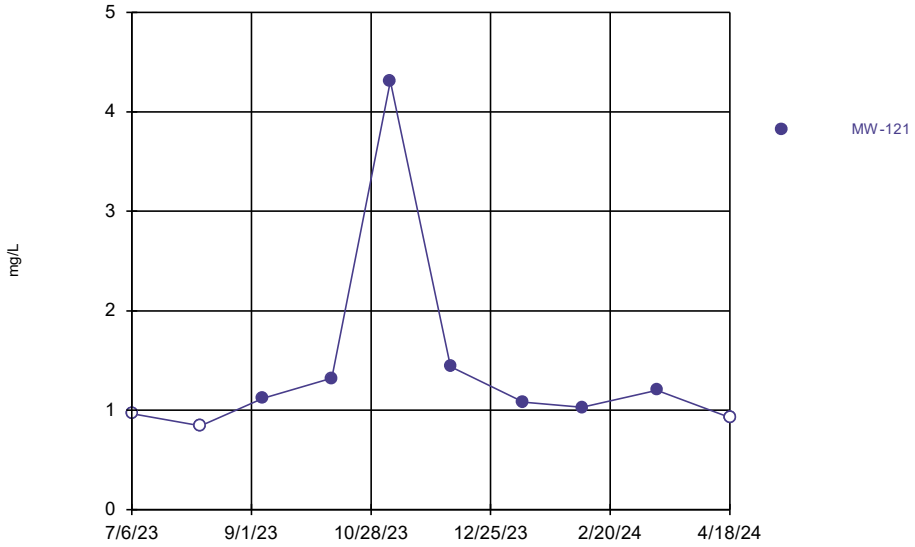


Constituent: Chloride Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

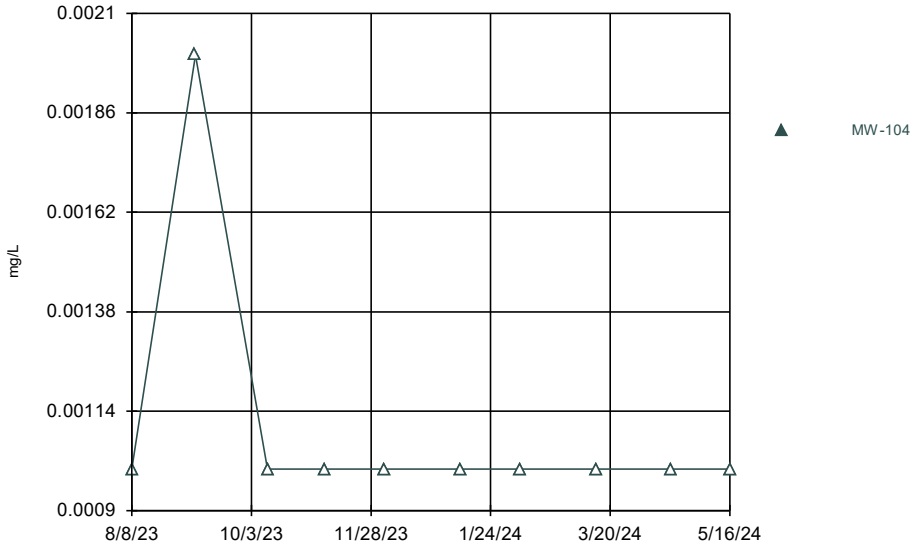


Constituent: Chloride Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

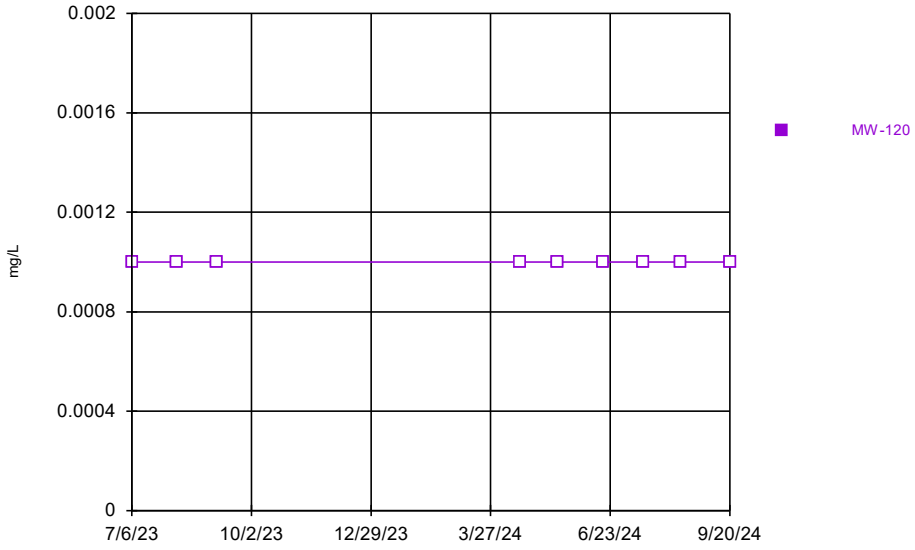


Constituent: Chromium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

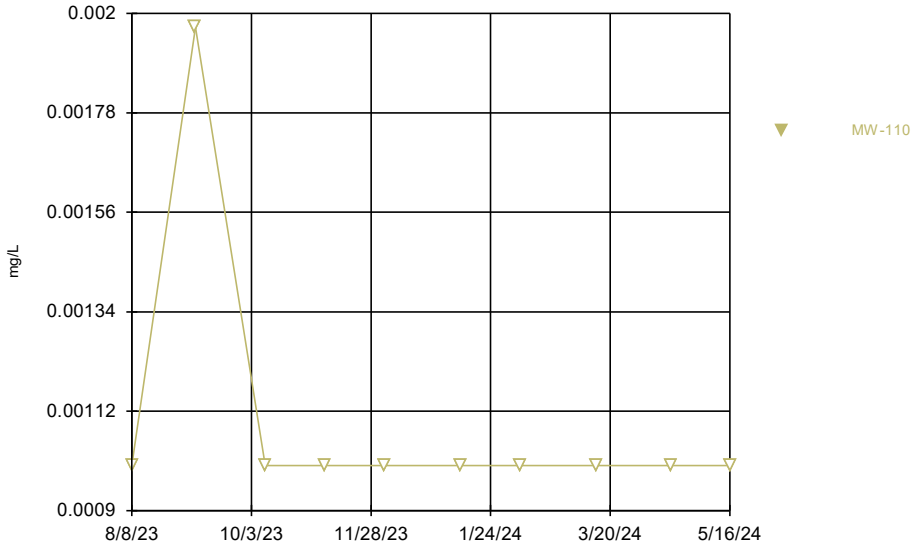


Constituent: Chromium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

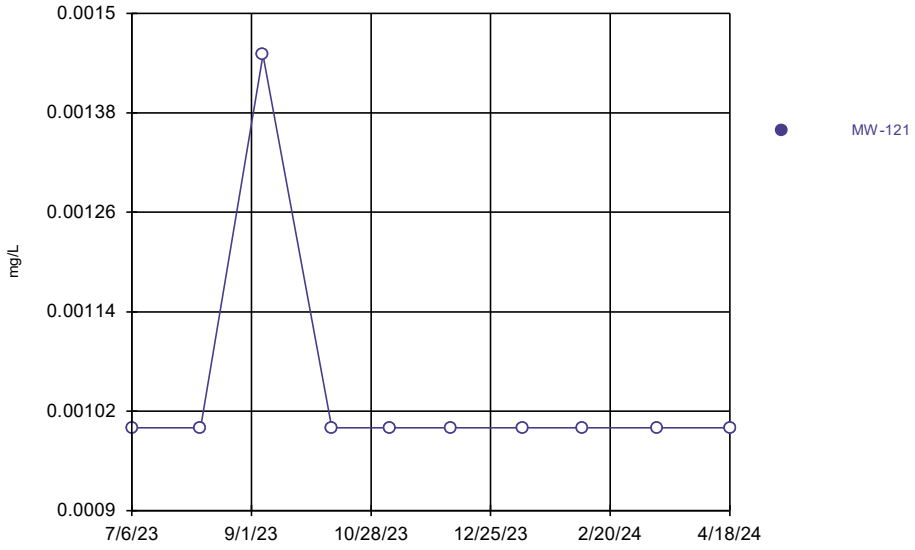


Constituent: Chromium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

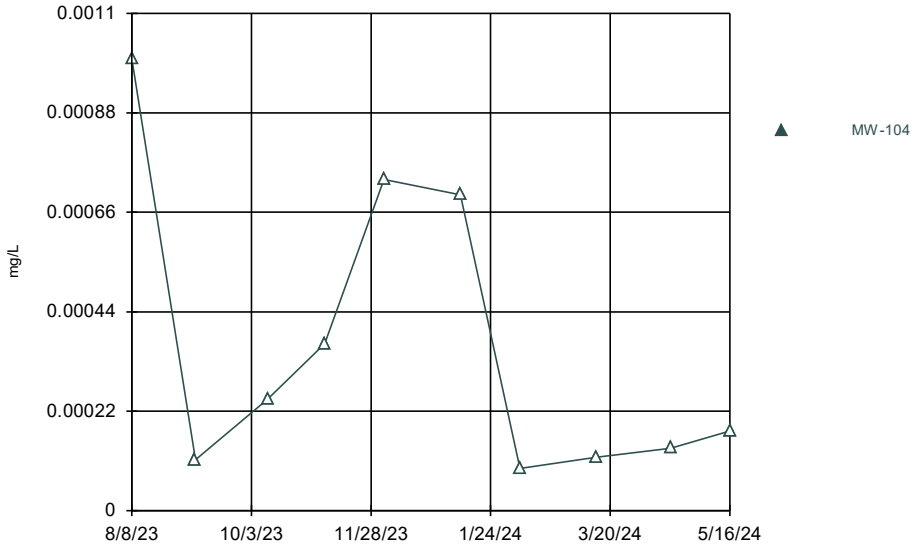


Constituent: Chromium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

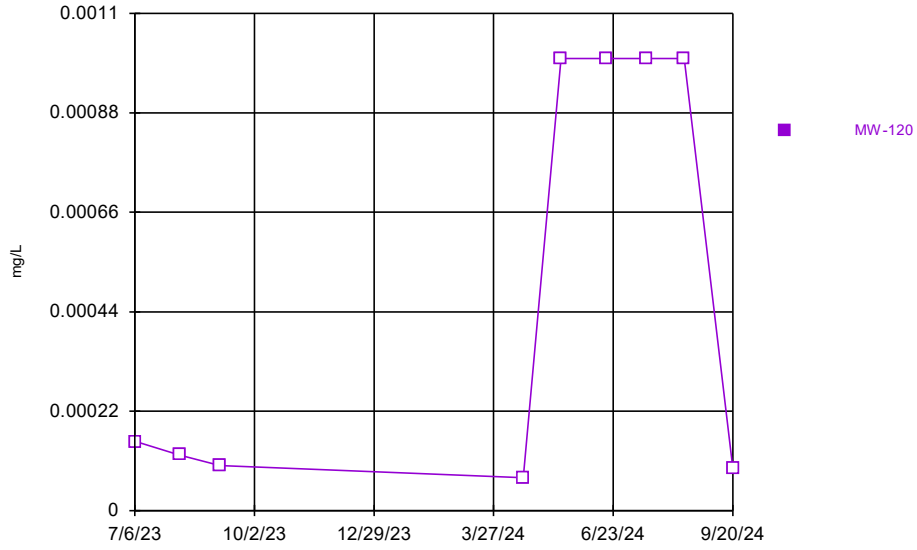


Constituent: Cobalt Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Time Series

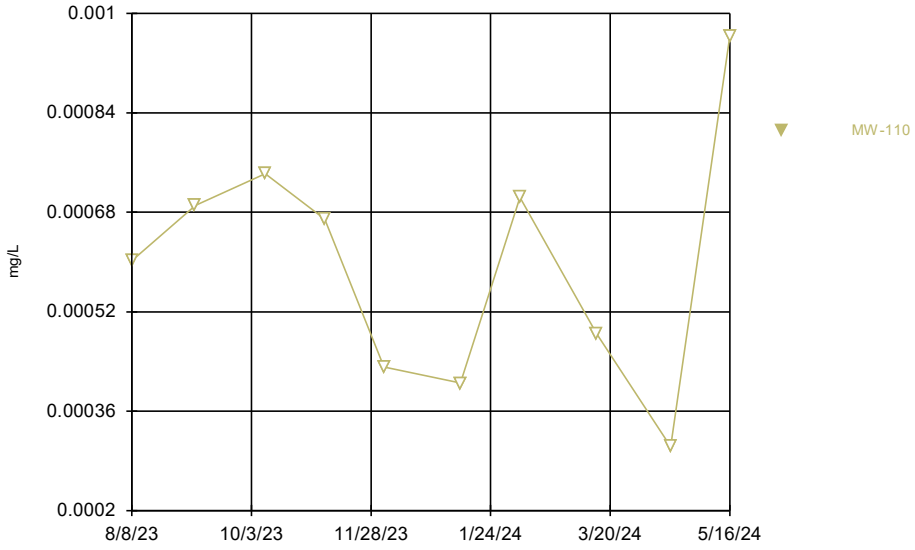


Constituent: Cobalt Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Time Series

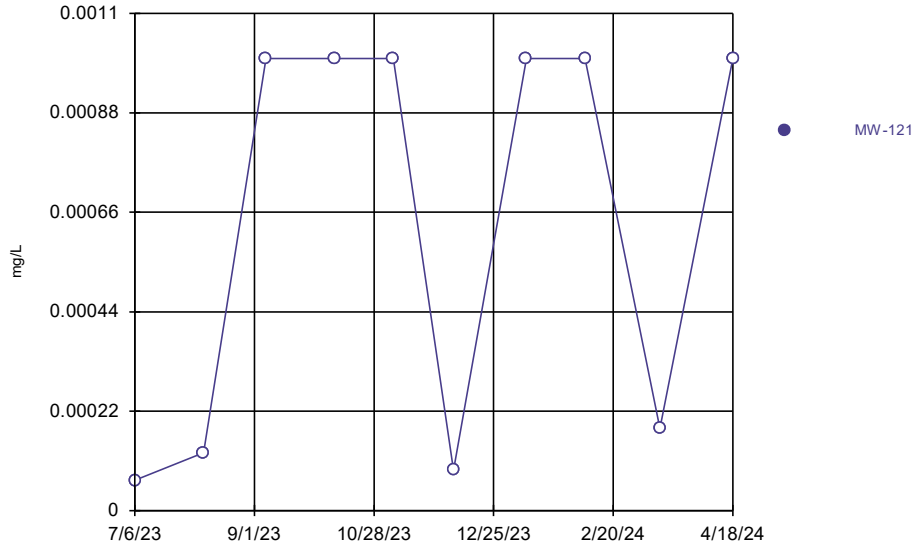


Constituent: Cobalt Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Time Series

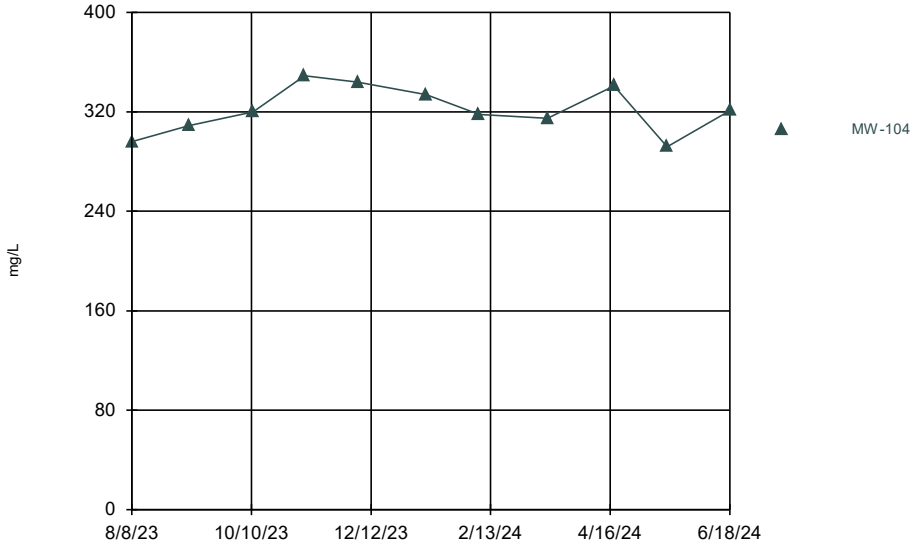


Constituent: Cobalt Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

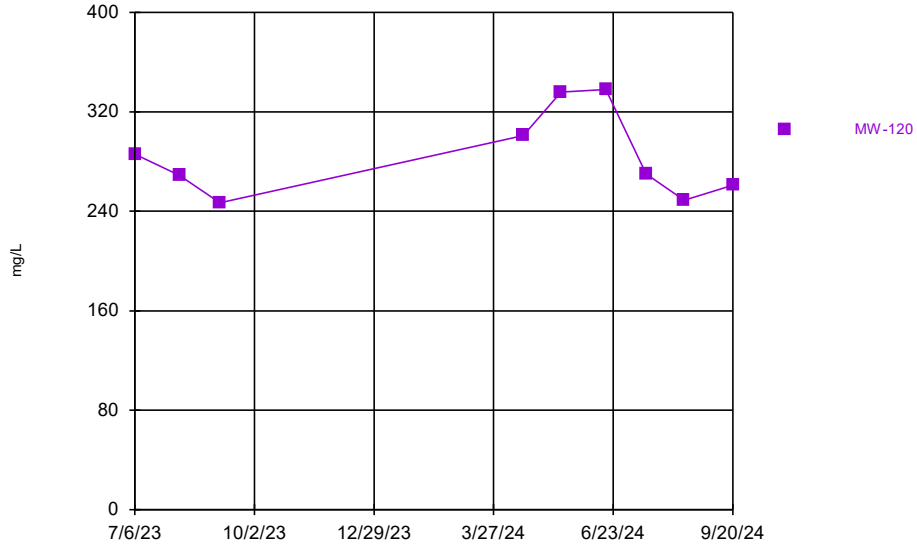


Constituent: Dissolved Solids Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

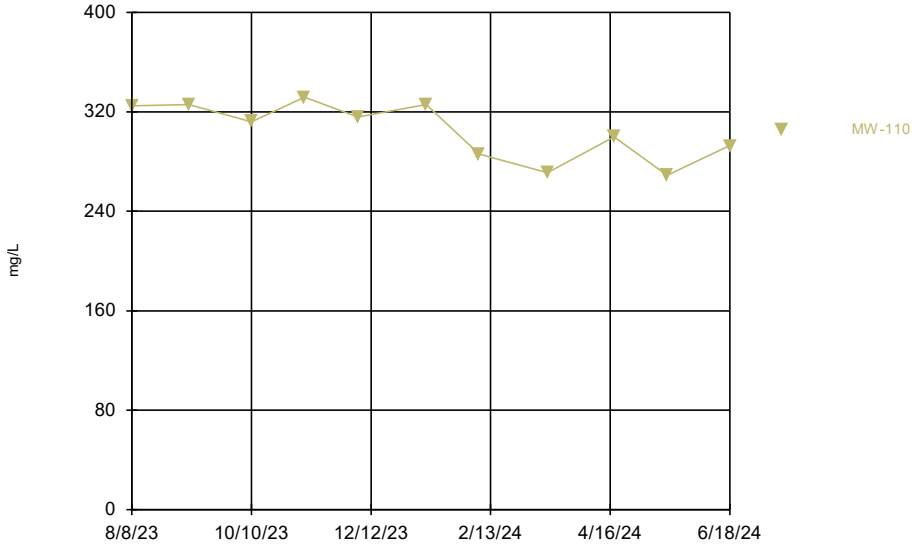


Constituent: Dissolved Solids Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

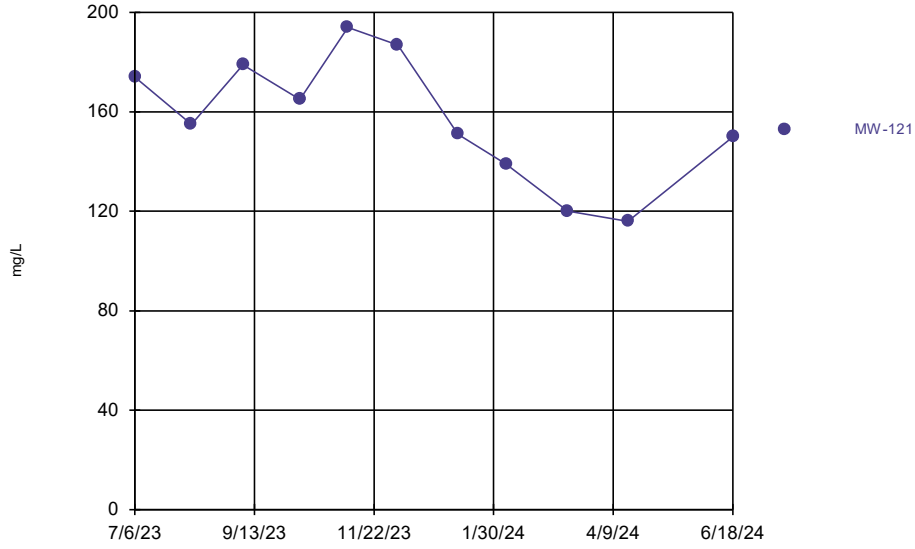


Constituent: Dissolved Solids Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

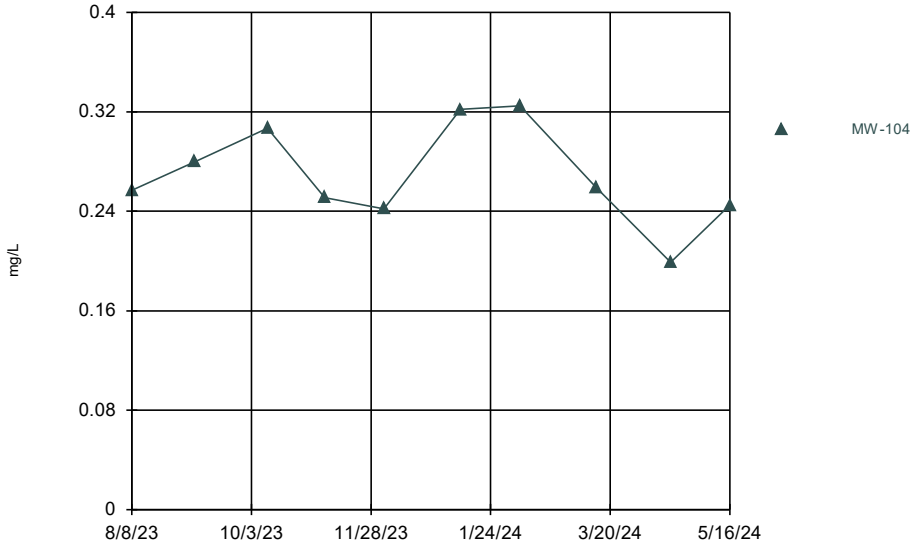


Constituent: Dissolved Solids Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

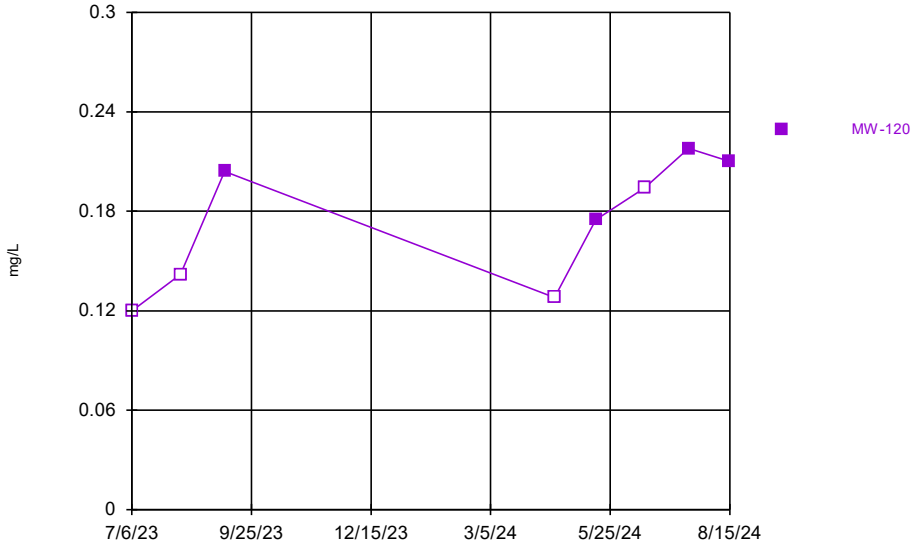


Constituent: Fluoride Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

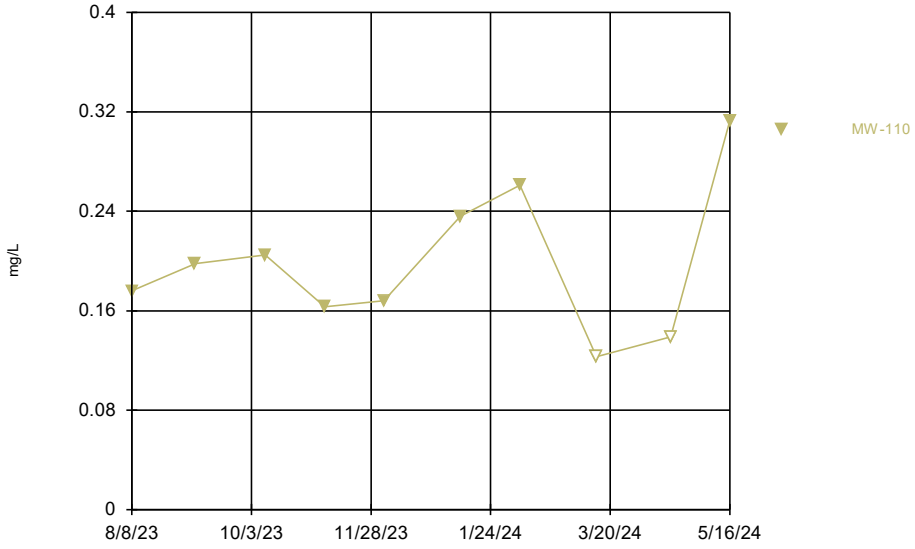


Constituent: Fluoride Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
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Time Series

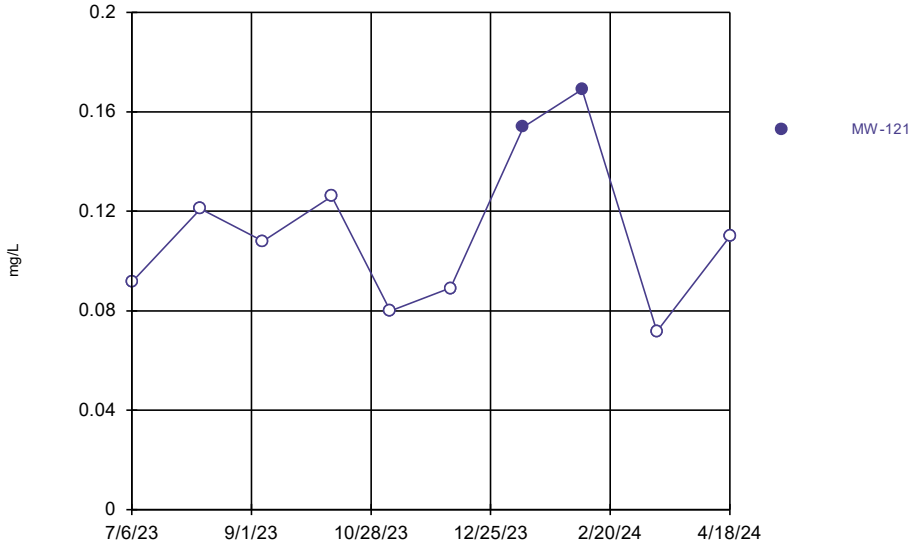


Constituent: Fluoride Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
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Time Series

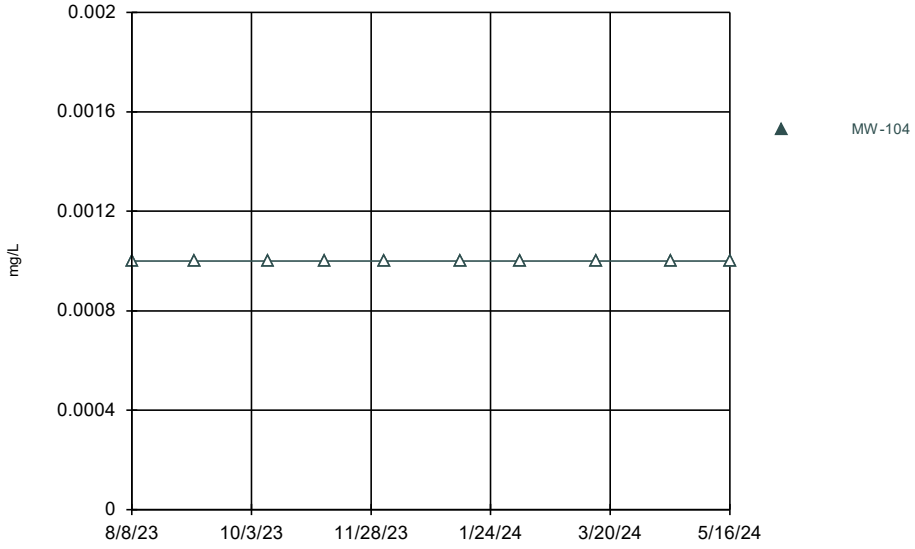


Constituent: Fluoride Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Time Series

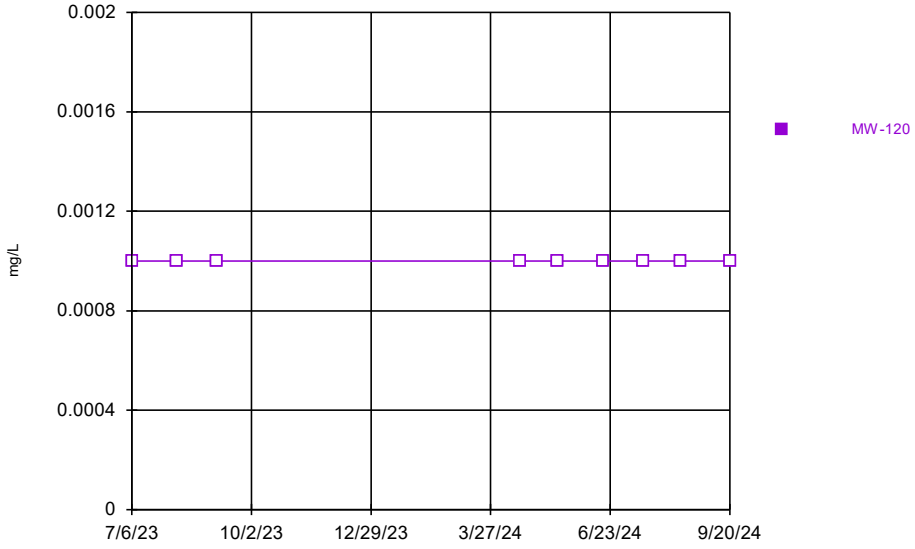


Constituent: Lead Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

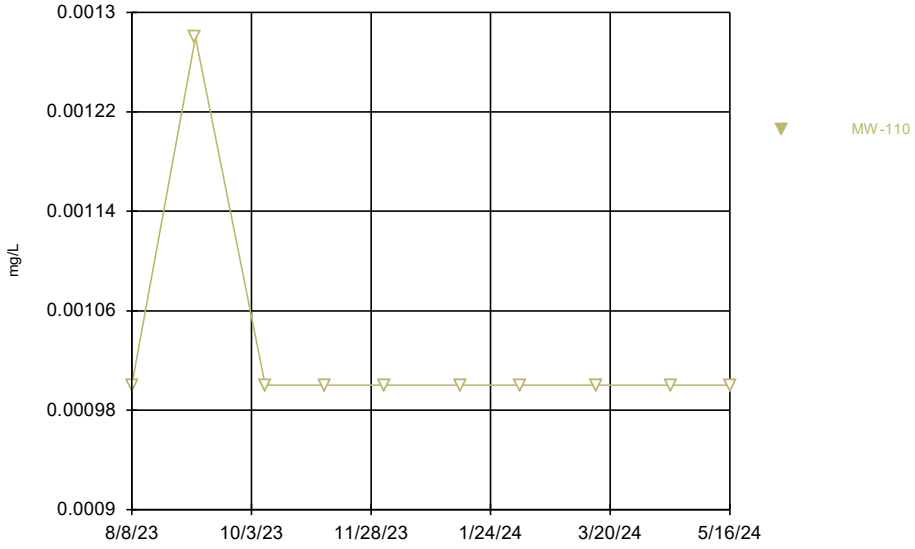


Constituent: Lead Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

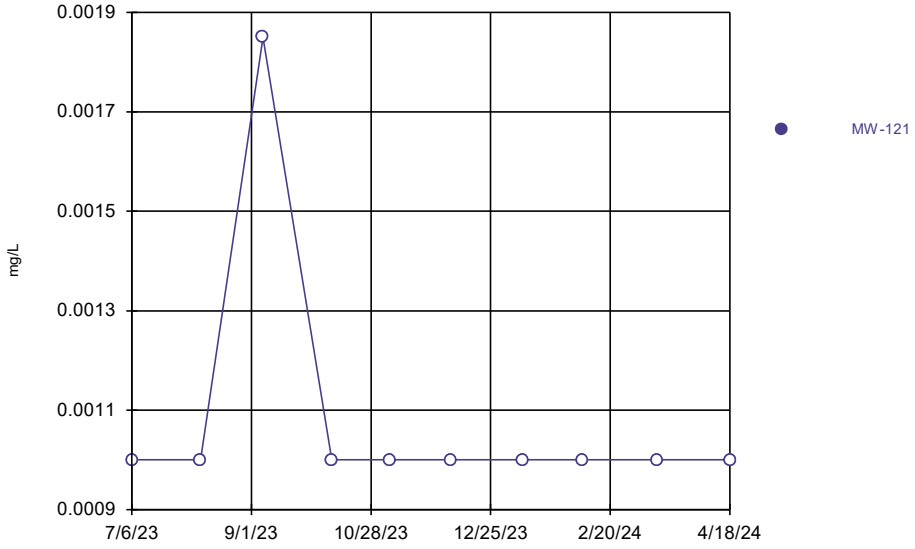


Constituent: Lead Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Time Series

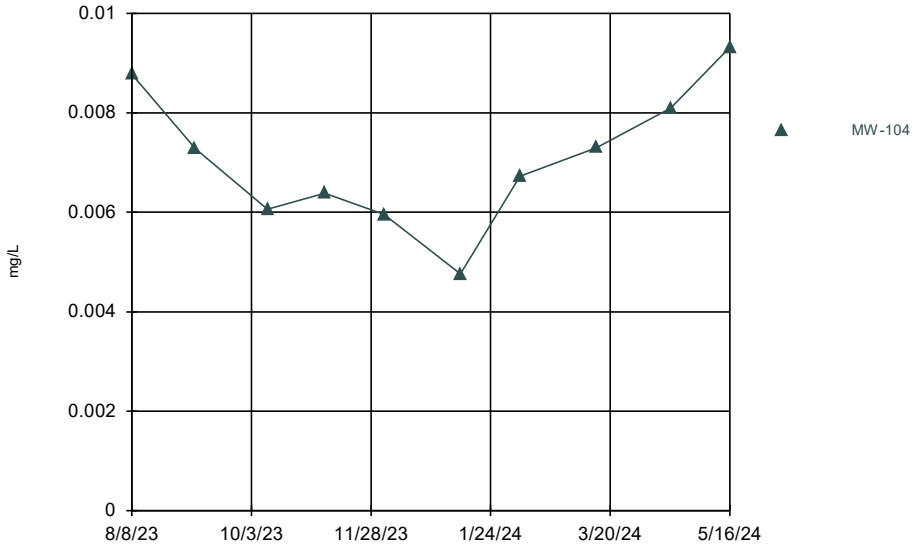


Constituent: Lead Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

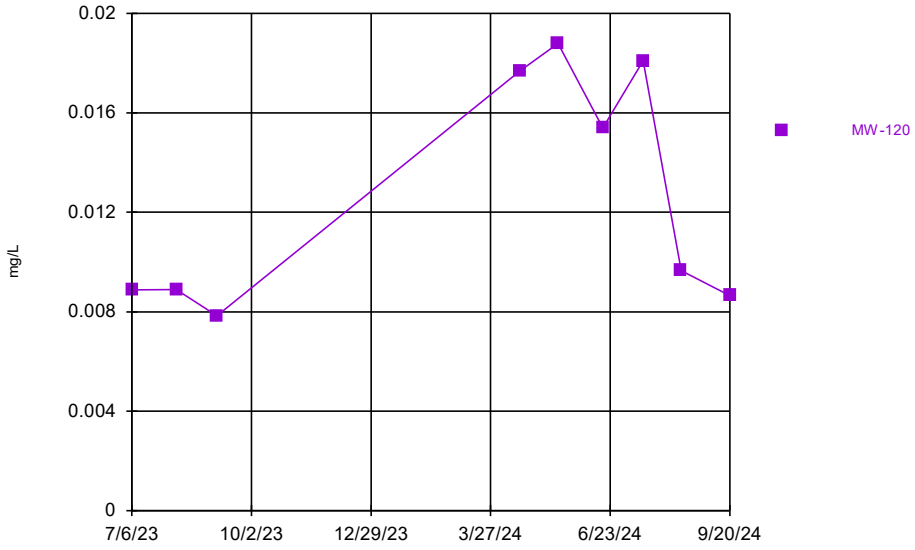


Constituent: Lithium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Time Series

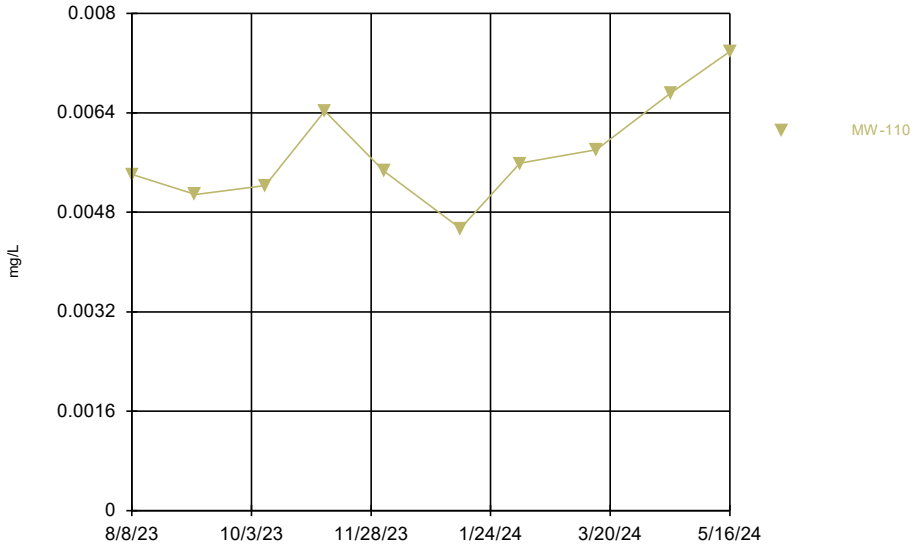


Constituent: Lithium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

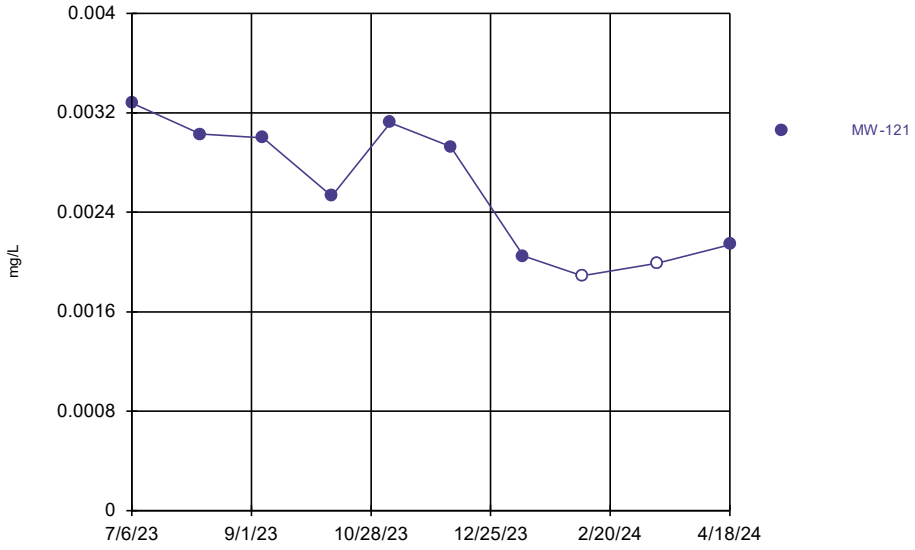


Constituent: Lithium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
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Time Series

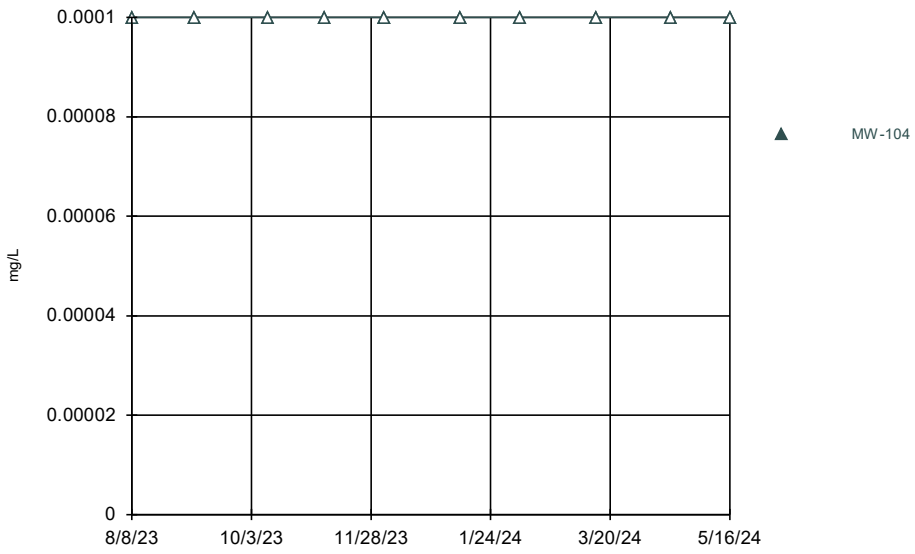


Constituent: Lithium Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
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Time Series

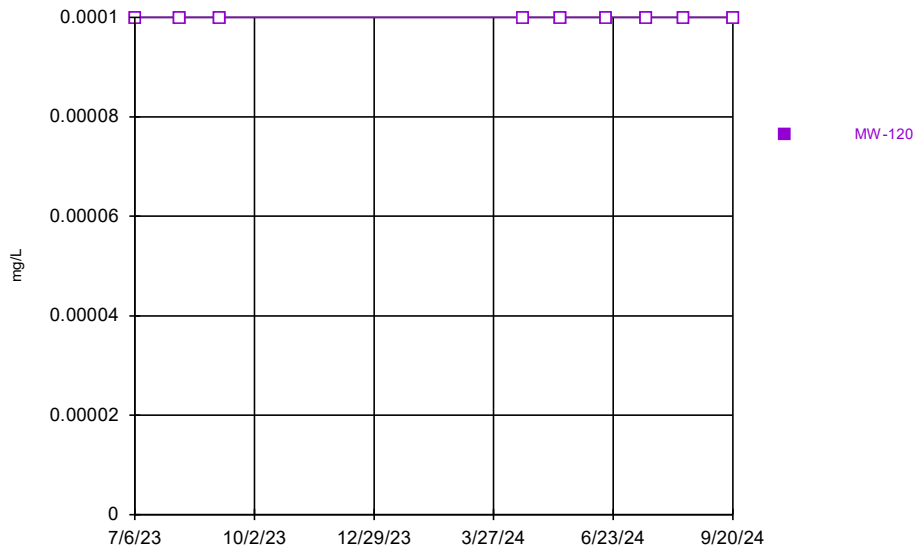


Constituent: Mercury Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

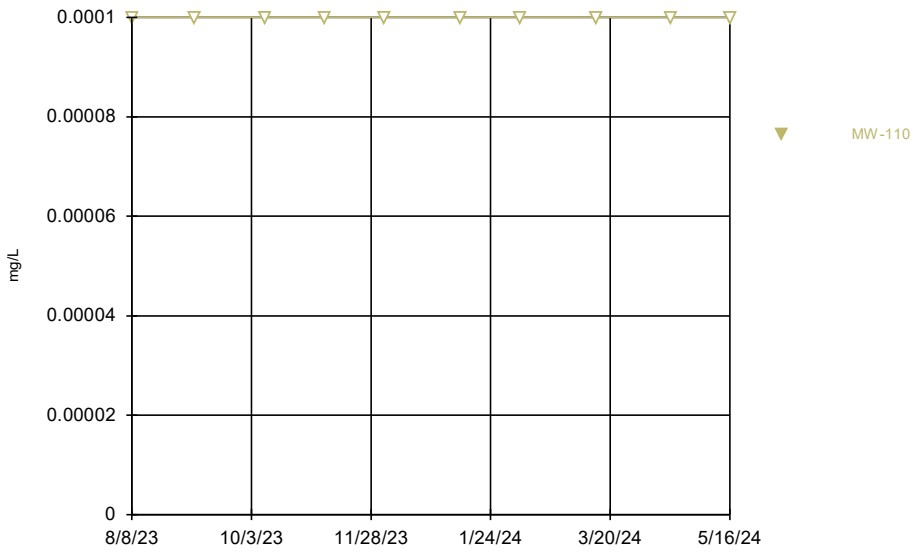


Constituent: Mercury Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

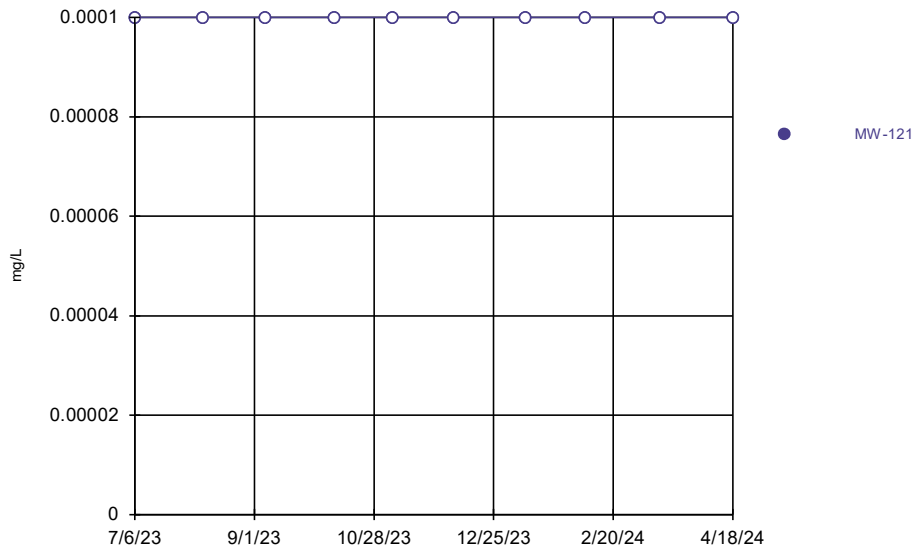


Constituent: Mercury Analysis Run 11/13/2024 10:59 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Time Series

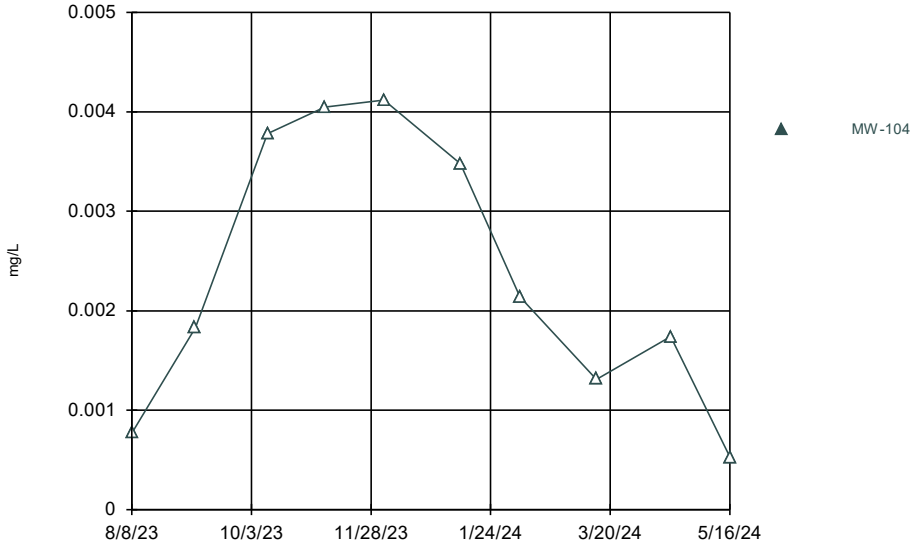


Constituent: Mercury Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Time Series

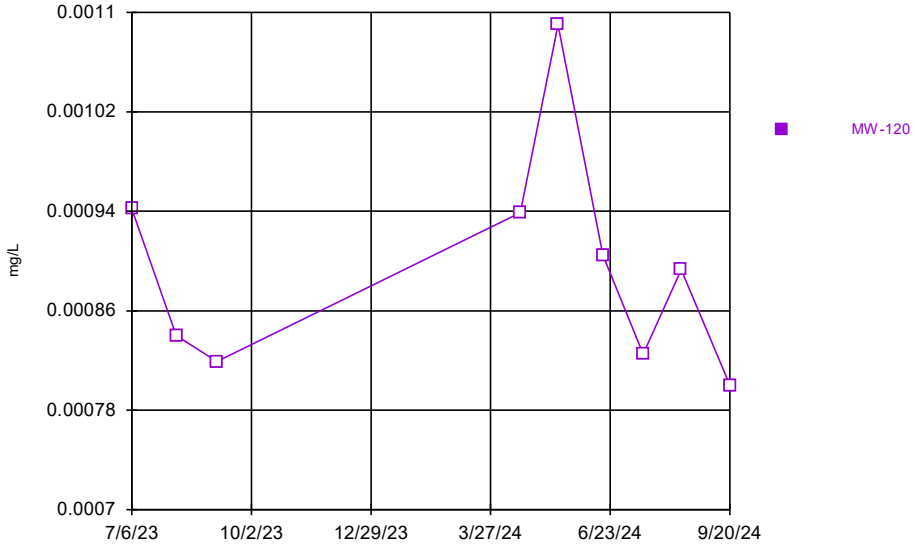


Constituent: Molybdenum Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

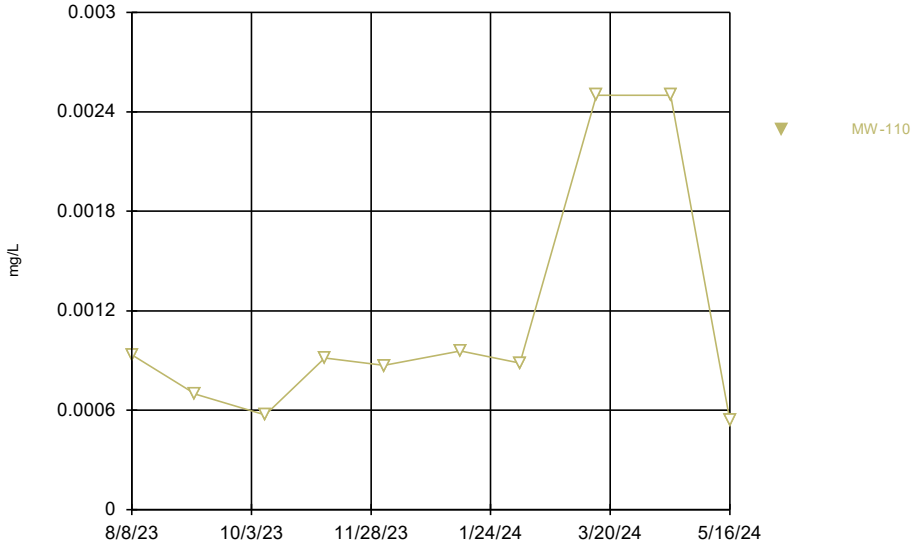


Constituent: Molybdenum Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
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Time Series

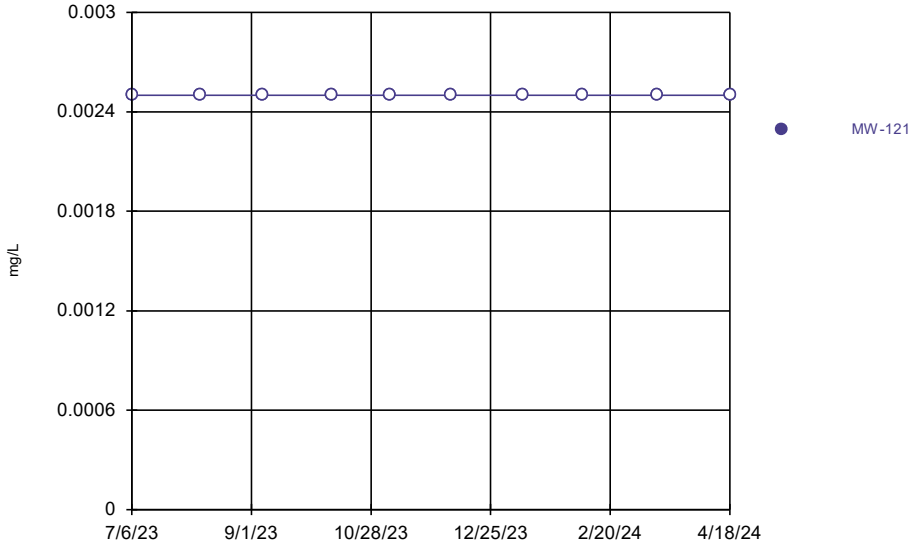


Constituent: Molybdenum Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
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Time Series

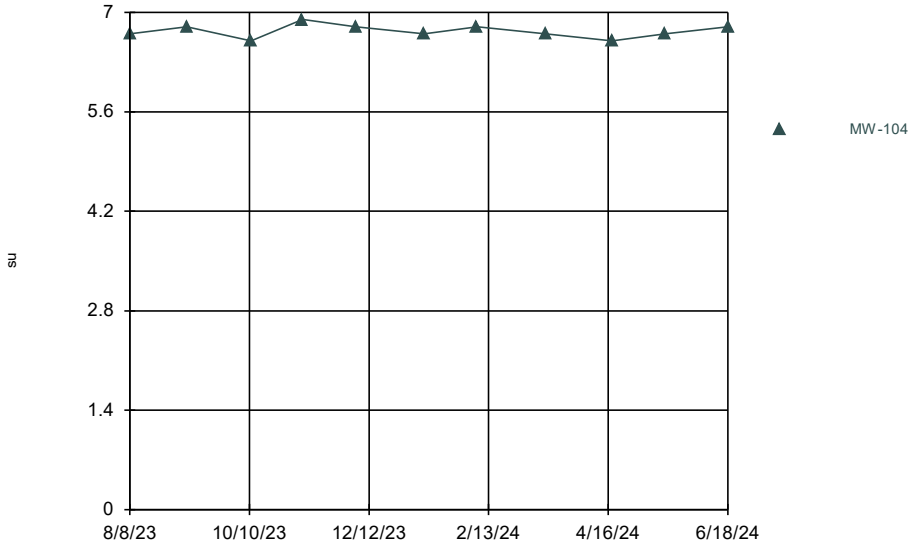


Constituent: Molybdenum Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

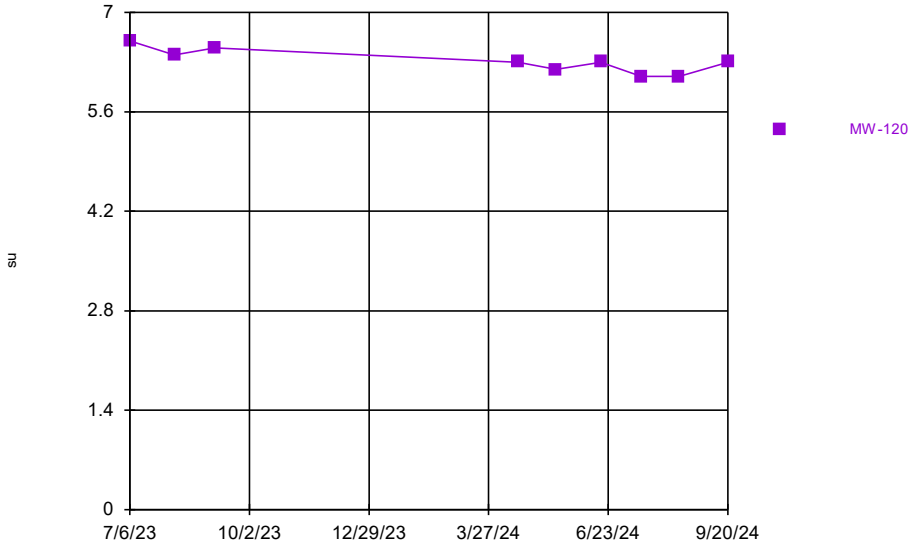


Constituent: pH Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

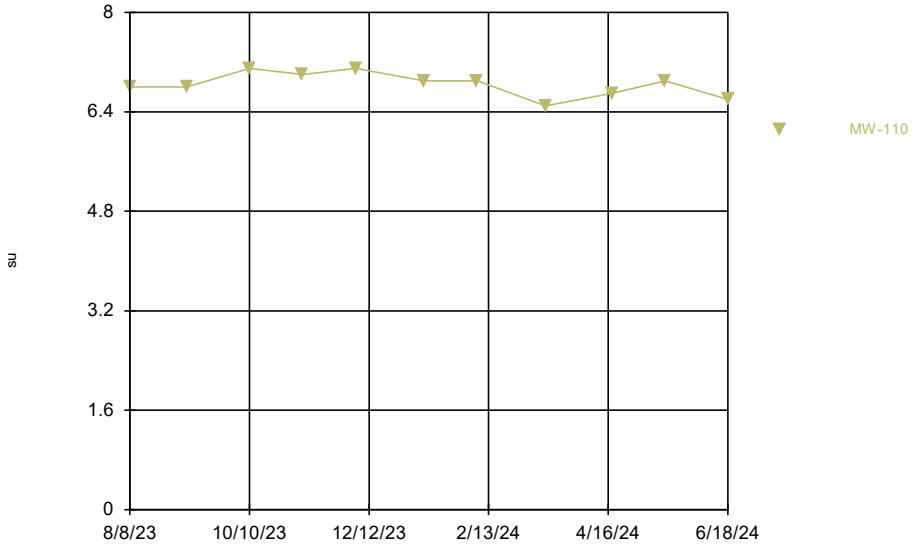


Constituent: pH Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

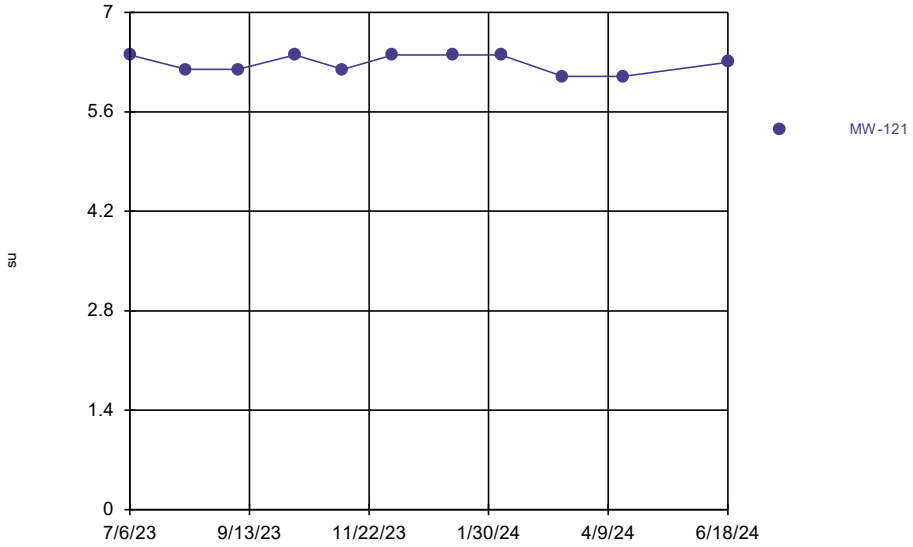


Constituent: pH Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

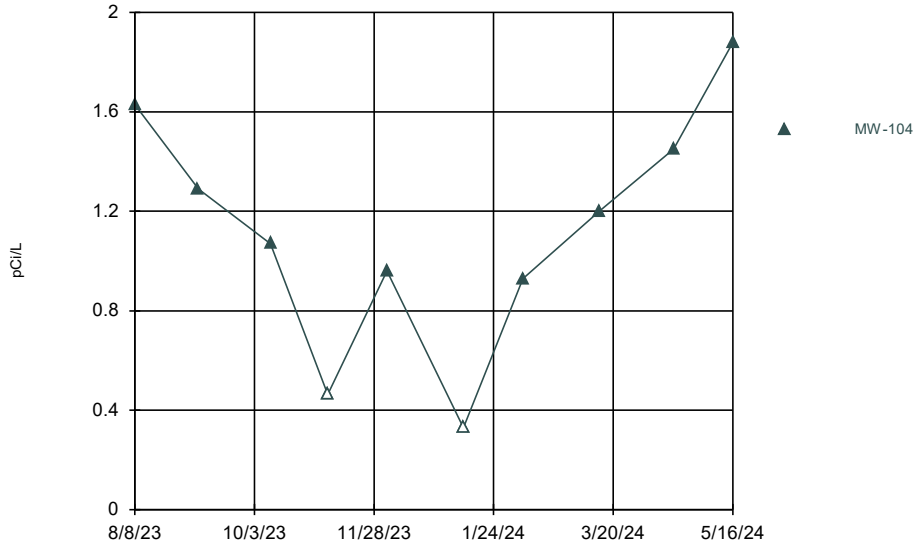


Constituent: pH Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

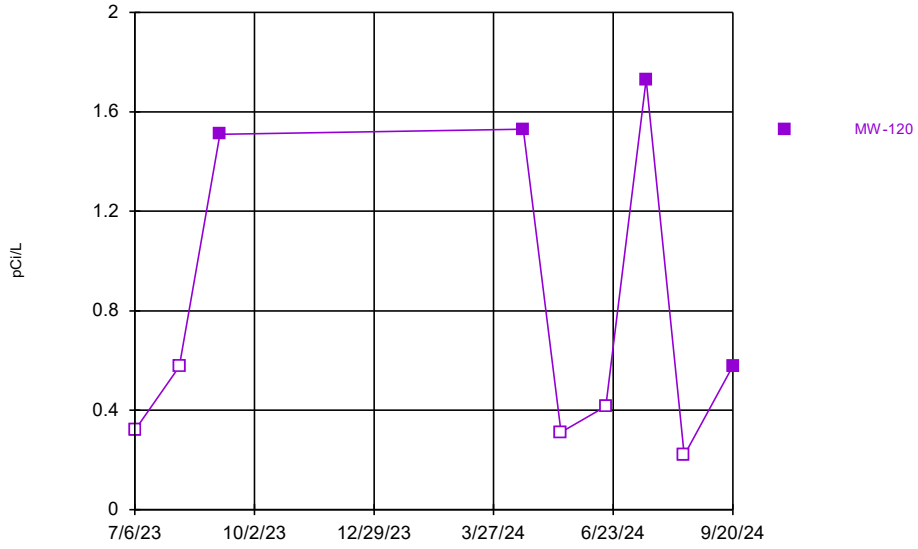


Constituent: Radium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

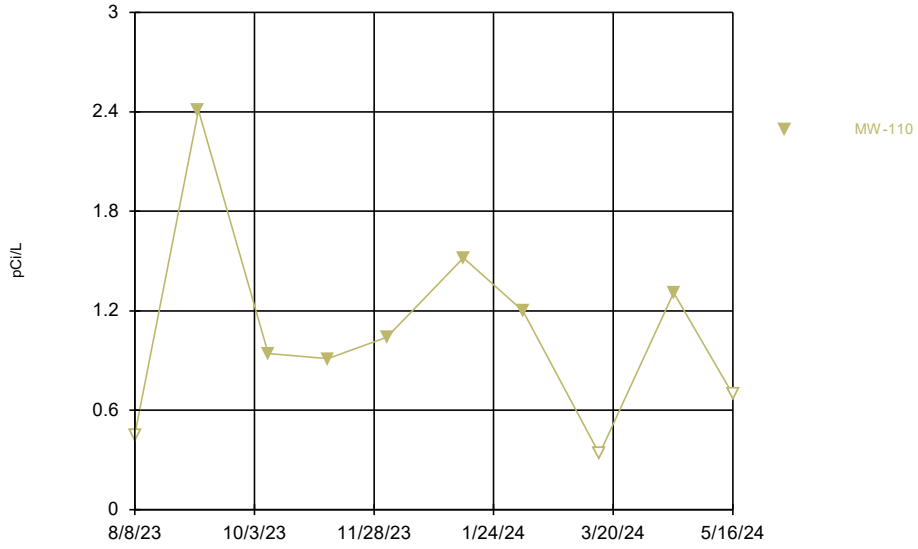


Constituent: Radium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

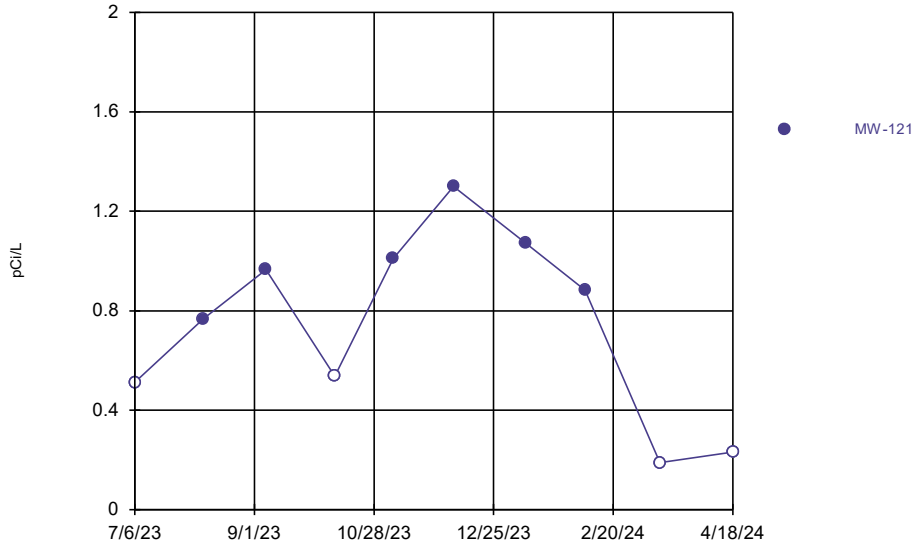


Constituent: Radium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

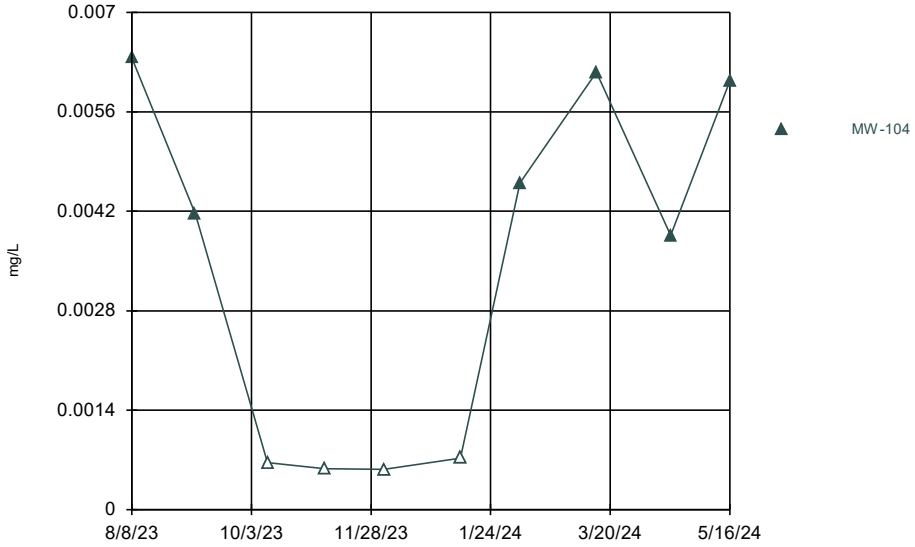


Constituent: Radium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

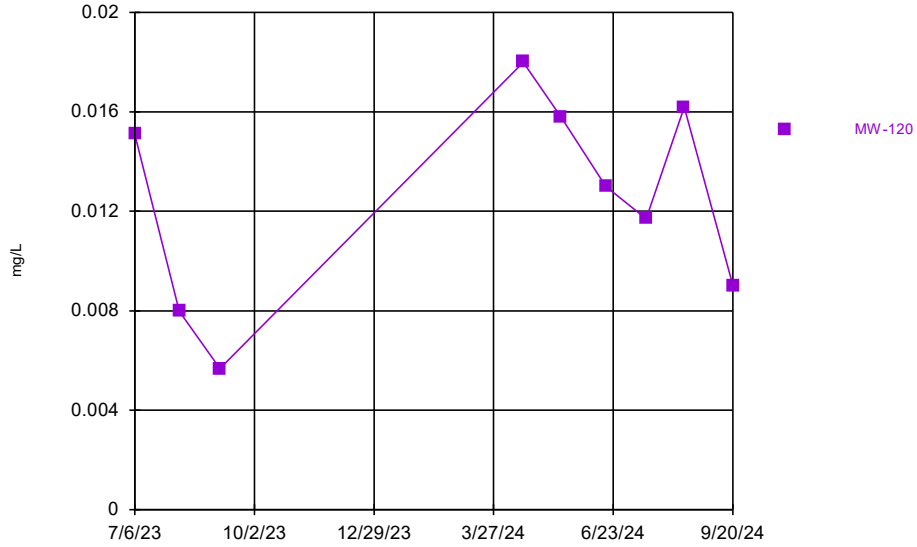


Constituent: Selenium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

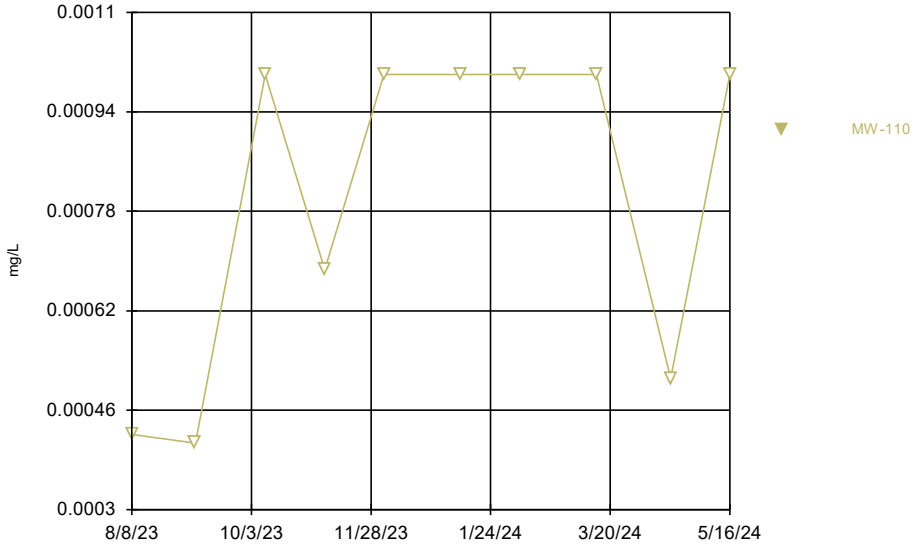


Constituent: Selenium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

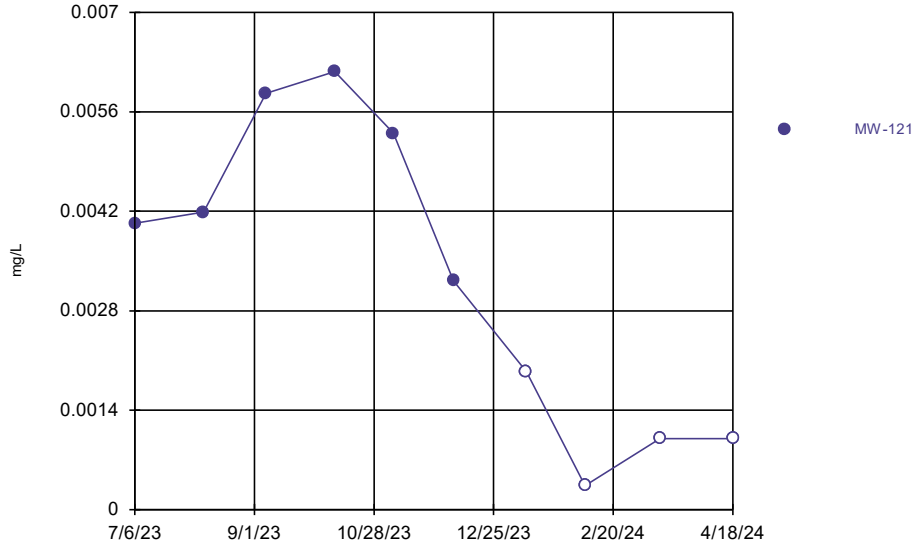


Constituent: Selenium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

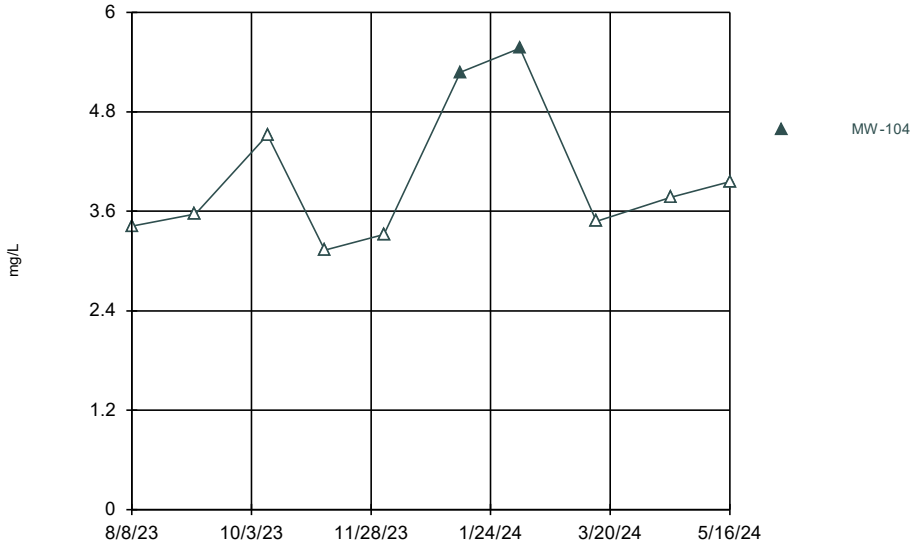


Constituent: Selenium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

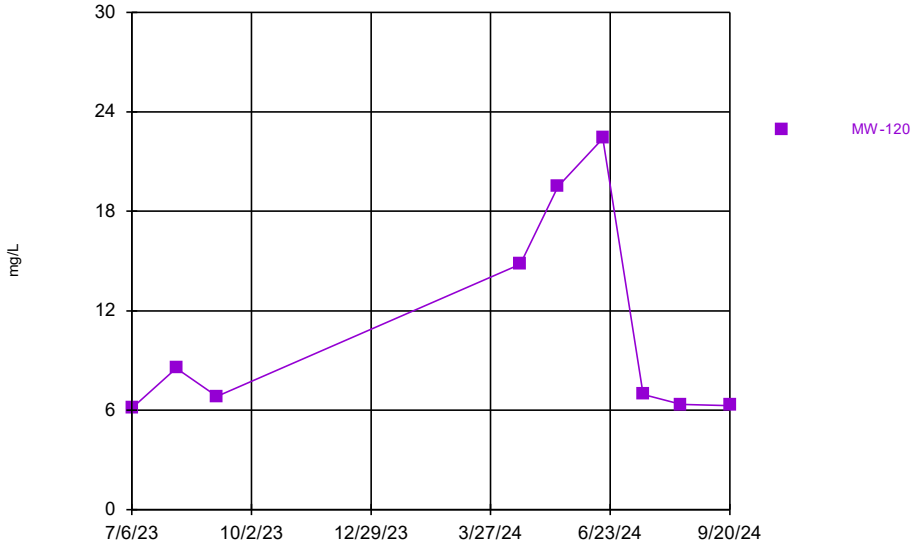


Constituent: Sulfate Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series

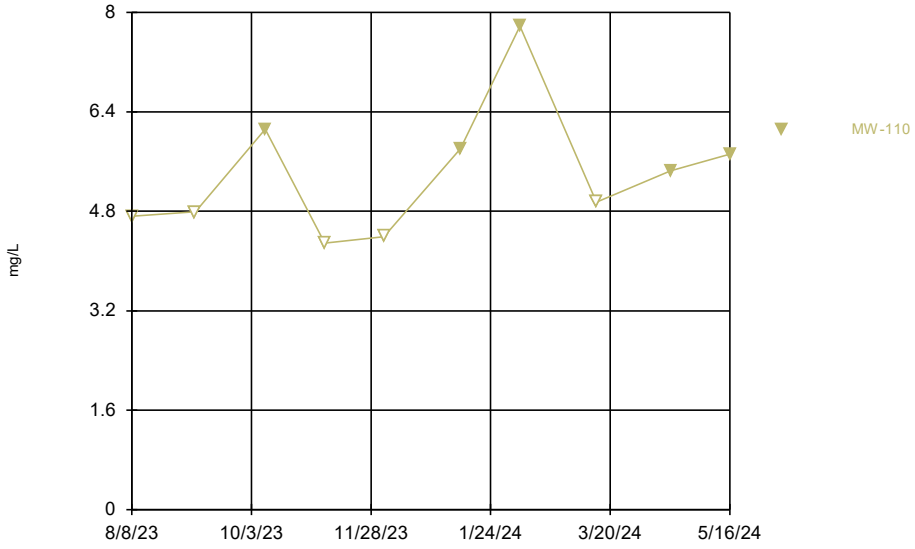


Constituent: Sulfate Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

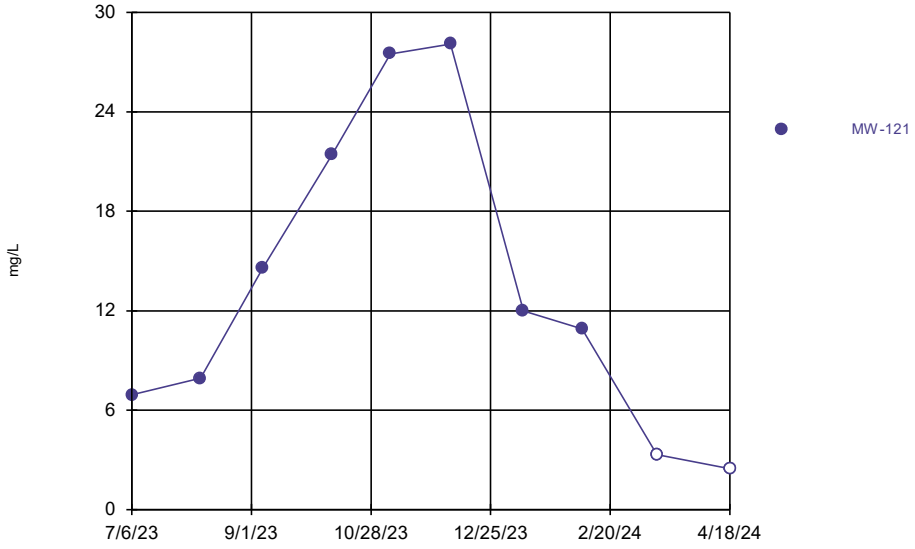


Constituent: Sulfate Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

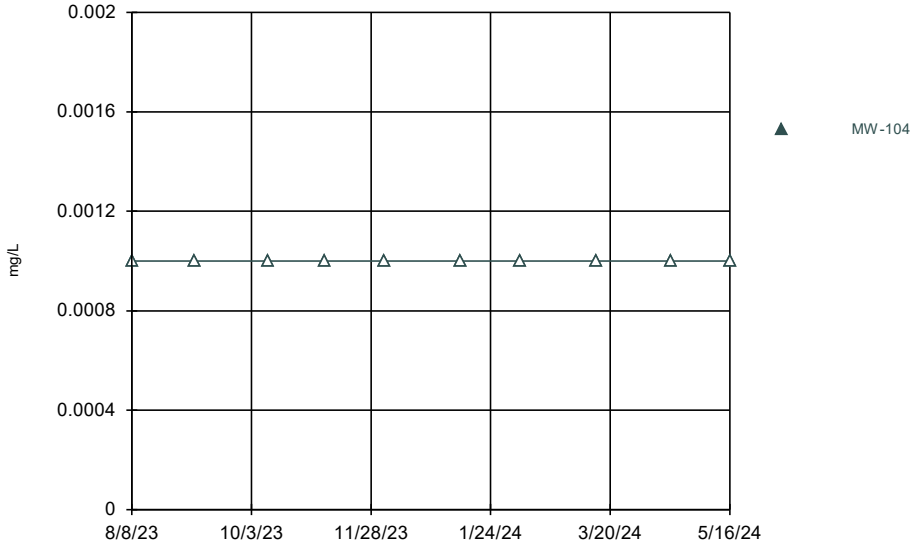


Constituent: Sulfate Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Time Series

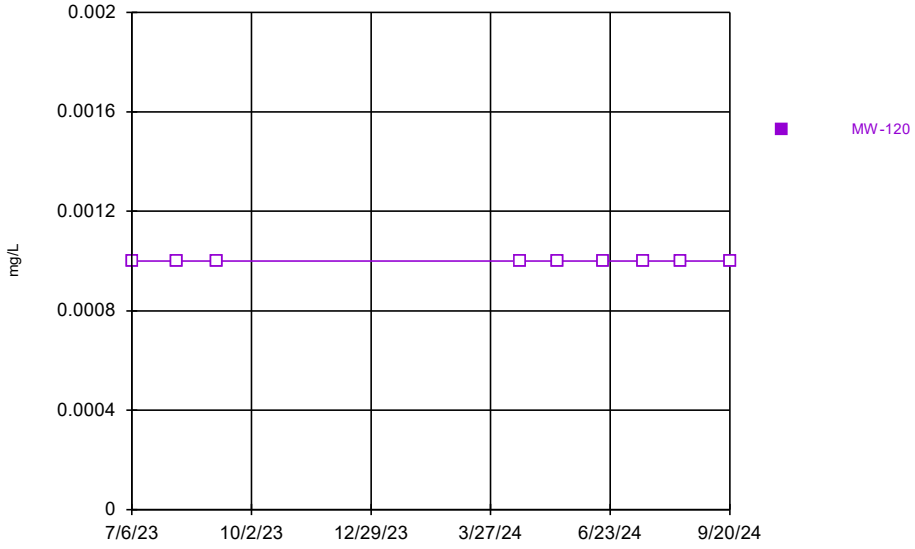


Constituent: Thallium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

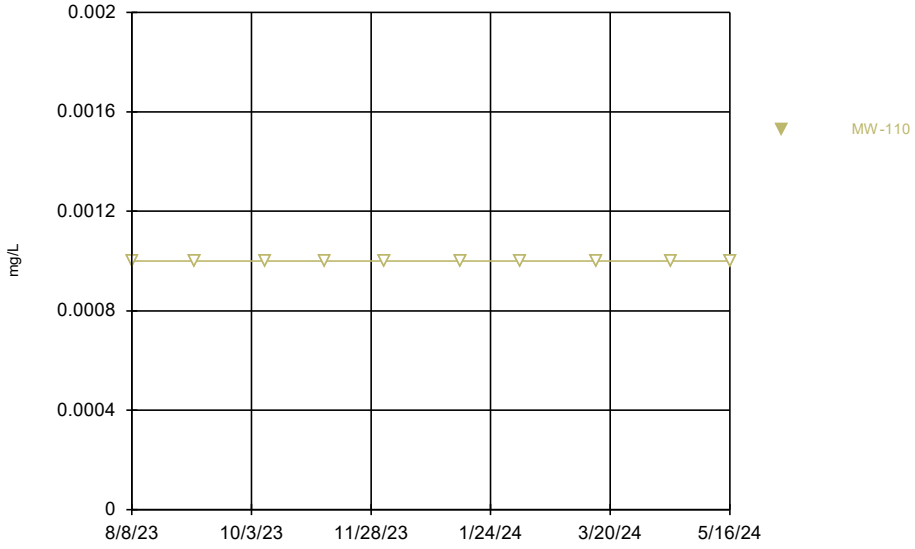


Constituent: Thallium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

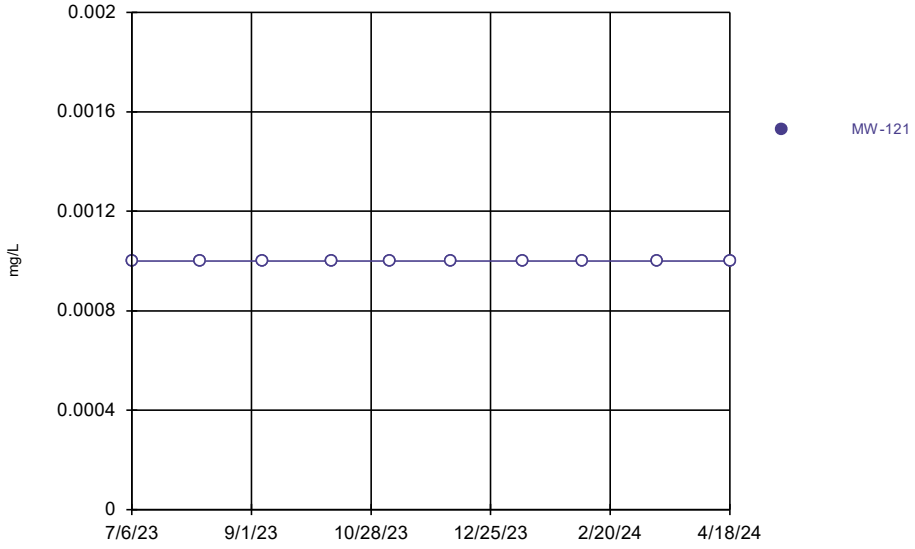


Constituent: Thallium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series



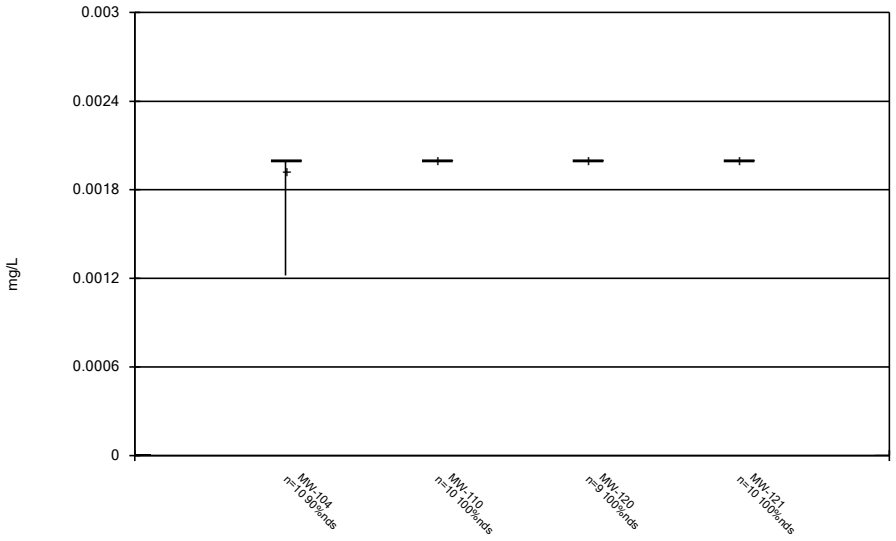
Constituent: Thallium Analysis Run 11/13/2024 11:00 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exploratory Data Analysis of Initial Background Data Sets for New Wells
Box-and-Whiskers Plots

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Box & Whiskers Plot

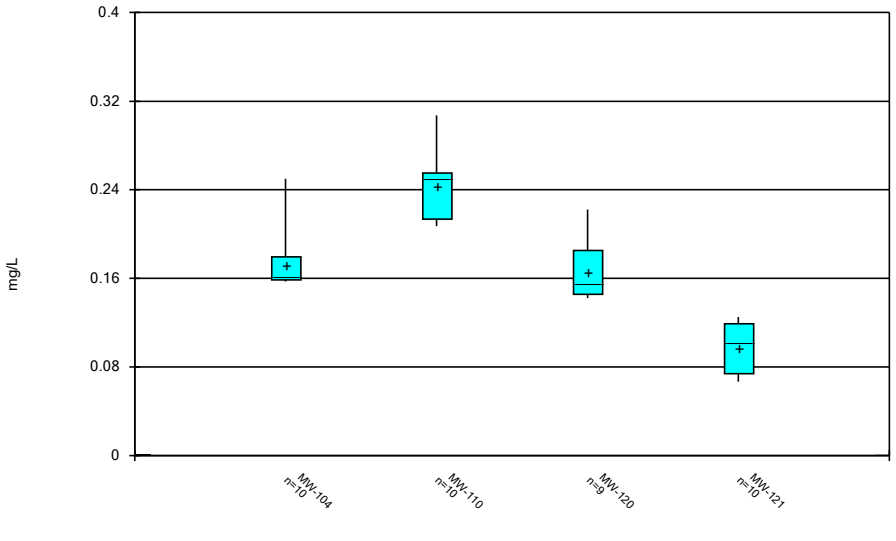


Constituent: Antimony Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Box & Whiskers Plot

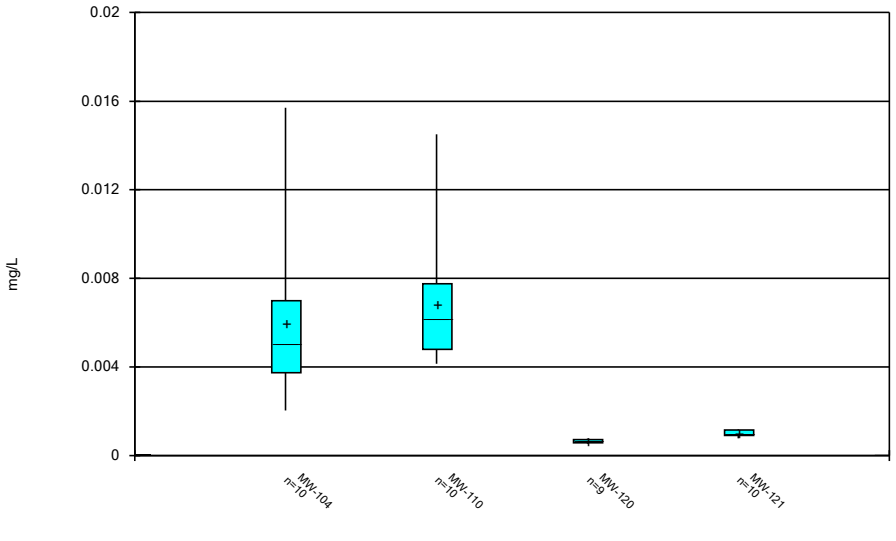


Constituent: Barium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

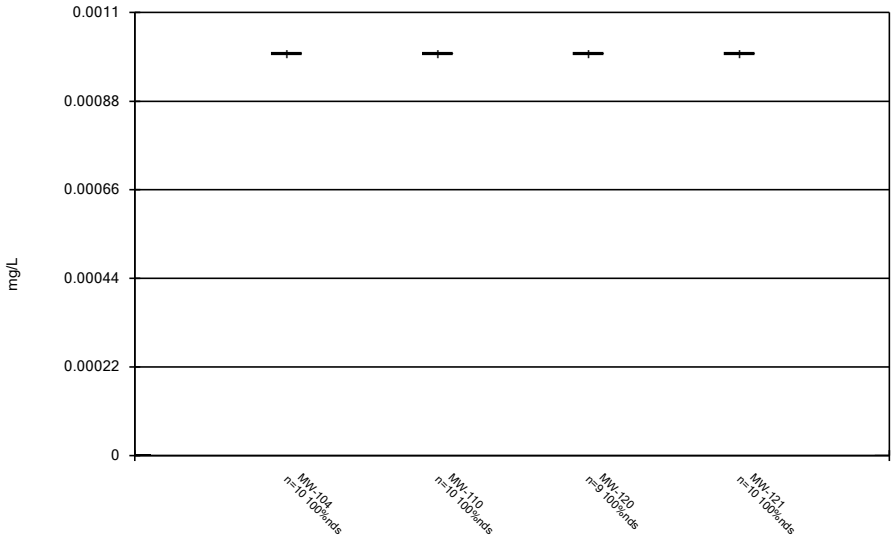


Constituent: Arsenic Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

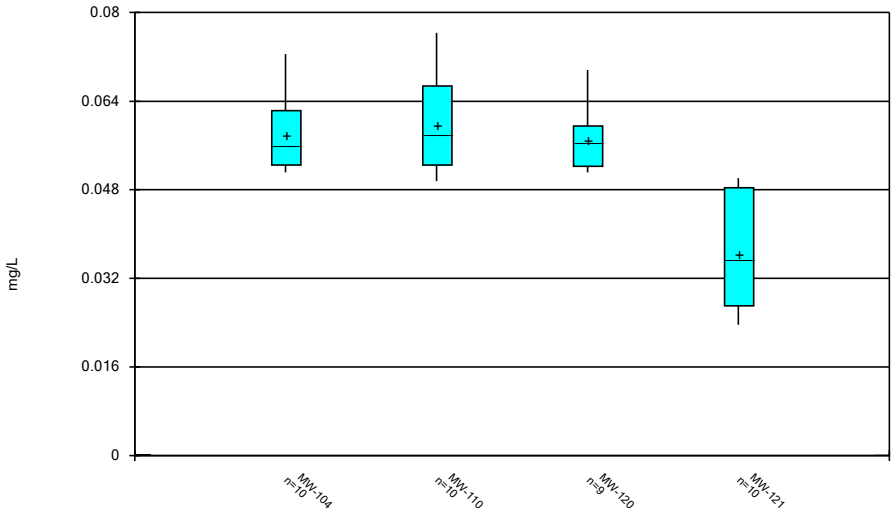


Constituent: Beryllium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

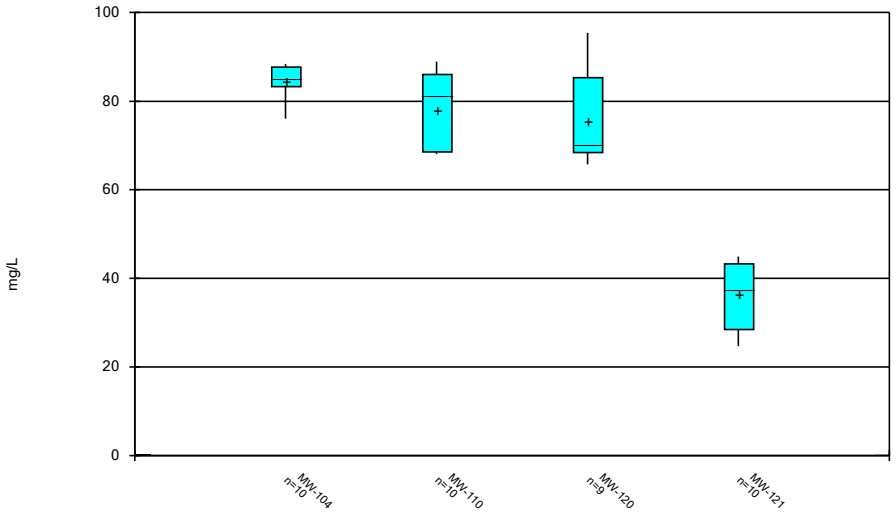


Constituent: Boron Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

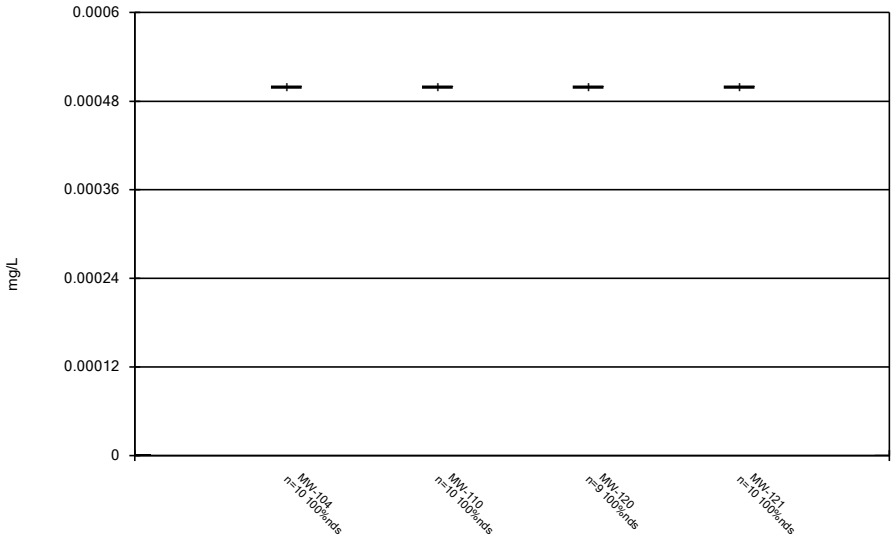


Constituent: Calcium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

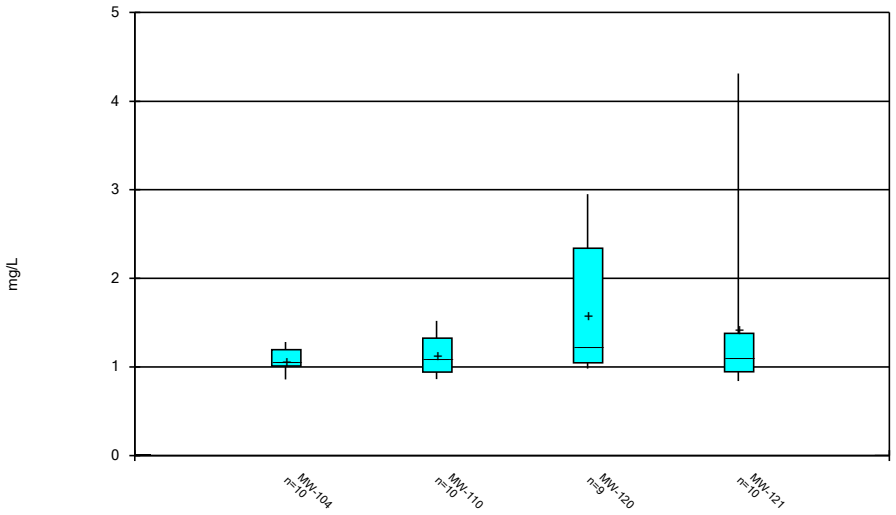


Constituent: Cadmium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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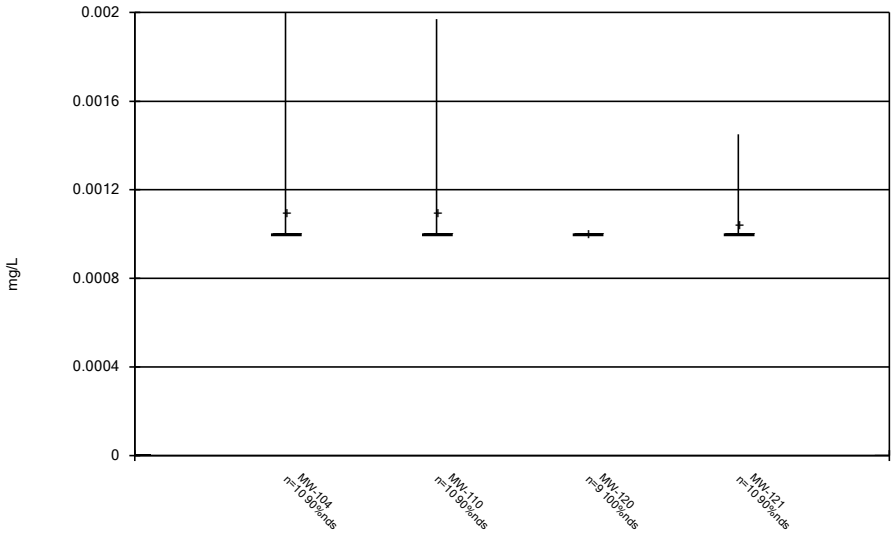
Box & Whiskers Plot



Constituent: Chloride Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot

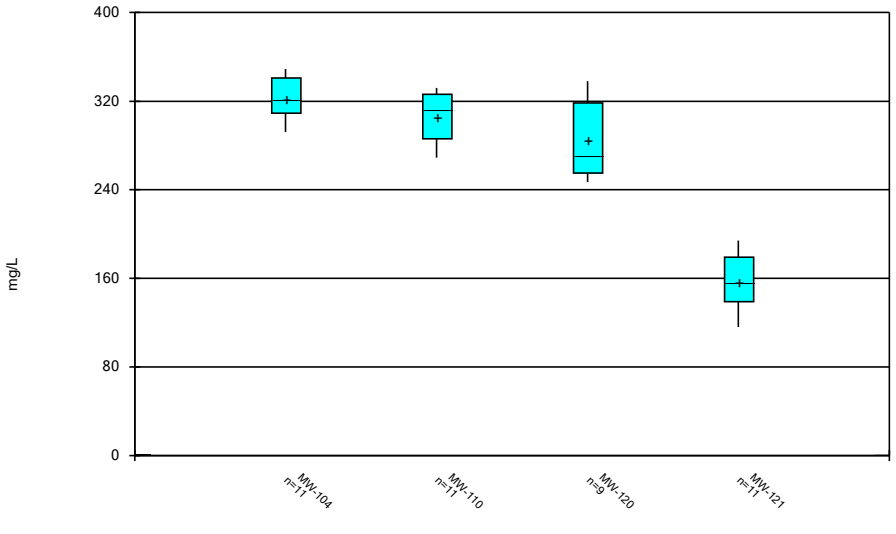


Constituent: Chromium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

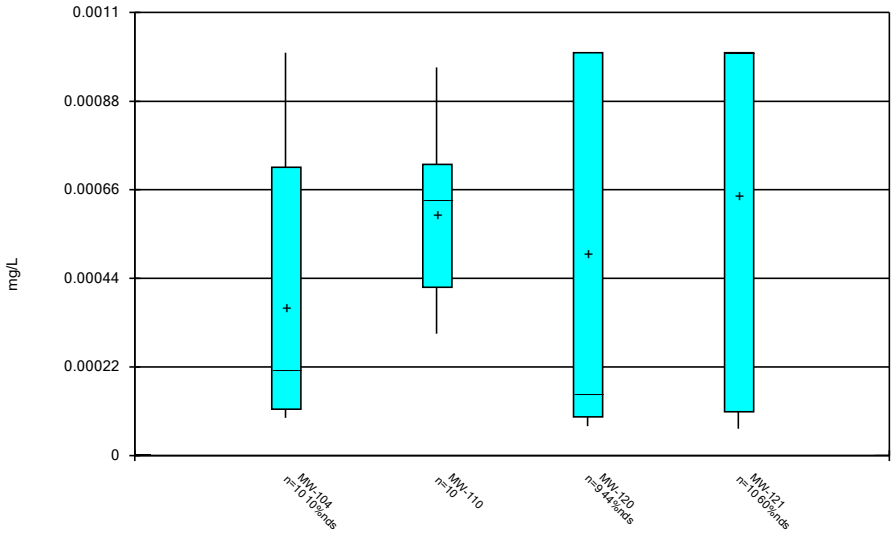


Constituent: Dissolved Solids Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Box & Whiskers Plot

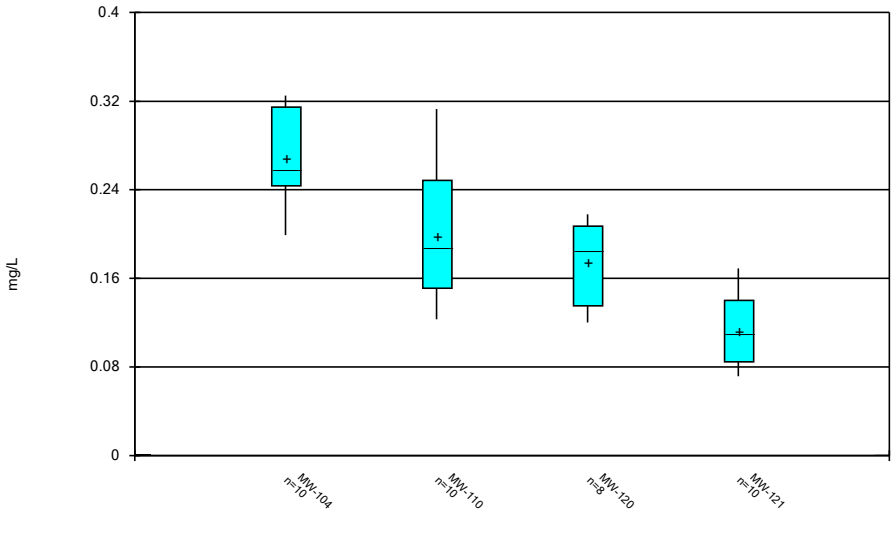


Constituent: Cobalt Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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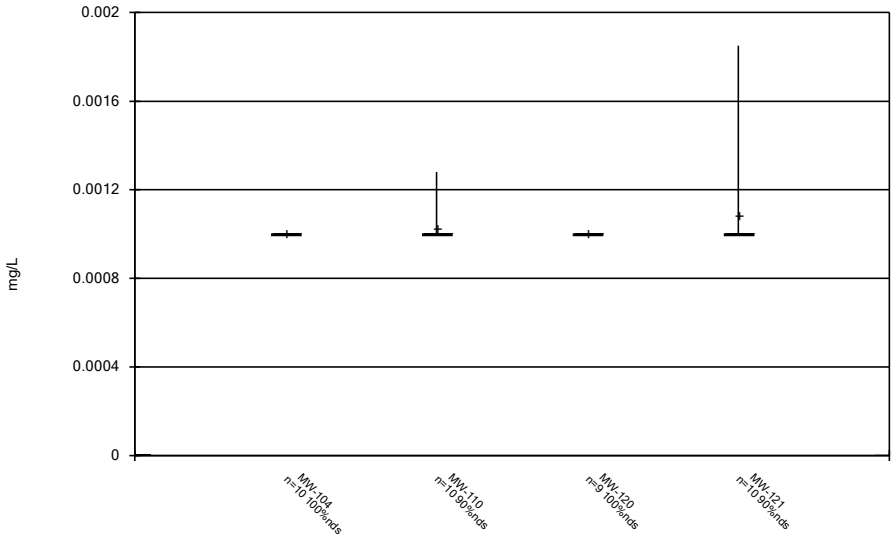
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot

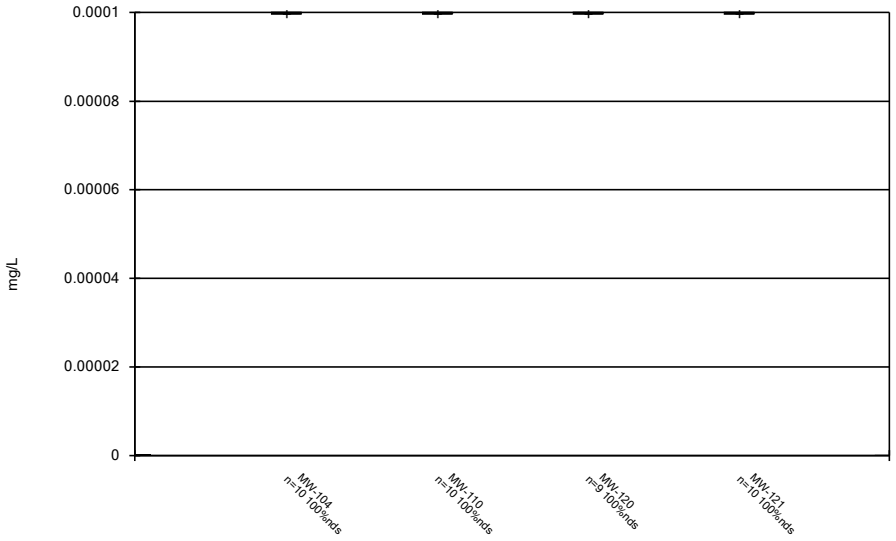


Constituent: Lead Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

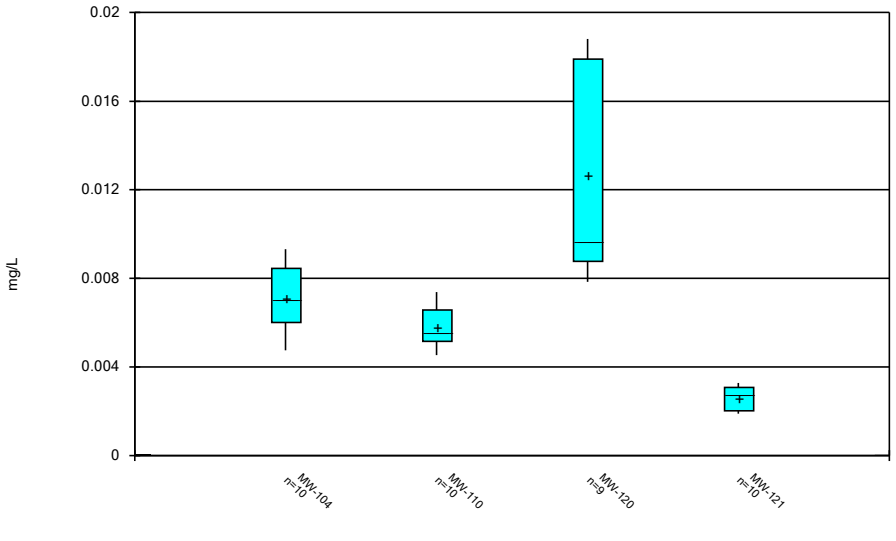


Constituent: Mercury Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

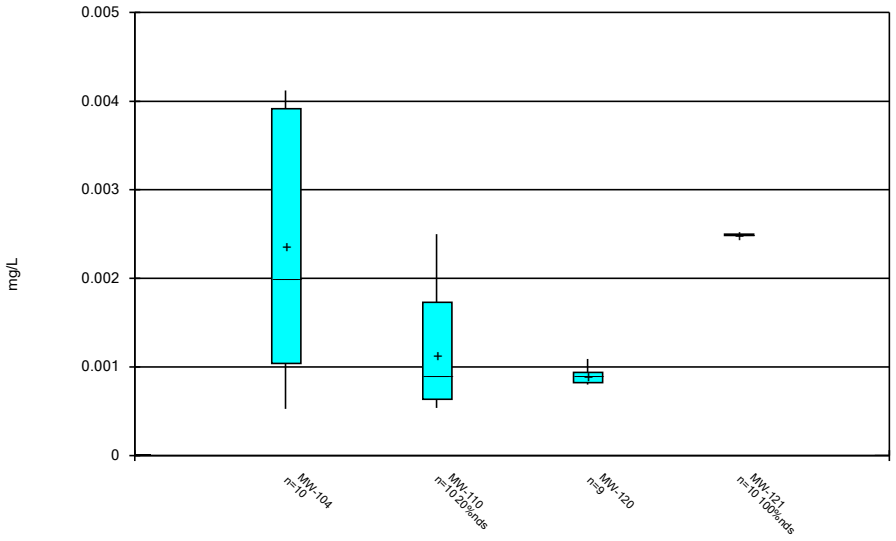


Constituent: Lithium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

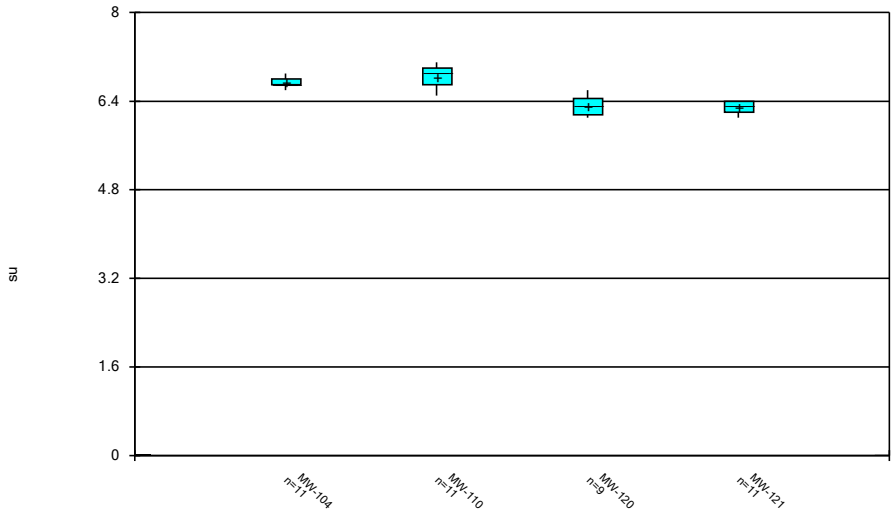


Constituent: Molybdenum Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

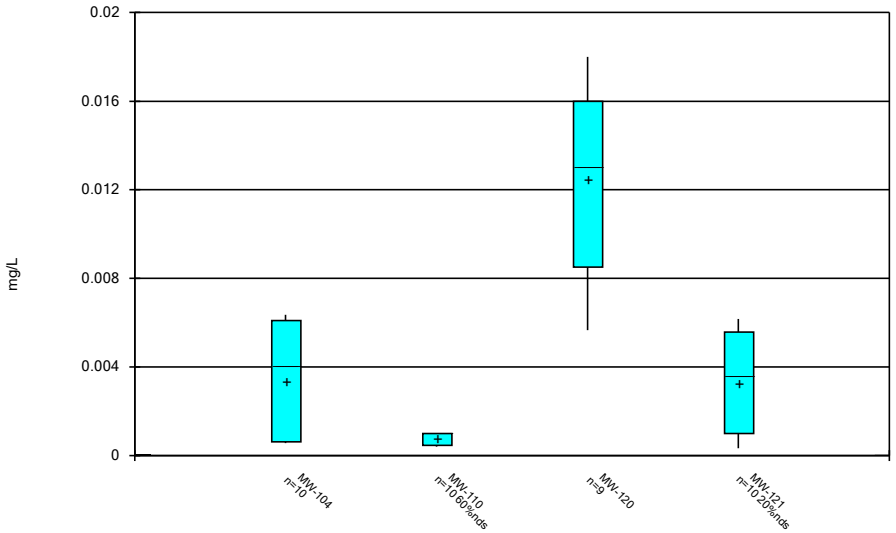


Constituent: pH Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

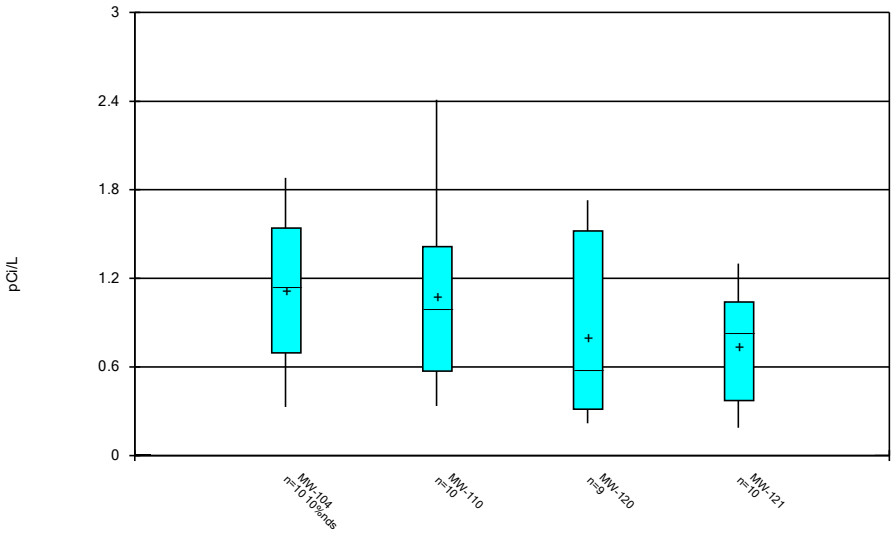


Constituent: Selenium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

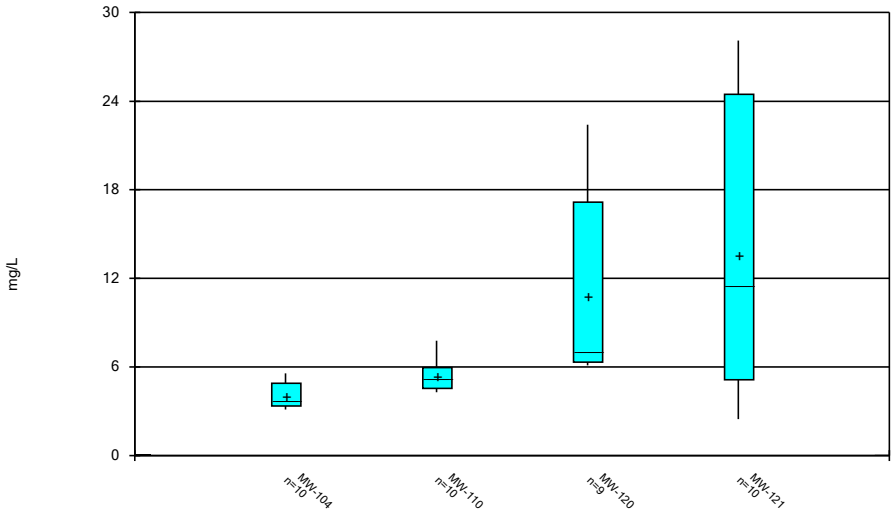


Constituent: Radium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

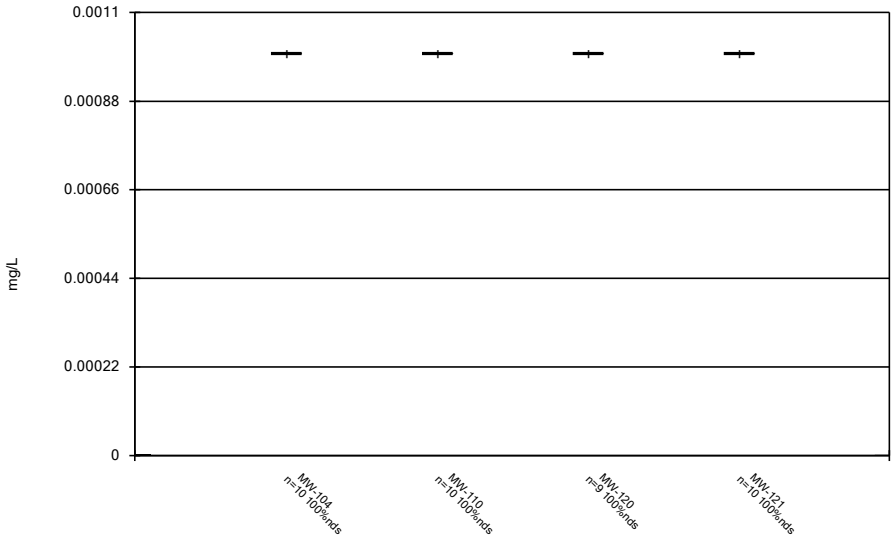


Constituent: Sulfate Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Box & Whiskers Plot



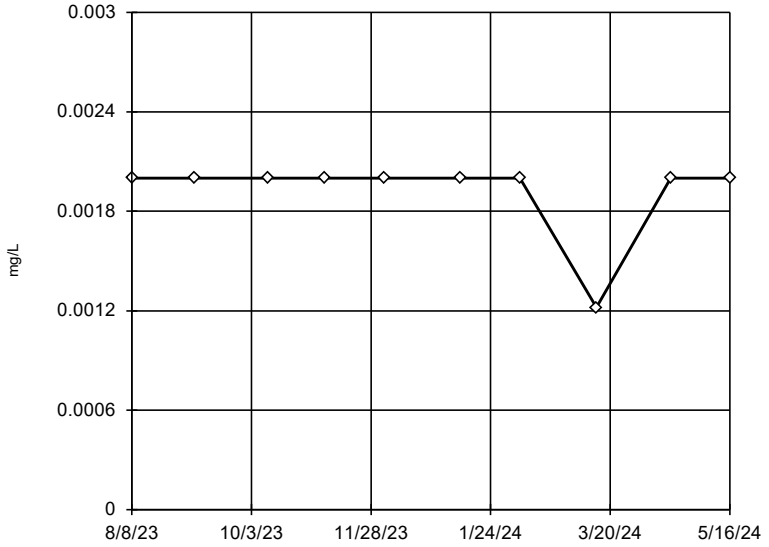
Constituent: Thallium Analysis Run 11/13/2024 11:35 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exploratory Data Analysis of Initial Background Data Sets for New Wells Outlier Tests

Tukey's Outlier Screening

MW-104



n = 10

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 root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

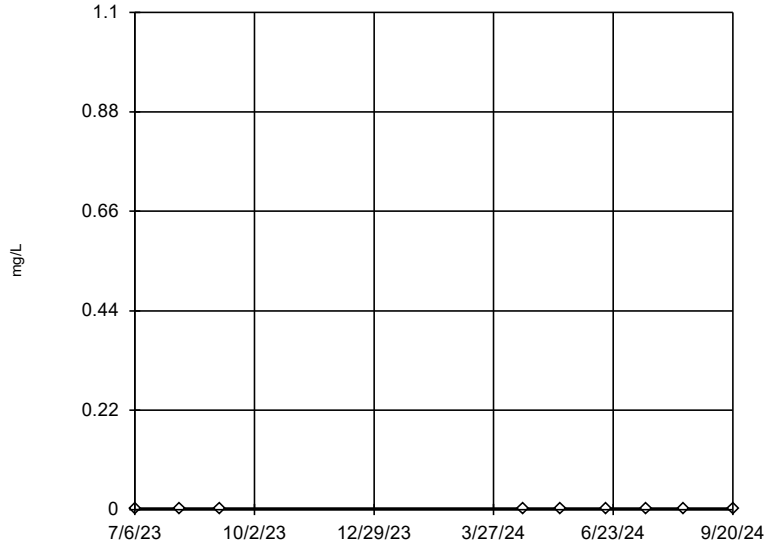
Constituent: Antimony Analysis Run 11/13/2024 11:40 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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.

All values are the same.

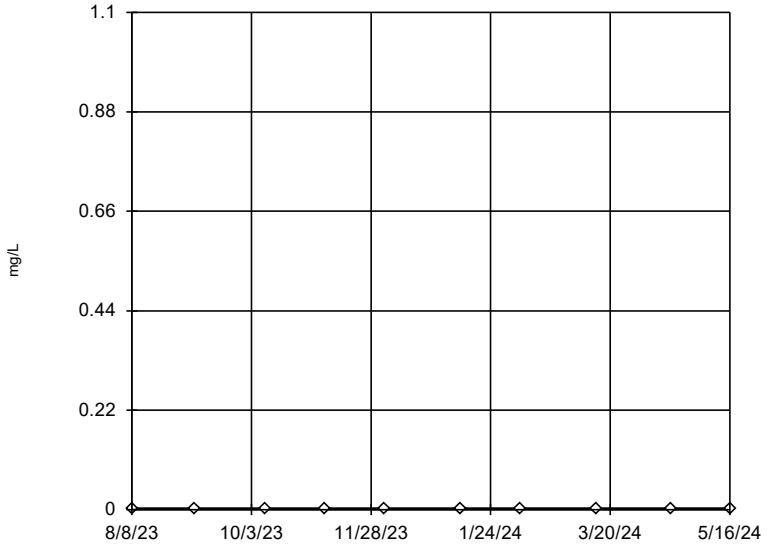
Constituent: Antimony Analysis Run 11/13/2024 11:40 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Tukey's Outlier Screening

MW-110



n = 10

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.

All values are the same.

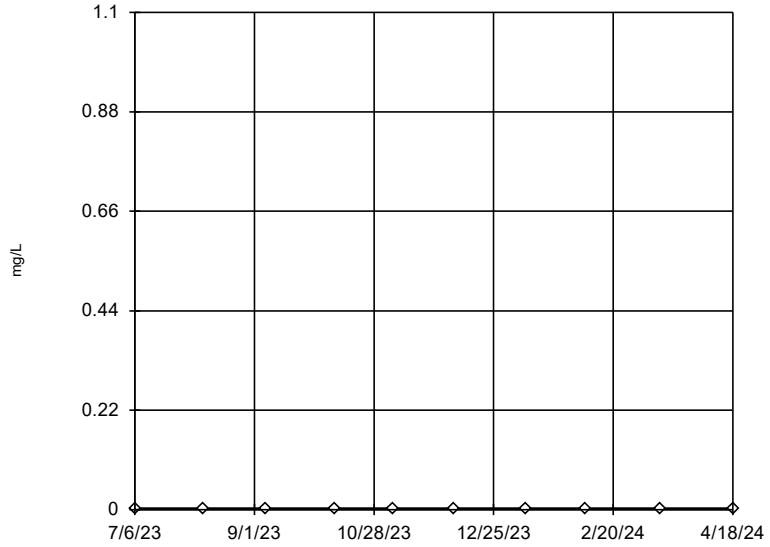
Constituent: Antimony Analysis Run 11/13/2024 11:40 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 10

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.

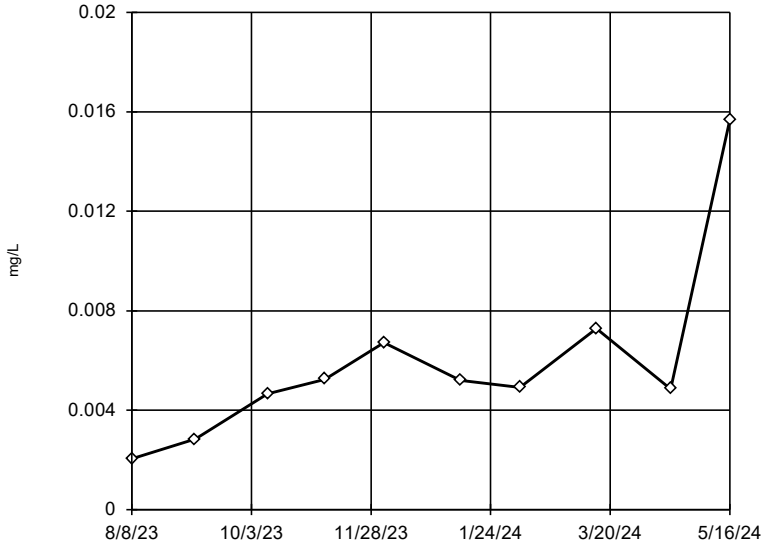
All values are the same.

Constituent: Antimony Analysis Run 11/13/2024 11:40 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.005943, std. dev. 0.003762, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9278
Critical = 0.869 (after natural log transformation)
The distribution was found to be log-normal.

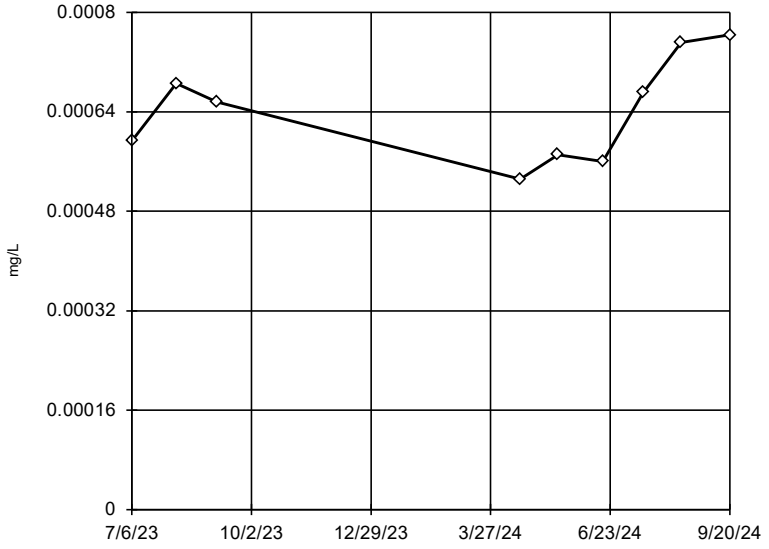
Constituent: Arsenic Analysis Run 11/13/2024 11:40 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0006428, std. dev. 0.00008383, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9328
Critical = 0.859
The distribution was found to be normally distributed.

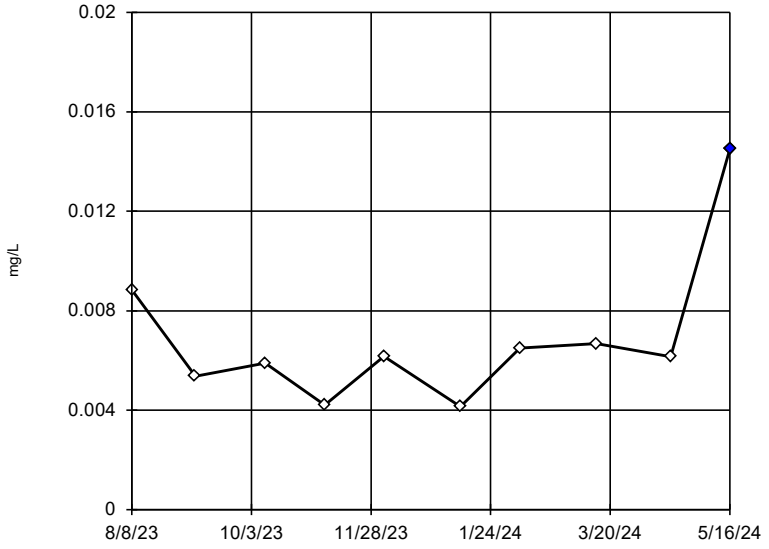
Constituent: Arsenic Analysis Run 11/13/2024 11:40 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Dixon's Outlier Test

MW-110



n = 10

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.006843.
Std. Dev. = 0.003001.
0.0145: c = 0.55
tabl = 0.477.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9159
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

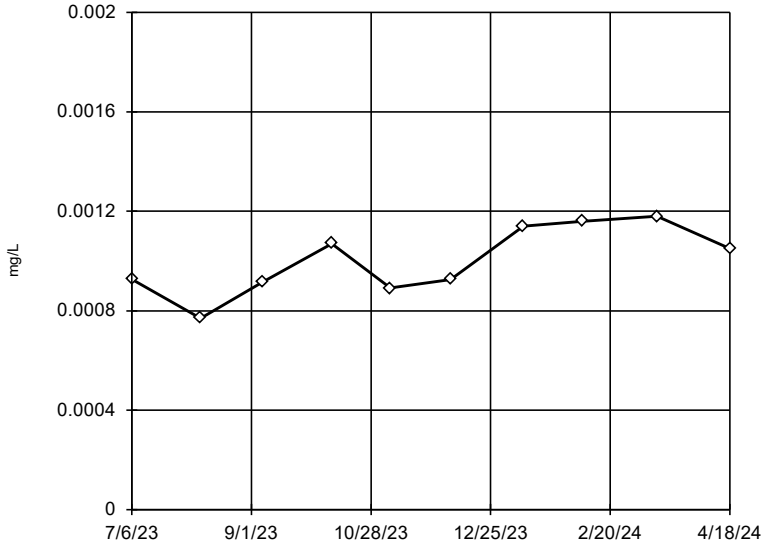
Constituent: Arsenic Analysis Run 11/13/2024 11:40 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.001003, std. dev. 0.0001365, critical Tn 2.176

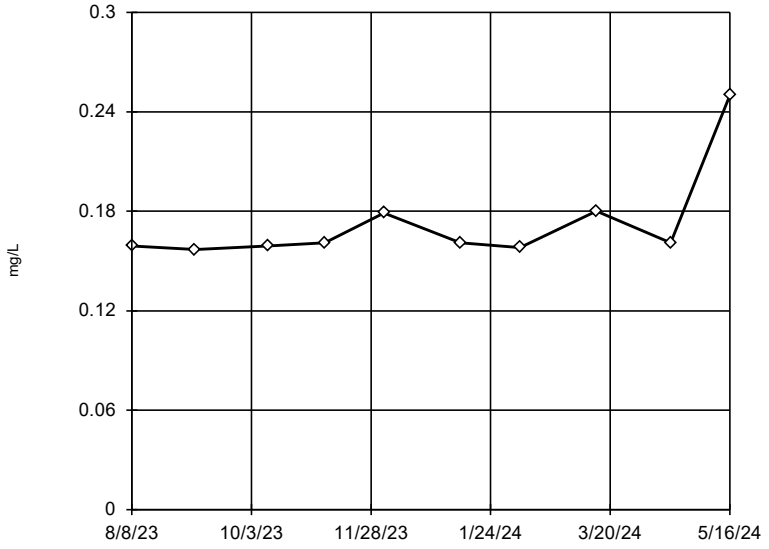
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9277
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Arsenic Analysis Run 11/13/2024 11:40 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-104



n = 10

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 = 0.2607, low cutoff = 0.1091, based on IQR multiplier of 3.

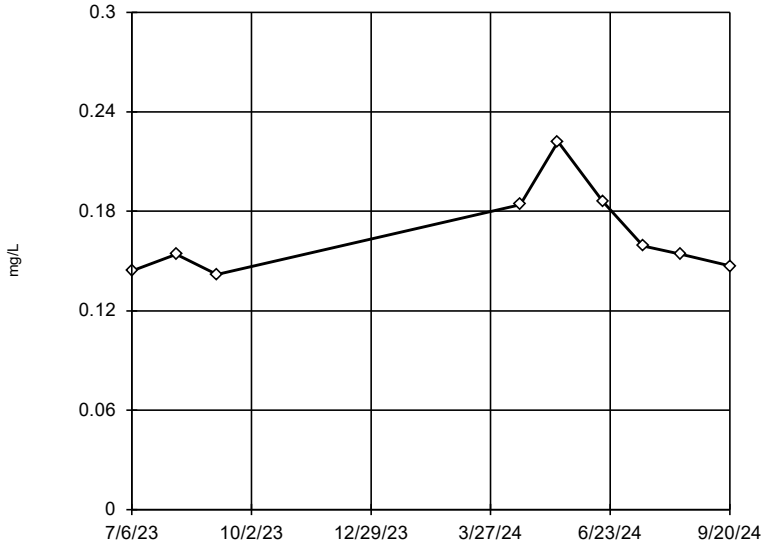
Constituent: Barium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1658, std. dev. 0.0265, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8637
Critical = 0.859 (after natural log transformation)
The distribution was found to be log-normal.

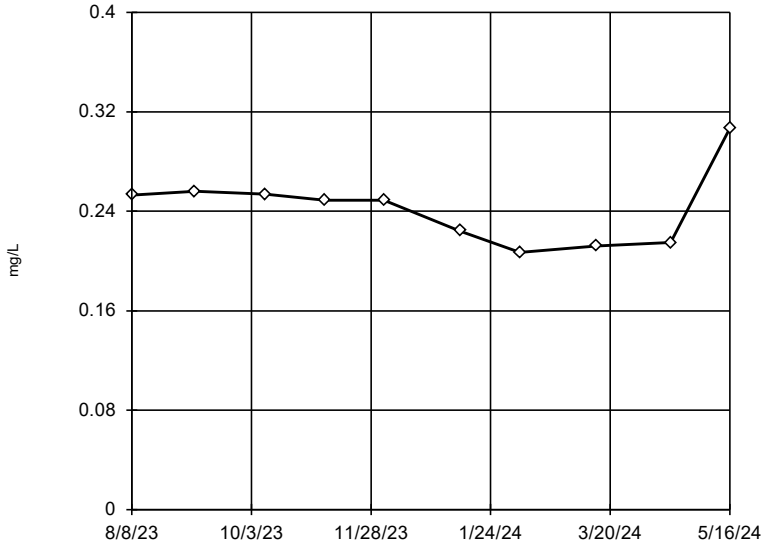
Constituent: Barium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2426, std. dev. 0.02974, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8818
Critical = 0.869
The distribution was found to be normally distributed.

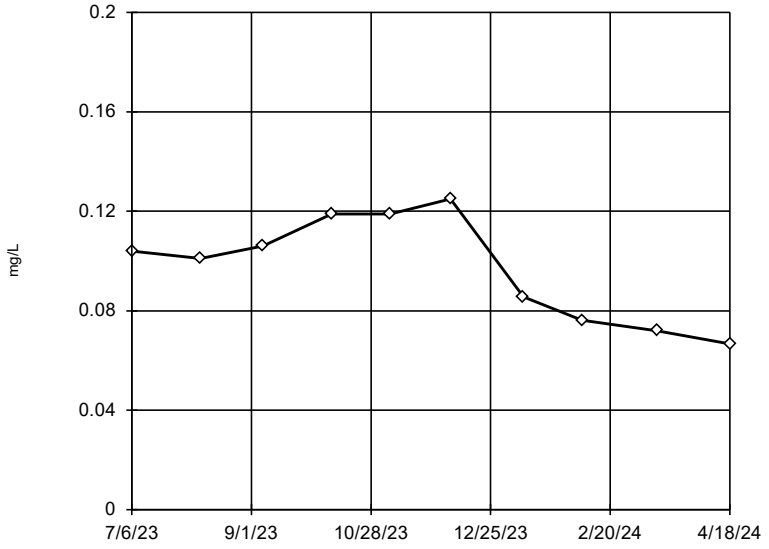
Constituent: Barium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.09743, std. dev. 0.02112, critical Tn 2.176

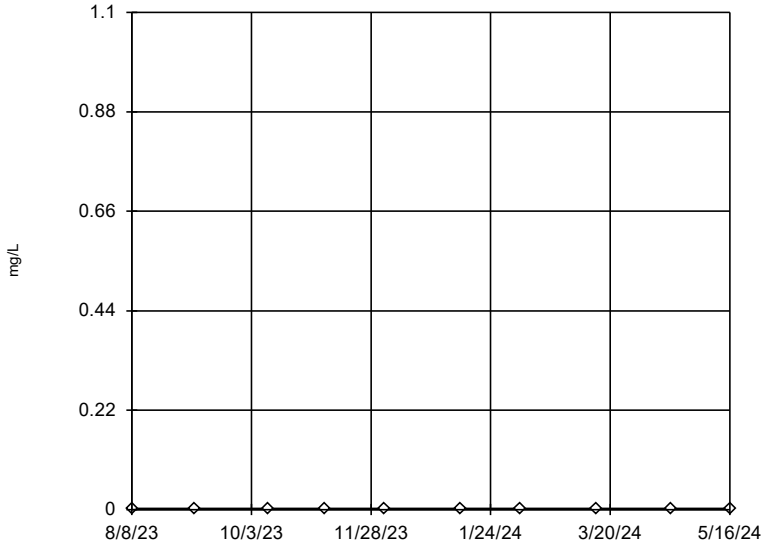
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9211
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Barium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-104



n = 10

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.

All values are the same.

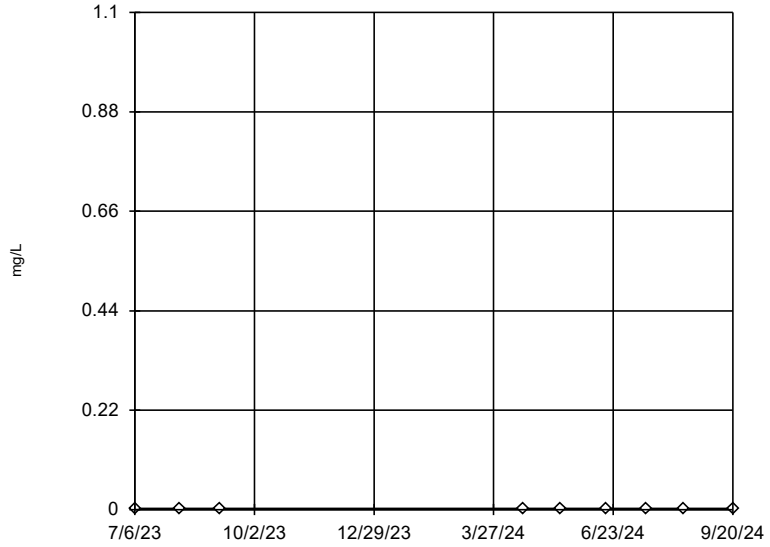
Constituent: Beryllium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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.

All values are the same.

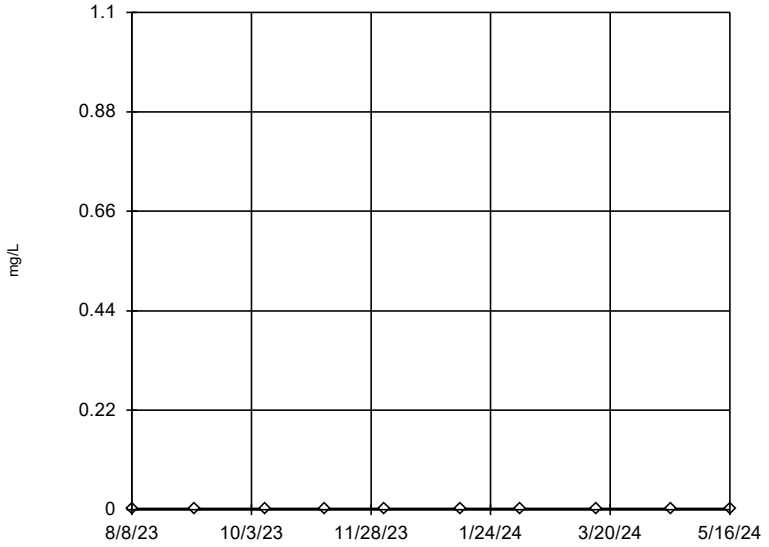
Constituent: Beryllium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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.

All values are the same.

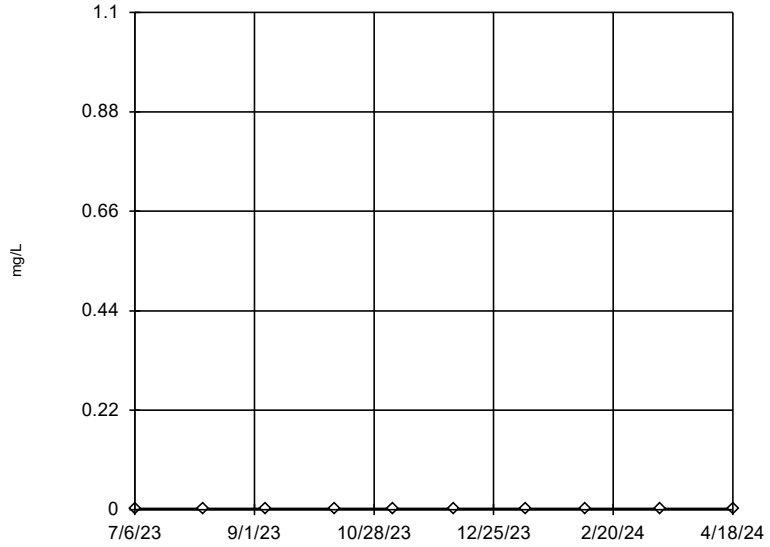
Constituent: Beryllium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 10

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.

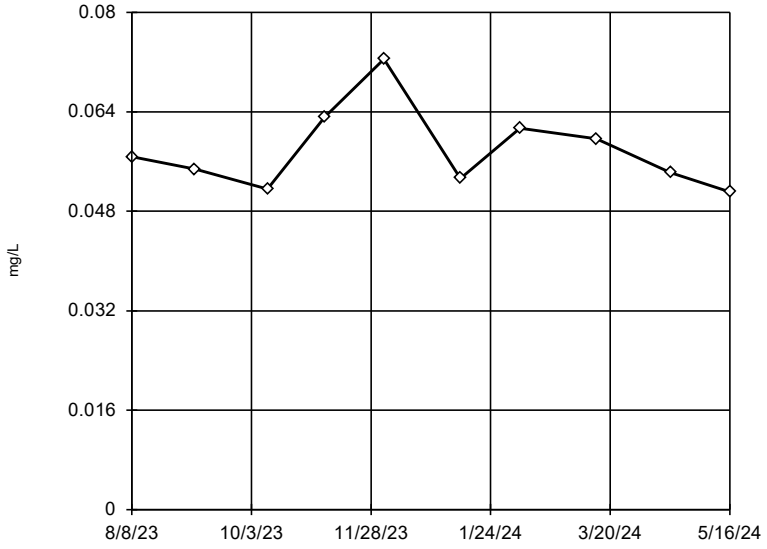
All values are the same.

Constituent: Beryllium Analysis Run 11/13/2024 11:41 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.05786, std. dev. 0.006569, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8896
Critical = 0.869
The distribution was found to be normally distributed.

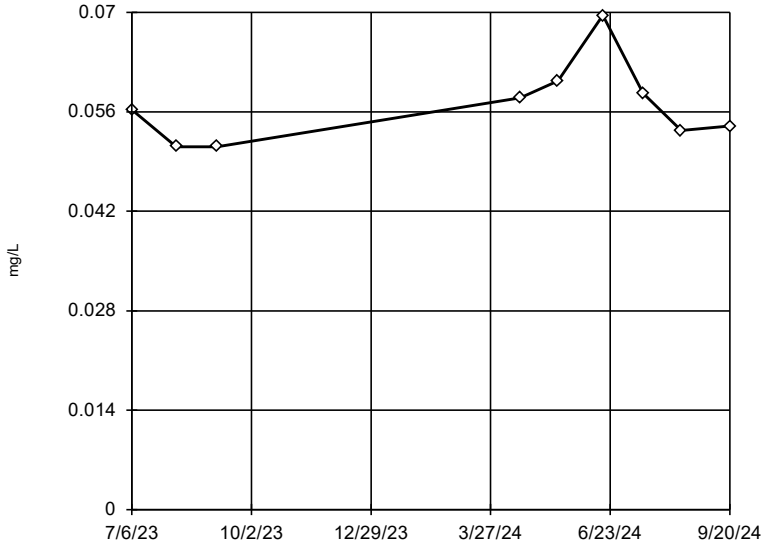
Constituent: Boron Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-120



n = 9

No statistical outliers.
Testing for 1 high outlier.
Mean = 0.05694.
Std. Dev. = 0.005765.
0.0696 (J): c = 0.4973
tabl = 0.512.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9305
Critical = 0.851
The distribution was found to be normally distributed.

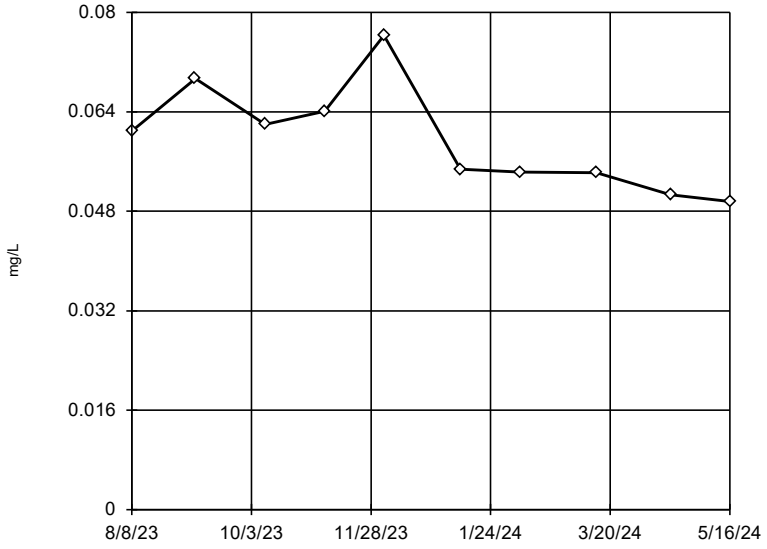
Constituent: Boron Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.05963, std. dev. 0.008577, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9276
Critical = 0.869
The distribution was found to be normally distributed.

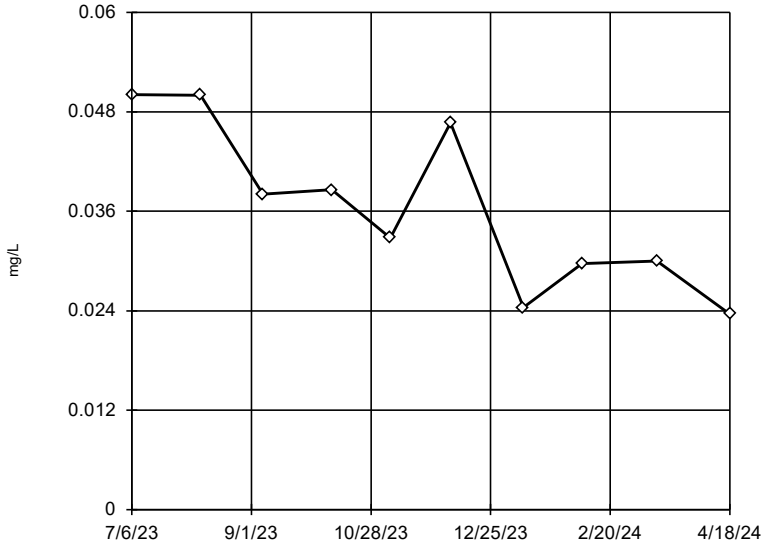
Constituent: Boron Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0364, std. dev. 0.009962, critical Tn 2.176

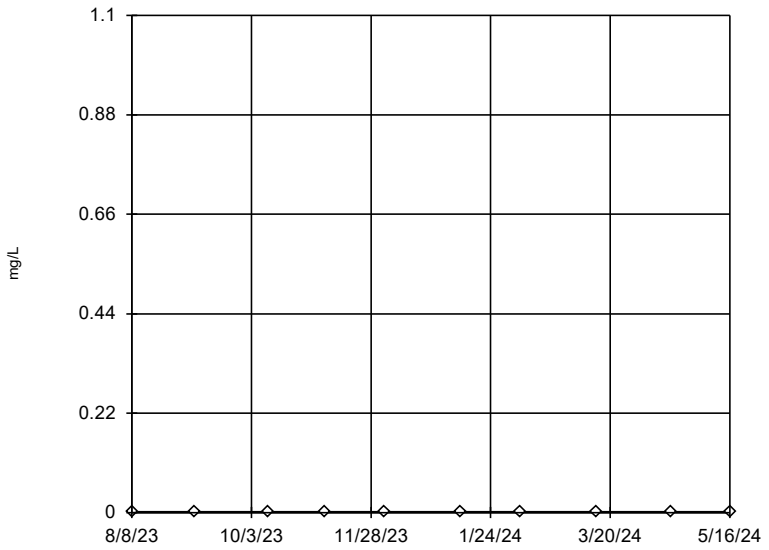
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9118
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-104



n = 10

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.

All values are the same.

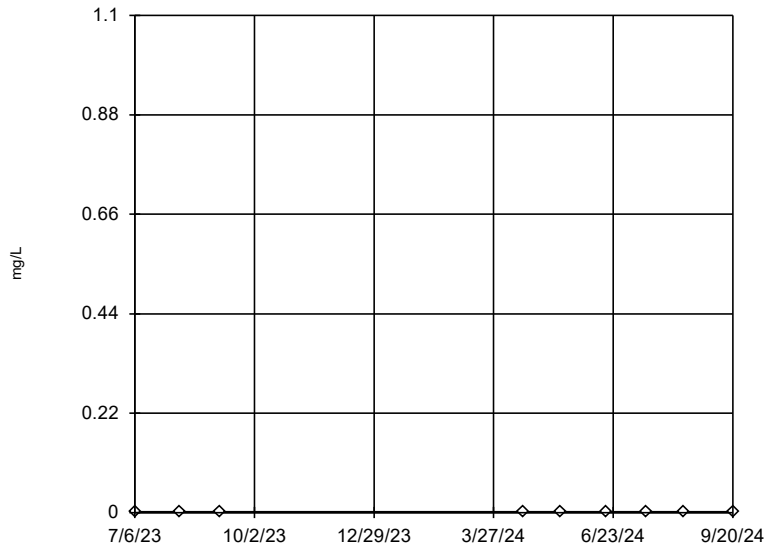
Constituent: Cadmium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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.

All values are the same.

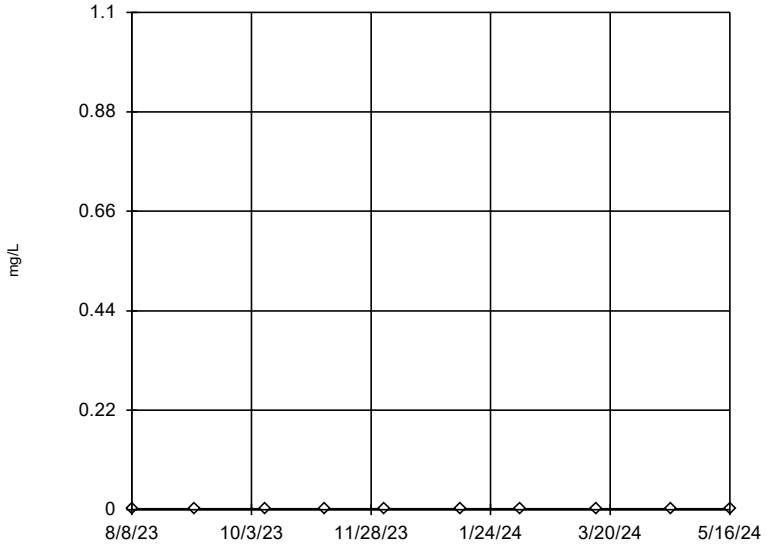
Constituent: Cadmium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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.

All values are the same.

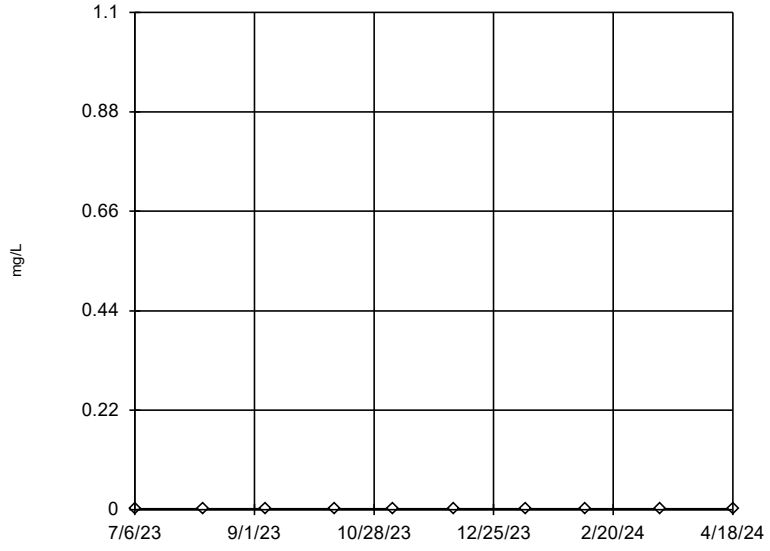
Constituent: Cadmium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 10

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.

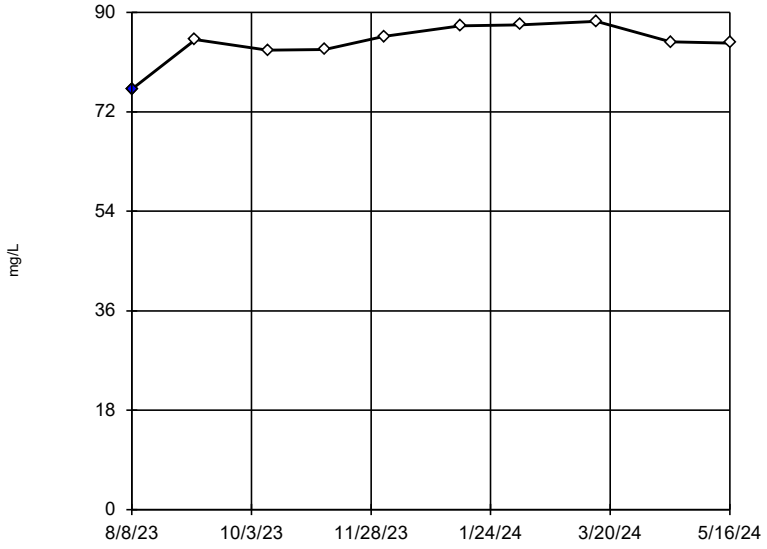
All values are the same.

Constituent: Cadmium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-104



n = 10

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 84.64.
Std. Dev. = 3.513.
76.1: c = 0.6068
tabl = 0.477.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9111
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

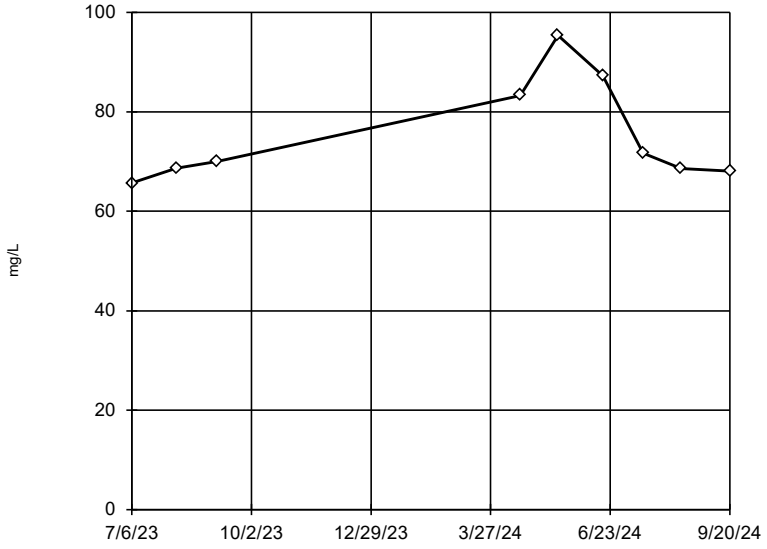
Constituent: Calcium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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 = 165.6, low cutoff = 35.19, based on IQR multiplier of 3.

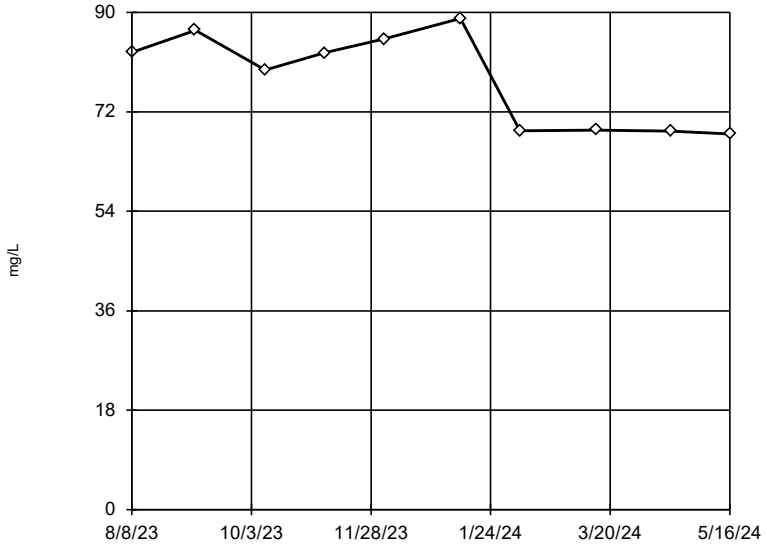
Constituent: Calcium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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 = 104.6, low cutoff = -96.35, based on IQR multiplier of 3.

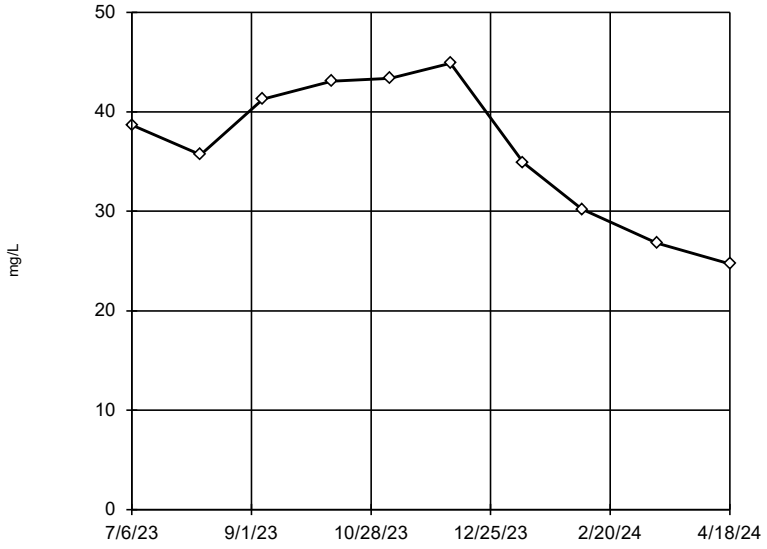
Constituent: Calcium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 36.37, std. dev. 7.193, critical Tn 2.176

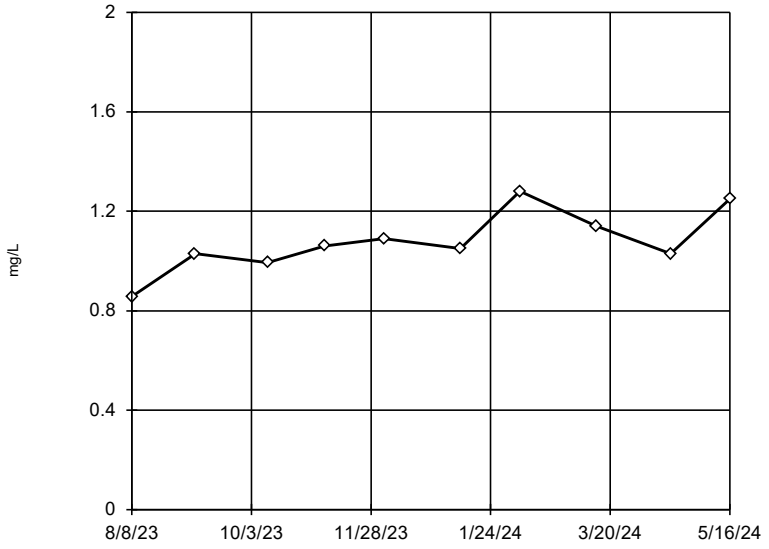
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.922
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 11/13/2024 11:41 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.078, std. dev. 0.123, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9446
Critical = 0.869
The distribution was found to be normally distributed.

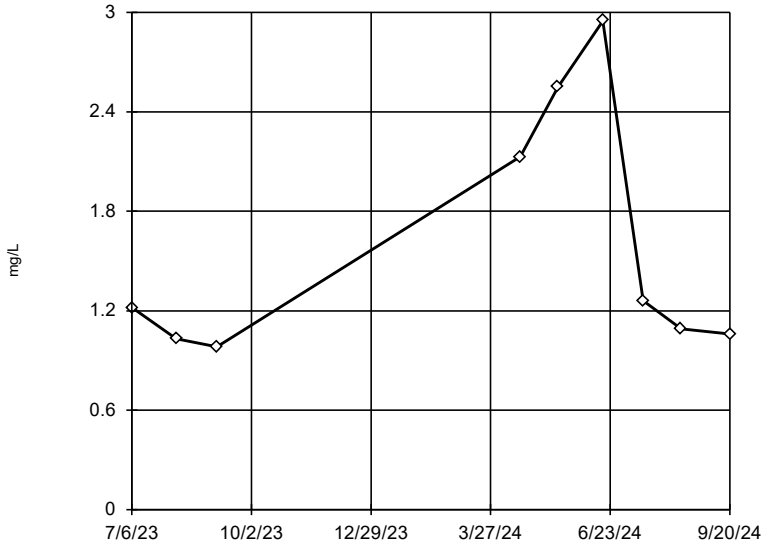
Constituent: Chloride Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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 = 25.86, low cutoff = 0.09417, based on IQR multiplier of 3.

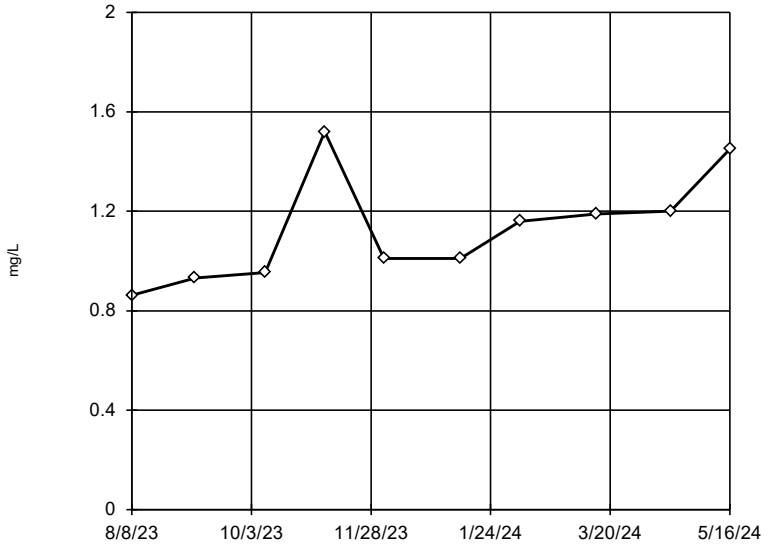
Constituent: Chloride Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.129, std. dev. 0.2198, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9095
Critical = 0.869
The distribution was found to be normally distributed.

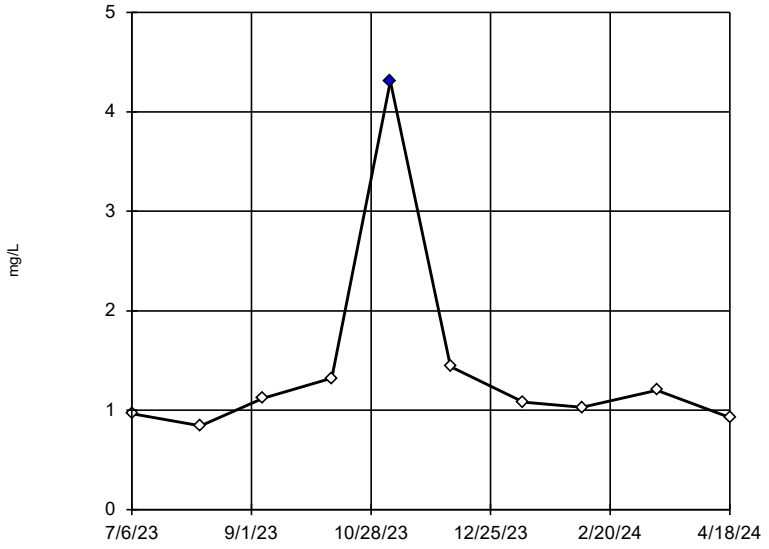
Constituent: Chloride Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-121



n = 10

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 1.423.
Std. Dev. = 1.03.
4.31: c = 0.8476
tabl = 0.477.
Alpha = 0.05.

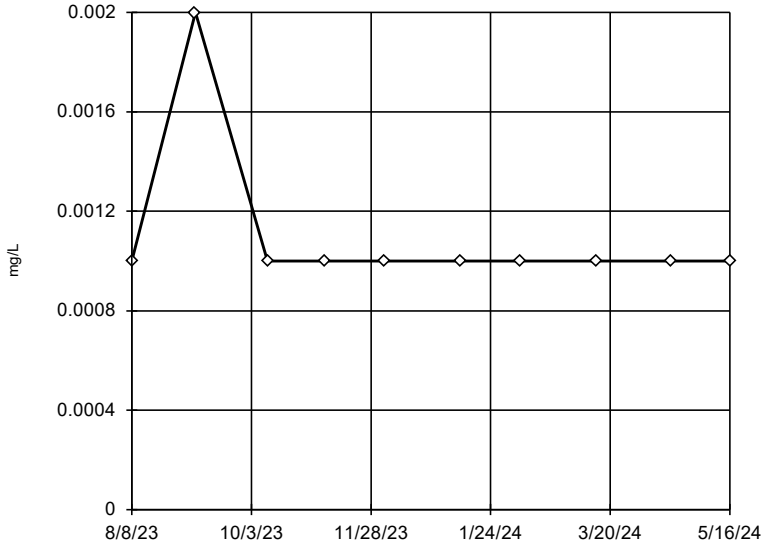
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.971
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-104



n = 10

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.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

The results were invalidated, because the lower and upper quartiles are equal.

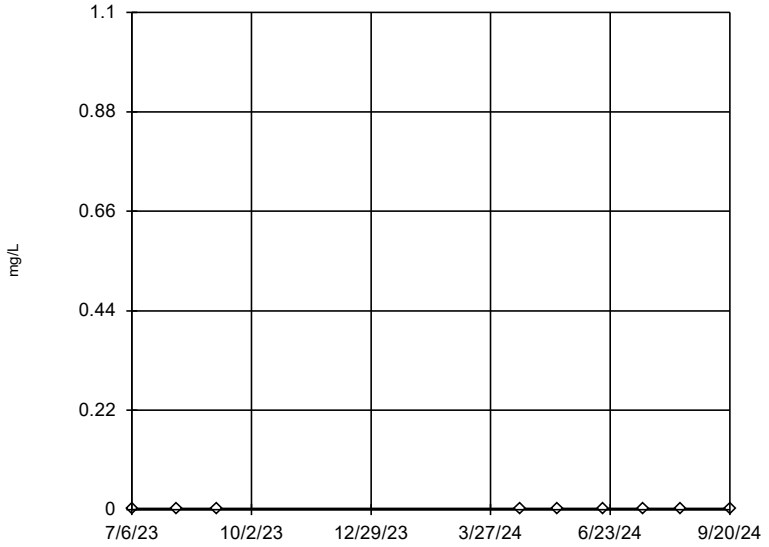
Constituent: Chromium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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.

All values are the same.

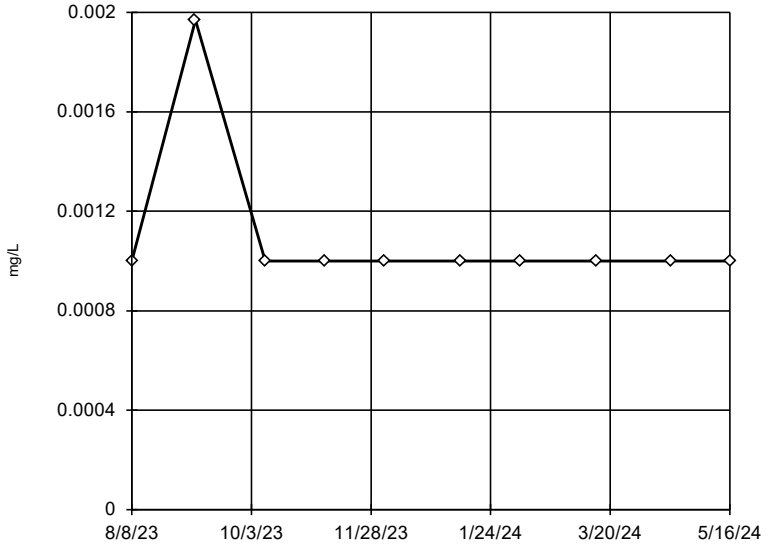
Constituent: Chromium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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 root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

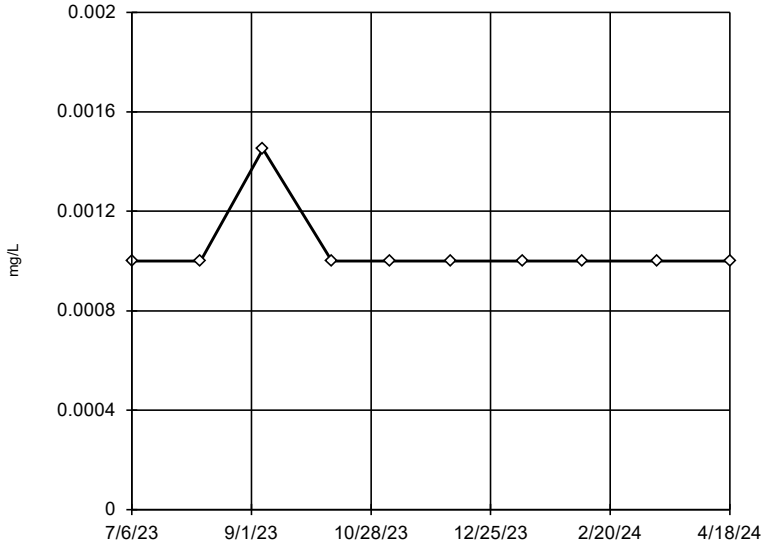
Constituent: Chromium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 10

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.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

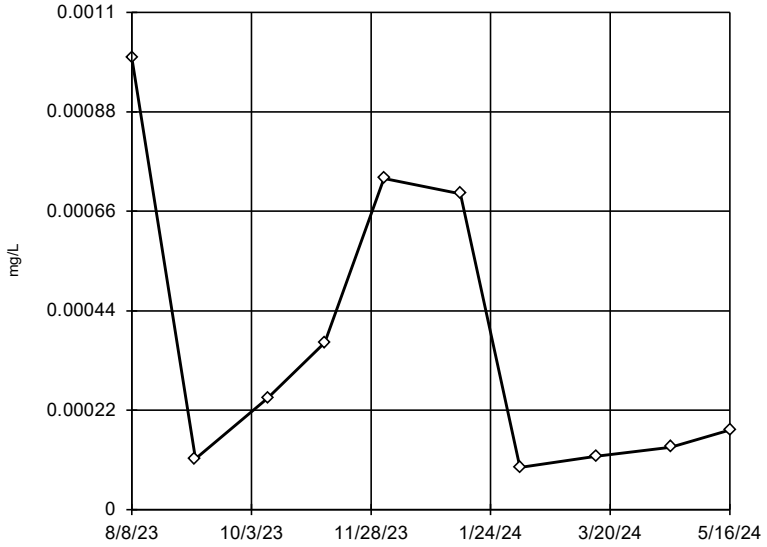
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Chromium Analysis Run 11/13/2024 11:41 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0003685, std. dev. 0.0003249, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8972
Critical = 0.869 (after natural log transformation)
The distribution was found to be log-normal.

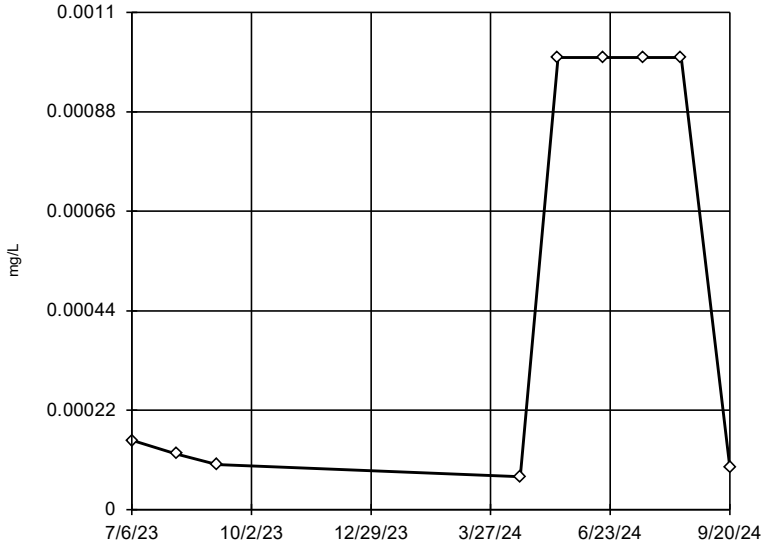
Constituent: Cobalt Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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 = 1.133, low cutoff = 8.5e-8, based on IQR multiplier of 3.

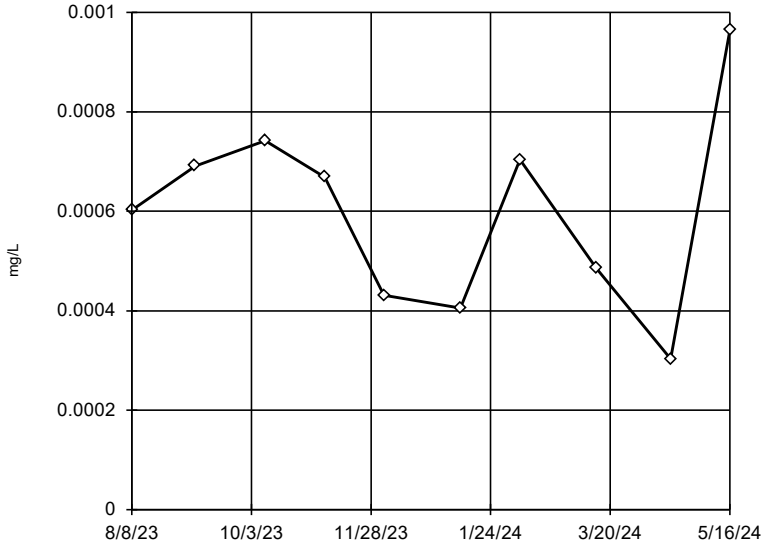
Constituent: Cobalt Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0005996, std. dev. 0.0001957, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9649
Critical = 0.869
The distribution was found to be normally distributed.

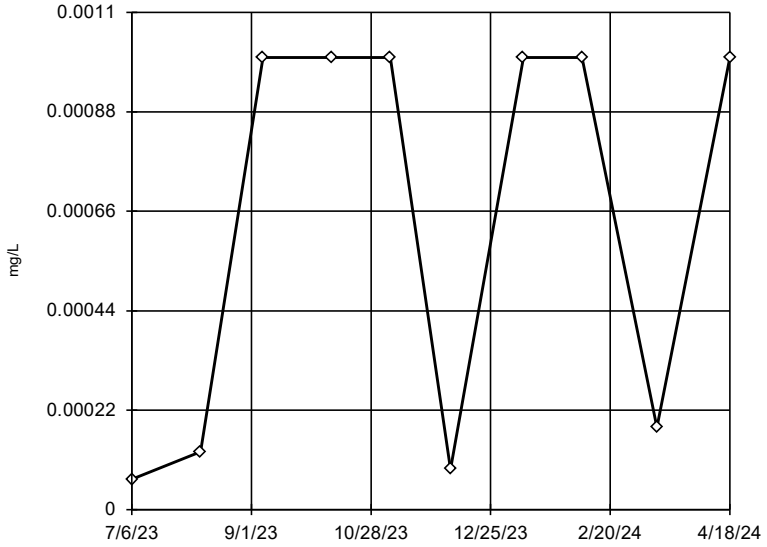
Constituent: Cobalt Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 10

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).

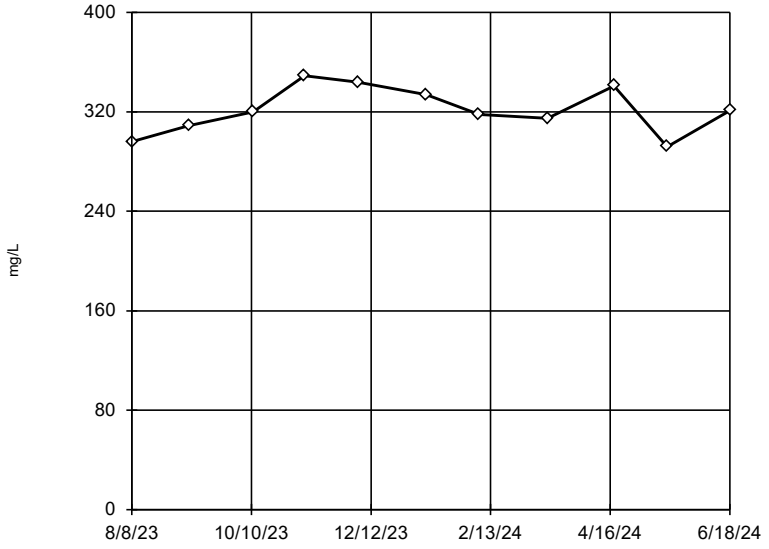
High cutoff = 0.8238, low cutoff = 1.3e-7, based on IQR multiplier of 3.

Constituent: Cobalt Analysis Run 11/13/2024 11:41 AM View: background for new wells

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-104



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 321.7, std. dev. 18.79, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9522
Critical = 0.876
The distribution was found to be normally distributed.

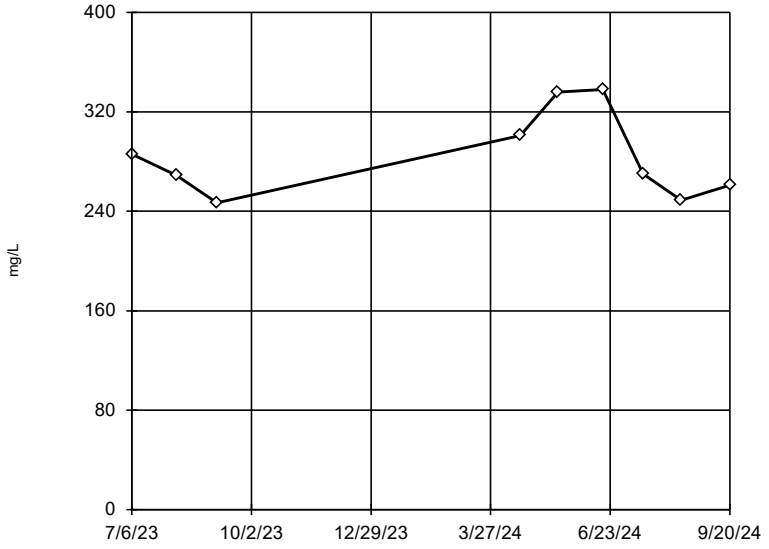
Constituent: Dissolved Solids Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 284.1, std. dev. 34.38, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8818
Critical = 0.859
The distribution was found to be normally distributed.

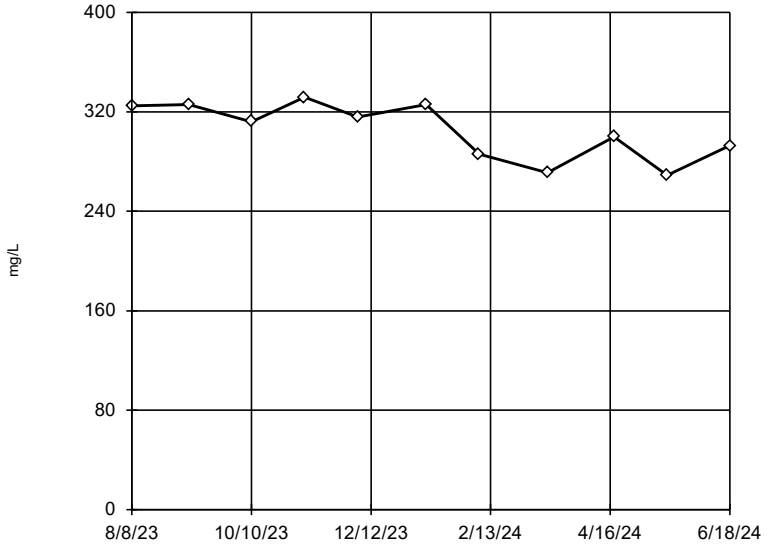
Constituent: Dissolved Solids Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 305.1, std. dev. 22.72, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.902
Critical = 0.876
The distribution was found to be normally distributed.

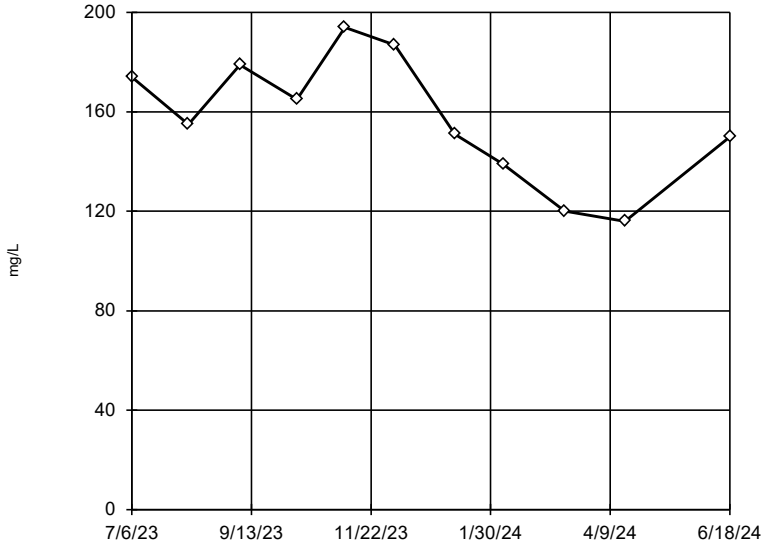
Constituent: Dissolved Solids Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 157.3, std. dev. 25.63, critical Tn 2.234

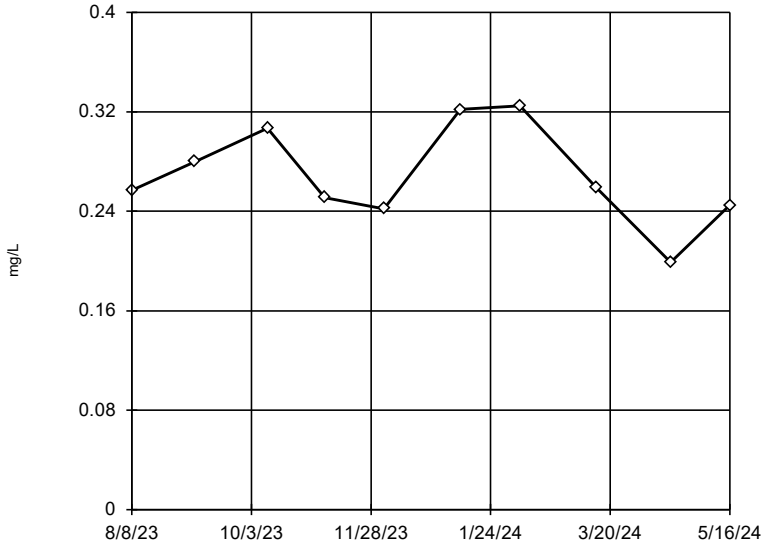
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9584
Critical = 0.876
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 11/13/2024 11:41 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2687, std. dev. 0.03984, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9347
Critical = 0.869
The distribution was found to be normally distributed.

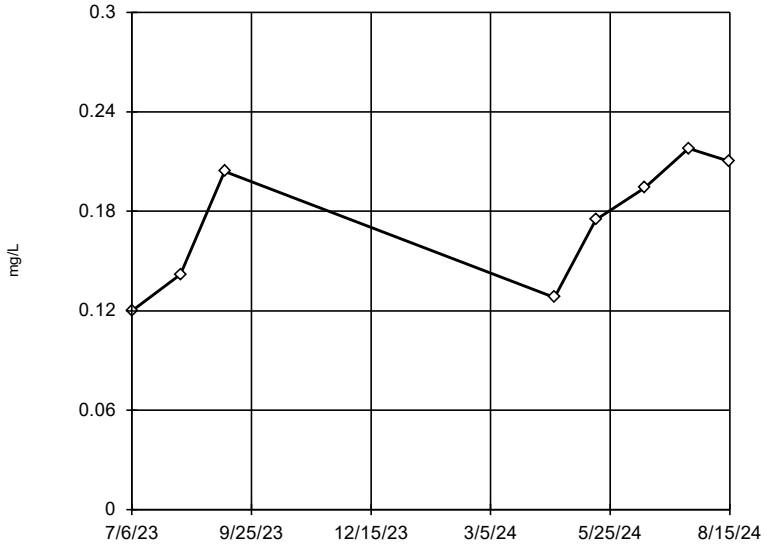
Constituent: Fluoride Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1739, std. dev. 0.03889, critical Tn 2.032

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8909
Critical = 0.851
The distribution was found to be normally distributed.

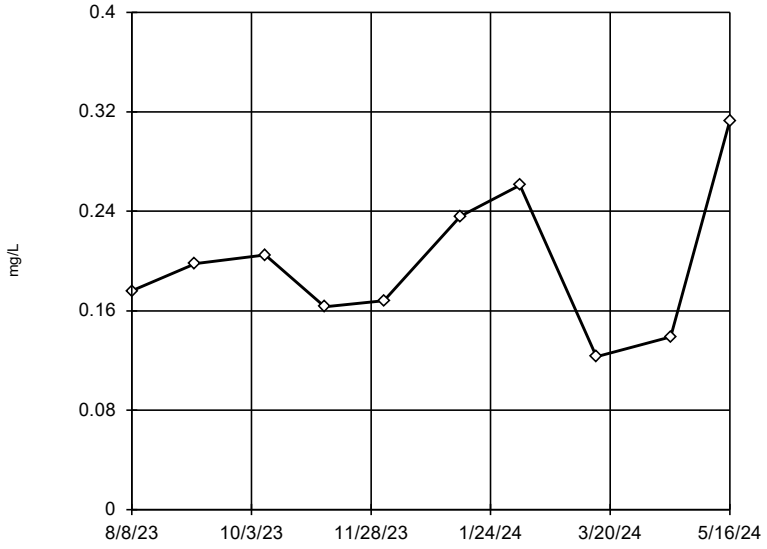
Constituent: Fluoride Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1982, std. dev. 0.05812, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9531
Critical = 0.869
The distribution was found to be normally distributed.

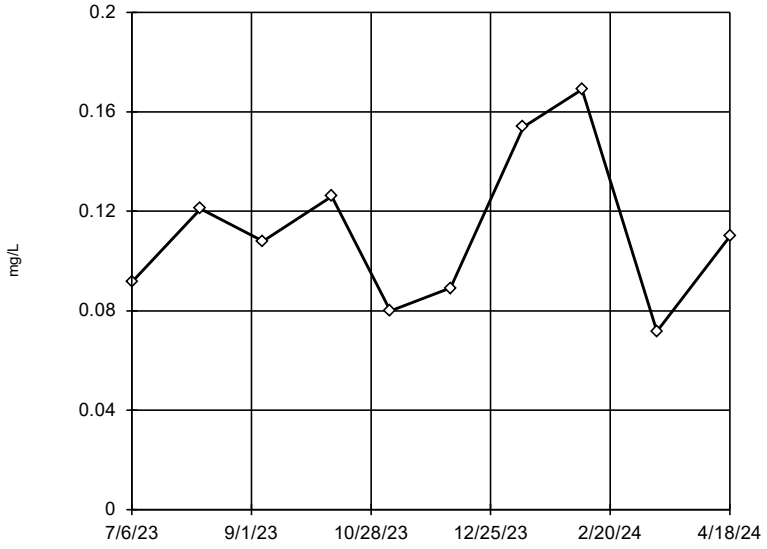
Constituent: Fluoride Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.112, std. dev. 0.03146, critical Tn 2.176

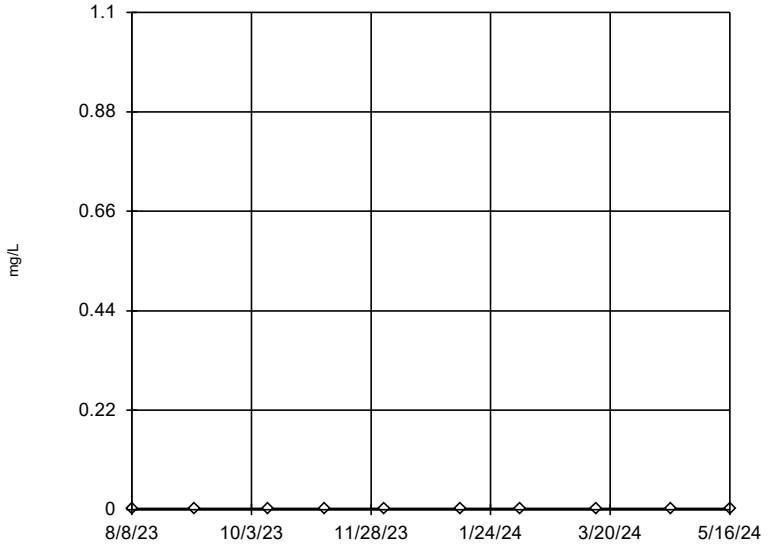
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9463
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-104



n = 10

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.

All values are the same.

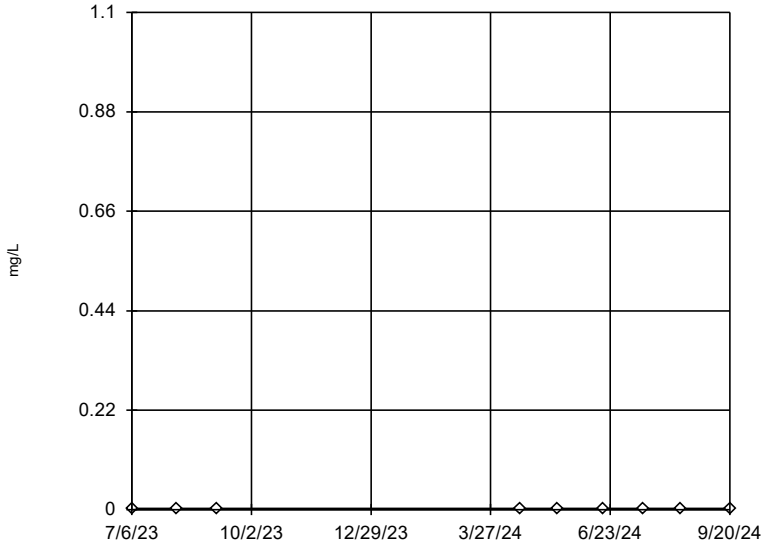
Constituent: Lead Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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.

All values are the same.

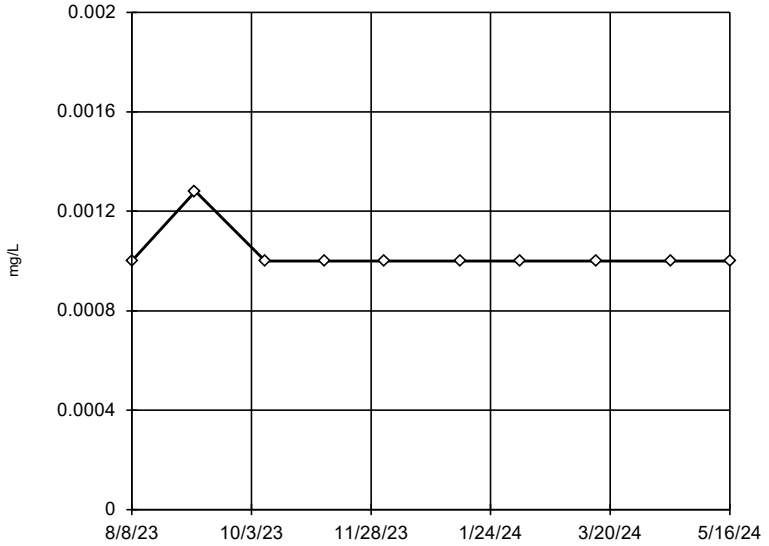
Constituent: Lead Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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).

The results were invalidated, because the lower and upper quartiles are equal.

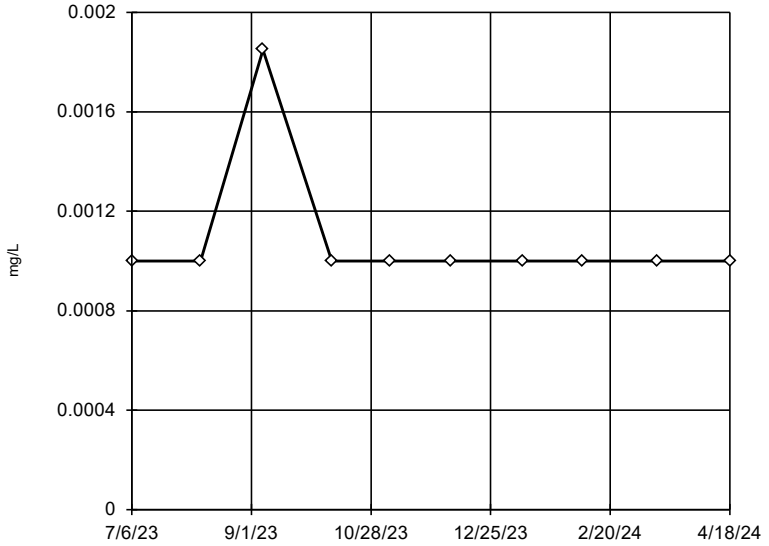
Constituent: Lead Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Tukey's Outlier Screening

MW-121



n = 10

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.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

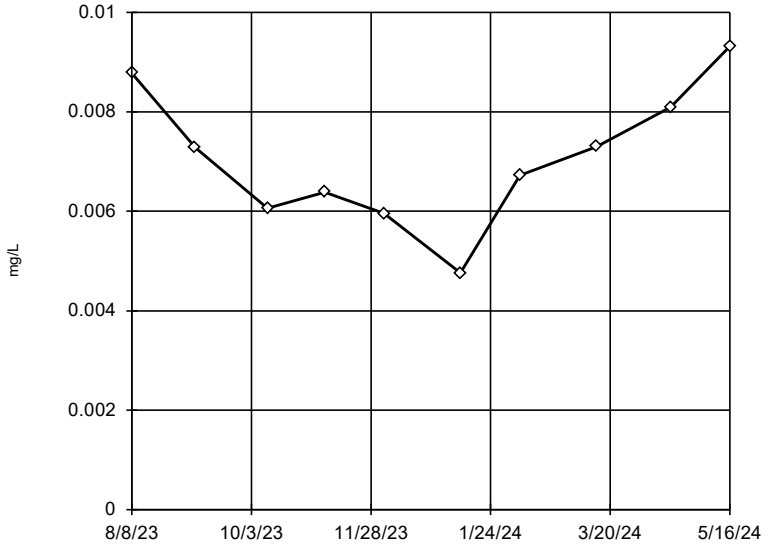
The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Lead Analysis Run 11/13/2024 11:41 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.007067, std. dev. 0.001387, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9781
Critical = 0.869
The distribution was found to be normally distributed.

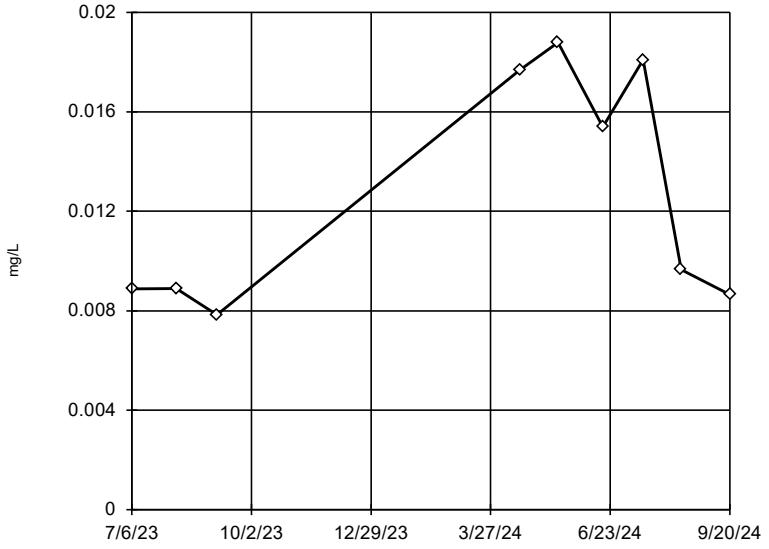
Constituent: Lithium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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 = 0.1525, low cutoff = 0.001029, based on IQR multiplier of 3.

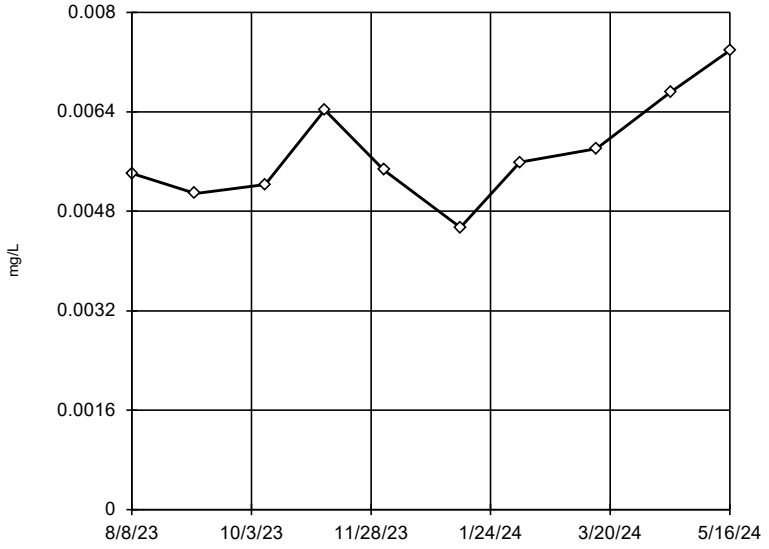
Constituent: Lithium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.005767, std. dev. 0.0008491, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9502
Critical = 0.869
The distribution was found to be normally distributed.

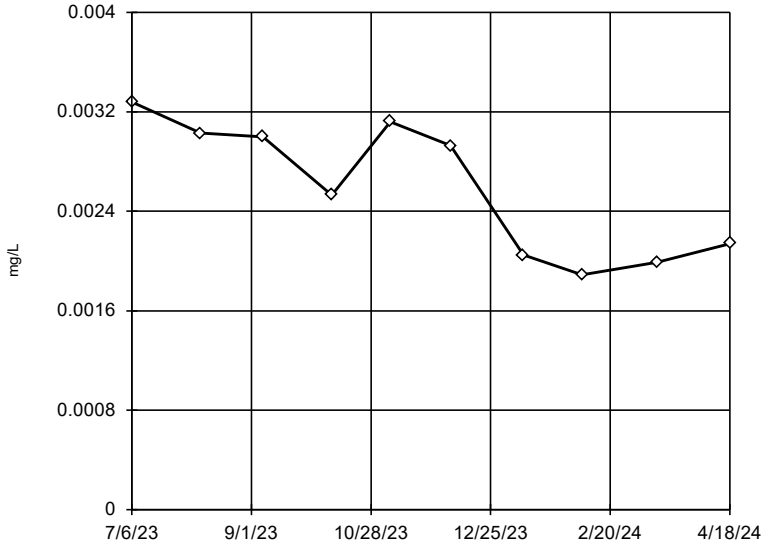
Constituent: Lithium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.002596, std. dev. 0.0005356, critical Tn 2.176

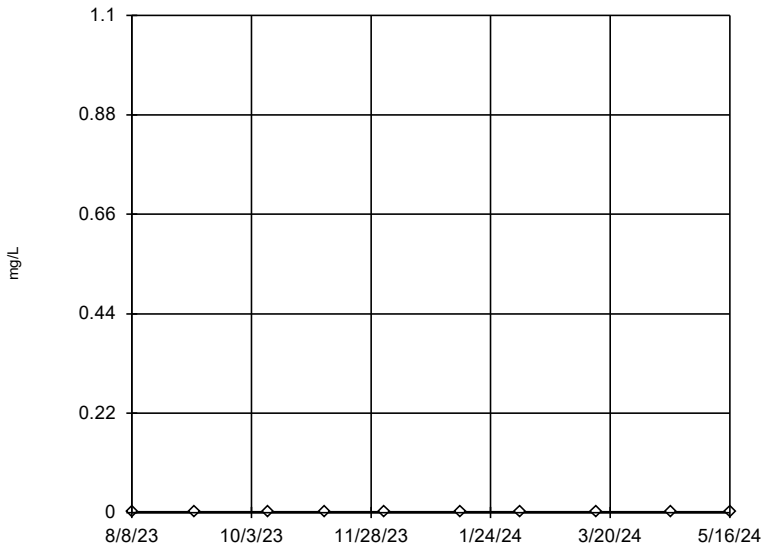
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8723
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Lithium Analysis Run 11/13/2024 11:41 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-104



n = 10

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.

All values are the same.

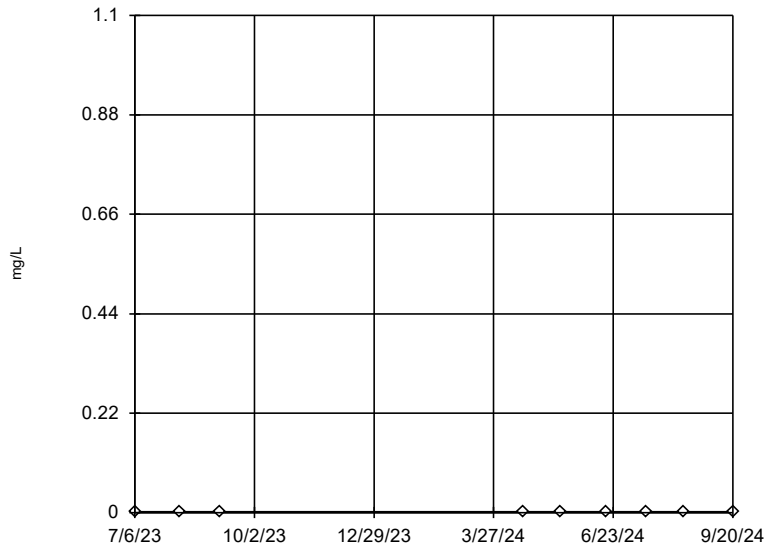
Constituent: Mercury Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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.

All values are the same.

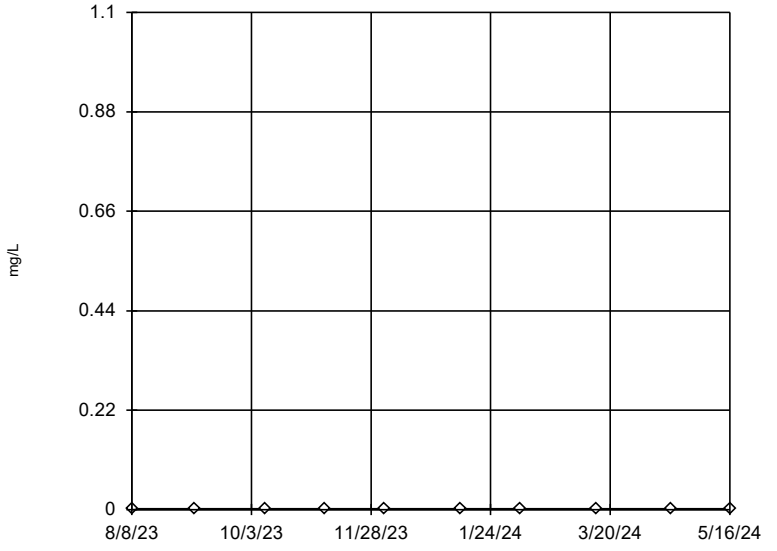
Constituent: Mercury Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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.

All values are the same.

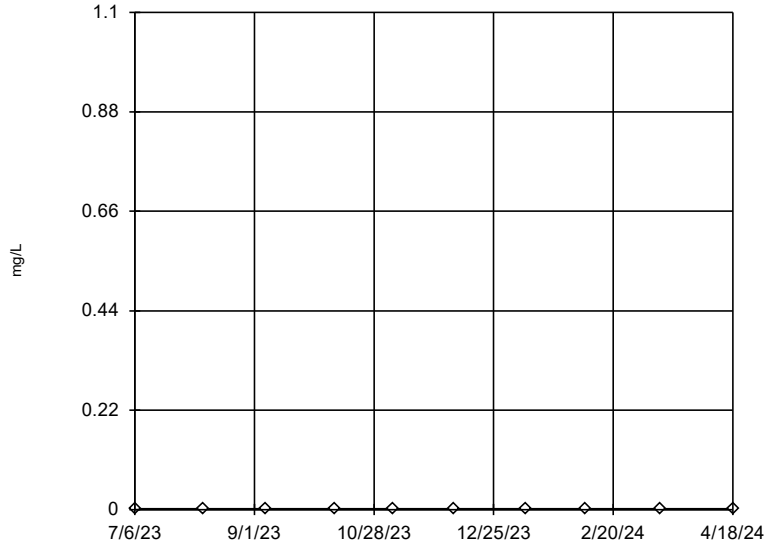
Constituent: Mercury Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 10

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.

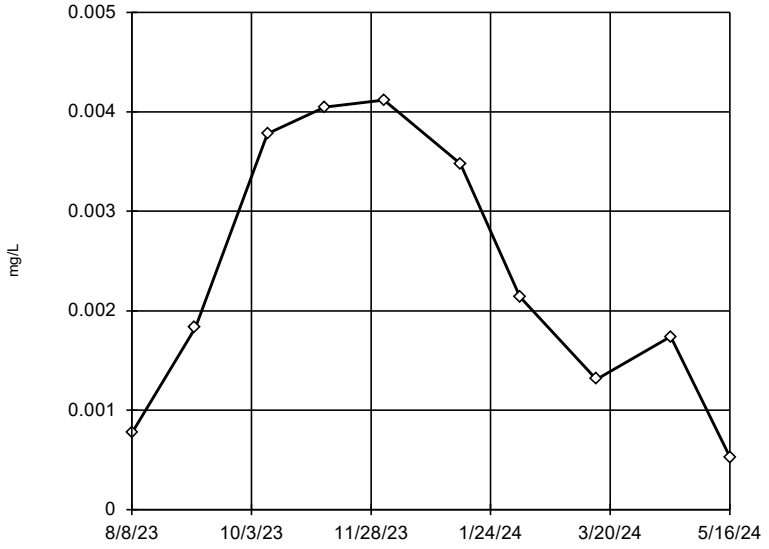
All values are the same.

Constituent: Mercury Analysis Run 11/13/2024 11:42 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.002375, std. dev. 0.001371, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8964
Critical = 0.869
The distribution was found to be normally distributed.

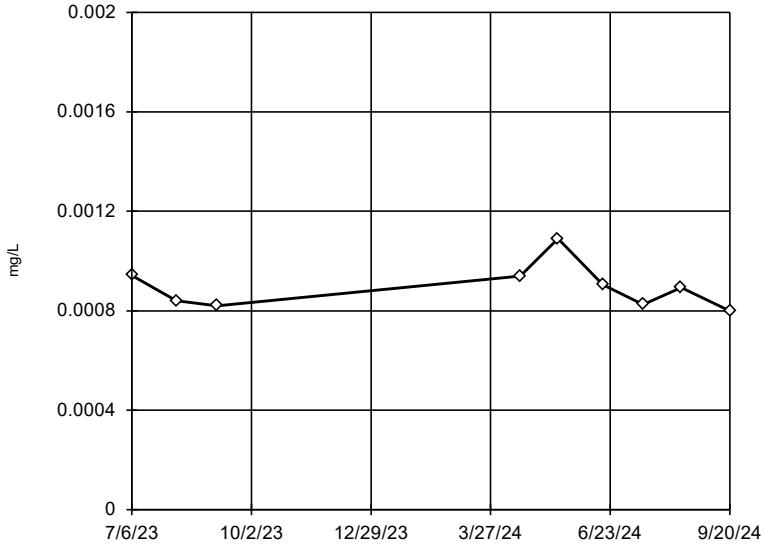
Constituent: Molybdenum Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0008948, std. dev. 0.00009014, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8813
Critical = 0.859
The distribution was found to be normally distributed.

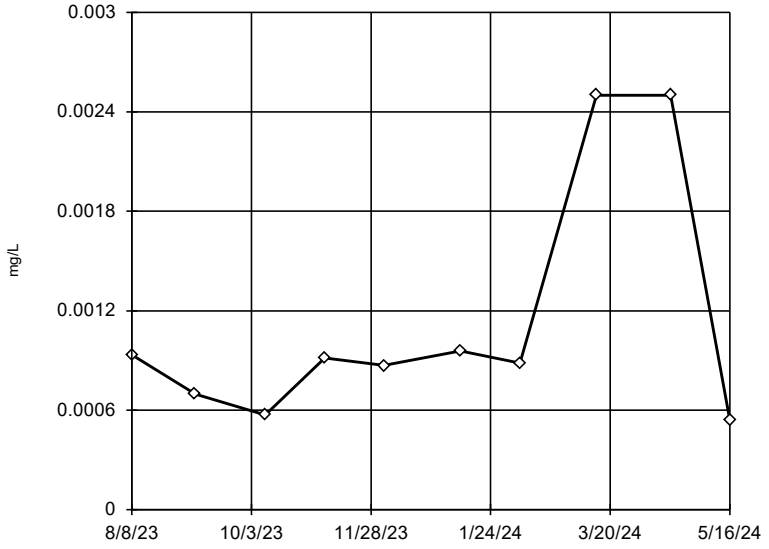
Constituent: Molybdenum Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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 = 0.02285, low cutoff = 0.00004273, based on IQR multiplier of 3.

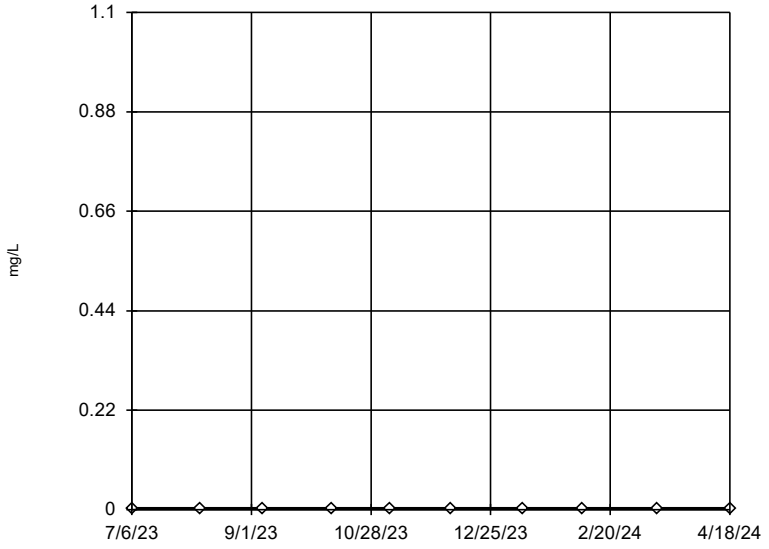
Constituent: Molybdenum Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 10

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.

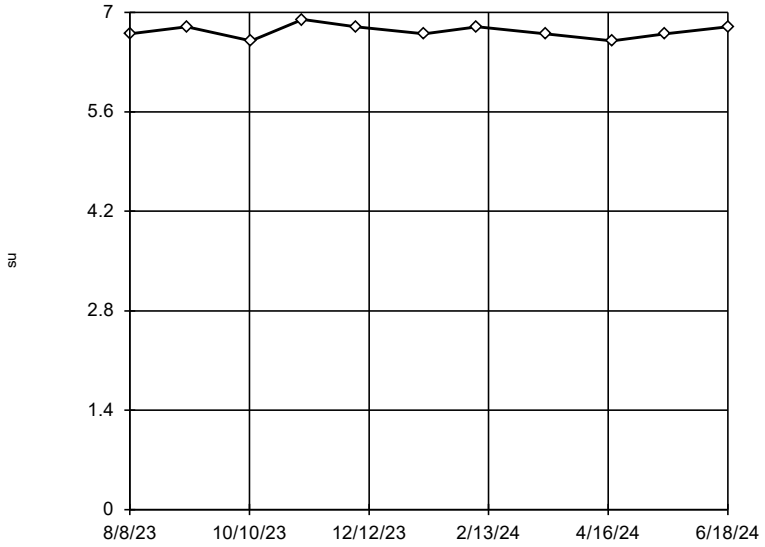
All values are the same.

Constituent: Molybdenum Analysis Run 11/13/2024 11:42 AM View: background for new wells

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-104



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.736, std. dev. 0.09244, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9055
Critical = 0.876
The distribution was found to be normally distributed.

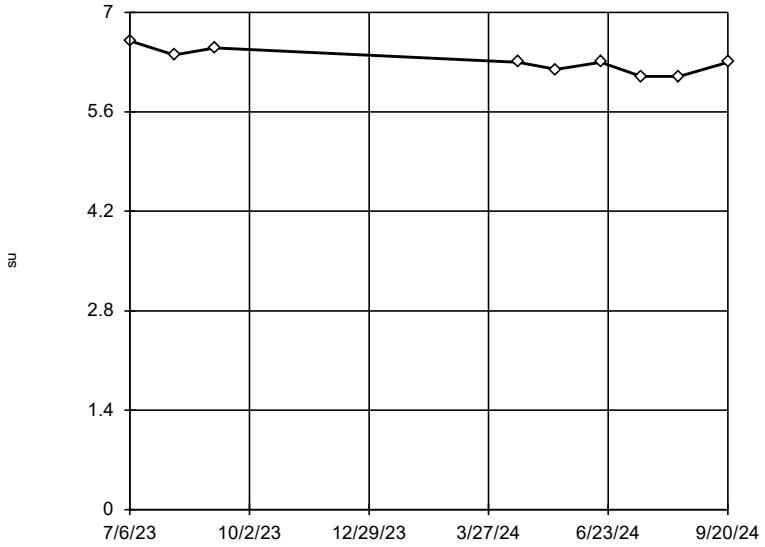
Constituent: pH Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.311, std. dev. 0.1691, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9393
Critical = 0.859
The distribution was found to be normally distributed.

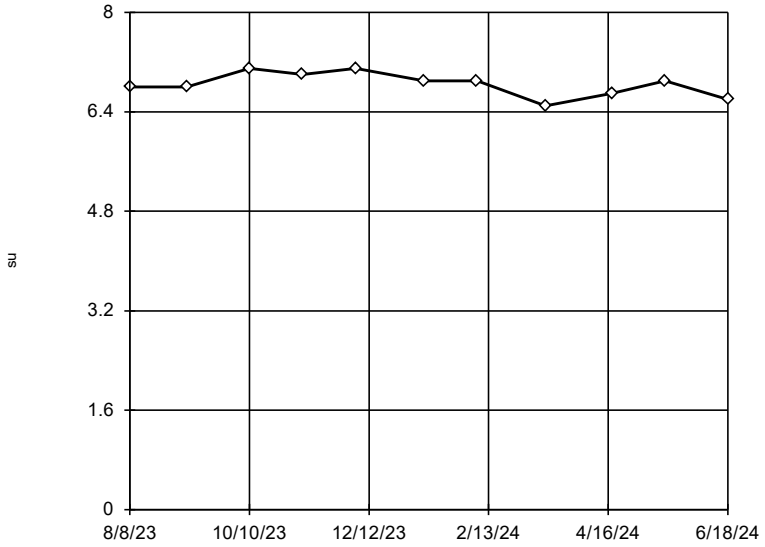
Constituent: pH Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.845, std. dev. 0.1916, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9505
Critical = 0.876
The distribution was found to be normally distributed.

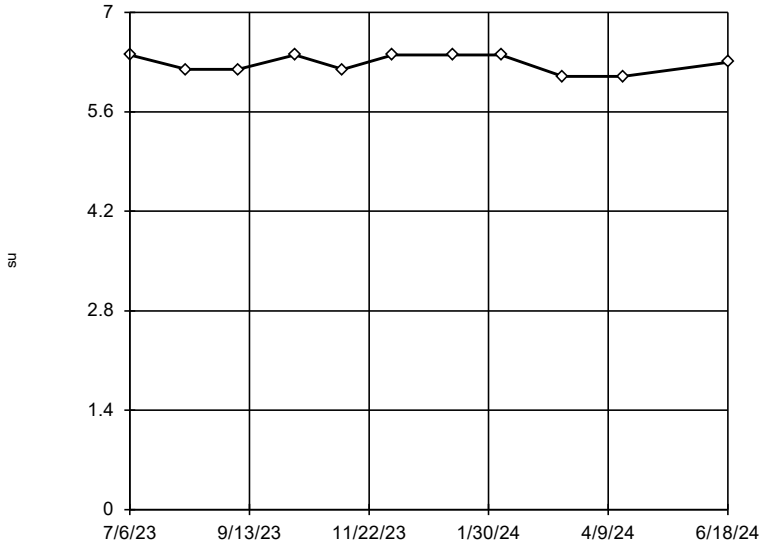
Constituent: pH Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Tukey's Outlier Screening

MW-121



n = 11

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).

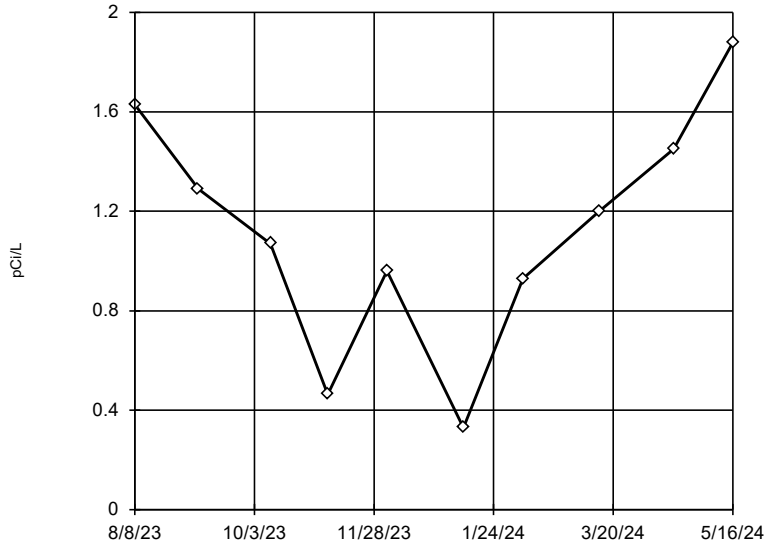
High cutoff = 7.04, low cutoff = 5.637, based on IQR multiplier of 3.

Constituent: pH Analysis Run 11/13/2024 11:42 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.12, std. dev. 0.4834, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9737
Critical = 0.869
The distribution was found to be normally distributed.

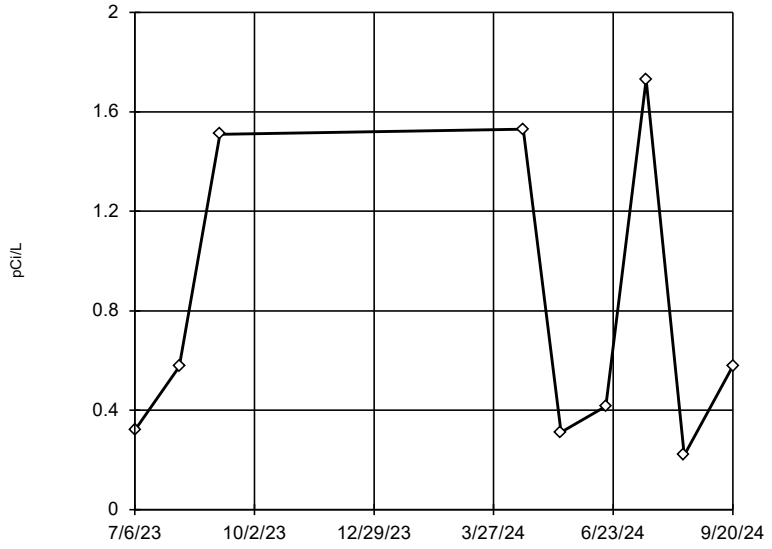
Constituent: Radium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.7984, std. dev. 0.6082, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8892
Critical = 0.859 (after natural log transformation)
The distribution was found to be log-normal.

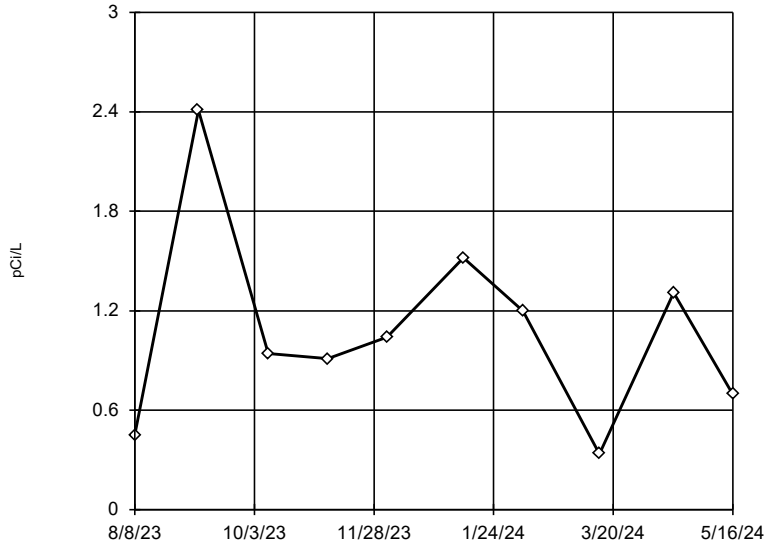
Constituent: Radium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.081, std. dev. 0.5943, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.924
Critical = 0.869
The distribution was found to be normally distributed.

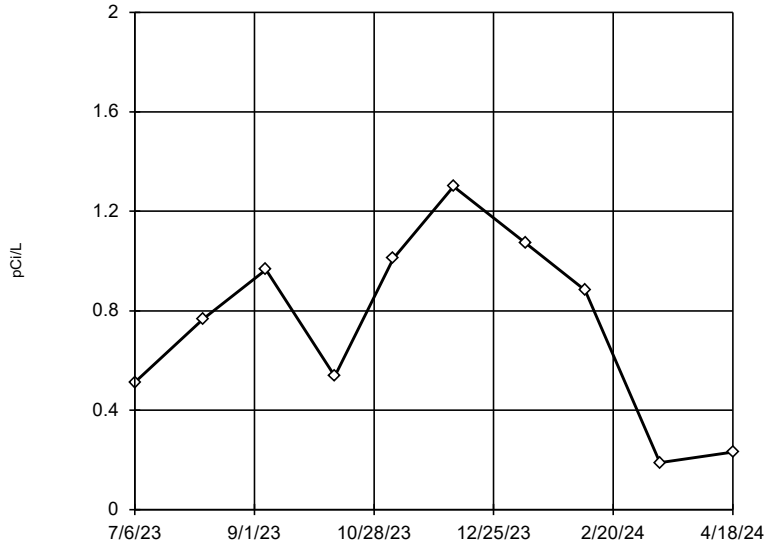
Constituent: Radium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.7465, std. dev. 0.3686, critical Tn 2.176

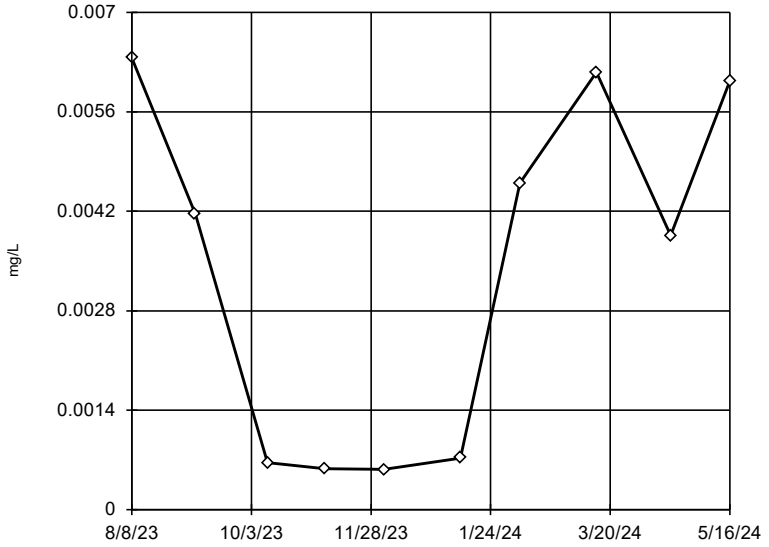
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9492
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Radium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-104



n = 10

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 = 0.01215, low cutoff = -0.01049, based on IQR multiplier of 3.

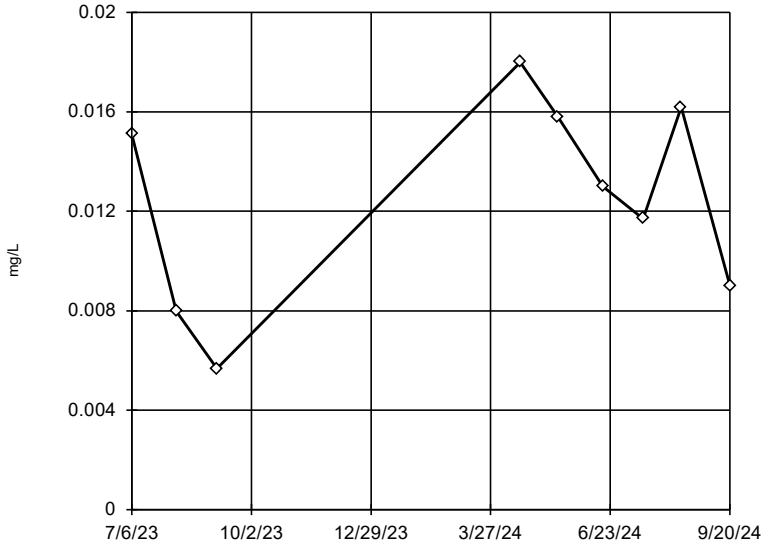
Constituent: Selenium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0125, std. dev. 0.004208, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9479
Critical = 0.859
The distribution was found to be normally distributed.

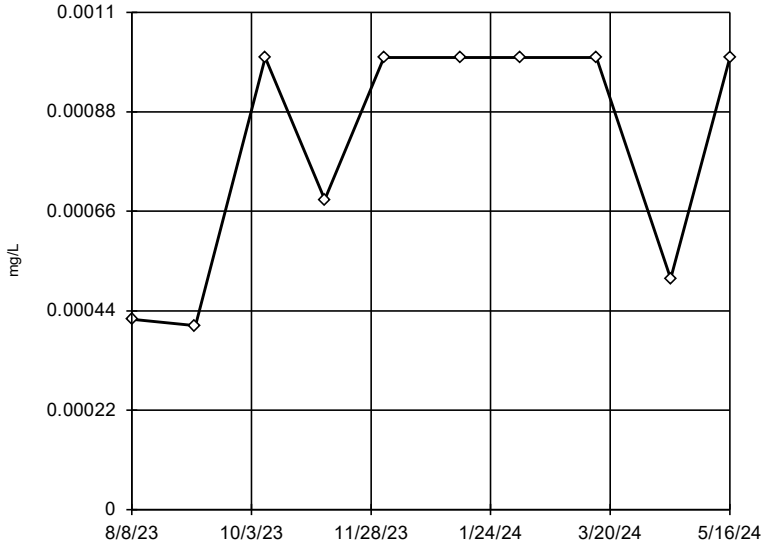
Constituent: Selenium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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 = 0.01002, low cutoff = 0.00004628, based on IQR multiplier of 3.

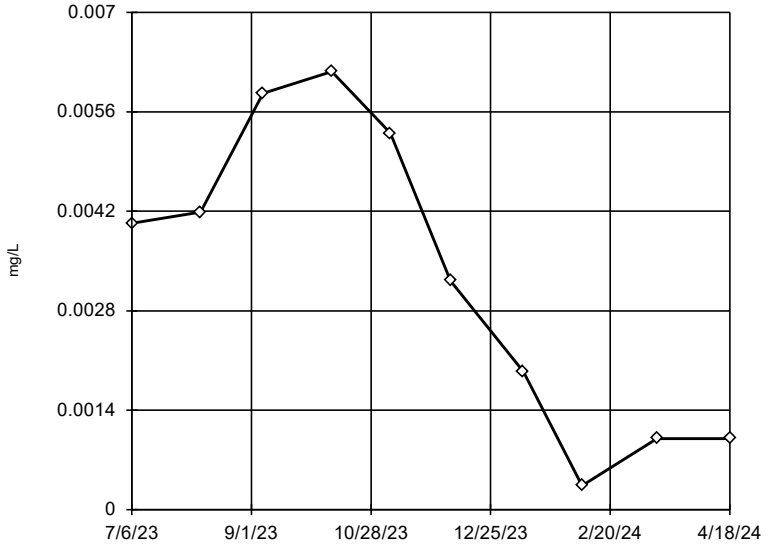
Constituent: Selenium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.003305, std. dev. 0.002143, critical Tn 2.176

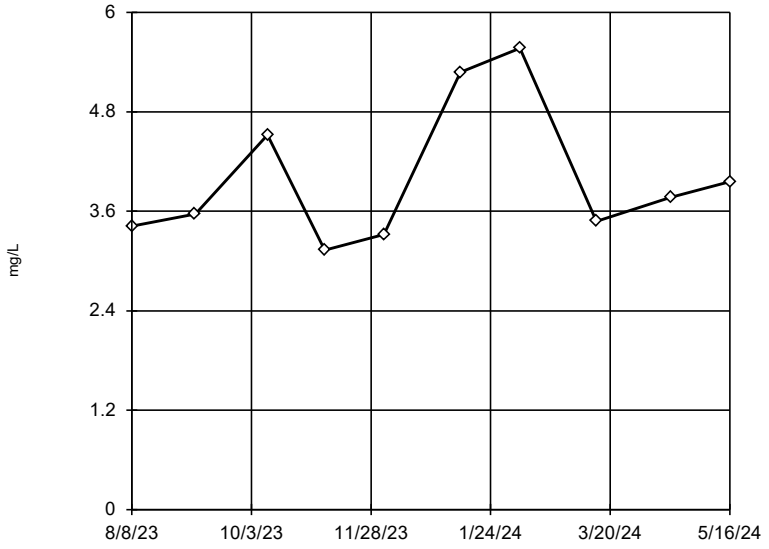
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9226
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Selenium Analysis Run 11/13/2024 11:42 AM View: background for new wells

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-104



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 4.002, std. dev. 0.8458, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8901
Critical = 0.869 (after natural log transformation)
The distribution was found to be log-normal.

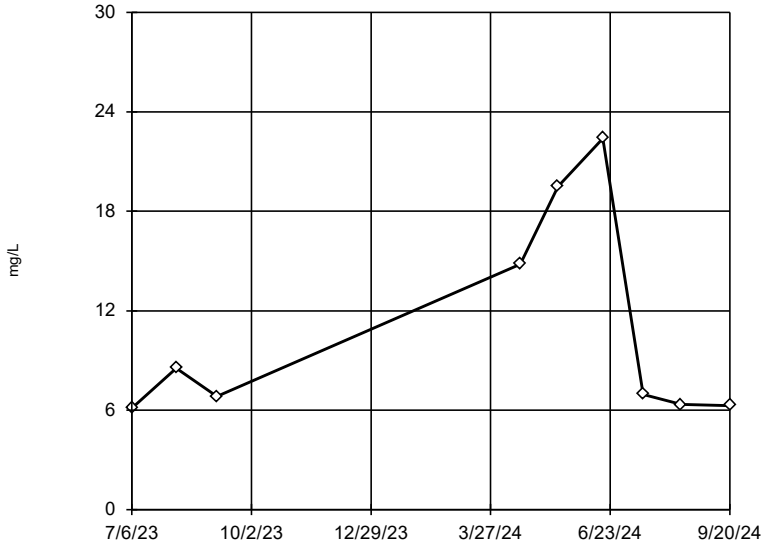
Constituent: Sulfate Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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 = 330.7, low cutoff = 0.3244, based on IQR multiplier of 3.

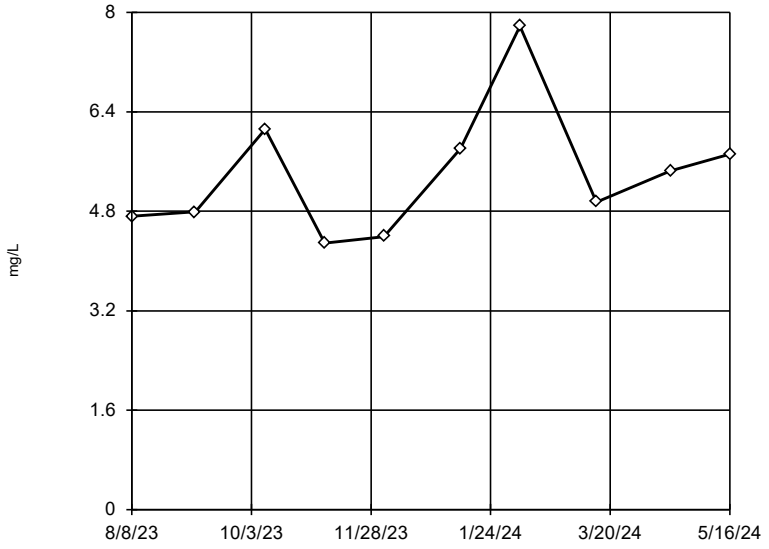
Constituent: Sulfate Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 5.402, std. dev. 1.041, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8866
Critical = 0.869
The distribution was found to be normally distributed.

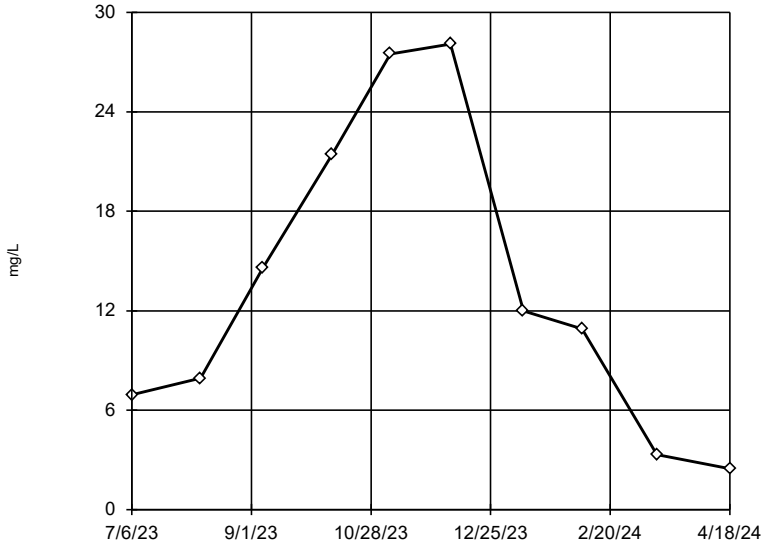
Constituent: Sulfate Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 13.51, std. dev. 9.318, critical Tn 2.176

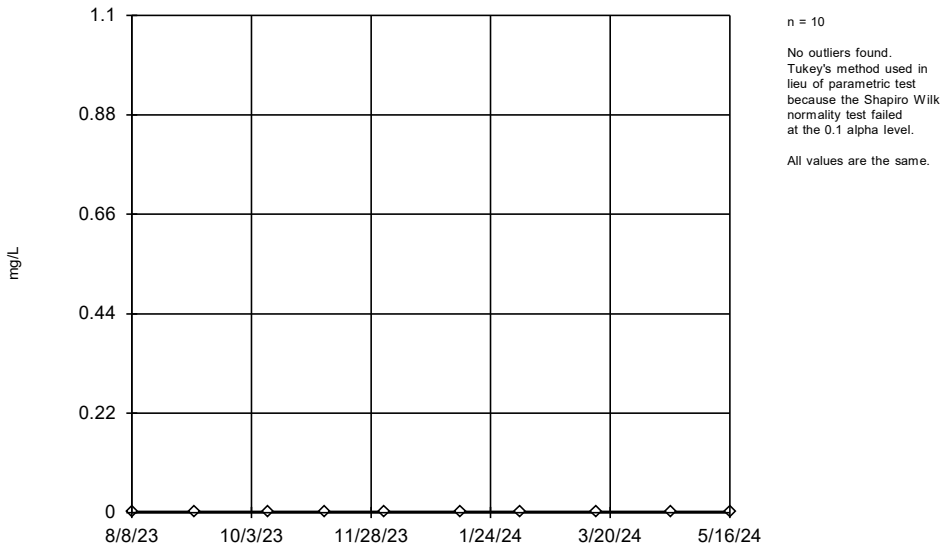
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9075
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-104



n = 10

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.

All values are the same.

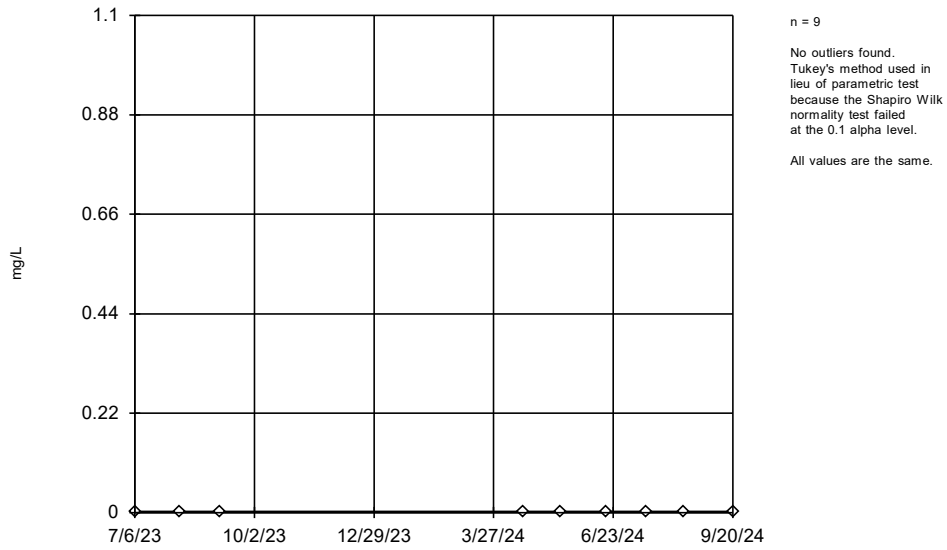
Constituent: Thallium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 9

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.

All values are the same.

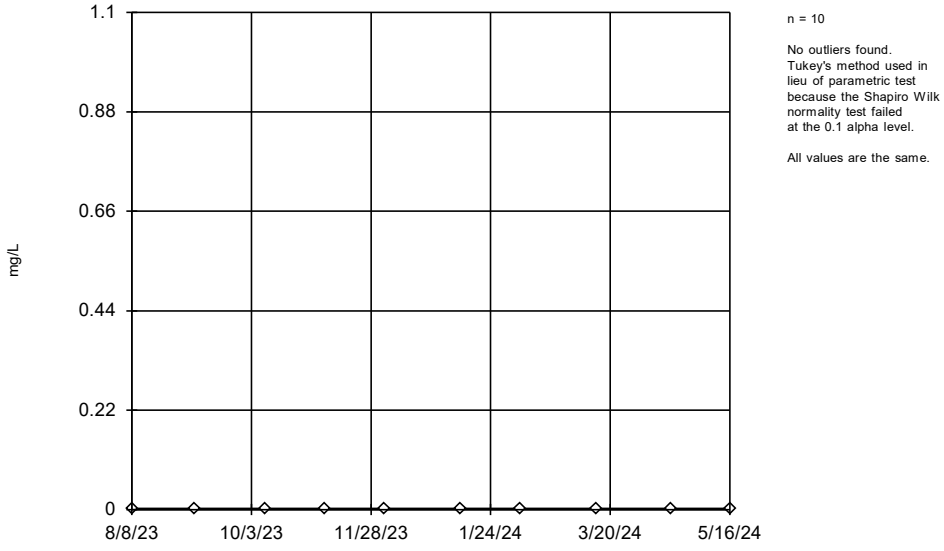
Constituent: Thallium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 10

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.

All values are the same.

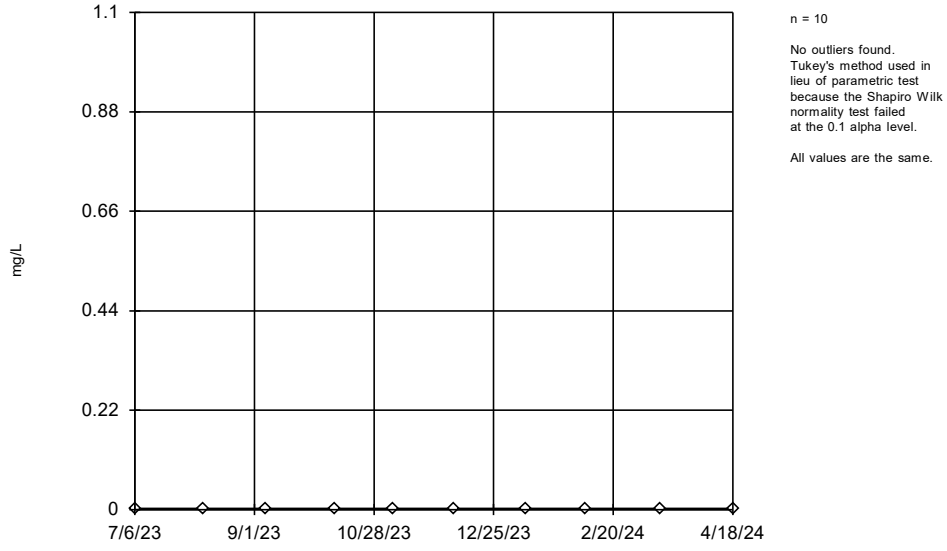
Constituent: Thallium Analysis Run 11/13/2024 11:42 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 10

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.

All values are the same.

Constituent: Thallium Analysis Run 11/13/2024 11:42 AM View: background for new wells

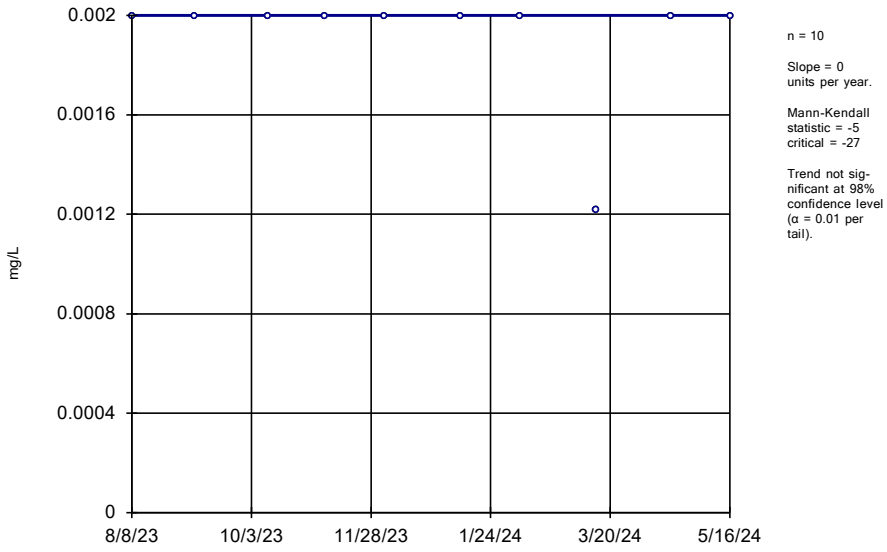
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Trend Tests Over Initial Background Data Sets for New Wells

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = -5
critical = -27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

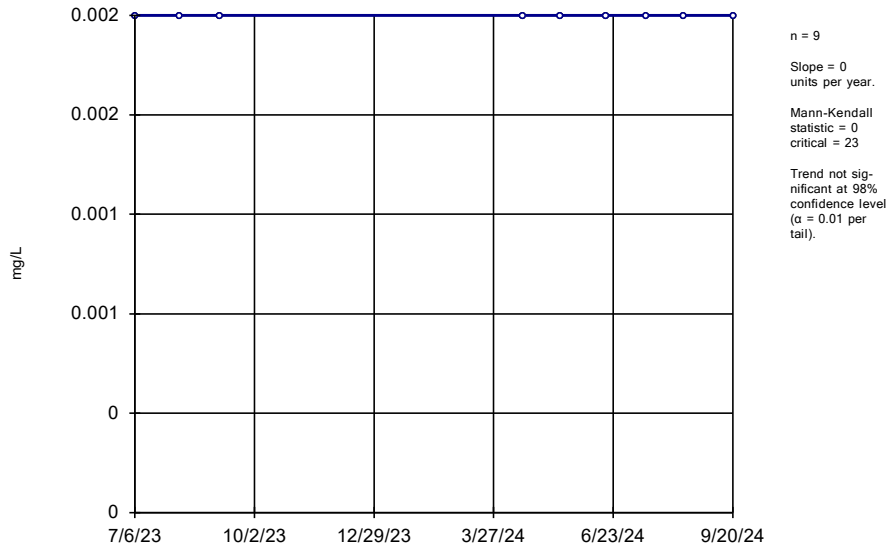
Constituent: Antimony Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

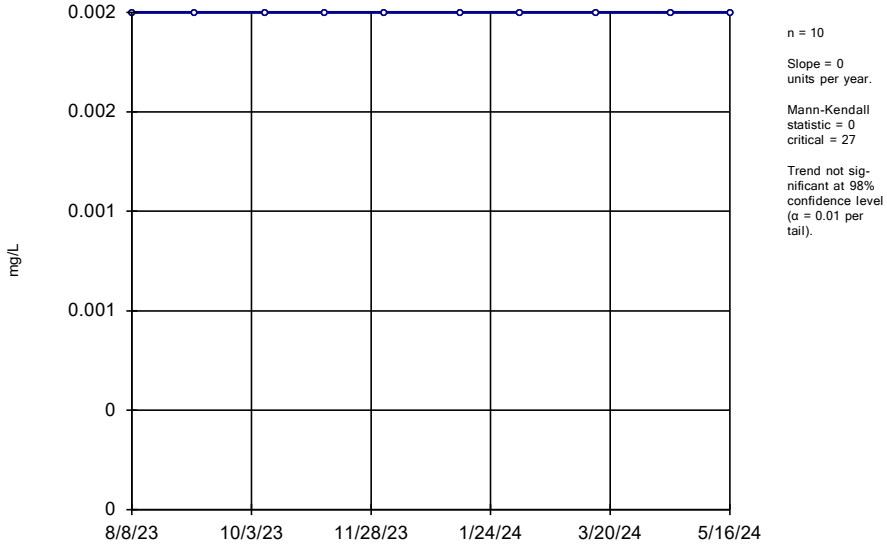
Constituent: Antimony Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

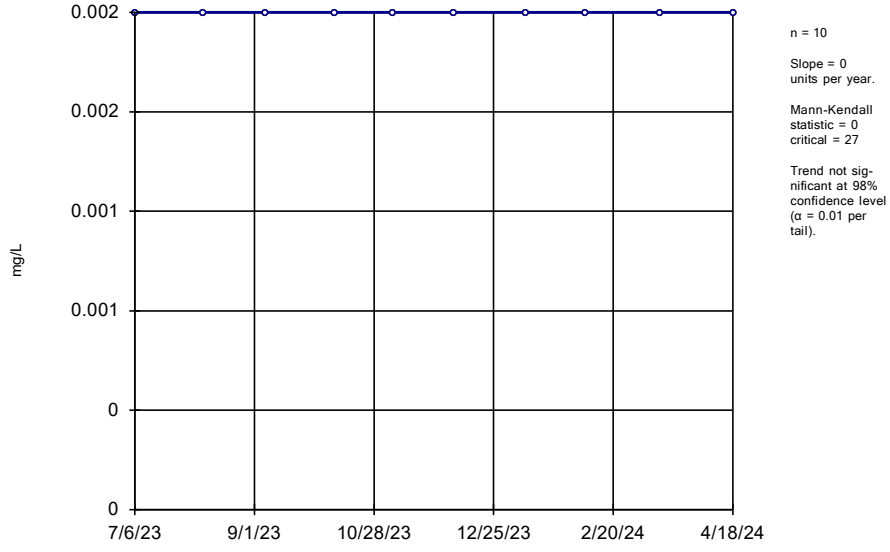
Constituent: Antimony Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

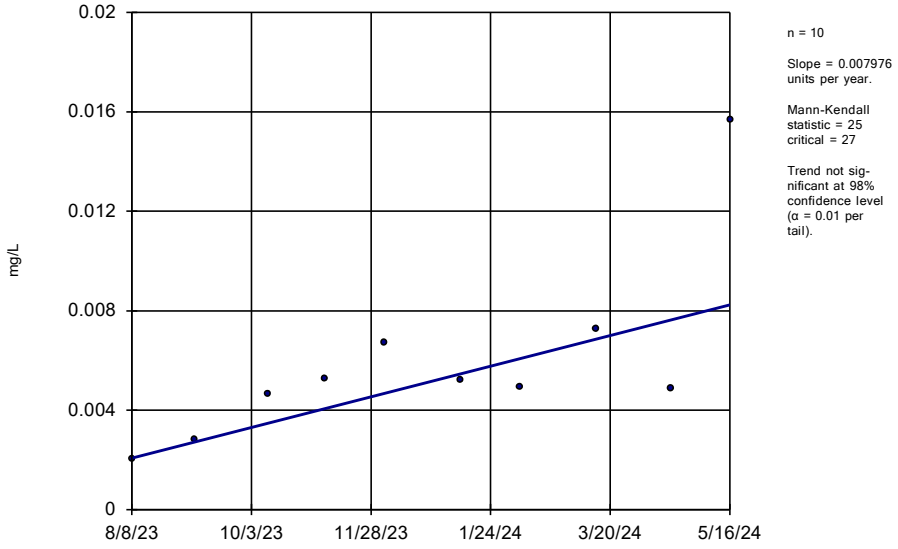
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Antimony Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-104



n = 10

Slope = 0.007976 units per year.

Mann-Kendall statistic = 25
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

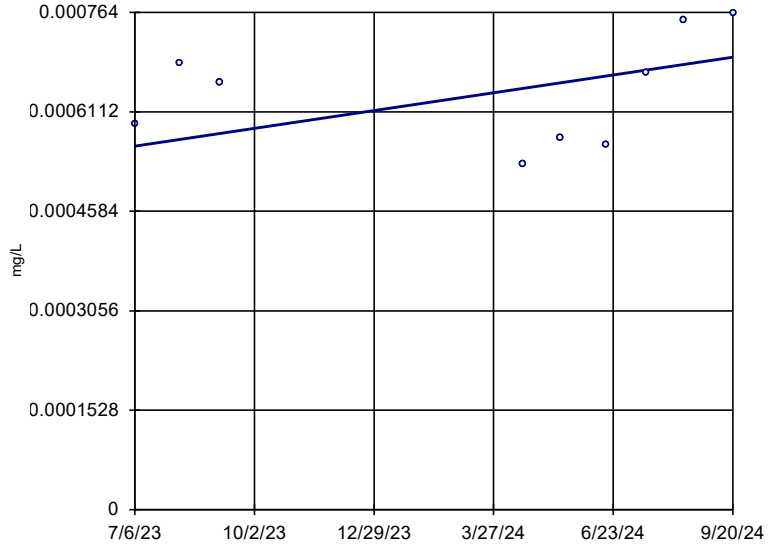
Constituent: Arsenic Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0.0001128 units per year.

Mann-Kendall statistic = 12
critical = 23

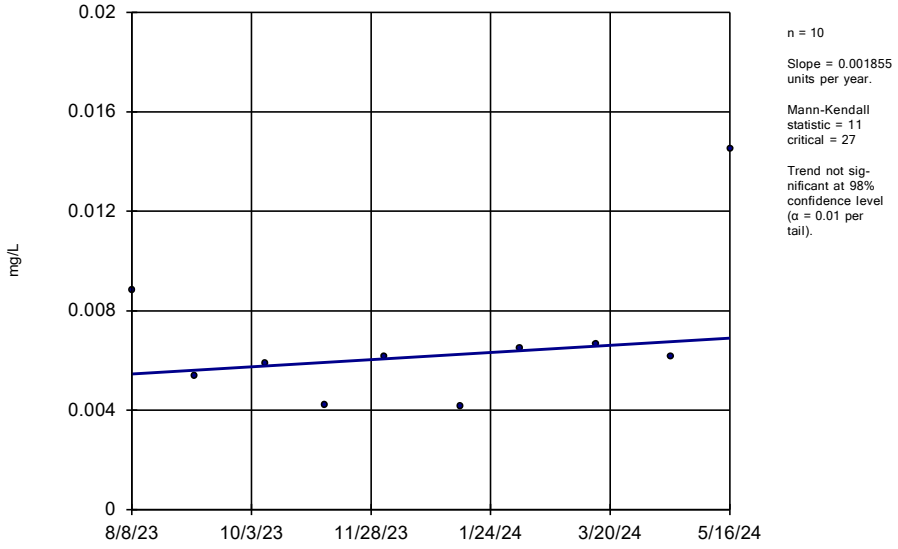
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Arsenic Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-110



n = 10

Slope = 0.001855 units per year.

Mann-Kendall statistic = 11
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

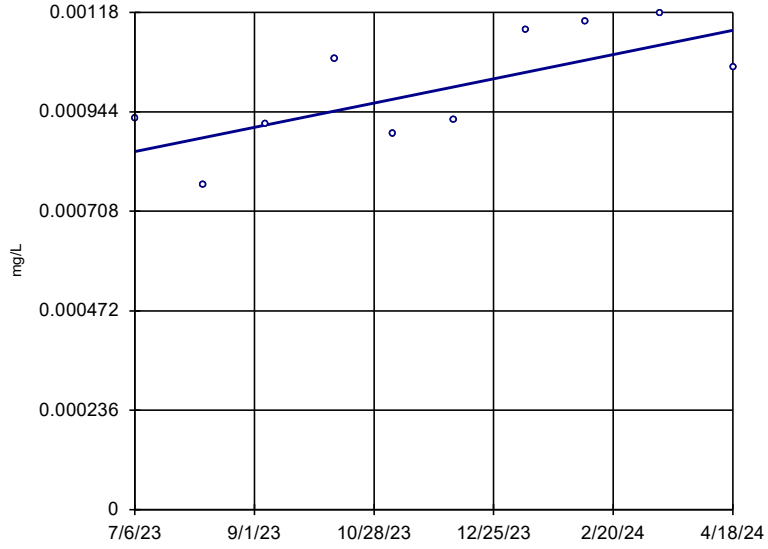
Constituent: Arsenic Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0.0003664 units per year.

Mann-Kendall statistic = 23
critical = 27

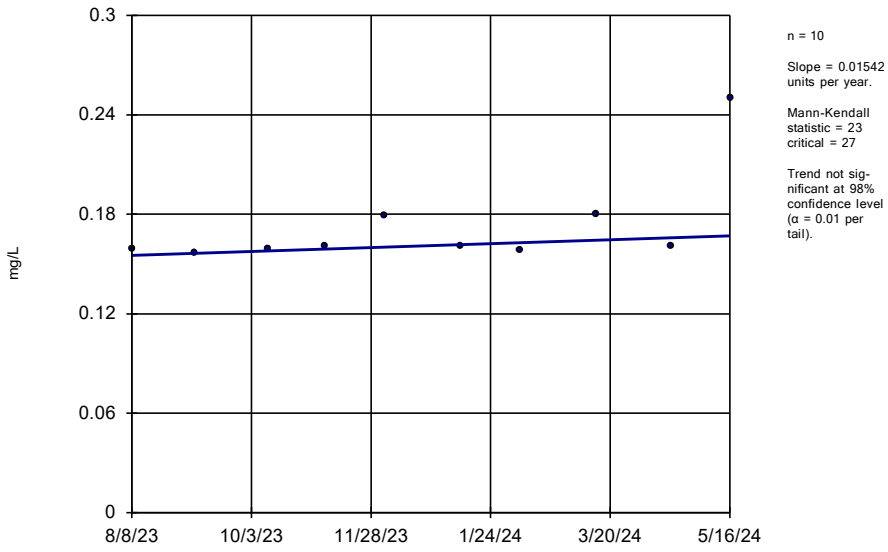
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Arsenic Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-104



n = 10

Slope = 0.01542 units per year.

Mann-Kendall statistic = 23 critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

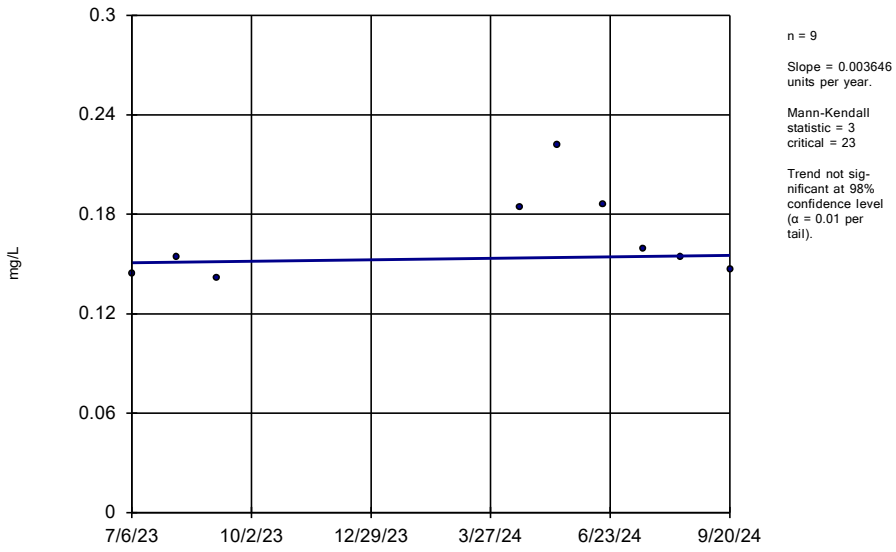
Constituent: Barium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-120



n = 9

Slope = 0.003646 units per year.

Mann-Kendall statistic = 3 critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

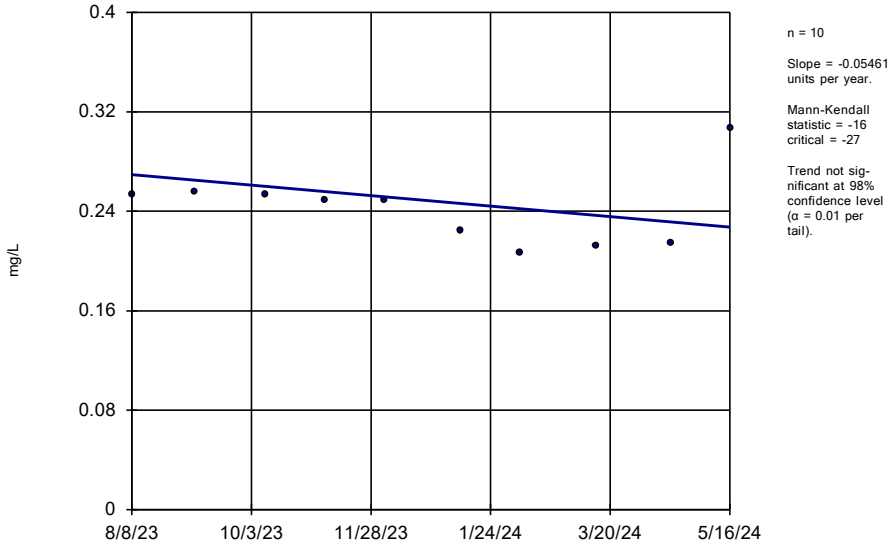
Constituent: Barium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-110



n = 10

Slope = -0.05461 units per year.

Mann-Kendall statistic = -16 critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

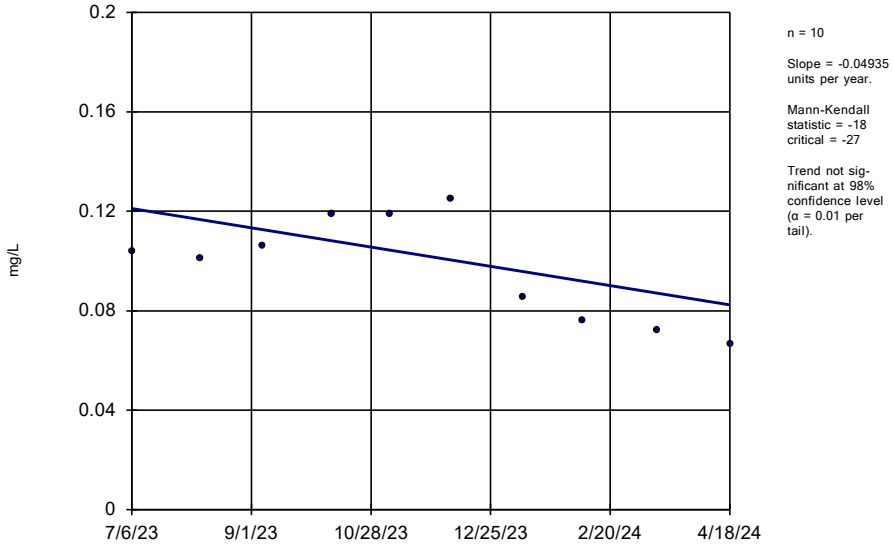
Constituent: Barium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-121



n = 10

Slope = -0.04935 units per year.

Mann-Kendall statistic = -18 critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

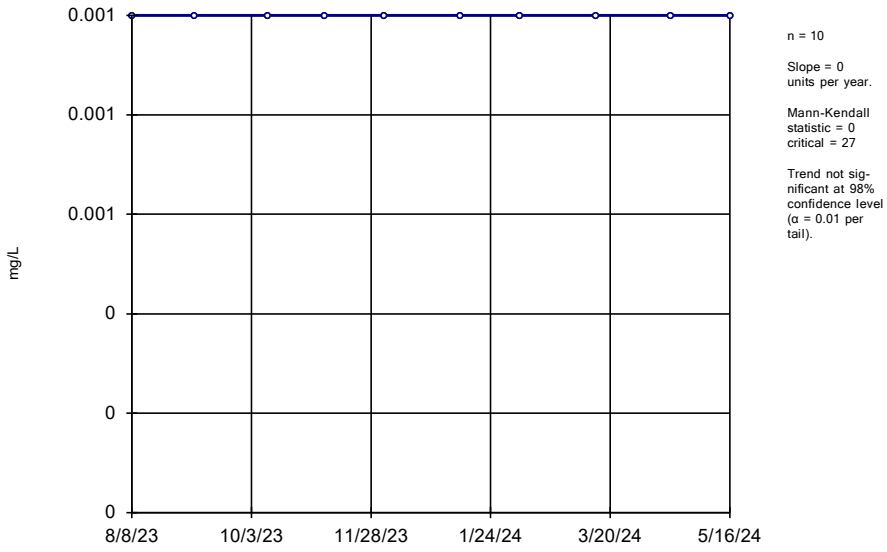
Constituent: Barium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

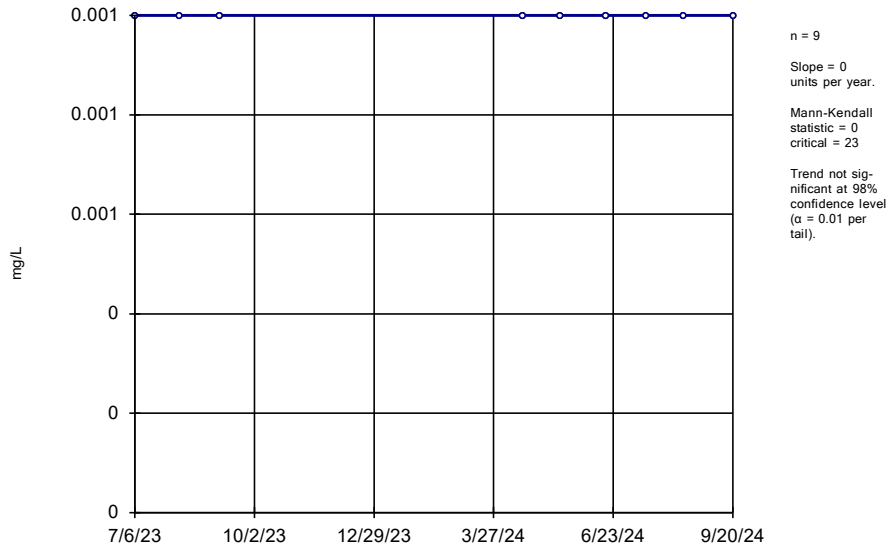
Constituent: Beryllium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

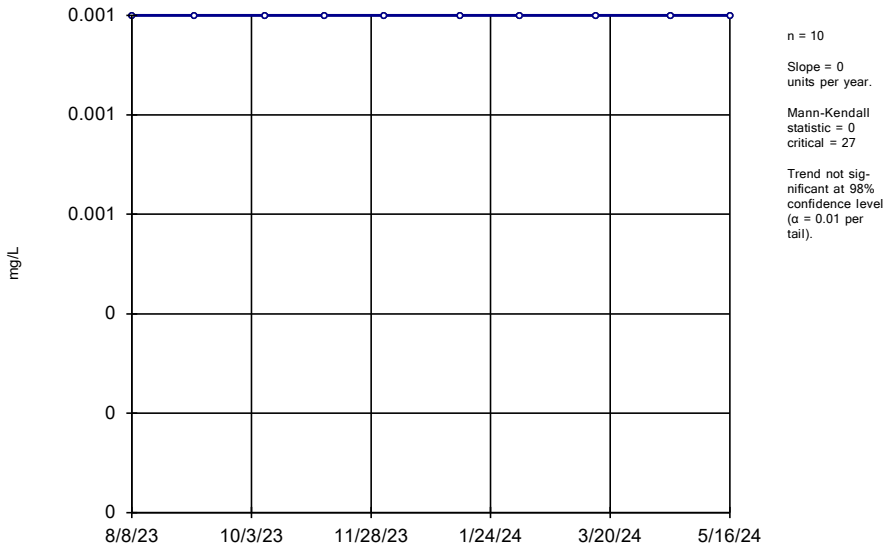
Constituent: Beryllium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

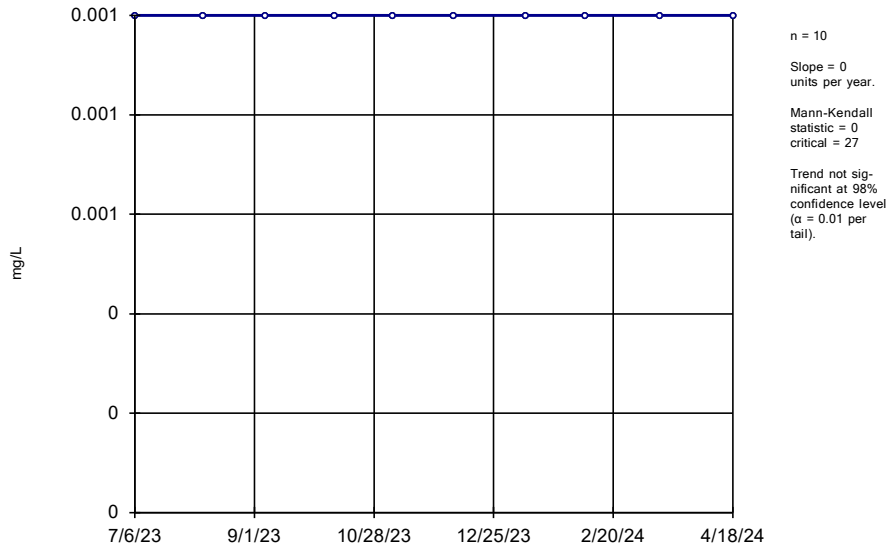
Constituent: Beryllium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

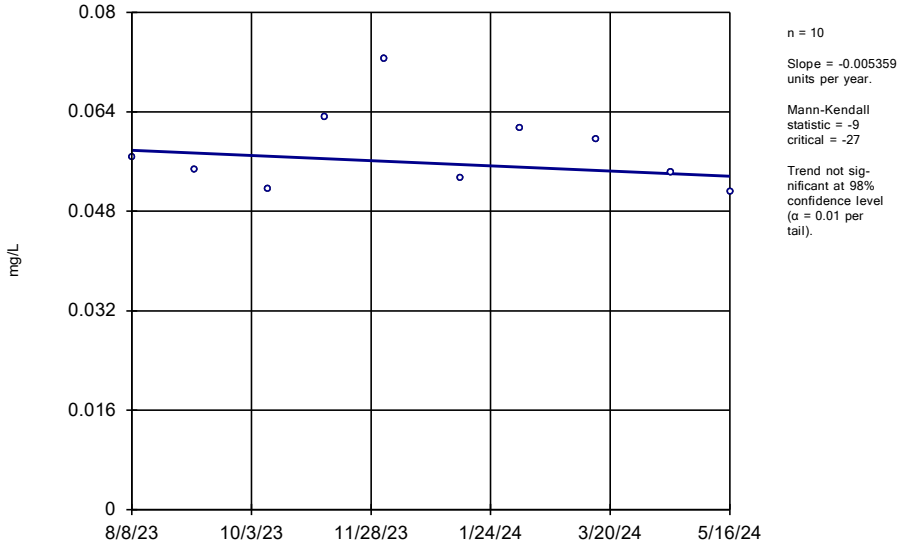
Constituent: Beryllium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = -0.005359 units per year.

Mann-Kendall statistic = -9
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

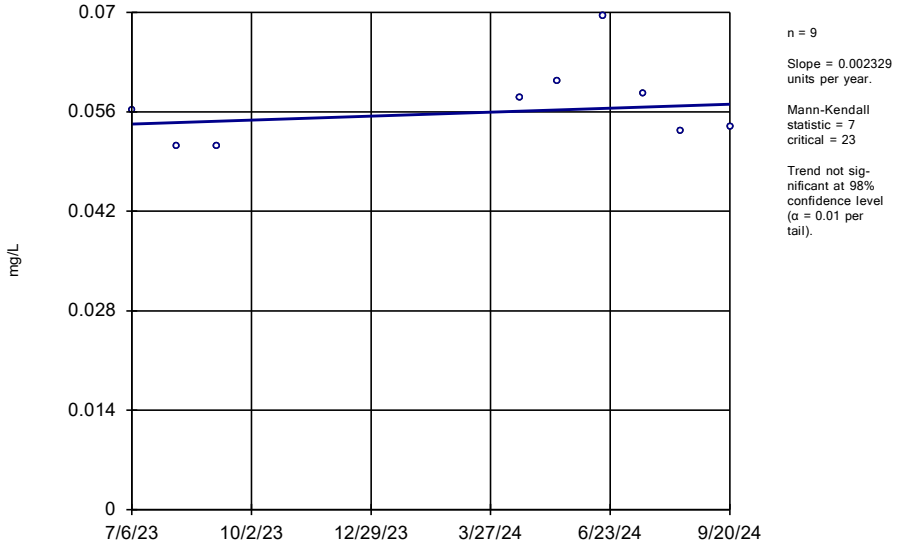
Constituent: Boron Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0.002329 units per year.

Mann-Kendall statistic = 7
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

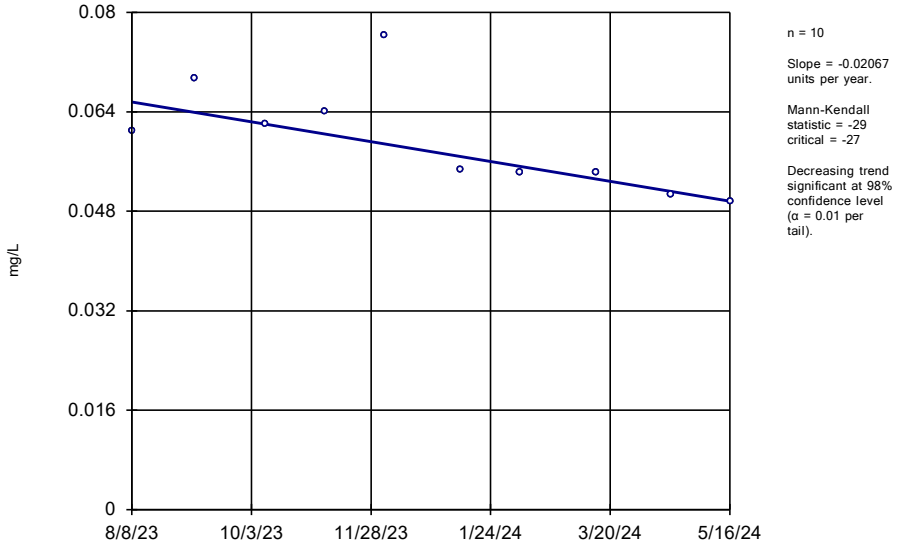
Constituent: Boron Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = -0.02067 units per year.

Mann-Kendall statistic = -29
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

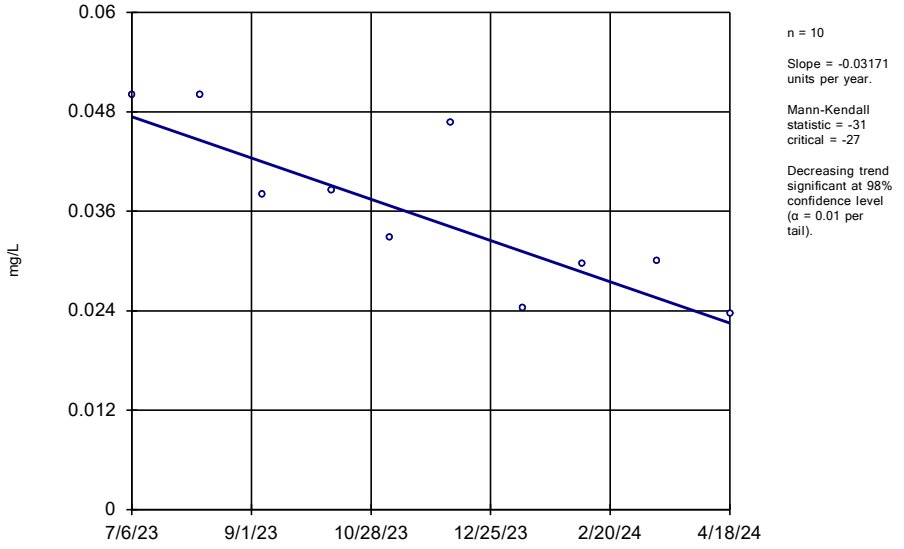
Constituent: Boron Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-121



n = 10

Slope = -0.03171 units per year.

Mann-Kendall statistic = -31
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

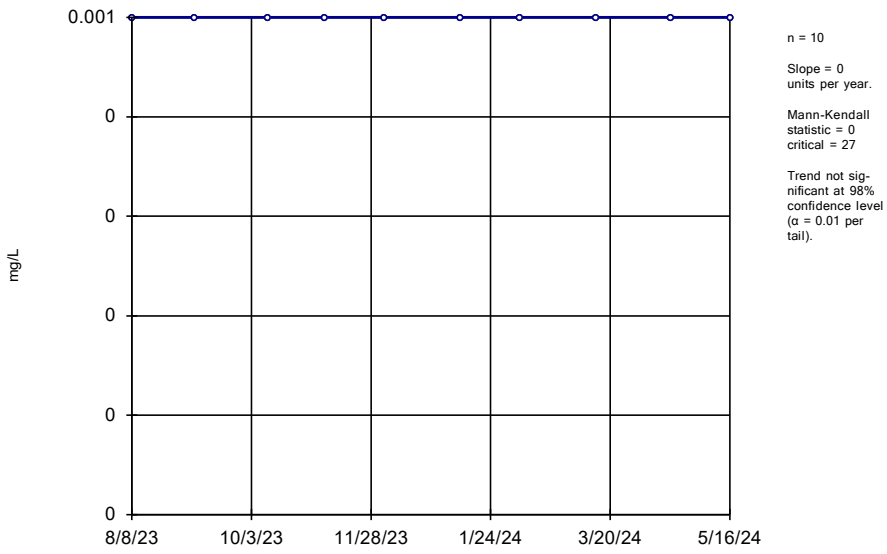
Constituent: Boron Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

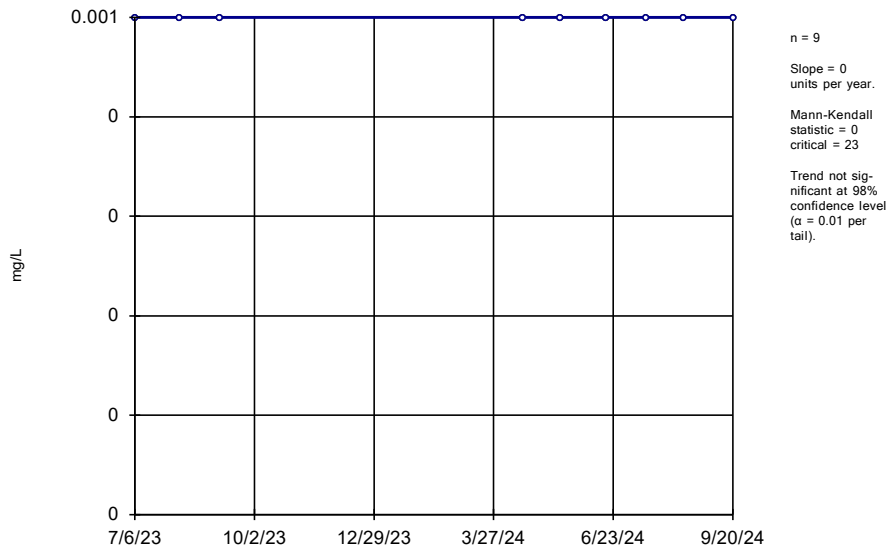
Constituent: Cadmium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

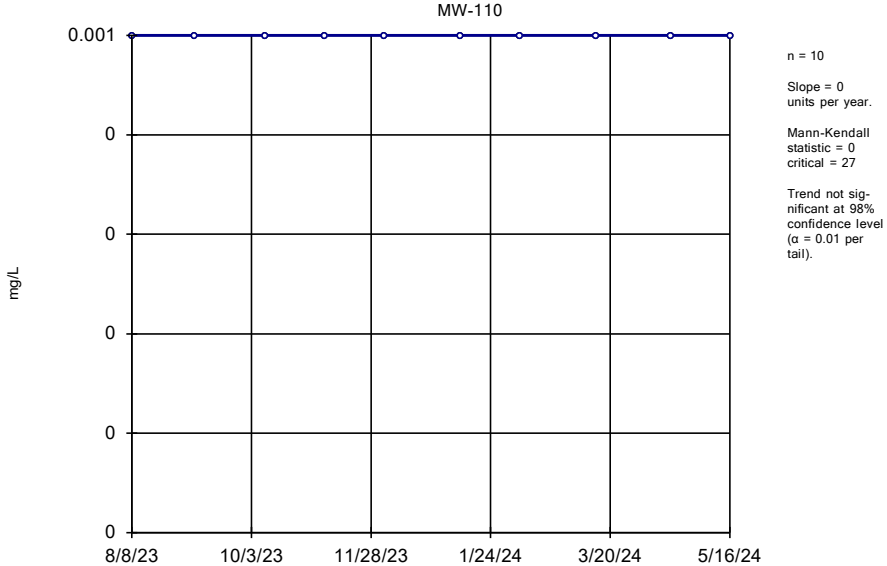
Constituent: Cadmium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

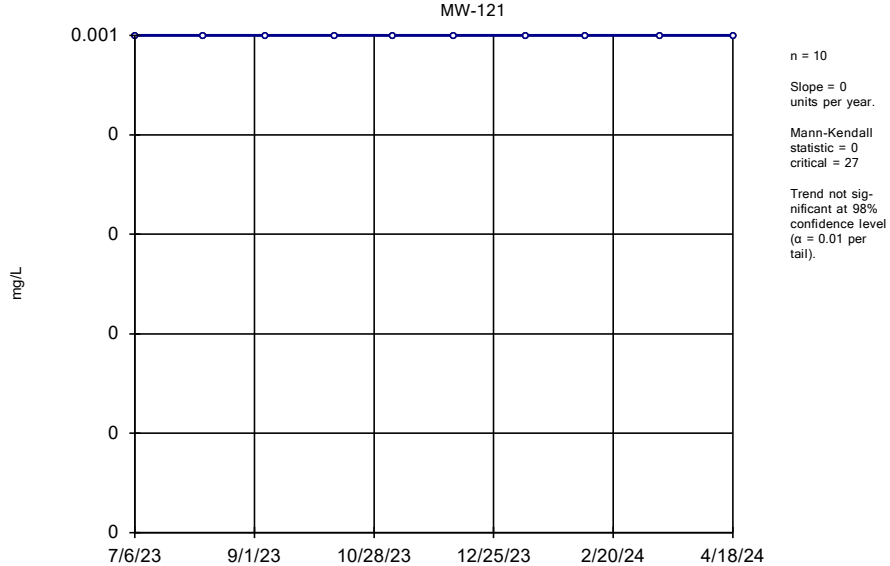
Constituent: Cadmium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

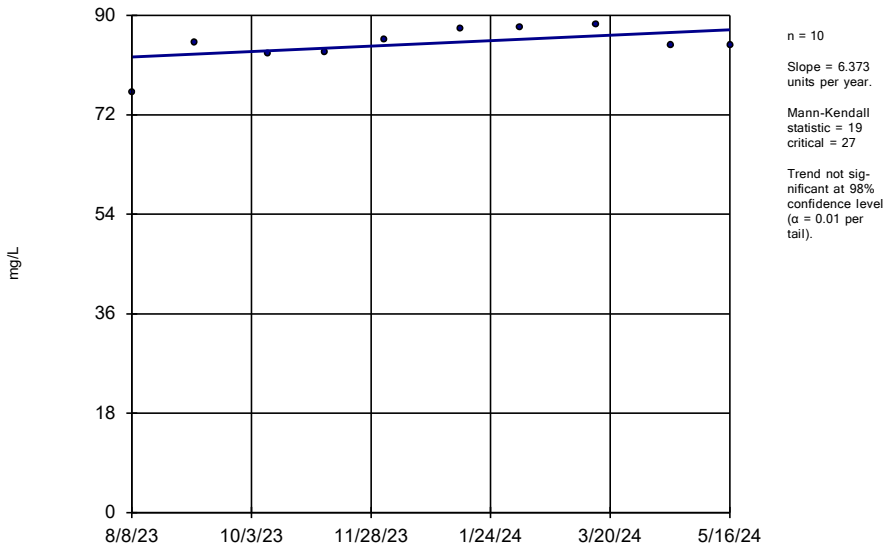
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Cadmium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-104



n = 10

Slope = 6.373 units per year.

Mann-Kendall statistic = 19 critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

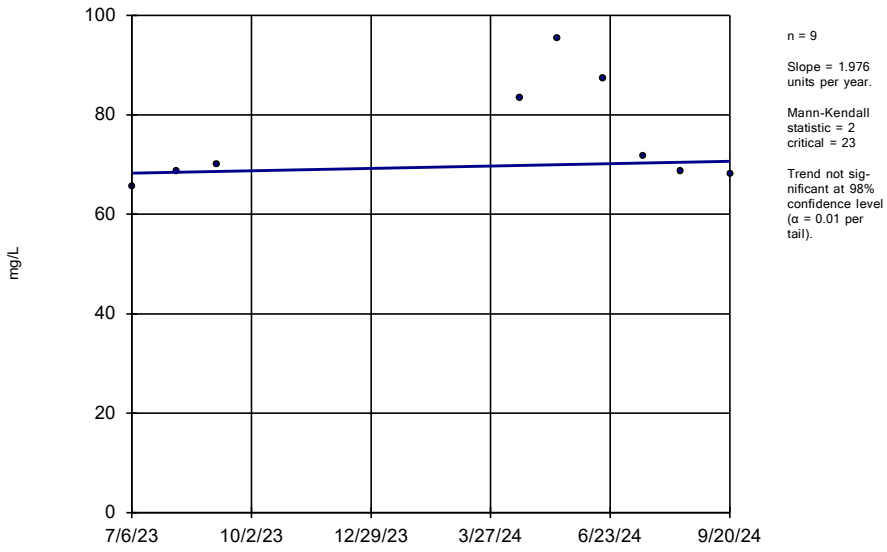
Constituent: Calcium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-120



n = 9

Slope = 1.976 units per year.

Mann-Kendall statistic = 2 critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

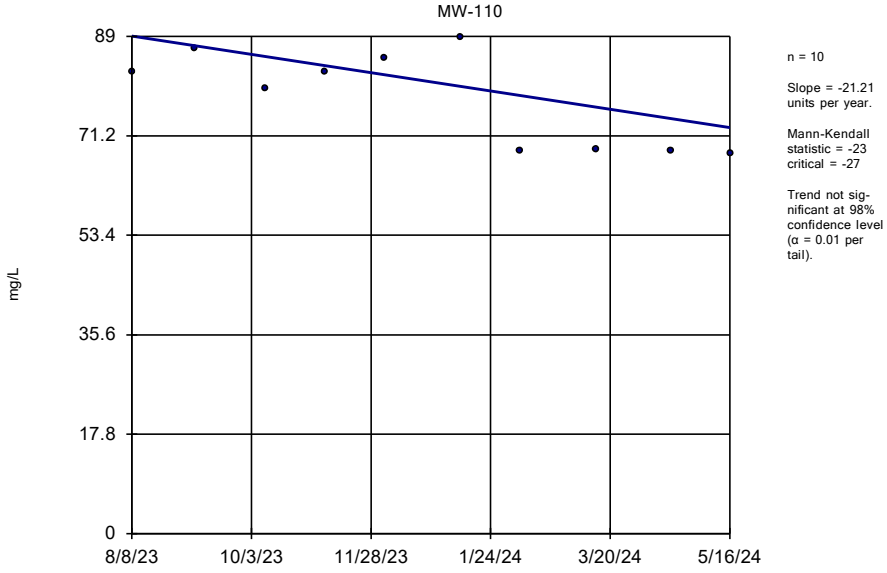
Constituent: Calcium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-110



n = 10

Slope = -21.21 units per year.

Mann-Kendall statistic = -23 critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

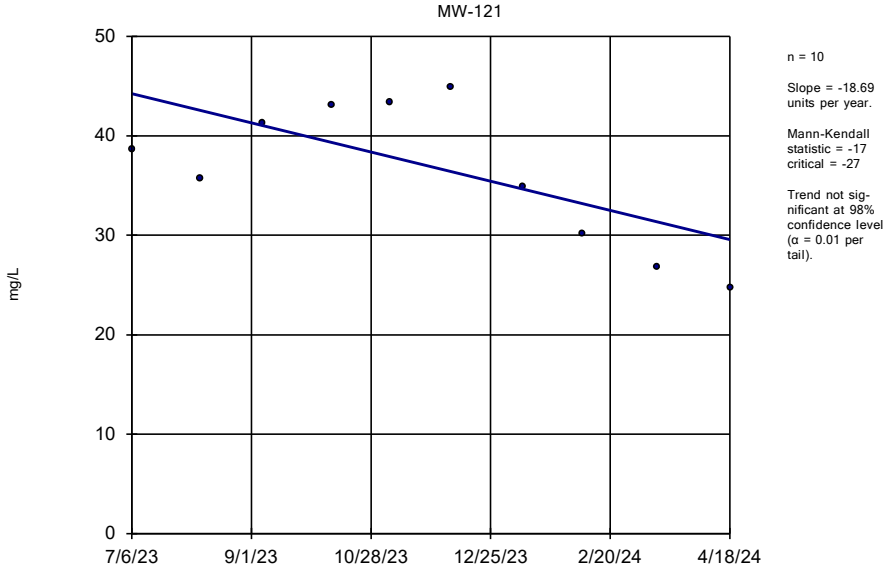
Constituent: Calcium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-121



n = 10

Slope = -18.69 units per year.

Mann-Kendall statistic = -17 critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

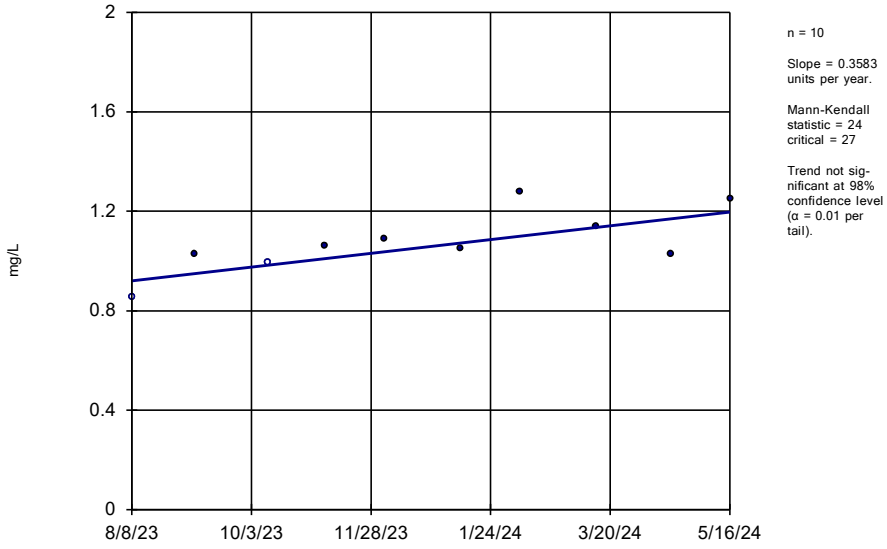
Constituent: Calcium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0.3583 units per year.

Mann-Kendall statistic = 24
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

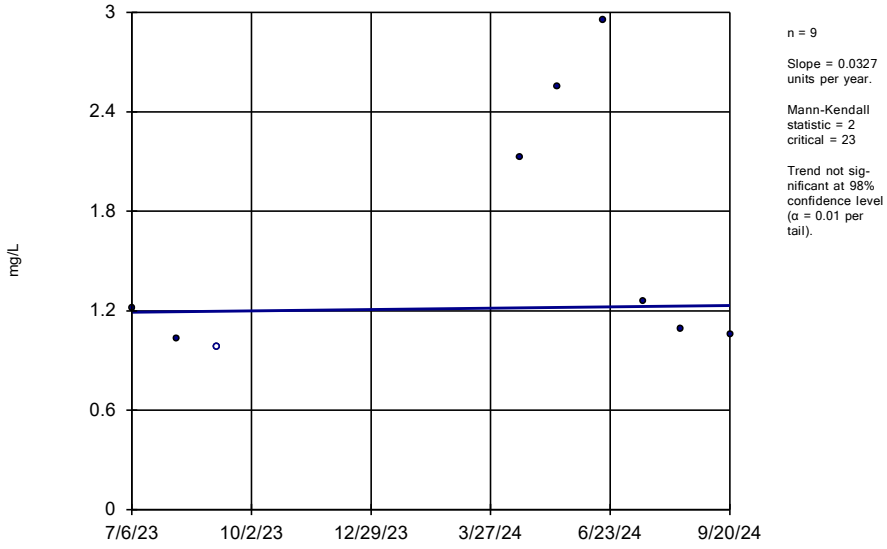
Constituent: Chloride Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0.0327 units per year.

Mann-Kendall statistic = 2
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

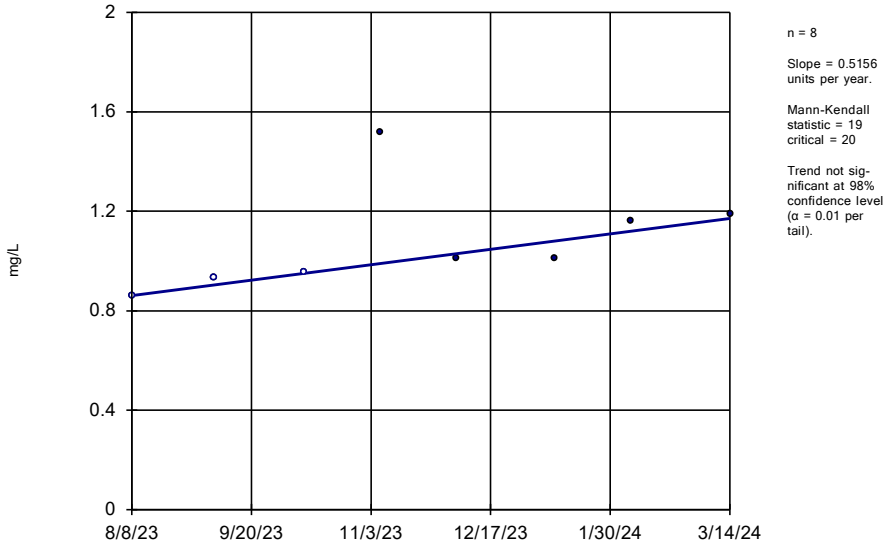
Constituent: Chloride Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 8

Slope = 0.5156 units per year.

Mann-Kendall statistic = 19
critical = 20

Trend not significant at 98% confidence level (α = 0.01 per tail).

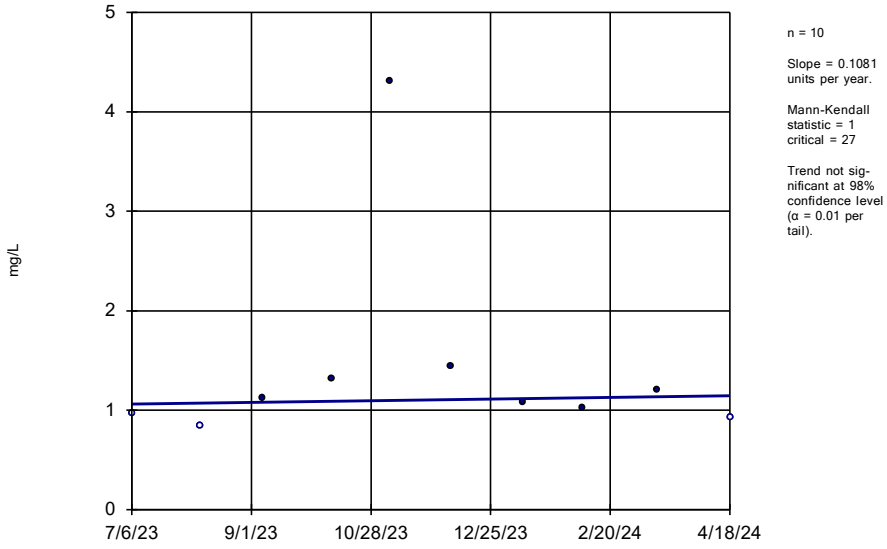
Constituent: Chloride Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0.1081 units per year.

Mann-Kendall statistic = 1
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

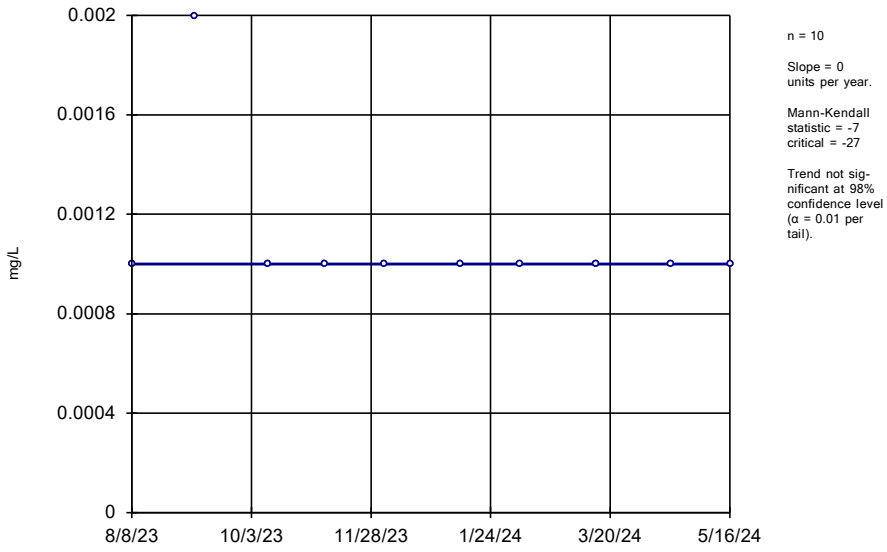
Constituent: Chloride Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = -7
critical = -27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

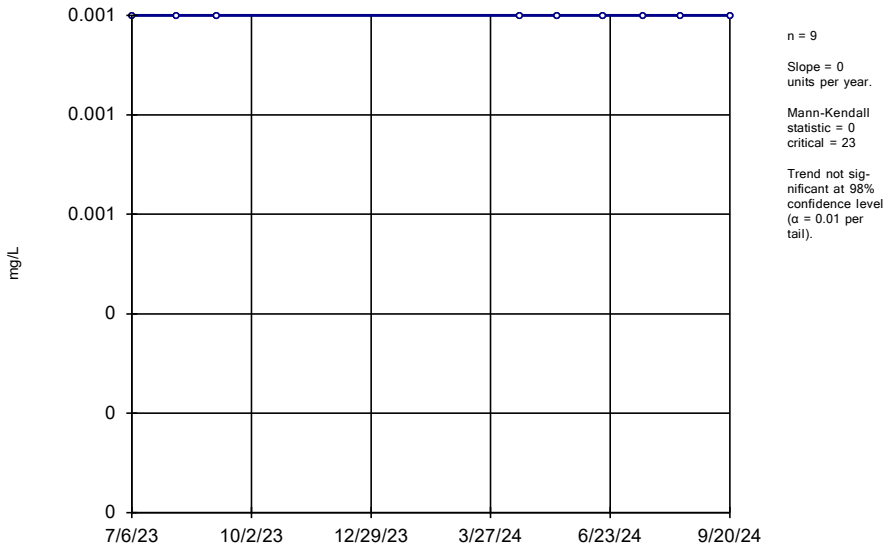
Constituent: Chromium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

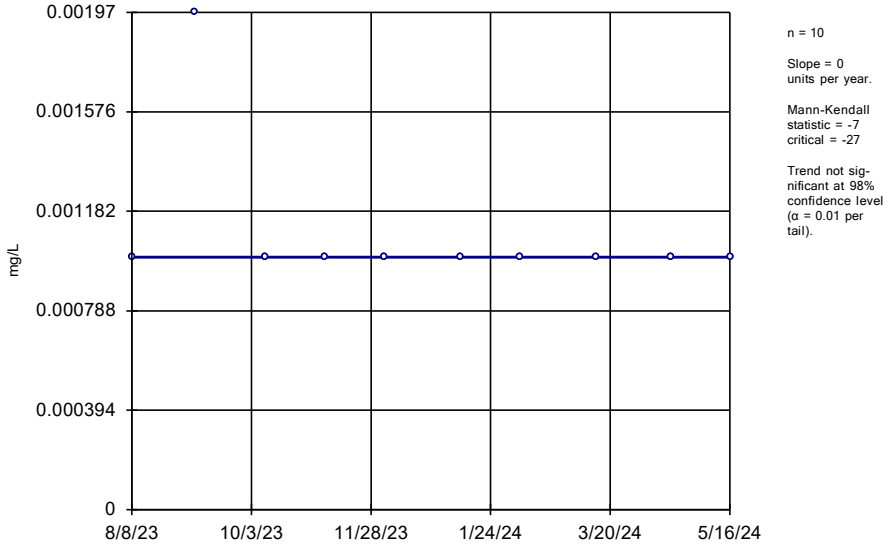
Constituent: Chromium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = -7
critical = -27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

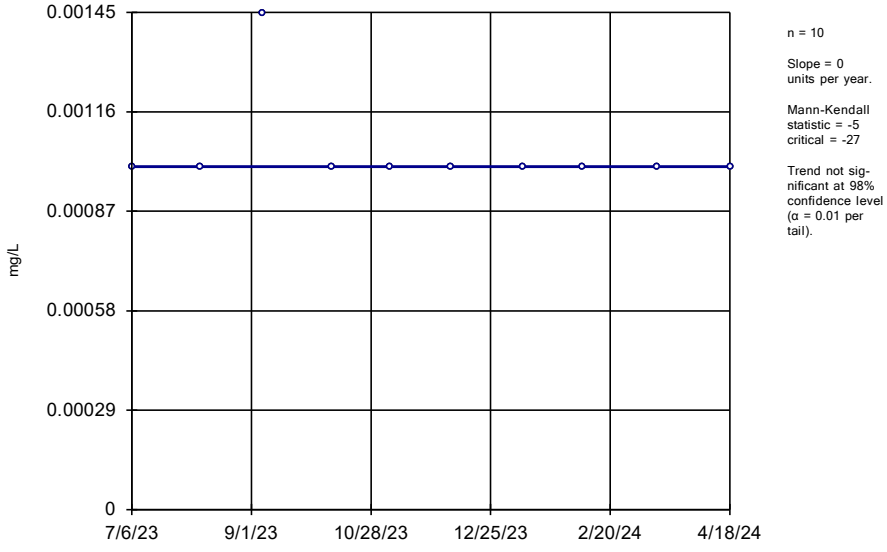
Constituent: Chromium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = -5
critical = -27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

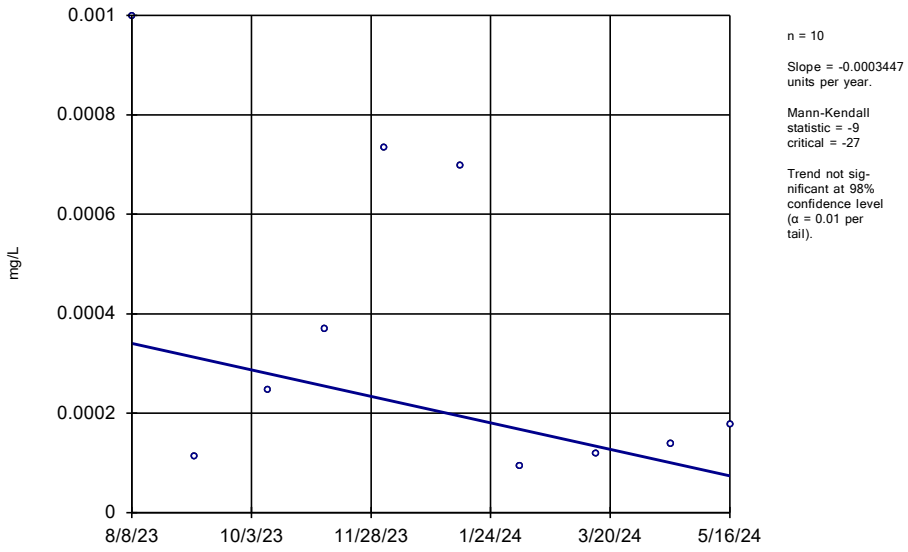
Constituent: Chromium Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = -0.0003447 units per year.

Mann-Kendall statistic = -9
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

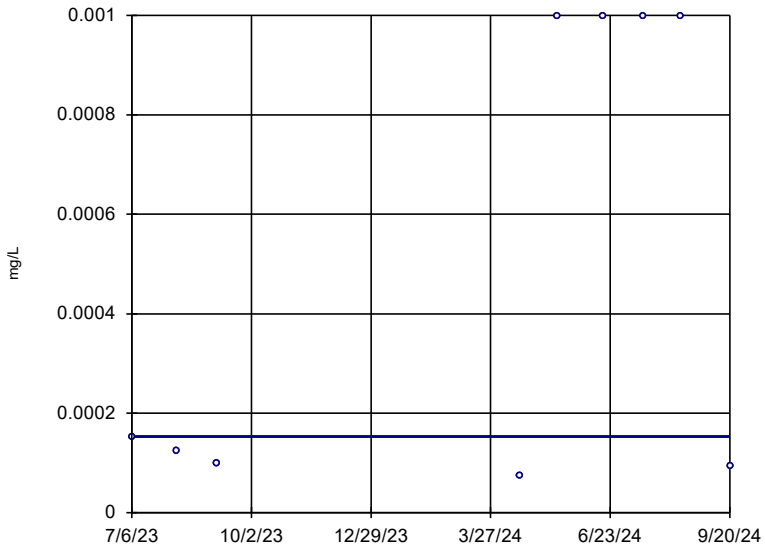
Constituent: Cobalt Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0 units per year.

Mann-Kendall statistic = 4
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

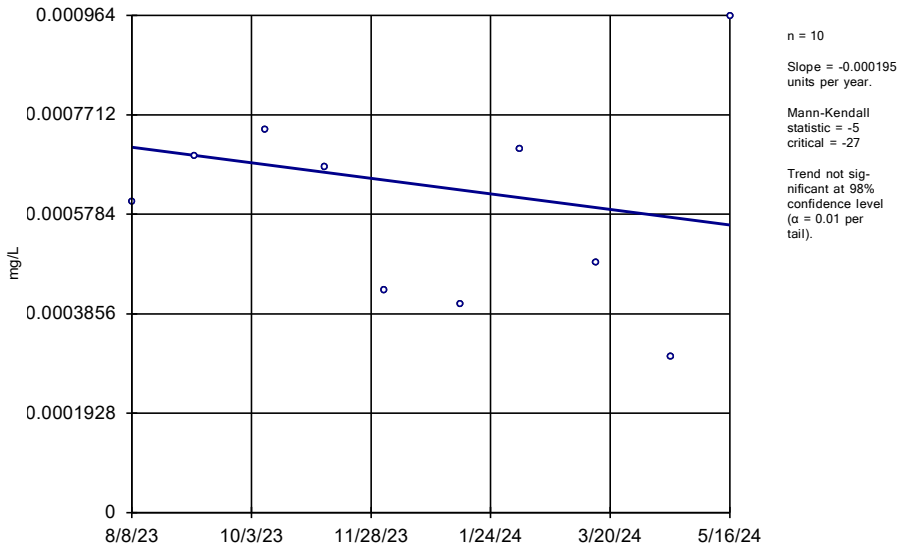
Constituent: Cobalt Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = -0.000195 units per year.

Mann-Kendall statistic = -5
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

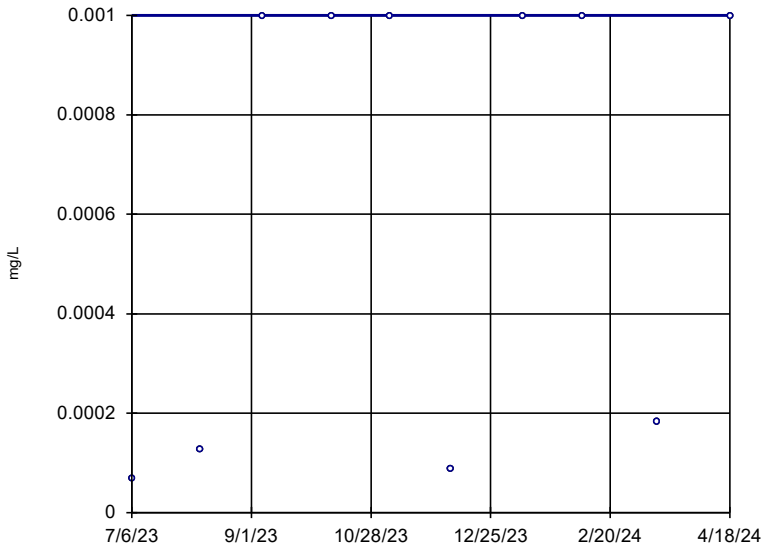
Constituent: Cobalt Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0 units per year.

Mann-Kendall statistic = 12
critical = 27

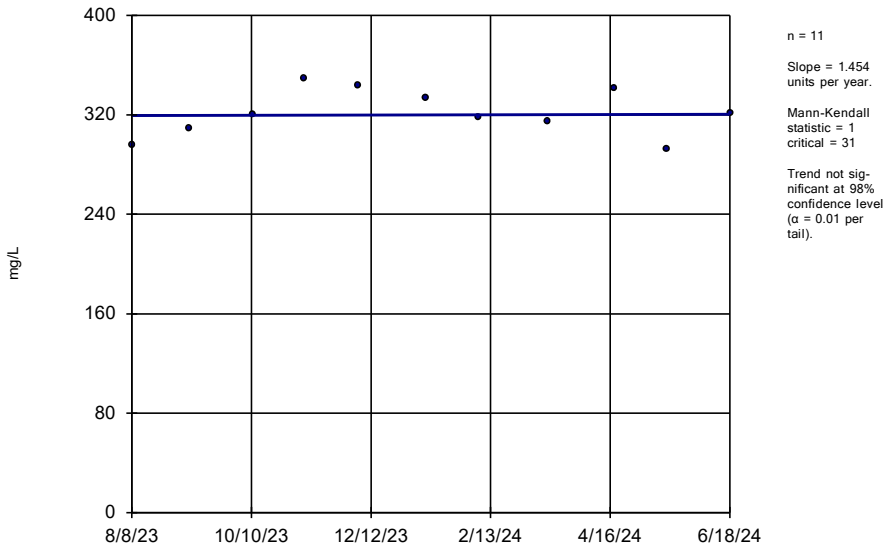
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-104



n = 11

Slope = 1.454 units per year.

Mann-Kendall statistic = 1
critical = 31

Trend not significant at 98% confidence level (α = 0.01 per tail).

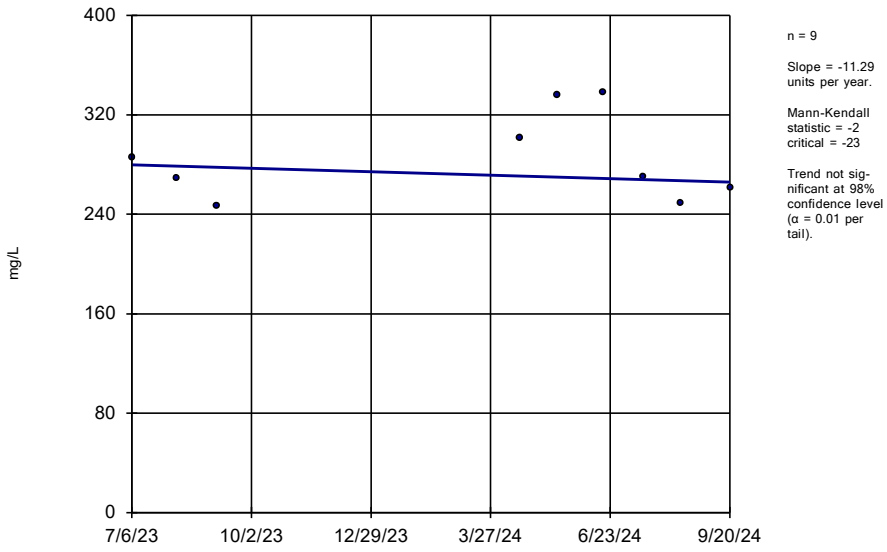
Constituent: Dissolved Solids Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-120



n = 9

Slope = -11.29 units per year.

Mann-Kendall statistic = -2
critical = -23

Trend not significant at 98% confidence level (α = 0.01 per tail).

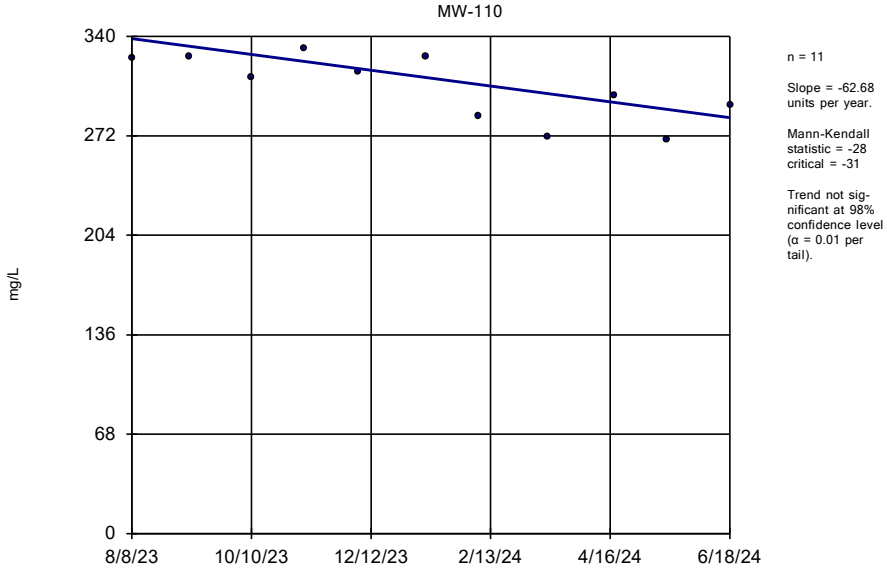
Constituent: Dissolved Solids Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-110



n = 11

Slope = -62.68 units per year.

Mann-Kendall statistic = -28
critical = -31

Trend not significant at 98% confidence level (α = 0.01 per tail).

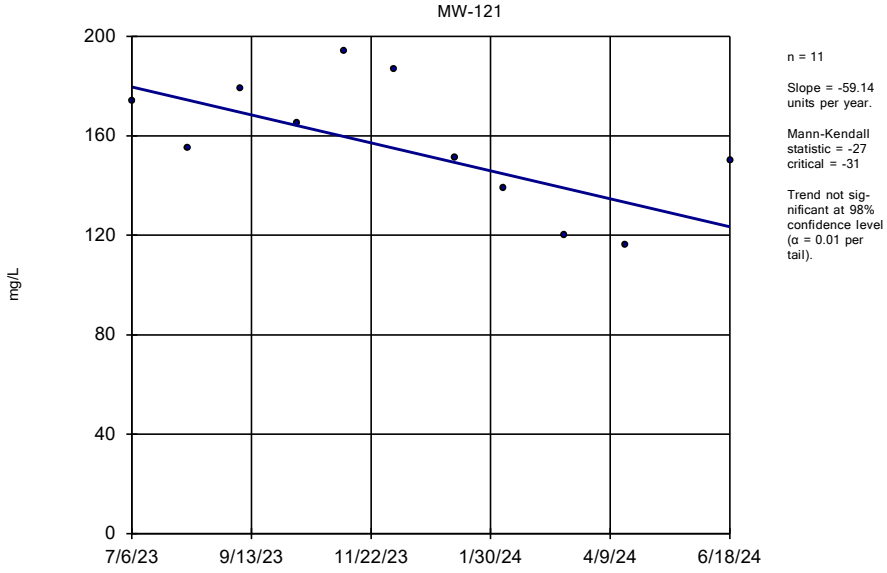
Constituent: Dissolved Solids Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-121



n = 11

Slope = -59.14 units per year.

Mann-Kendall statistic = -27
critical = -31

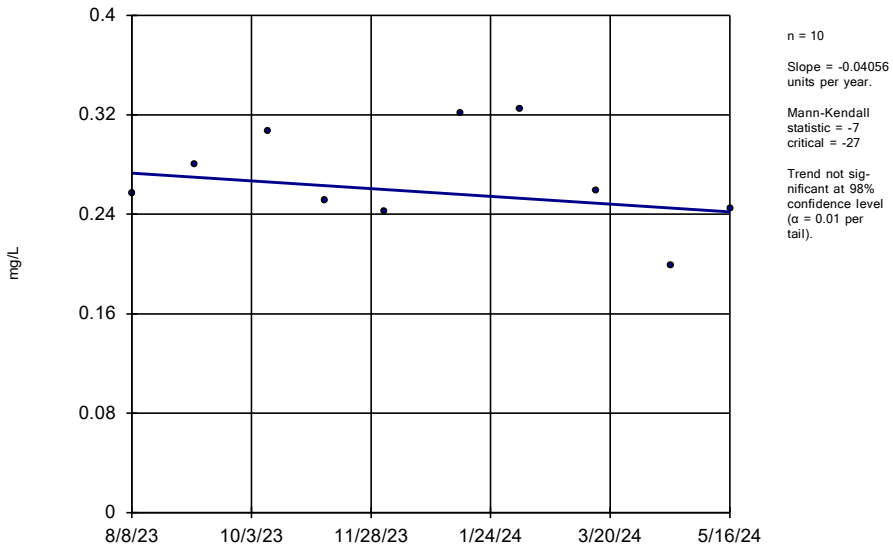
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Dissolved Solids Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-104



n = 10

Slope = -0.04056 units per year.

Mann-Kendall statistic = -7
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

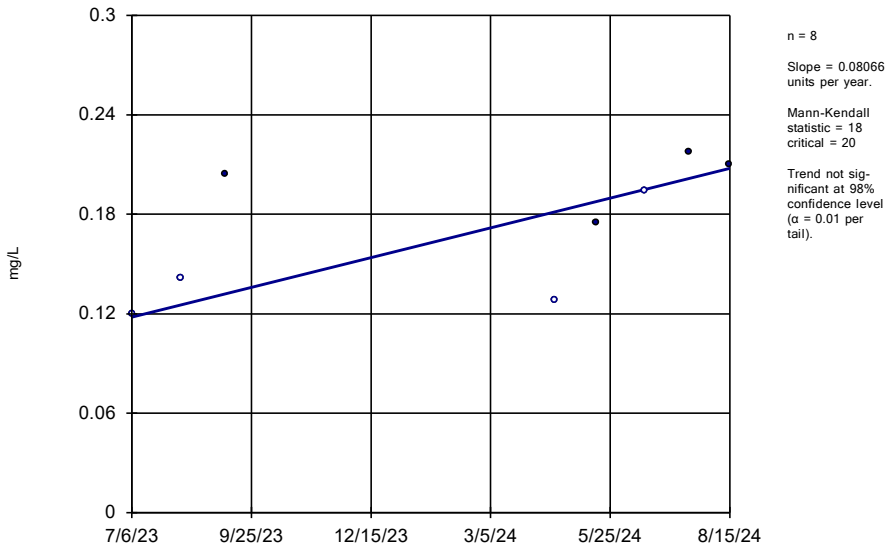
Constituent: Fluoride Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 8

Slope = 0.08066 units per year.

Mann-Kendall statistic = 18
critical = 20

Trend not significant at 98% confidence level (α = 0.01 per tail).

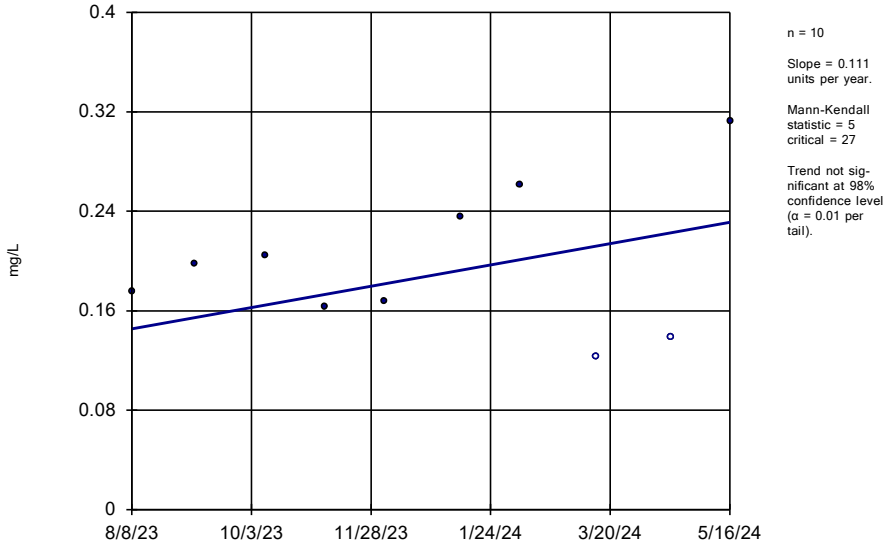
Constituent: Fluoride Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0.111 units per year.

Mann-Kendall statistic = 5
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

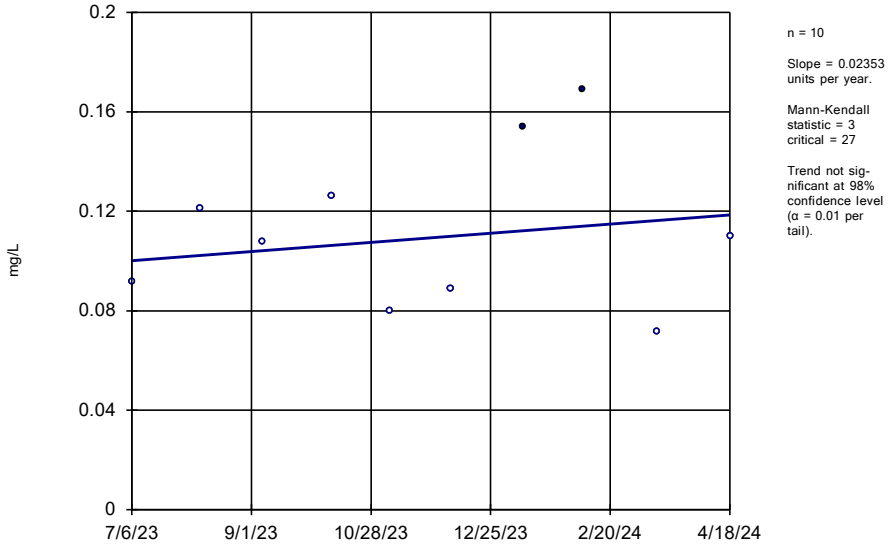
Constituent: Fluoride Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0.02353 units per year.

Mann-Kendall statistic = 3
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

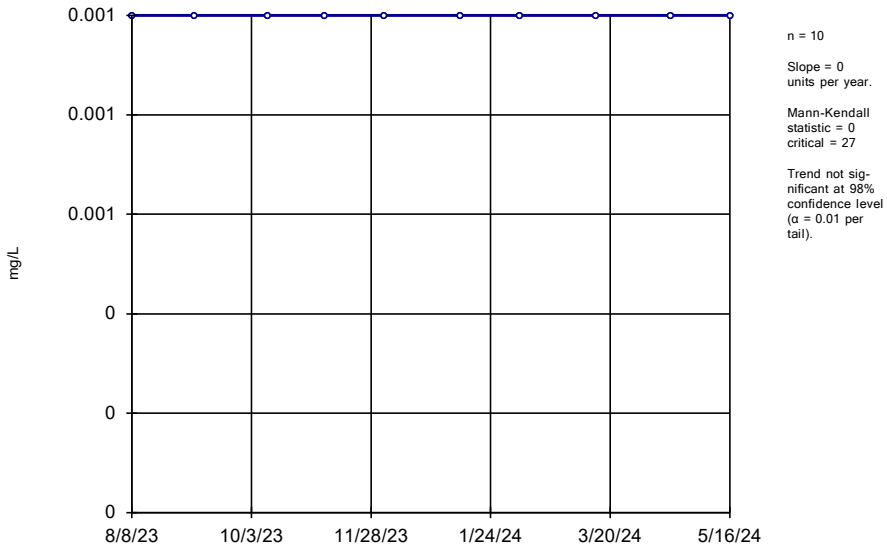
Constituent: Fluoride Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

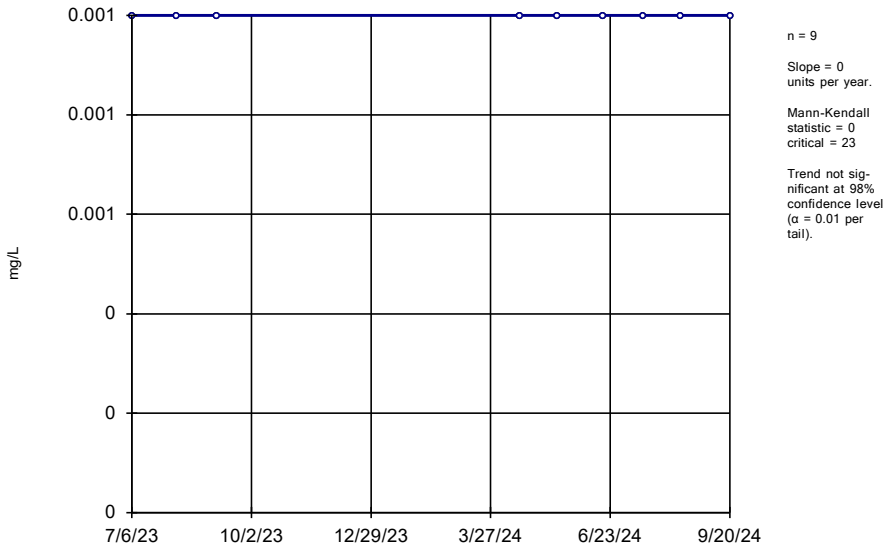
Constituent: Lead Analysis Run 11/13/2024 11:53 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

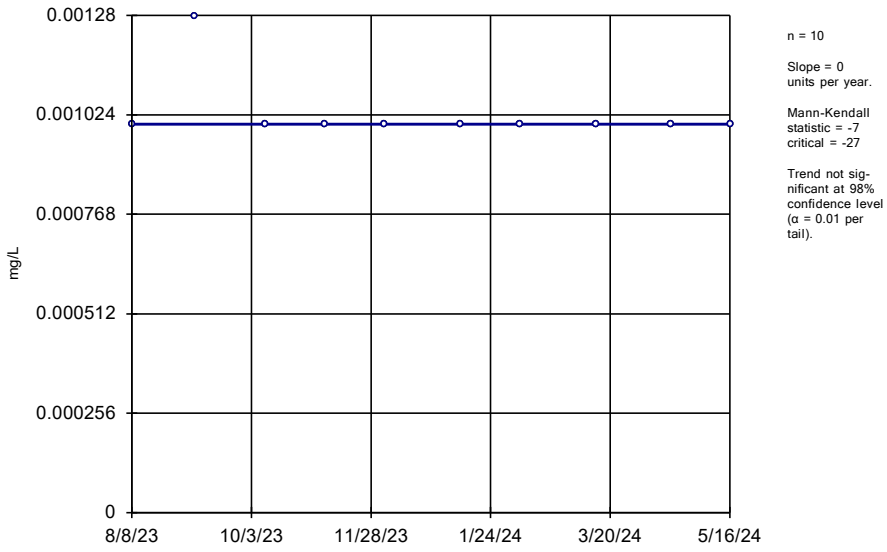
Constituent: Lead Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = -7
critical = -27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

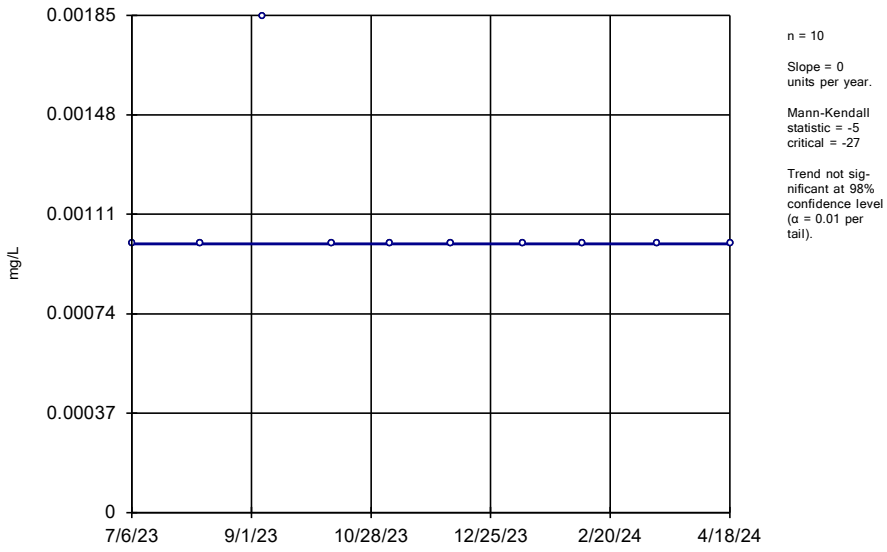
Constituent: Lead Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = -5
critical = -27

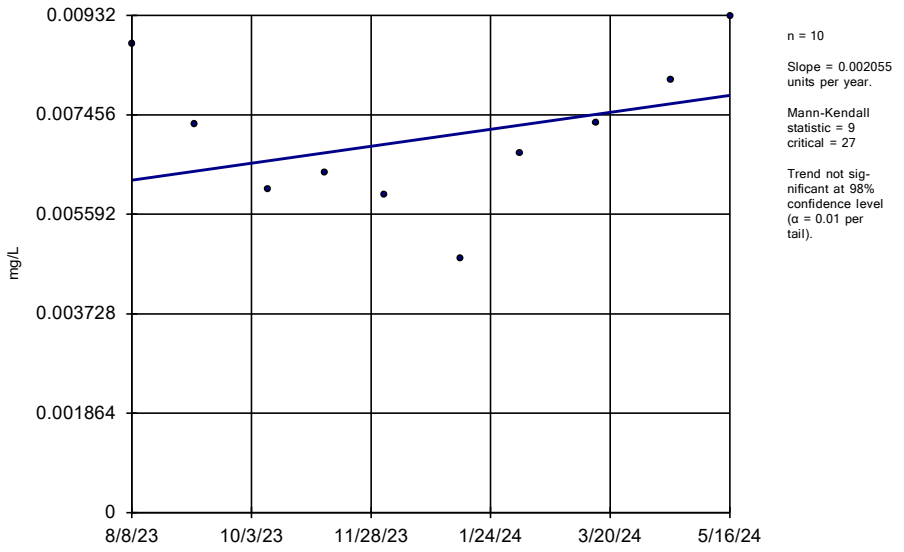
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Lead Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-104



n = 10

Slope = 0.002055 units per year.

Mann-Kendall statistic = 9
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

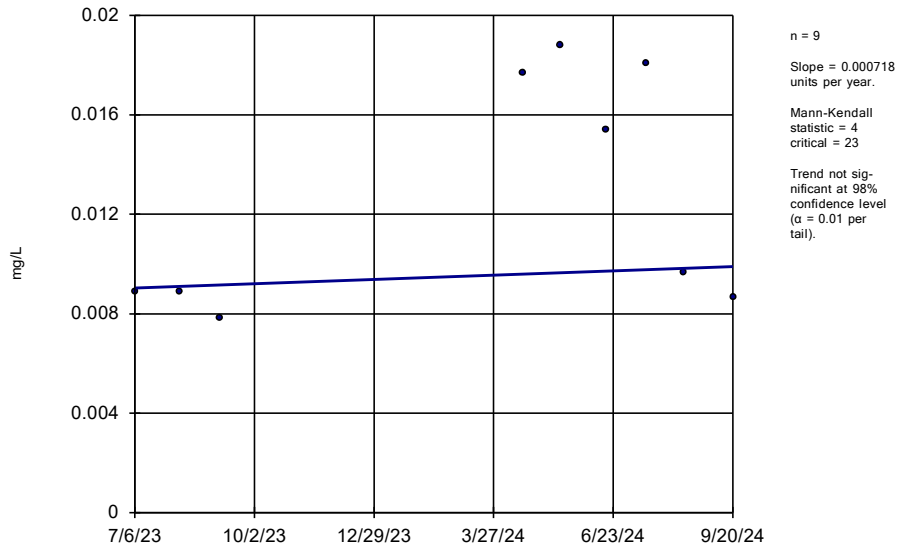
Constituent: Lithium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-120



n = 9

Slope = 0.000718 units per year.

Mann-Kendall statistic = 4
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

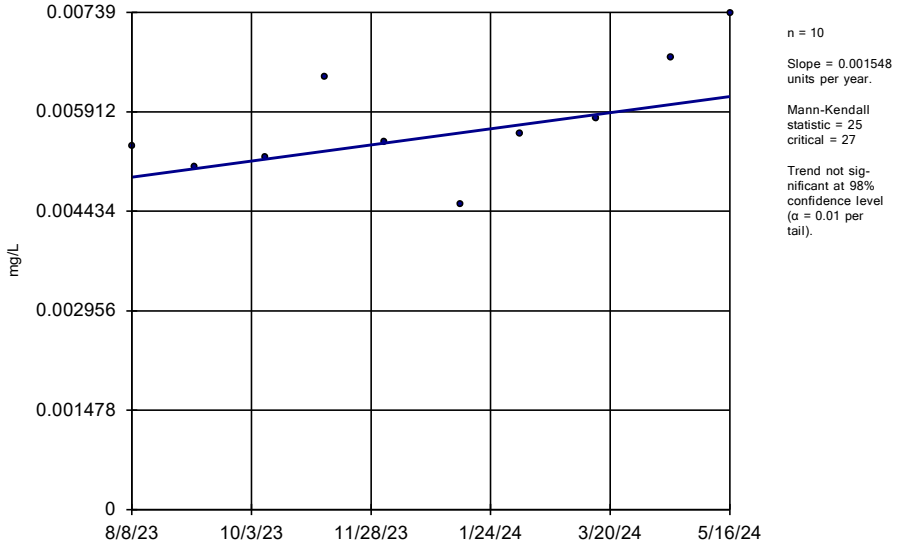
Constituent: Lithium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-110



n = 10

Slope = 0.001548 units per year.

Mann-Kendall statistic = 25
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

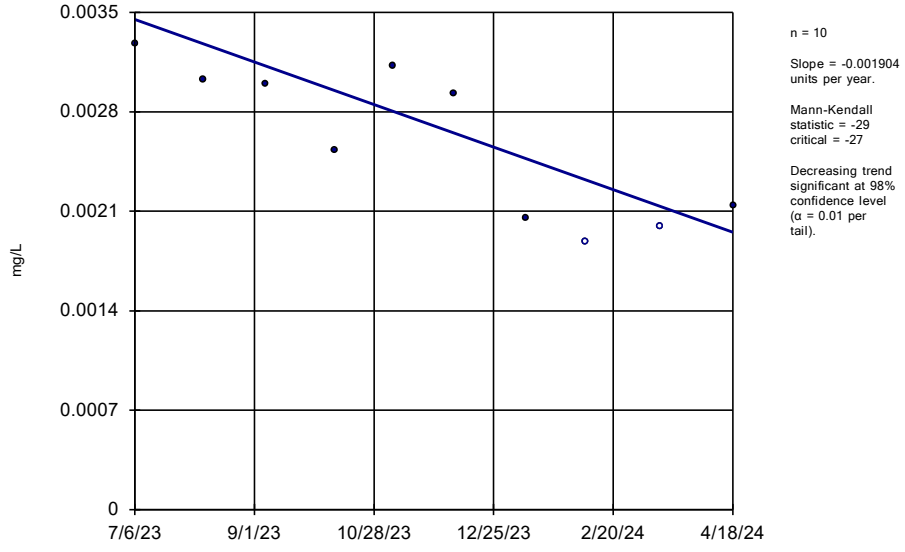
Constituent: Lithium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = -0.001904 units per year.

Mann-Kendall statistic = -29
critical = -27

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

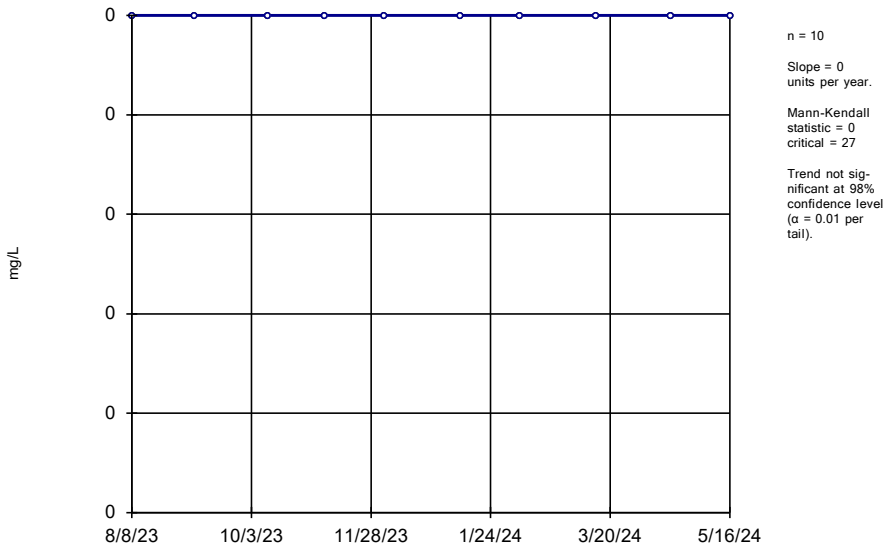
Constituent: Lithium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

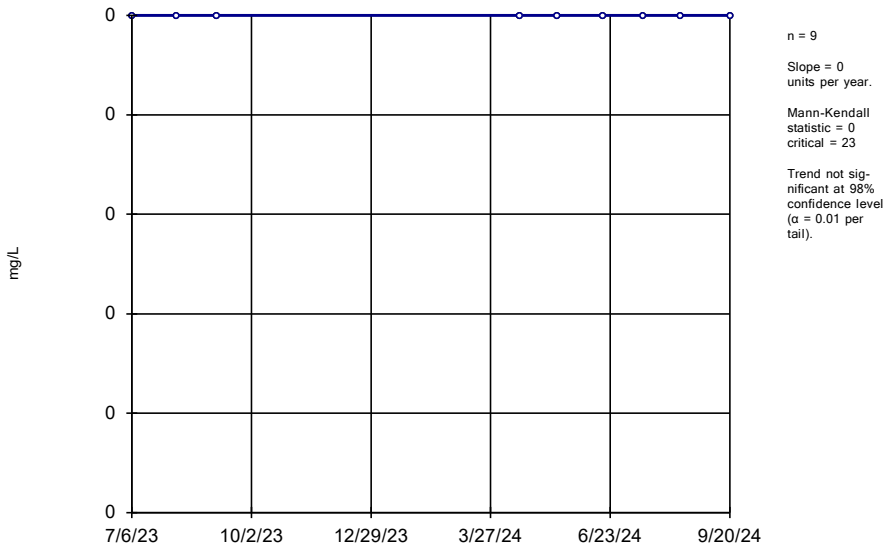
Constituent: Mercury Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

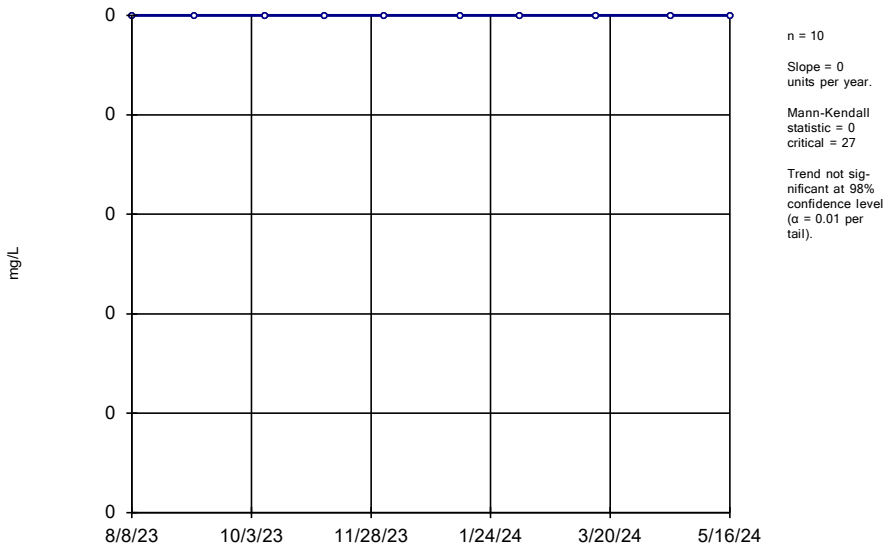
Constituent: Mercury Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

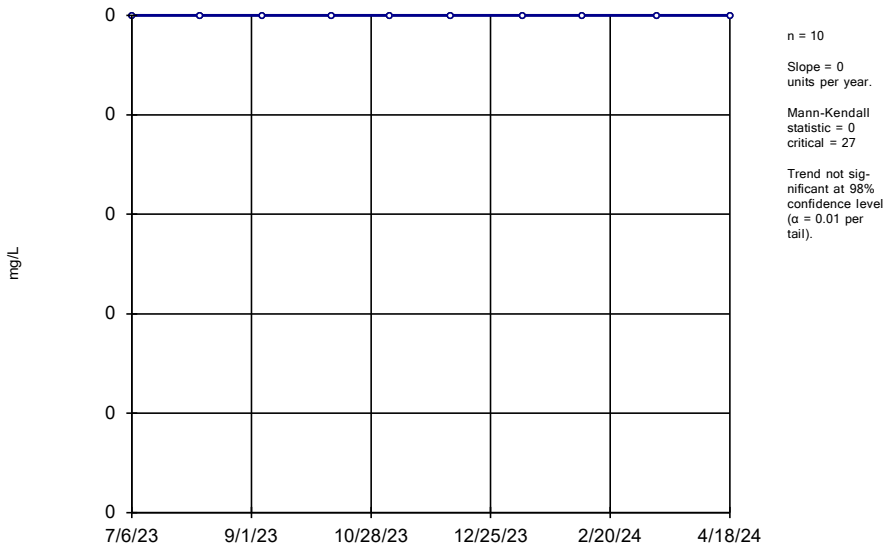
Constituent: Mercury Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

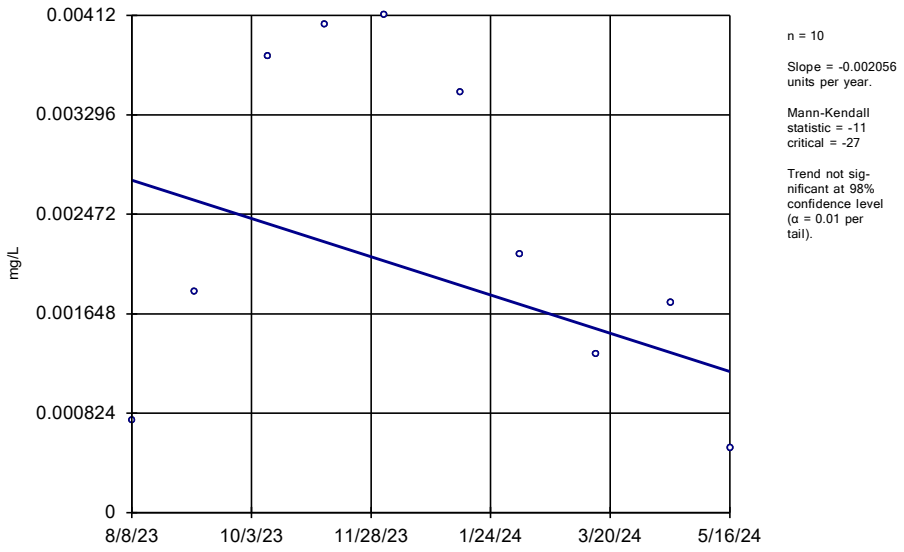
Constituent: Mercury Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = -0.002056 units per year.

Mann-Kendall statistic = -11
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

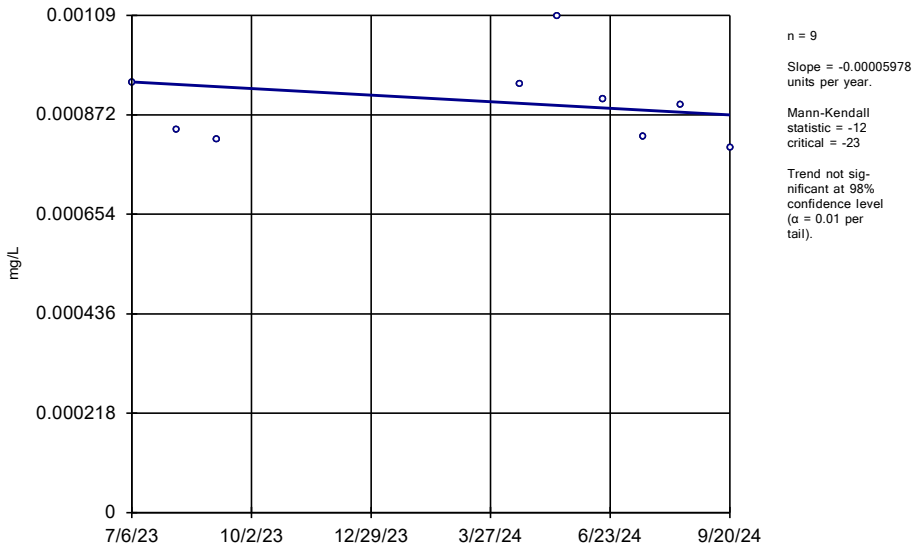
Constituent: Molybdenum Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = -0.00005978 units per year.

Mann-Kendall statistic = -12
critical = -23

Trend not significant at 98% confidence level (α = 0.01 per tail).

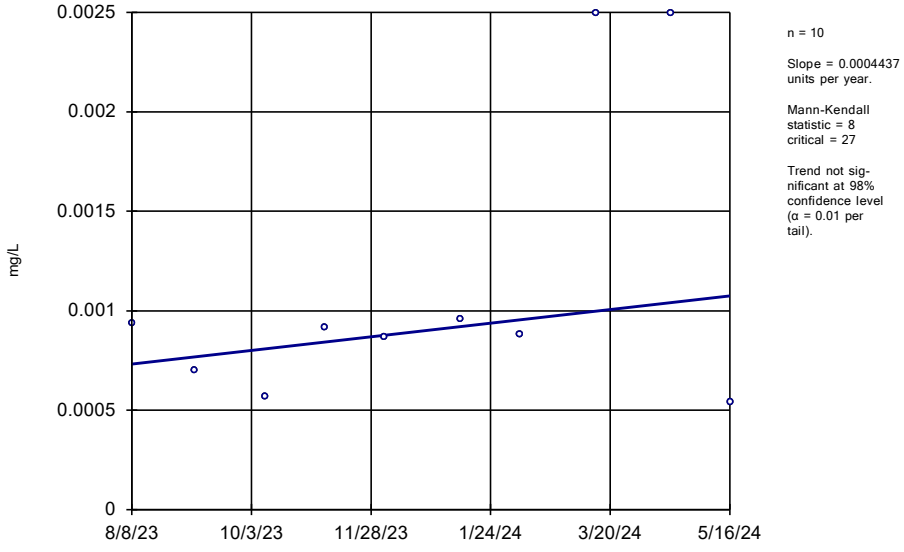
Constituent: Molybdenum Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0.0004437 units per year.

Mann-Kendall statistic = 8
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

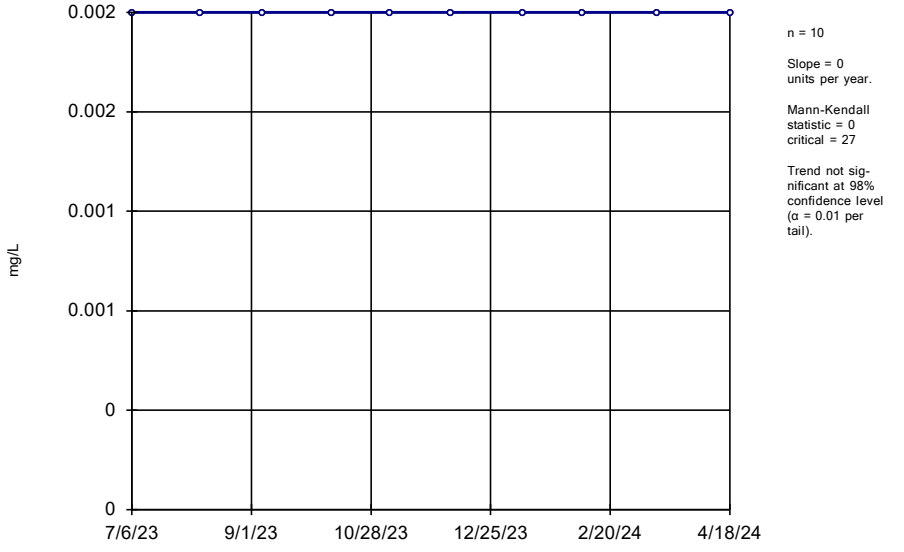
Constituent: Molybdenum Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0 units per year.

Mann-Kendall statistic = 0
critical = 27

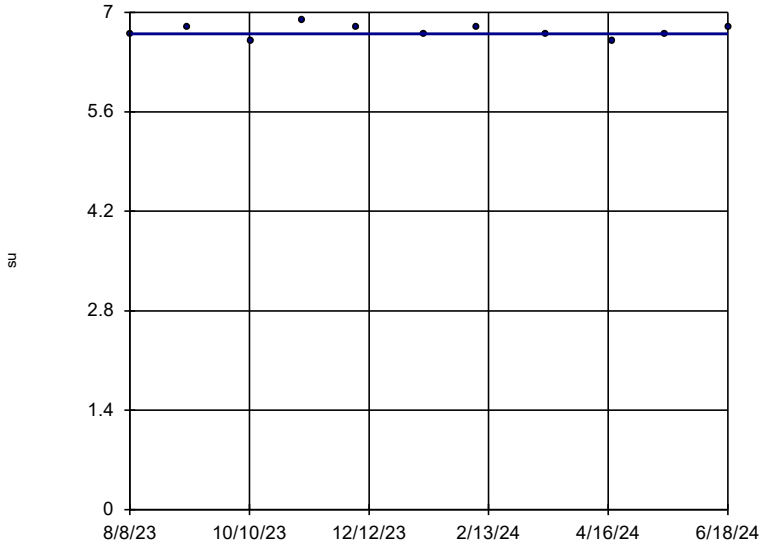
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Molybdenum Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-104



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = -4 critical = -31

Trend not significant at 98% confidence level (α = 0.01 per tail).

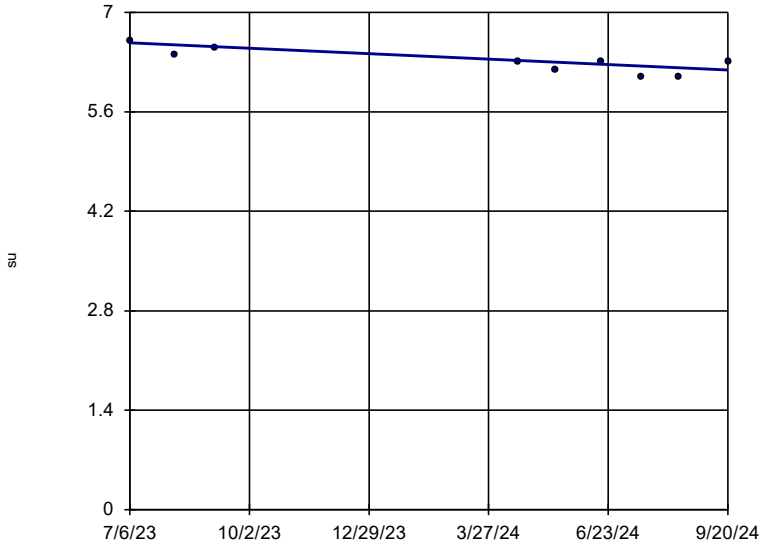
Constituent: pH Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-120



n = 9

Slope = -0.316 units per year.

Mann-Kendall statistic = -22 critical = -23

Trend not significant at 98% confidence level (α = 0.01 per tail).

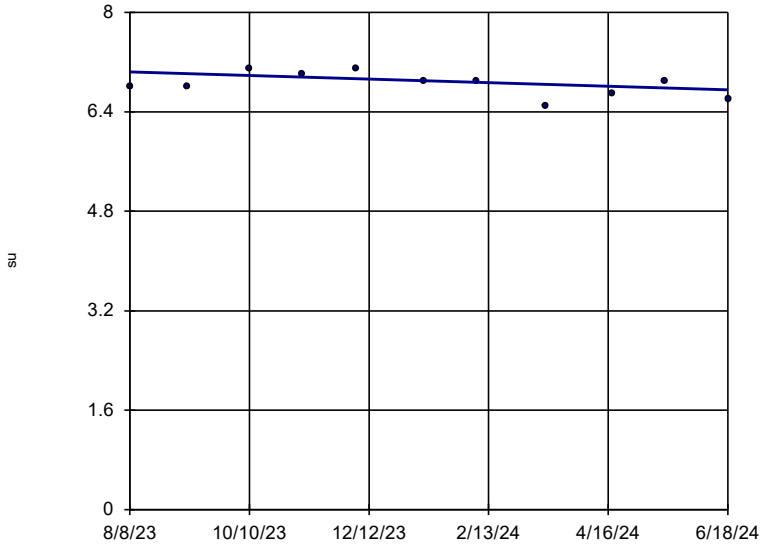
Constituent: pH Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-110



n = 11

Slope = -0.3333 units per year.

Mann-Kendall statistic = -16 critical = -31

Trend not significant at 98% confidence level (α = 0.01 per tail).

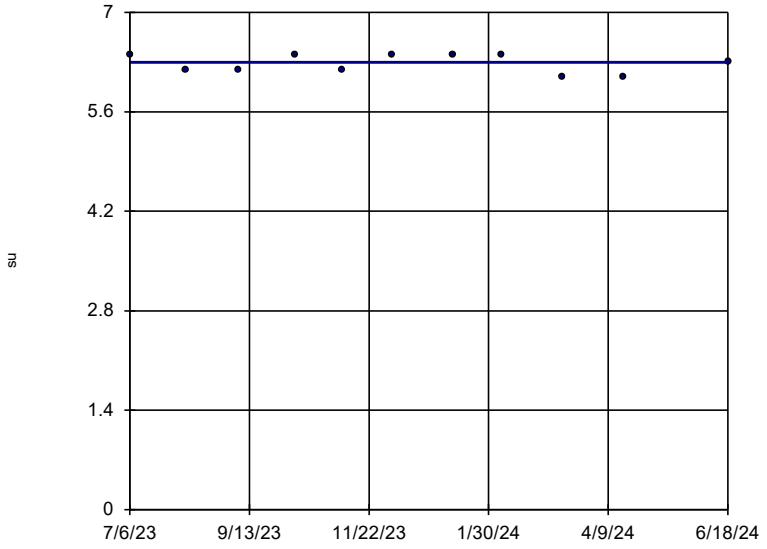
Constituent: pH Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-121



n = 11

Slope = 0 units per year.

Mann-Kendall statistic = -9 critical = -31

Trend not significant at 98% confidence level (α = 0.01 per tail).

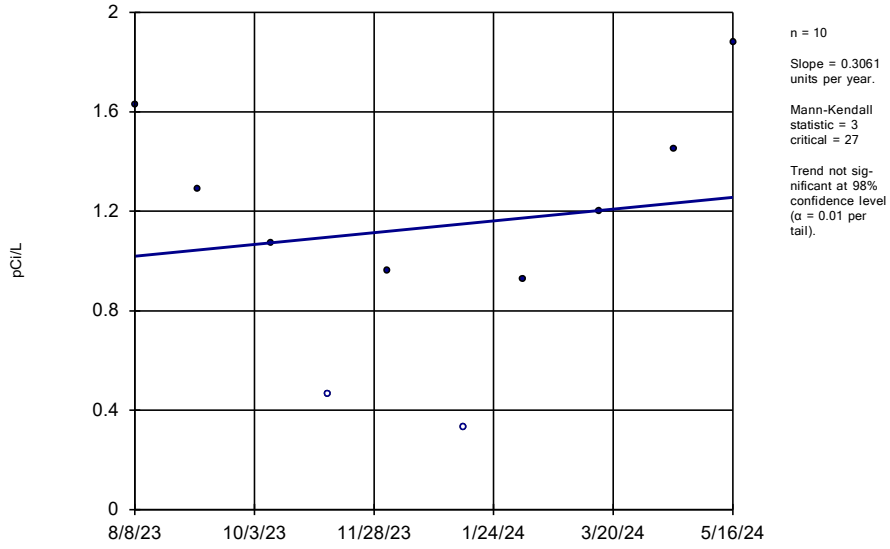
Constituent: pH Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0.3061 units per year.

Mann-Kendall statistic = 3
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

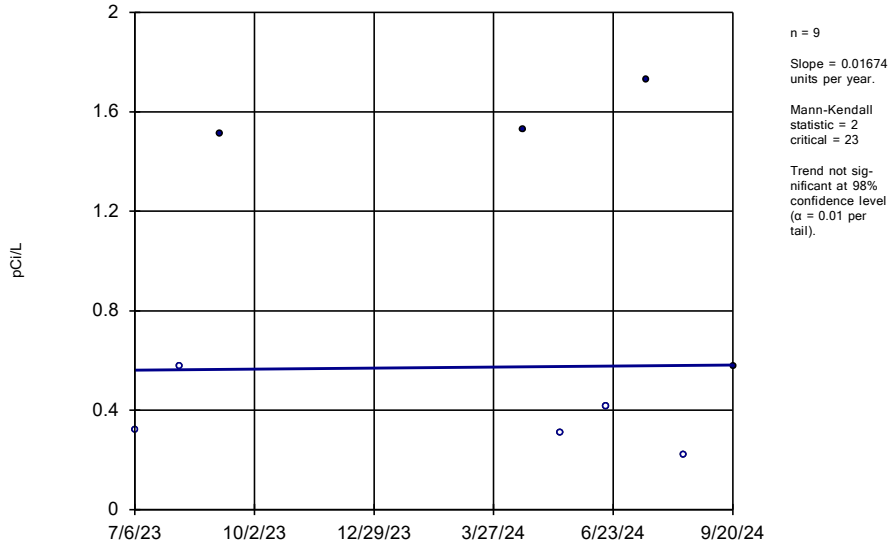
Constituent: Radium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0.01674 units per year.

Mann-Kendall statistic = 2
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

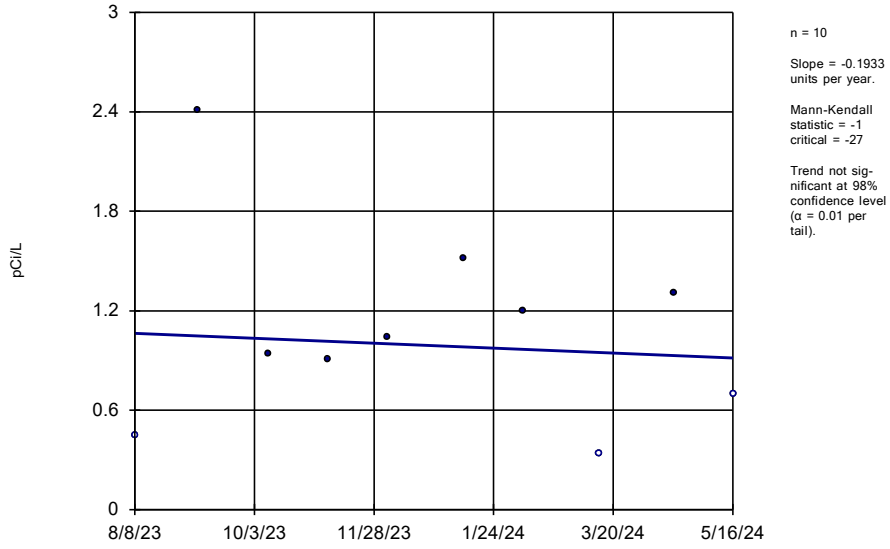
Constituent: Radium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = -0.1933 units per year.

Mann-Kendall statistic = -1
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

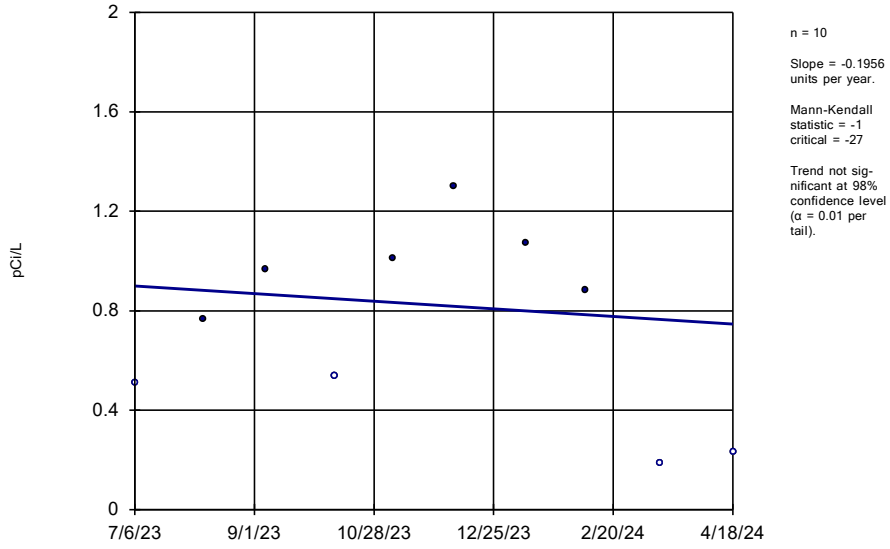
Constituent: Radium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = -0.1956 units per year.

Mann-Kendall statistic = -1
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

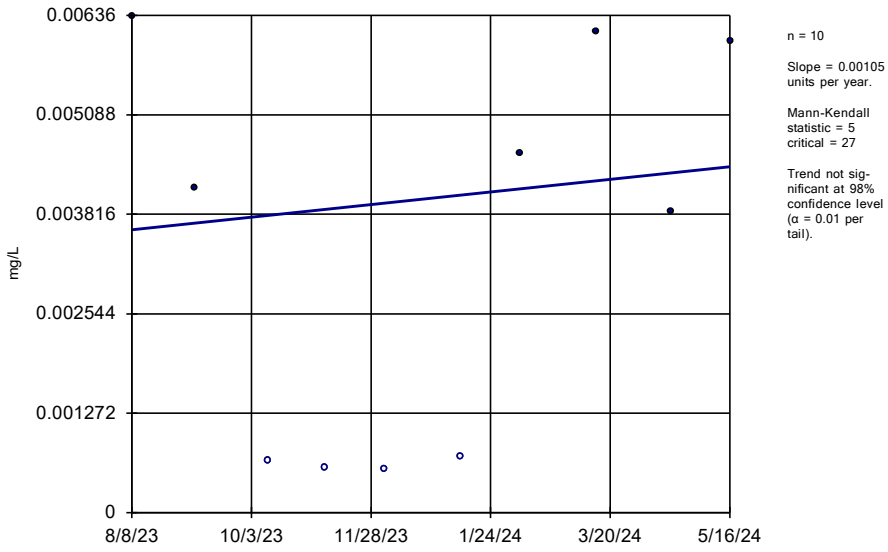
Constituent: Radium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0.00105 units per year.

Mann-Kendall statistic = 5
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

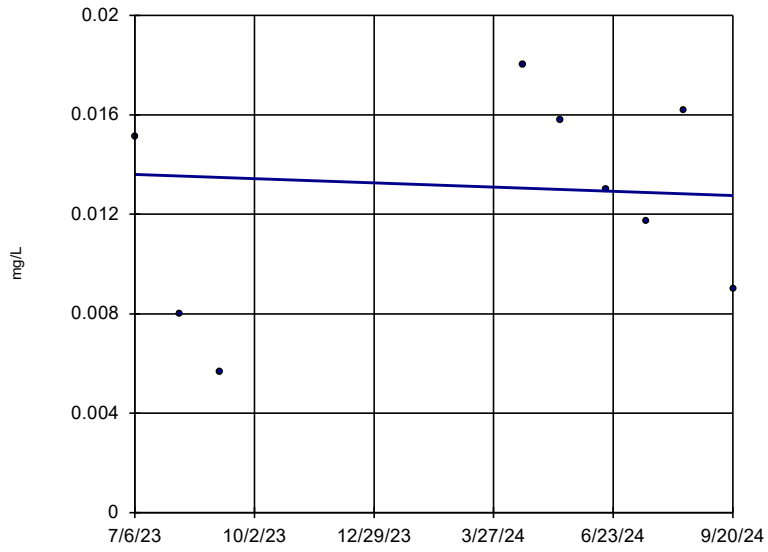
Constituent: Selenium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-120



n = 9

Slope = -0.0006957 units per year.

Mann-Kendall statistic = 0
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

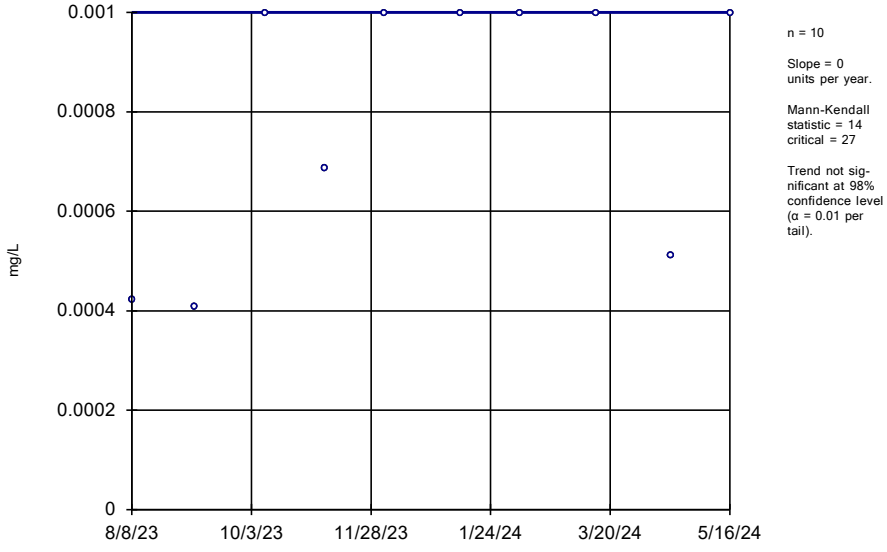
Constituent: Selenium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0 units per year.

Mann-Kendall statistic = 14
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

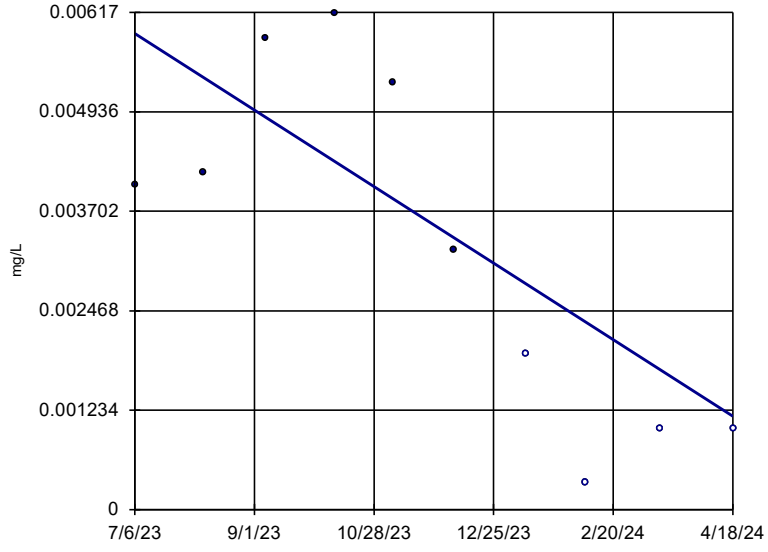
Constituent: Selenium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = -0.006047 units per year.

Mann-Kendall statistic = -24
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

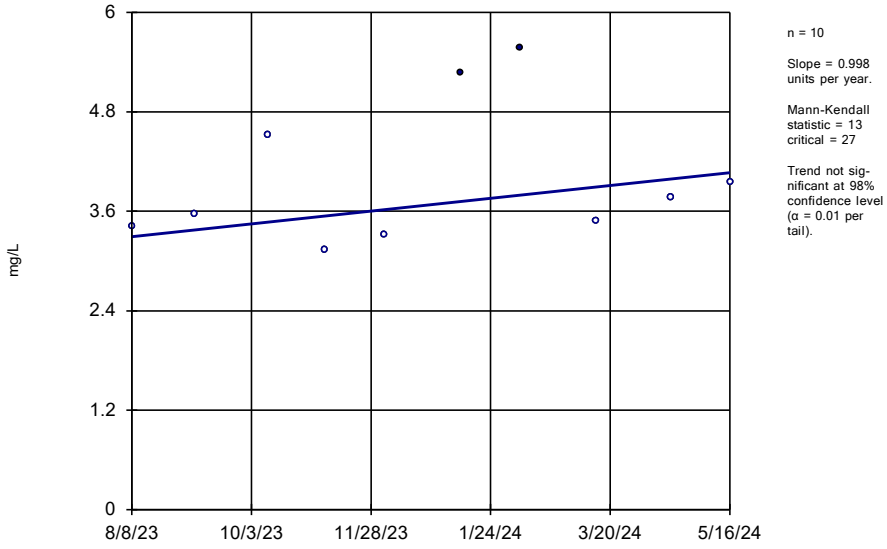
Constituent: Selenium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0.998 units per year.

Mann-Kendall statistic = 13
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

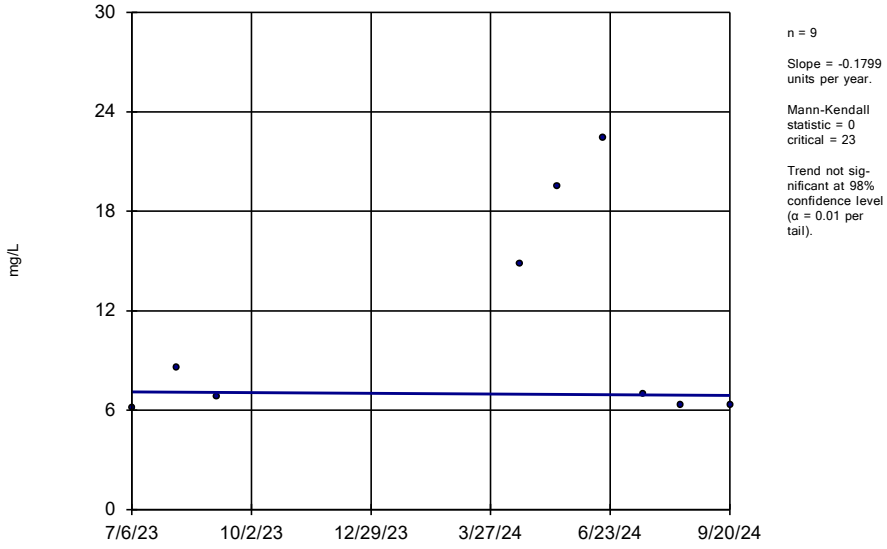
Constituent: Sulfate Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-120



n = 9

Slope = -0.1799 units per year.

Mann-Kendall statistic = 0
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

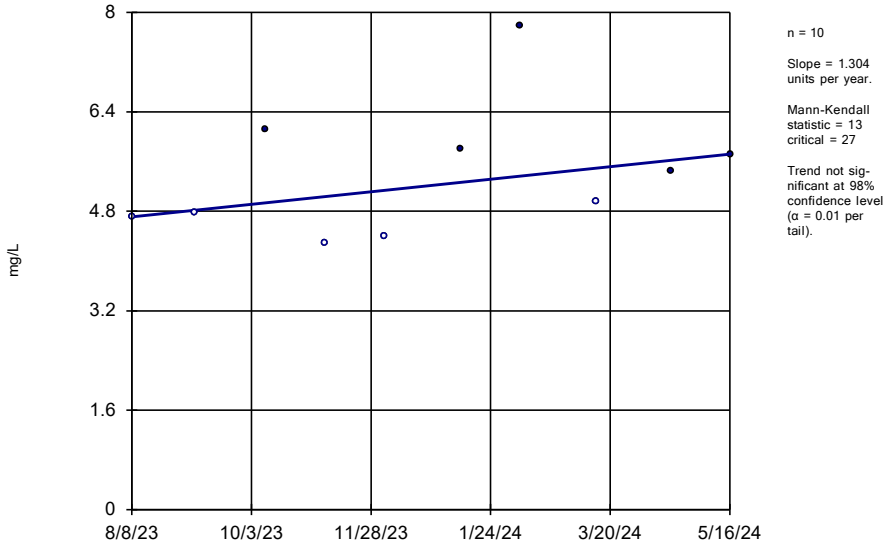
Constituent: Sulfate Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 1.304 units per year.

Mann-Kendall statistic = 13
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

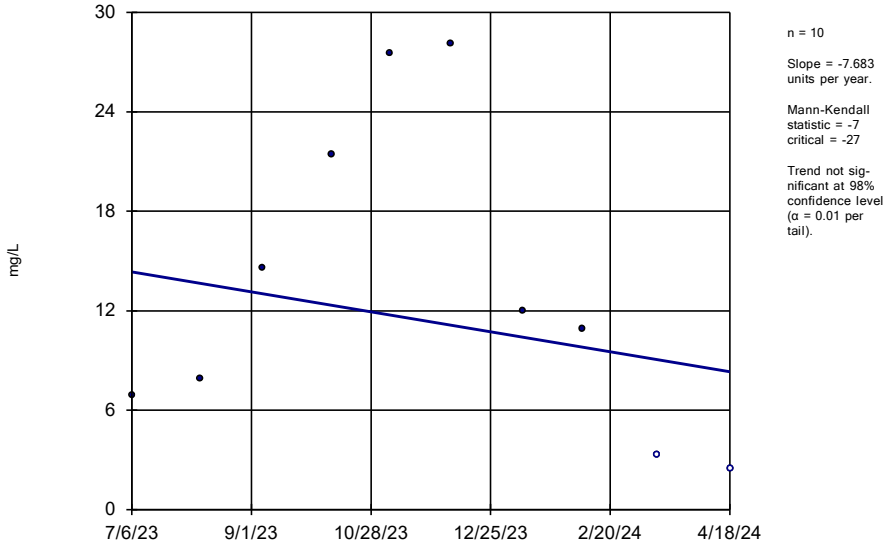
Constituent: Sulfate Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = -7.683 units per year.

Mann-Kendall statistic = -7
critical = -27

Trend not significant at 98% confidence level (α = 0.01 per tail).

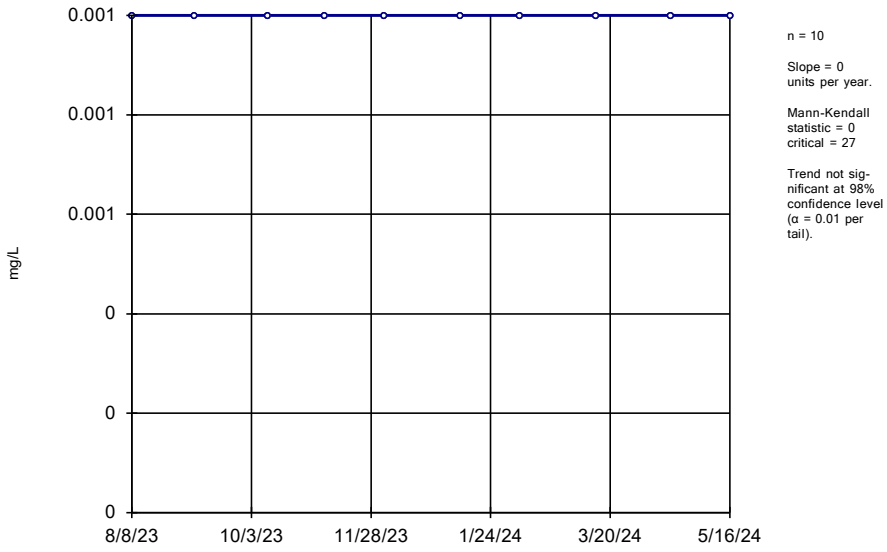
Constituent: Sulfate Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-104



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

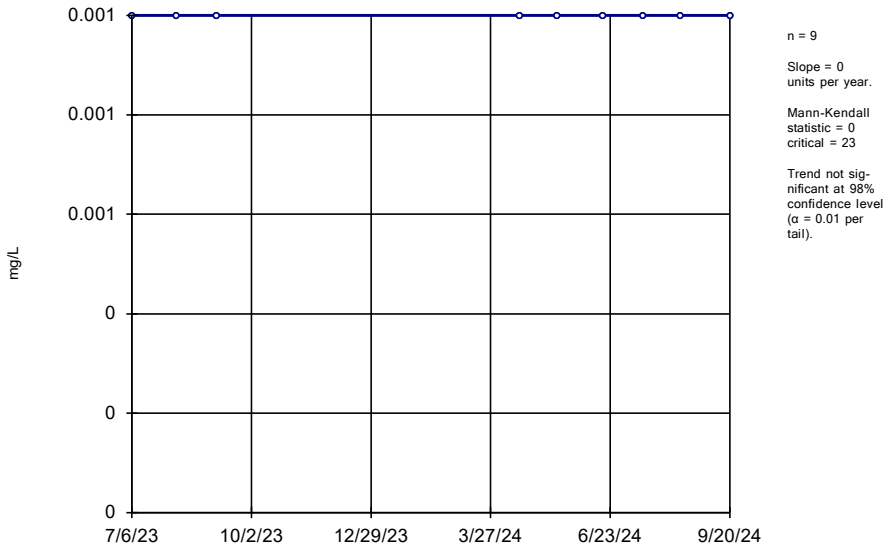
Constituent: Thallium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-120



n = 9

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 23

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

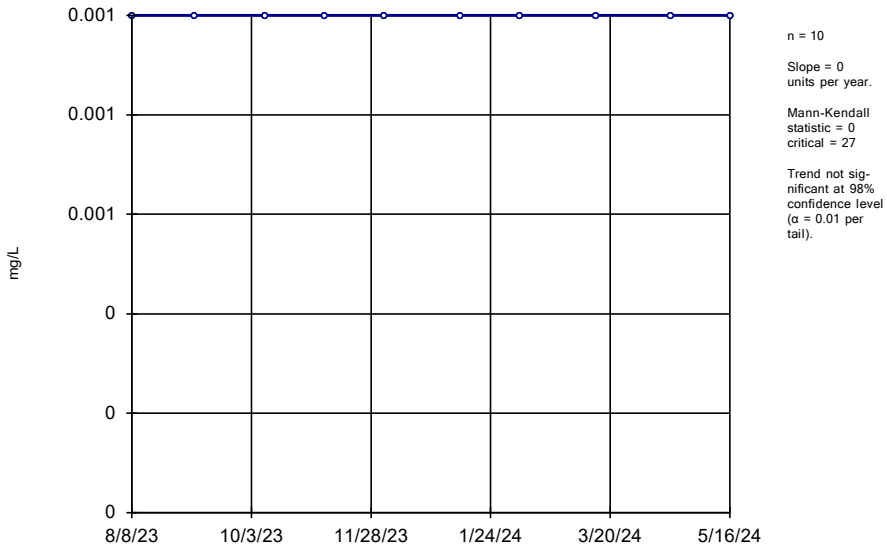
Constituent: Thallium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-110



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

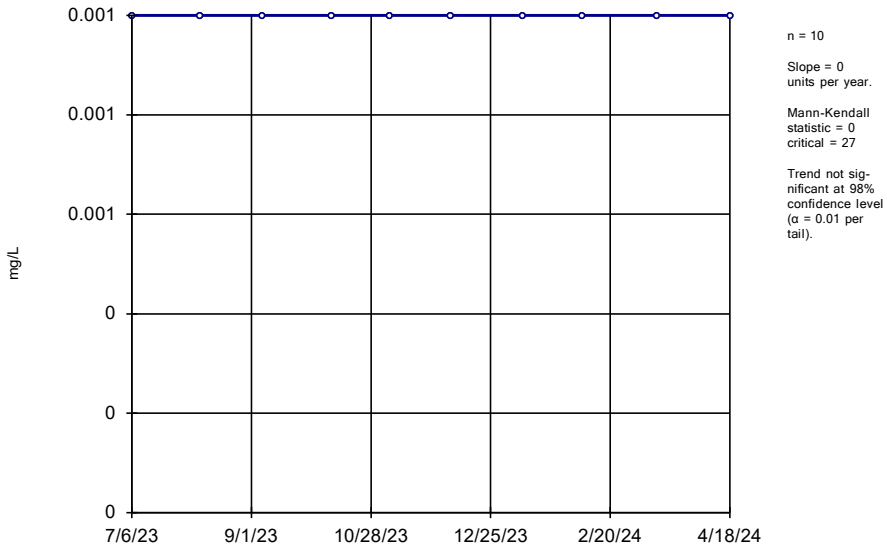
Constituent: Thallium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-121



n = 10

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 27

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Thallium Analysis Run 11/13/2024 11:54 AM View: background for new wells

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Updated Background Date Ranges, Second Half of 2024 Monitoring Period

Date Ranges

Date: 11/13/2024 12:48 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Antimony (mg/L)
- MW-101 background:10/7/2015-9/20/2017
- MW-102 background:10/7/2015-9/20/2017
- MW-103 background:10/7/2015-9/20/2017
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-9/20/2017
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-9/20/2017
- MW-115 background:10/7/2015-9/20/2017
- MW-116 background:10/7/2015-9/20/2017
- MW-117 background:10/7/2015-9/20/2017
- MW-118 background:10/7/2015-9/20/2017
- MW-119 background:10/7/2015-8/2/2019
- MW-120 background:10/7/2015-9/20/2024
- MW-121 background:10/7/2015-9/20/2024

Arsenic (mg/L)
- MW-101 background:10/7/2015-9/20/2017
- MW-102 background:10/7/2015-9/20/2017
- MW-103 background:10/7/2015-9/20/2017
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-9/20/2017
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-9/20/2017
- MW-115 background:10/7/2015-9/20/2017
- MW-116 background:10/7/2015-9/20/2017
- MW-117 background:10/7/2015-9/20/2017
- MW-118 background:10/7/2015-9/20/2017
- MW-119 background:10/7/2015-8/2/2019
- MW-120 background:10/7/2015-9/20/2024
- MW-121 background:10/7/2015-9/20/2024

Barium (mg/L)
- MW-101 background:10/7/2015-9/20/2017
- MW-102 background:10/7/2015-9/20/2017
- MW-103 background:10/7/2015-9/20/2017
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-9/20/2017
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-9/20/2017
- MW-115 background:10/7/2015-9/20/2017
- MW-116 background:10/7/2015-9/20/2017
- MW-117 background:10/7/2015-9/20/2017
- MW-118 background:10/7/2015-9/20/2017
- MW-119 background:10/7/2015-8/2/2019
- MW-120 background:10/7/2015-9/20/2024
- MW-121 background:10/7/2015-9/20/2024

Beryllium (mg/L)
- MW-101 background:10/7/2015-9/20/2017
- MW-102 background:10/7/2015-9/20/2017
- MW-103 background:10/7/2015-9/20/2017
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-9/20/2017
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-9/20/2017
- MW-115 background:10/7/2015-9/20/2017
- MW-116 background:10/7/2015-9/20/2017
- MW-117 background:10/7/2015-9/20/2017
- MW-118 background:10/7/2015-9/20/2017
- MW-119 background:10/7/2015-8/2/2019
- MW-120 background:10/7/2015-9/20/2024
- MW-121 background:10/7/2015-9/20/2024

Boron (mg/L)
- MW-101 background:10/7/2015-6/19/2024
- MW-102 background:10/7/2015-6/19/2024
- MW-103 background:10/7/2015-6/19/2024
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-6/19/2024
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-6/19/2024
- MW-115 background:10/7/2015-6/19/2024
- MW-116 background:10/7/2015-6/19/2024

Date Ranges

Date: 11/13/2024 12:48 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

MW-117 background:10/7/2015-6/19/2024
MW-118 background:10/7/2015-6/19/2024
MW-119 background:10/7/2015-6/19/2024
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Cadmium (mg/L)

MW-101 background:10/7/2015-9/20/2017
MW-102 background:10/7/2015-9/20/2017
MW-103 background:10/7/2015-9/20/2017
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-9/20/2017
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-9/20/2017
MW-115 background:10/7/2015-9/20/2017
MW-116 background:10/7/2015-9/20/2017
MW-117 background:10/7/2015-9/20/2017
MW-118 background:10/7/2015-9/20/2017
MW-119 background:10/7/2015-8/2/2019
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Calcium (mg/L)

MW-101 background:10/7/2015-1/10/2024
MW-102 background:10/7/2015-6/19/2024
MW-103 background:10/7/2015-6/19/2024
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-1/11/2023
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-6/19/2024
MW-115 background:10/7/2015-6/19/2024
MW-116 background:10/7/2015-6/19/2024
MW-117 background:10/7/2015-2/18/2019
MW-118 background:10/7/2015-6/19/2024
MW-119 background:10/7/2015-6/19/2024
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Chloride (mg/L)

MW-101 background:10/7/2015-6/19/2024
MW-102 background:10/7/2015-6/19/2024
MW-103 background:10/7/2015-6/19/2024
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-6/19/2024
MW-110 background:10/7/2015-3/14/2024
MW-113 background:10/7/2015-6/19/2024
MW-115 background:10/7/2015-6/19/2024
MW-116 background:10/7/2015-6/19/2024
MW-117 background:10/7/2015-6/19/2024
MW-118 background:10/7/2015-1/11/2023
MW-119 background:10/7/2015-6/19/2024
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Chromium (mg/L)

MW-101 background:10/7/2015-9/20/2017
MW-102 background:10/7/2015-9/20/2017
MW-103 background:10/7/2015-9/20/2017
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-9/20/2017
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-9/20/2017
MW-115 background:10/7/2015-9/20/2017
MW-116 background:10/7/2015-9/20/2017
MW-117 background:10/7/2015-9/20/2017
MW-118 background:10/7/2015-9/20/2017
MW-119 background:10/7/2015-8/2/2019
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Cobalt (mg/L)

MW-101 background:10/7/2015-9/20/2017
MW-102 background:10/7/2015-9/20/2017
MW-103 background:10/7/2015-9/20/2017
MW-104 background:10/7/2015-9/20/2024

Date Ranges

Date: 11/13/2024 12:48 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

MW-108 background:10/7/2015-9/20/2017
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-9/20/2017
MW-115 background:10/7/2015-9/20/2017
MW-116 background:10/7/2015-9/20/2017
MW-117 background:10/7/2015-9/20/2017
MW-118 background:10/7/2015-9/20/2017
MW-119 background:10/7/2015-8/2/2019
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Dissolved Solids (mg/L)

MW-101 background:10/7/2015-1/11/2023
MW-102 background:10/7/2015-1/11/2023
MW-103 background:10/7/2015-6/19/2024
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-6/19/2024
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-6/19/2024
MW-115 background:10/7/2015-6/19/2024
MW-116 background:10/7/2015-6/19/2024
MW-117 background:10/7/2015-2/18/2019
MW-118 background:10/7/2015-6/19/2024
MW-119 background:10/7/2015-6/19/2024
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Fluoride (mg/L)

MW-101 background:10/7/2015-6/19/2024
MW-102 background:10/7/2015-6/19/2024
MW-103 background:10/7/2015-6/19/2024
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-6/19/2024
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-6/19/2024
MW-115 background:10/7/2015-6/19/2024
MW-116 background:10/7/2015-6/19/2024
MW-117 background:10/7/2015-6/19/2024
MW-118 background:10/7/2015-6/19/2024
MW-119 background:10/7/2015-6/19/2024
MW-120 background:10/7/2015-8/15/2024
MW-121 background:10/7/2015-9/20/2024

Lead (mg/L)

MW-101 background:10/7/2015-9/20/2017
MW-102 background:10/7/2015-9/20/2017
MW-103 background:10/7/2015-9/20/2017
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-9/20/2017
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-9/20/2017
MW-115 background:10/7/2015-9/20/2017
MW-116 background:10/7/2015-9/20/2017
MW-117 background:10/7/2015-9/20/2017
MW-118 background:10/7/2015-9/20/2017
MW-119 background:10/7/2015-8/2/2019
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Lithium (mg/L)

MW-101 background:10/7/2015-9/20/2017
MW-102 background:10/7/2015-9/20/2017
MW-103 background:10/7/2015-9/20/2017
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-9/20/2017
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-9/20/2017
MW-115 background:10/7/2015-9/20/2017
MW-116 background:10/7/2015-9/20/2017
MW-117 background:10/7/2015-9/20/2017
MW-118 background:10/7/2015-9/20/2017
MW-119 background:10/7/2015-8/2/2019
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Date Ranges

Date: 11/13/2024 12:48 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Mercury (mg/L)
- MW-101 background:10/7/2015-9/20/2017
- MW-102 background:10/7/2015-9/20/2017
- MW-103 background:10/7/2015-9/20/2017
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-9/20/2017
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-9/20/2017
- MW-115 background:10/7/2015-9/20/2017
- MW-116 background:10/7/2015-9/20/2017
- MW-117 background:10/7/2015-9/20/2017
- MW-118 background:10/7/2015-9/20/2017
- MW-119 background:10/7/2015-8/2/2019
- MW-120 background:10/7/2015-9/20/2024
- MW-121 background:10/7/2015-9/20/2024

Molybdenum (mg/L)
- MW-101 background:10/7/2015-9/20/2017
- MW-102 background:10/7/2015-9/20/2017
- MW-103 background:10/7/2015-9/20/2017
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-9/20/2017
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-9/20/2017
- MW-115 background:10/7/2015-9/20/2017
- MW-116 background:10/7/2015-9/20/2017
- MW-117 background:10/7/2015-9/20/2017
- MW-118 background:10/7/2015-9/20/2017
- MW-119 background:10/7/2015-8/2/2019
- MW-120 background:10/7/2015-9/20/2024
- MW-121 background:10/7/2015-9/20/2024

pH (su)
- MW-101 background:10/7/2015-6/19/2024
- MW-102 background:10/7/2015-6/19/2024
- MW-103 background:10/7/2015-6/19/2024
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-6/19/2024
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-6/19/2024
- MW-115 background:10/7/2015-6/19/2024
- MW-116 background:10/7/2015-6/19/2024
- MW-117 background:10/7/2015-6/19/2024
- MW-118 background:10/7/2015-6/19/2024
- MW-119 background:10/7/2015-6/19/2024
- MW-120 background:10/7/2015-9/20/2024
- MW-121 background:10/7/2015-9/20/2024

Radium (pCi/L)
- MW-101 background:10/7/2015-9/20/2017
- MW-102 background:10/7/2015-9/20/2017
- MW-103 background:10/7/2015-9/20/2017
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-9/20/2017
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-9/20/2017
- MW-115 background:10/7/2015-9/20/2017
- MW-116 background:10/7/2015-9/20/2017
- MW-117 background:10/7/2015-9/20/2017
- MW-118 background:10/7/2015-9/20/2017
- MW-119 background:10/7/2015-8/2/2019
- MW-120 background:10/7/2015-9/20/2024
- MW-121 background:10/7/2015-9/20/2024

Selenium (mg/L)
- MW-101 background:10/7/2015-9/20/2017
- MW-102 background:10/7/2015-9/20/2017
- MW-103 background:10/7/2015-9/20/2017
- MW-104 background:10/7/2015-9/20/2024
- MW-108 background:10/7/2015-9/20/2017
- MW-110 background:10/7/2015-9/20/2024
- MW-113 background:10/7/2015-9/20/2017
- MW-115 background:10/7/2015-9/20/2017
- MW-116 background:10/7/2015-9/20/2017

Date Ranges

Date: 11/13/2024 12:48 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

MW-117 background:10/7/2015-9/20/2017
MW-118 background:10/7/2015-9/20/2017
MW-119 background:10/7/2015-8/2/2019
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Sulfate (mg/L)

MW-101 background:10/7/2015-1/11/2023
MW-102 background:10/7/2015-6/19/2024
MW-103 background:10/7/2015-6/19/2024
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-6/19/2024
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-6/19/2024
MW-115 background:10/7/2015-6/19/2024
MW-116 background:10/7/2015-6/19/2024
MW-117 background:10/7/2015-10/23/2019
MW-118 background:10/7/2015-6/19/2024
MW-119 background:10/7/2015-6/19/2024
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

Thallium (mg/L)

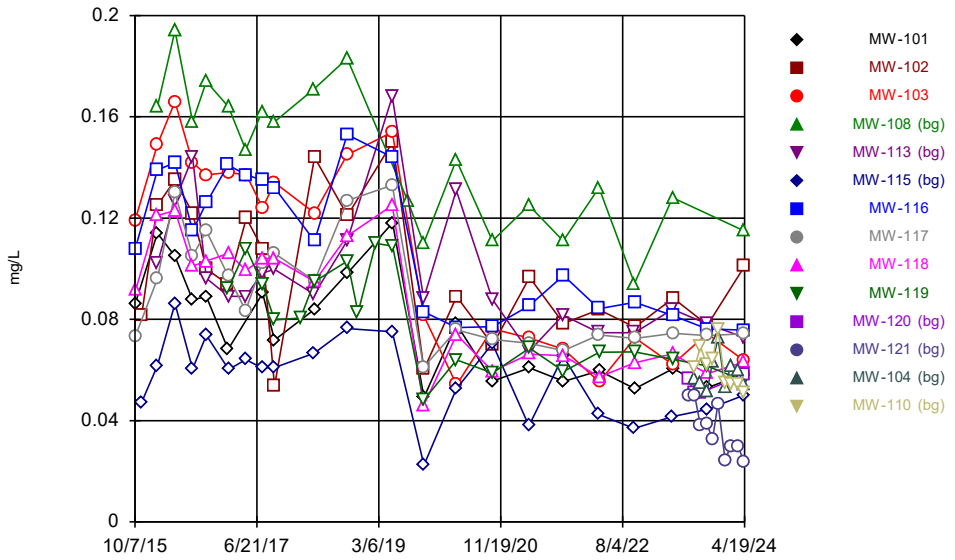
MW-101 background:10/7/2015-9/20/2017
MW-102 background:10/7/2015-9/20/2017
MW-103 background:10/7/2015-9/20/2017
MW-104 background:10/7/2015-9/20/2024
MW-108 background:10/7/2015-9/20/2017
MW-110 background:10/7/2015-9/20/2024
MW-113 background:10/7/2015-9/20/2017
MW-115 background:10/7/2015-9/20/2017
MW-116 background:10/7/2015-9/20/2017
MW-117 background:10/7/2015-9/20/2017
MW-118 background:10/7/2015-9/20/2017
MW-119 background:10/7/2015-8/2/2019
MW-120 background:10/7/2015-9/20/2024
MW-121 background:10/7/2015-9/20/2024

APPENDIX F
EXPLORATORY DATA ANALYSIS PLOTS

TIME-SERIES PLOTS, FIRST HALF OF 2024 DATA SET

Sanitas™ v.10.0.16 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

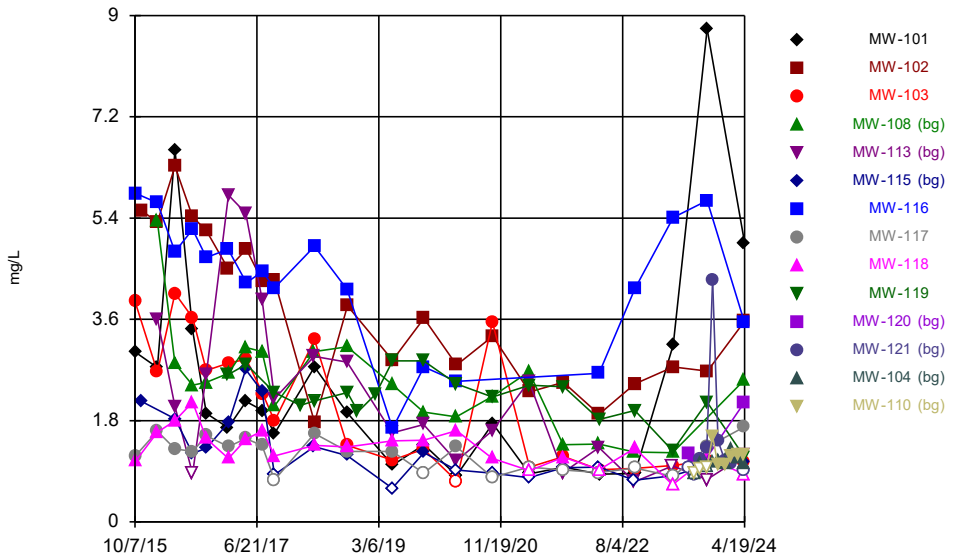
Time Series



Constituent: Boron Analysis Run 5/28/2024 1:46 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

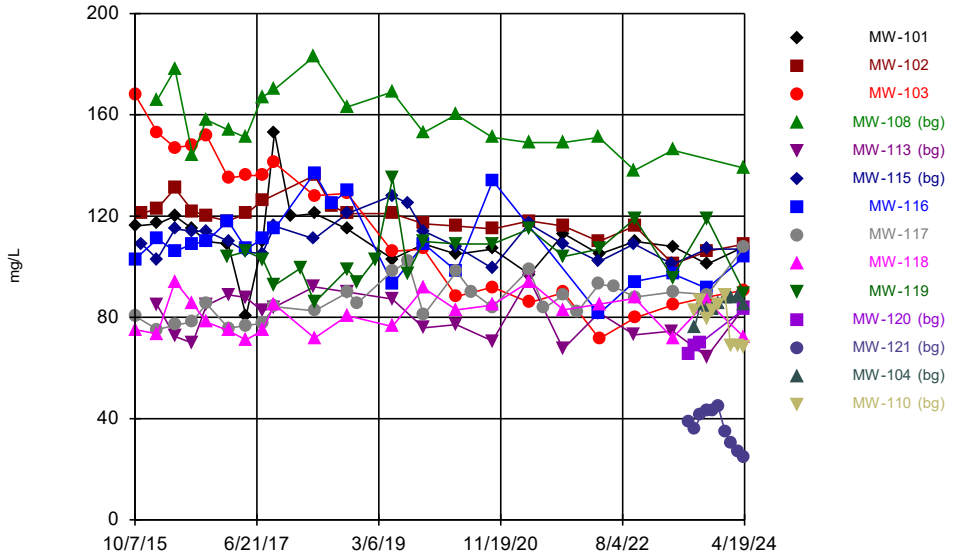
Time Series



Constituent: Chloride Analysis Run 5/28/2024 1:46 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

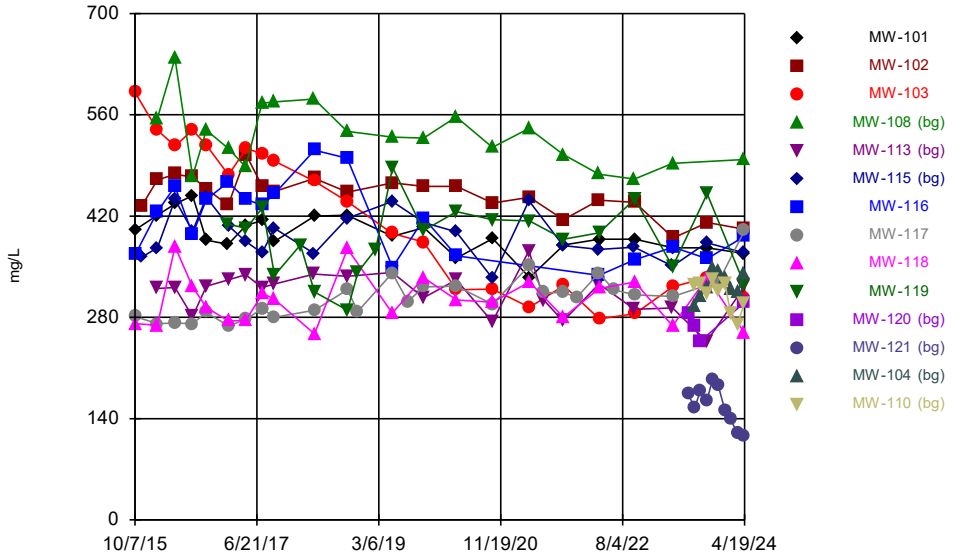
Time Series



Constituent: Calcium Analysis Run 5/28/2024 1:46 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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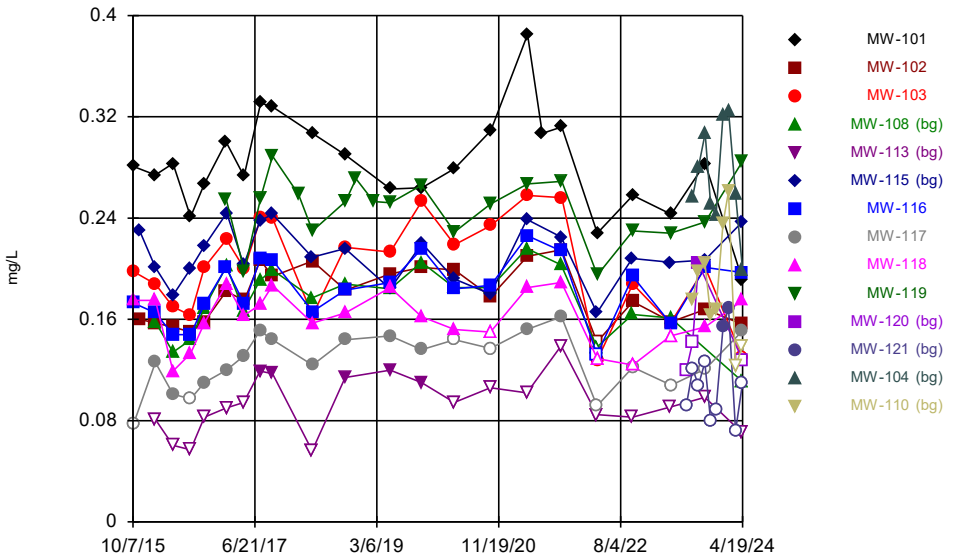
Time Series



Constituent: Dissolved Solids Analysis Run 5/28/2024 1:46 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

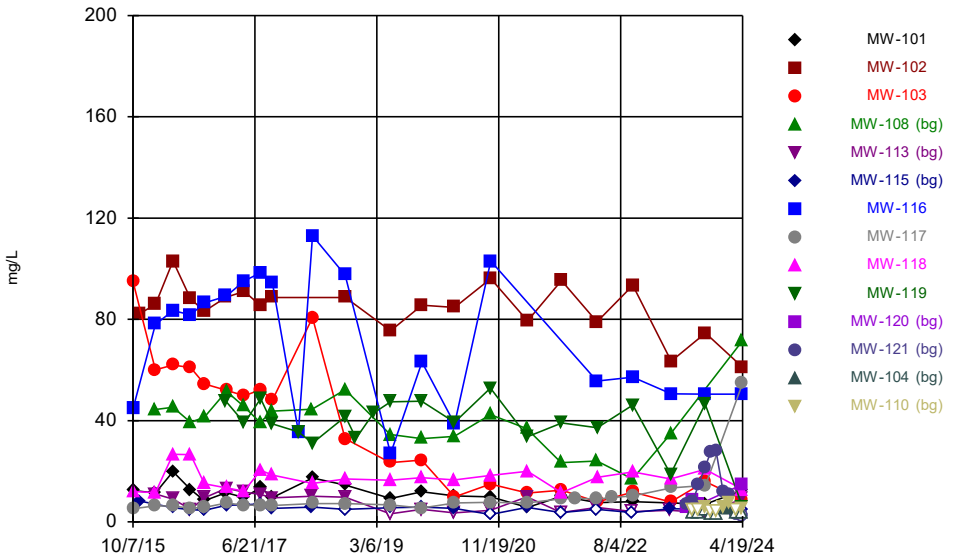
Time Series



Constituent: Fluoride Analysis Run 5/28/2024 1:47 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

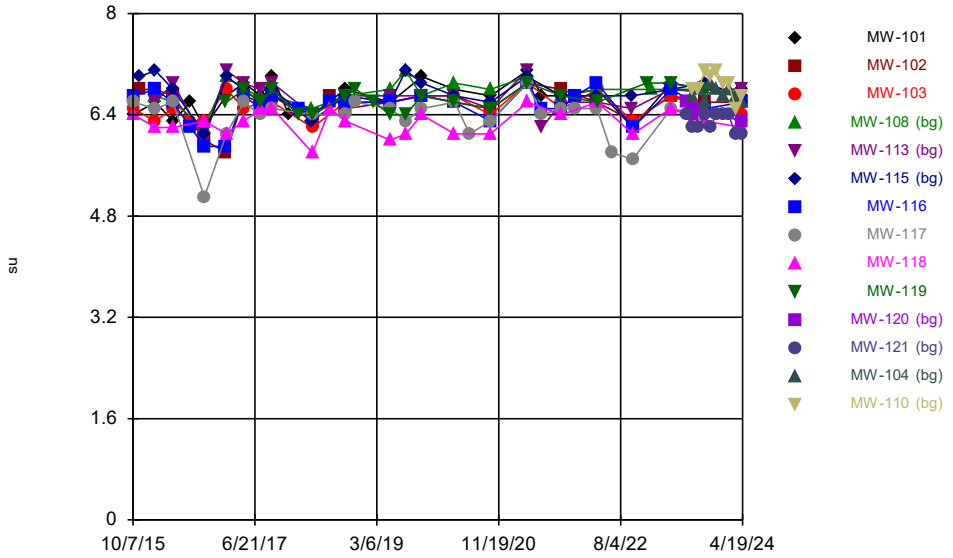
Time Series



Constituent: Sulfate Analysis Run 5/28/2024 1:47 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Time Series

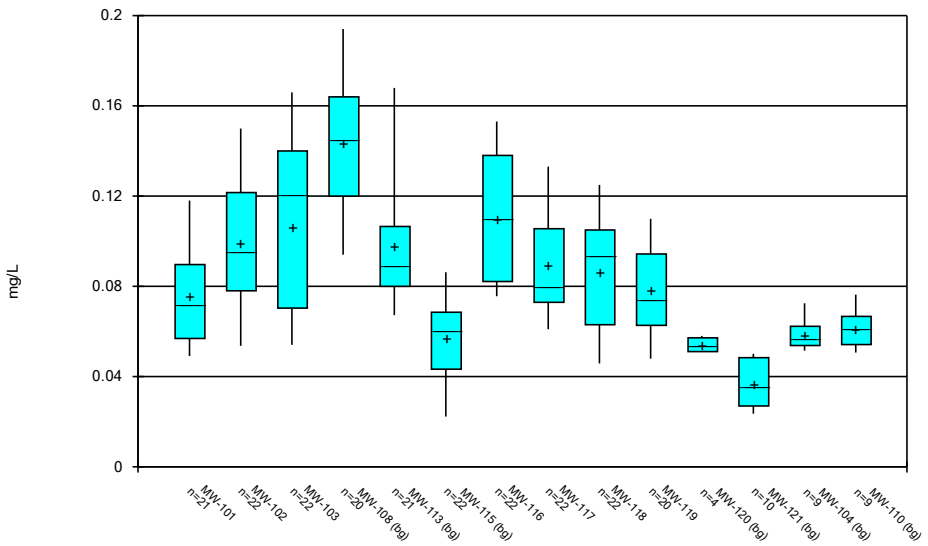


Constituent: pH Analysis Run 5/28/2024 1:47 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

BOX-AND-WHISKER PLOTS
FIRST HALF OF 2024 DATA SET

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

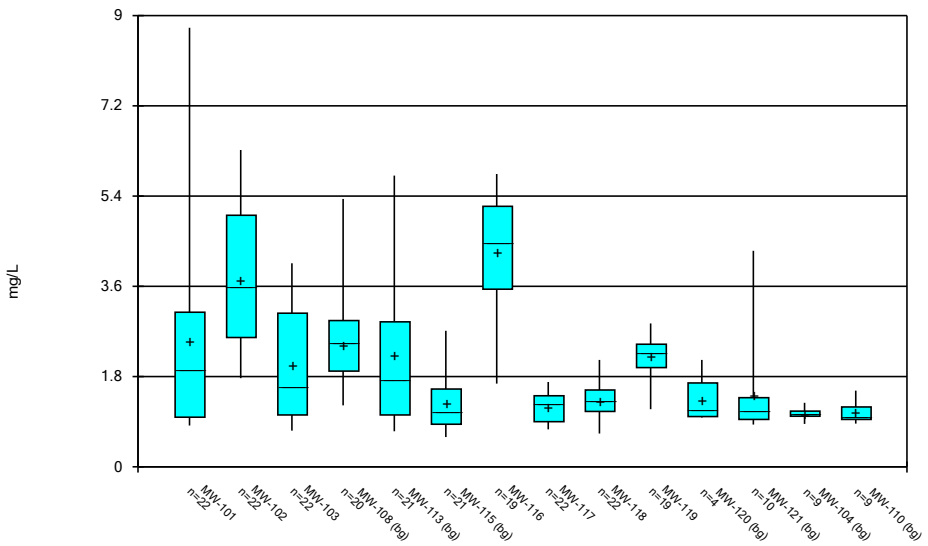
Box & Whiskers Plot



Constituent: Boron Analysis Run 5/28/2024 1:48 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

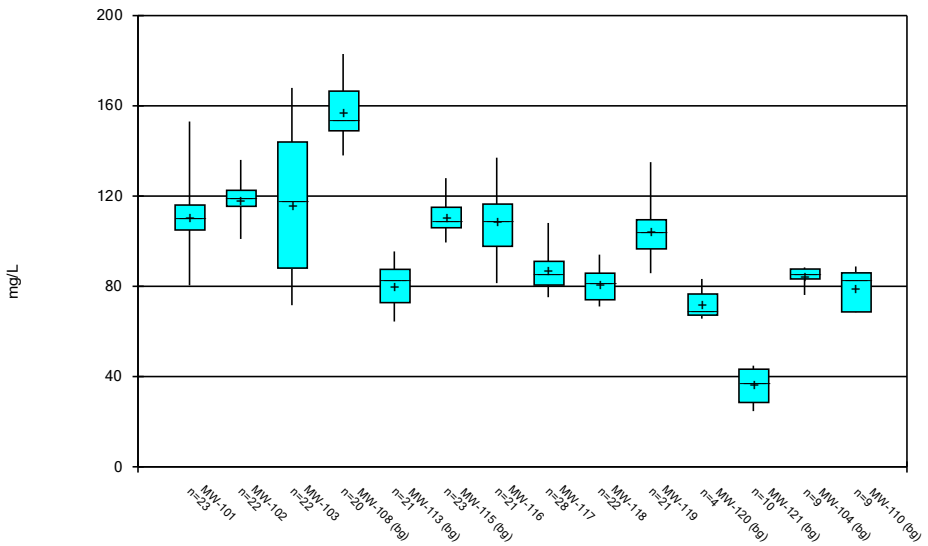
Box & Whiskers Plot



Constituent: Chloride Analysis Run 5/28/2024 1:48 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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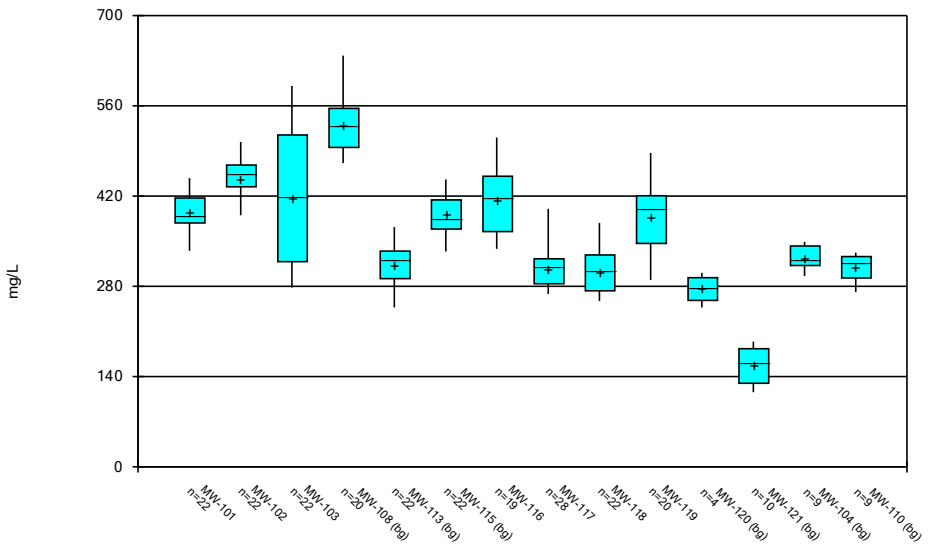
Box & Whiskers Plot



Constituent: Calcium Analysis Run 5/28/2024 1:48 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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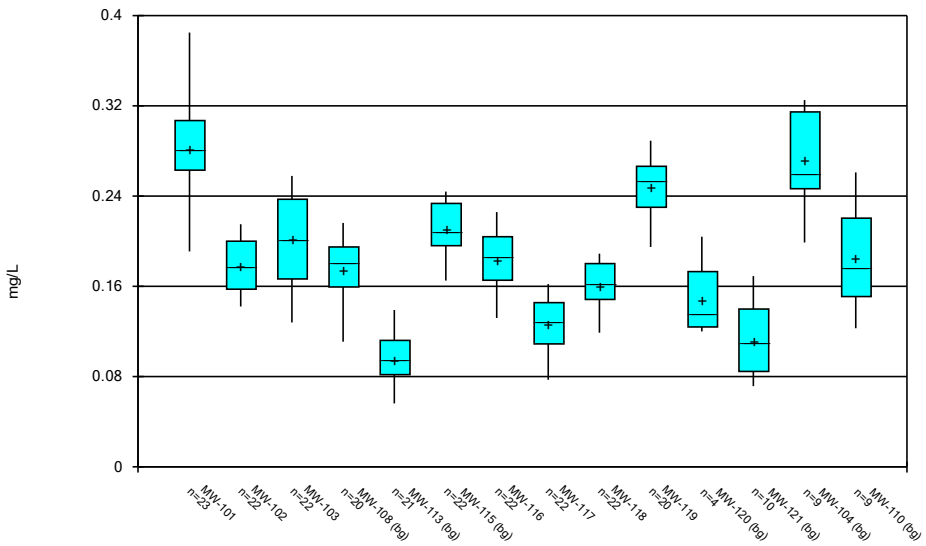
Box & Whiskers Plot



Constituent: Dissolved Solids Analysis Run 5/28/2024 1:48 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

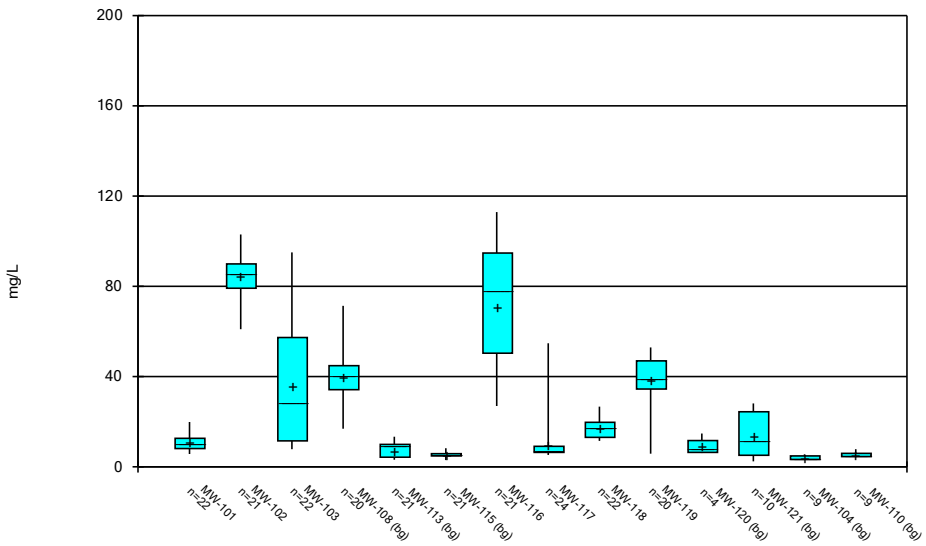
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 5/28/2024 1:48 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

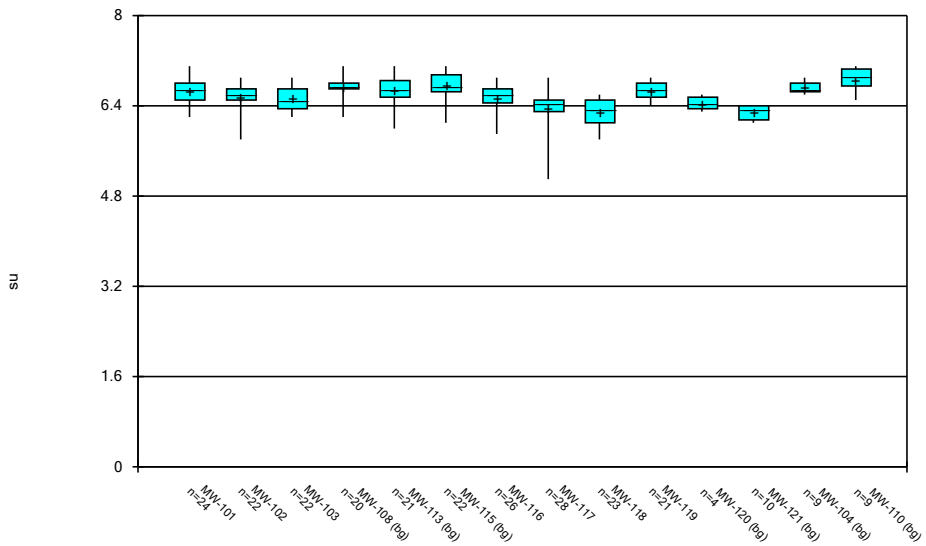
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 5/28/2024 1:48 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

Box & Whiskers Plot



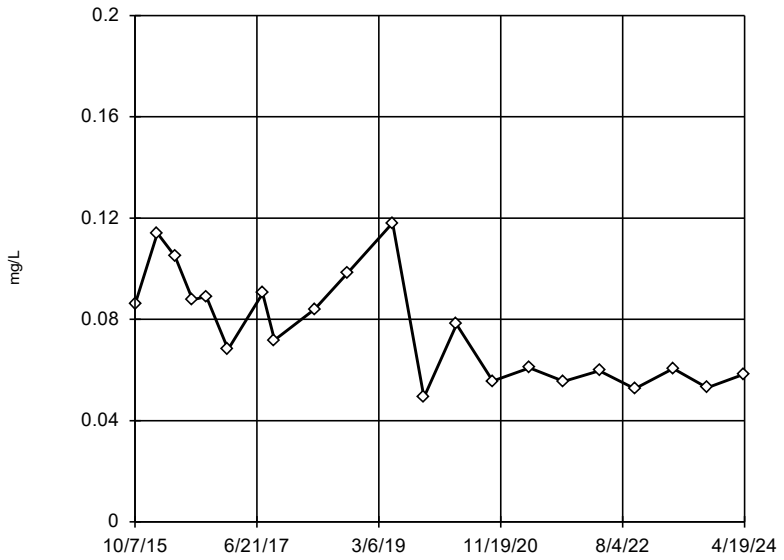
Constituent: pH Analysis Run 5/28/2024 1:48 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

OUTLIER PLOTS
PERIOD-OF-RECORD DATA THROUGH FIRST HALF OF 2024 DATA SET

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EPA Screening (suspected outliers for Dixon's Test)

MW-101



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.07596, std. dev. 0.02118, critical Tn 2.58

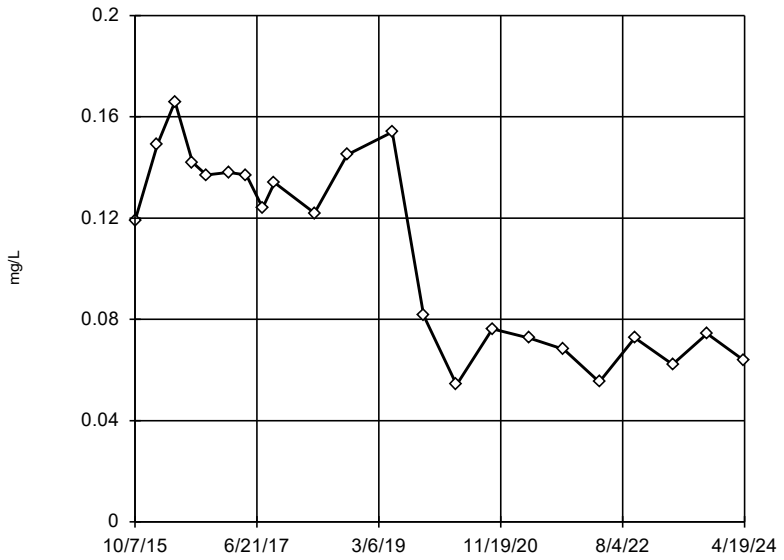
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9369
Critical = 0.923 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-103



n = 22

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).

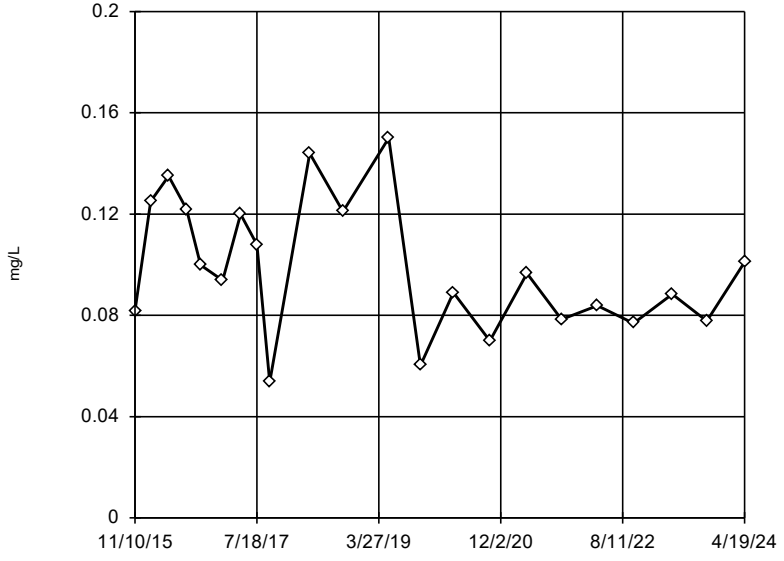
High cutoff = 0.2521, low cutoff = -0.1975, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.09891, std. dev. 0.02645, critical Tn 2.603

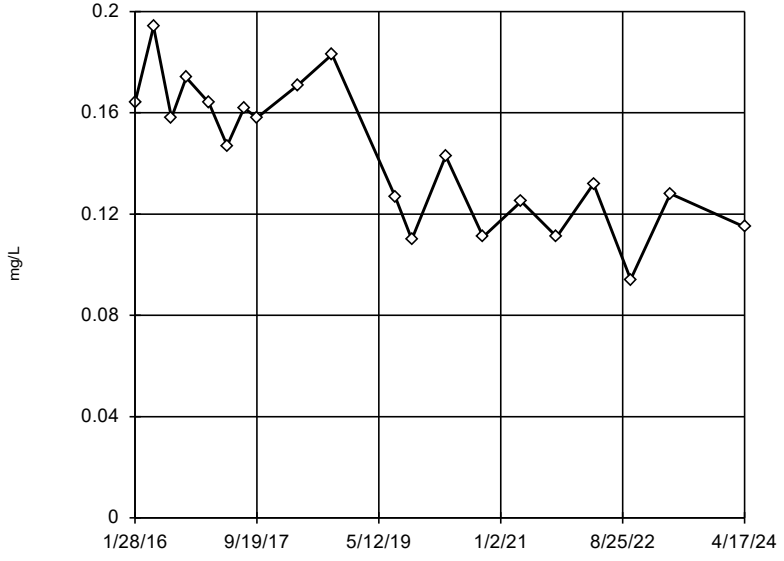
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9701
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 20

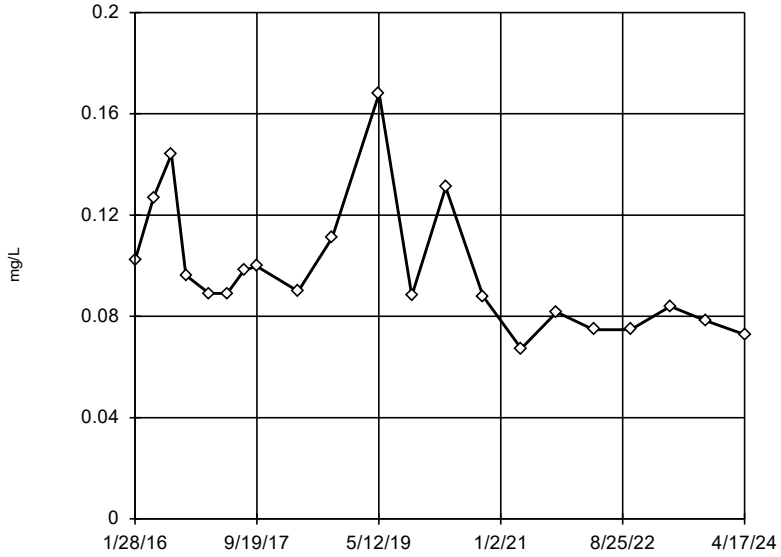
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1436, std. dev. 0.02799, critical Tn 2.557

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9624
Critical = 0.92
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.09784, std. dev. 0.02557, critical Tn 2.58

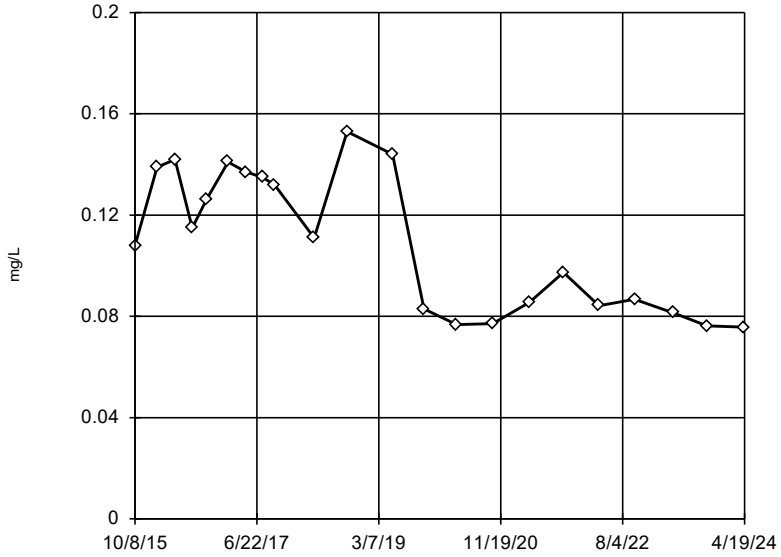
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9337
Critical = 0.923 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-116



n = 22

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.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

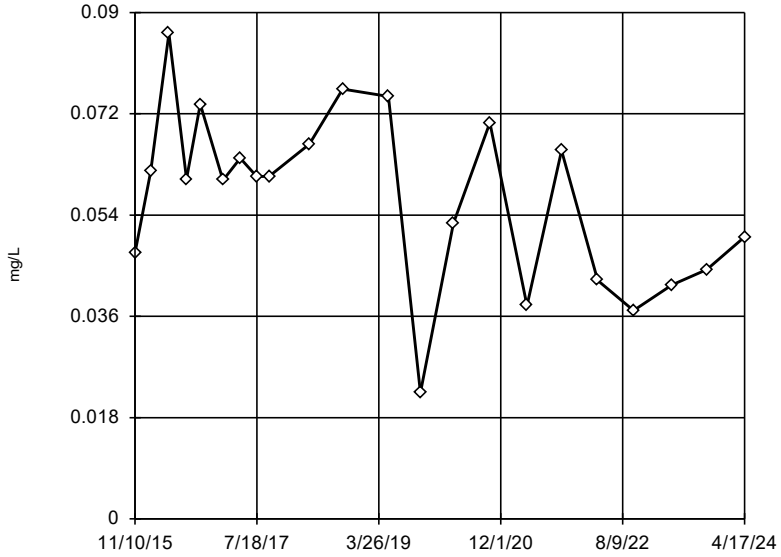
High cutoff = 0.3056, low cutoff = -0.0854, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-115 (bg)



n = 22

No statistical outliers.
Testing for 1 low outlier.
Mean = 0.05716.
Std. Dev. = 0.0155.
0.0224 (J): c = 0.2941
tabl = 0.43.
Alpha = 0.05.

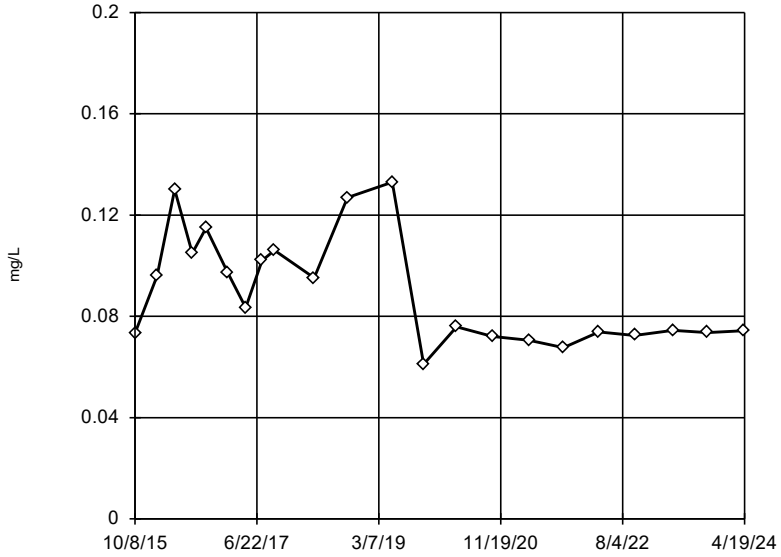
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9643
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-117



n = 22

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).

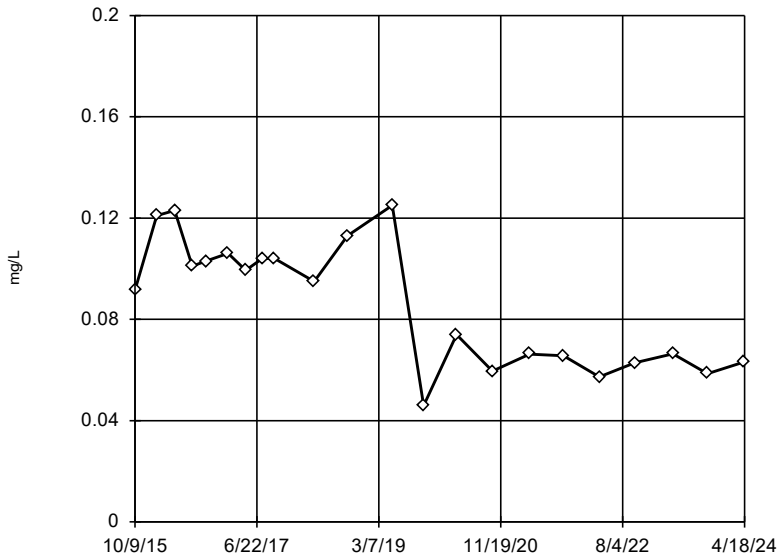
High cutoff = 0.3198, low cutoff = 0.02405, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-118



n = 22

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 root transformed to achieve best W statistic (graph shown in original units).

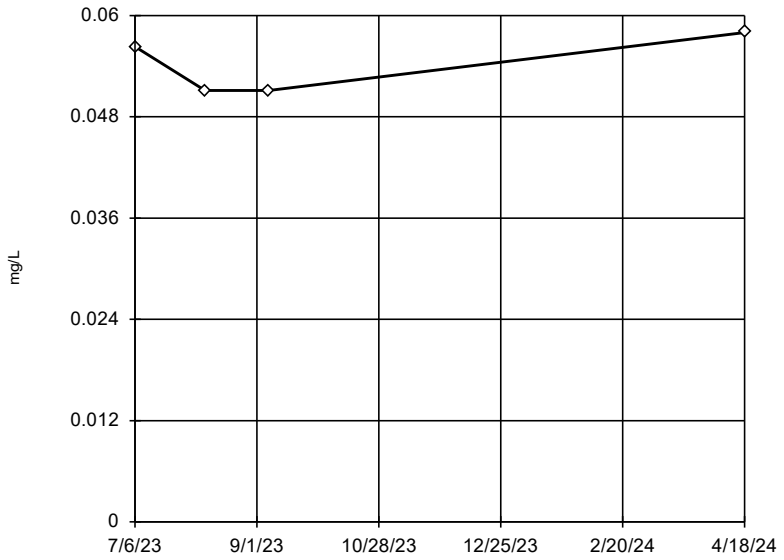
High cutoff = 0.295, low cutoff = 0.001017, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120 (bg)



n = 4

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.05413, std. dev. 0.003561, critical Tn 1.463

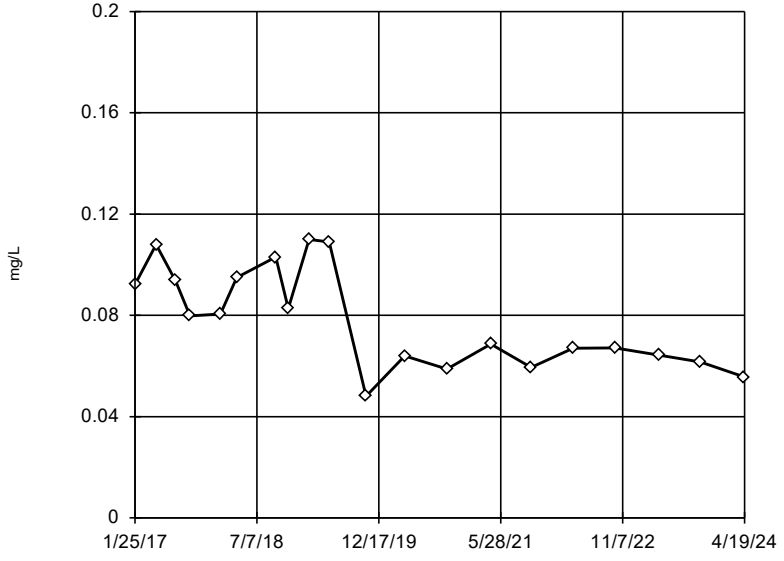
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8283
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.07841, std. dev. 0.01969, critical Tn 2.557

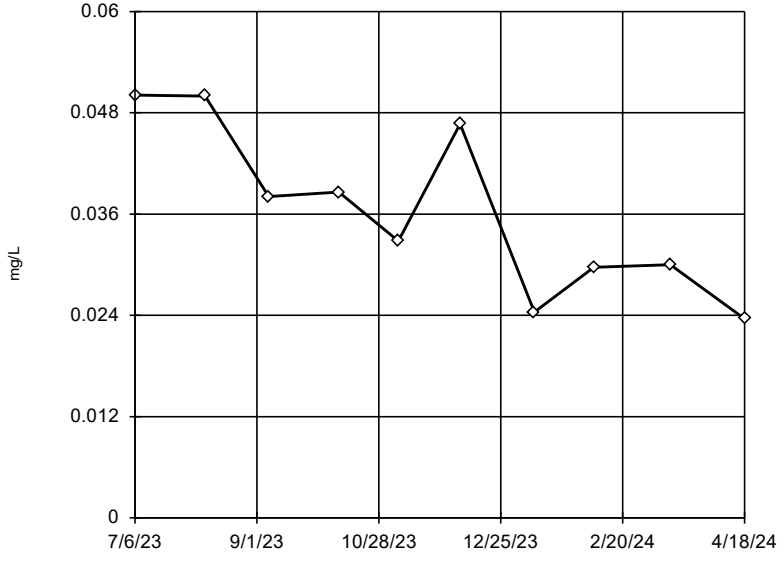
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9223
Critical = 0.92
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121 (bg)



n = 10

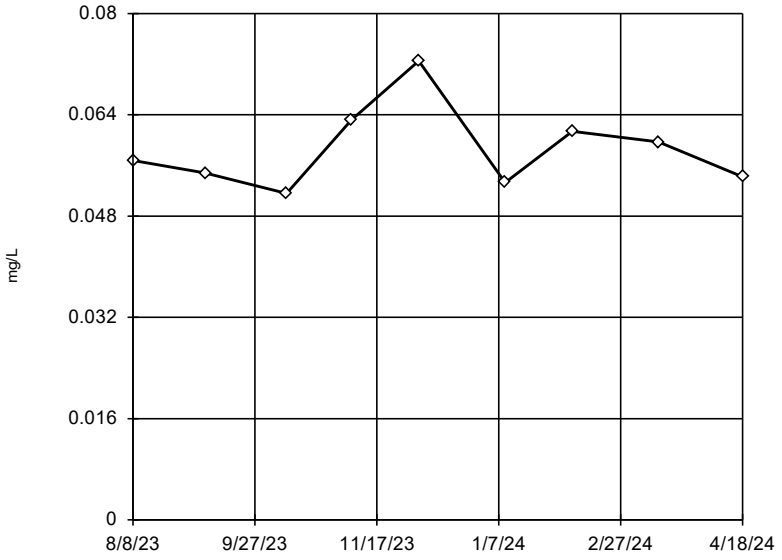
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0364, std. dev. 0.009962, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9118
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-104 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.05861, std. dev. 0.006496, critical Tn 2.11

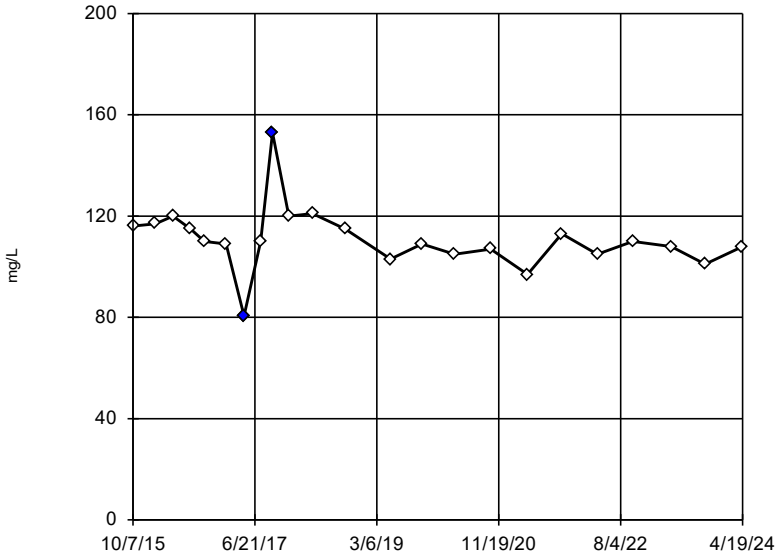
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8974
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Rosner's Outlier Test

MW-101



n = 23

Statistical outliers are drawn as solid.

k = 2
r = 3.187
Tabulated value = 3.168
Alpha = 0.01

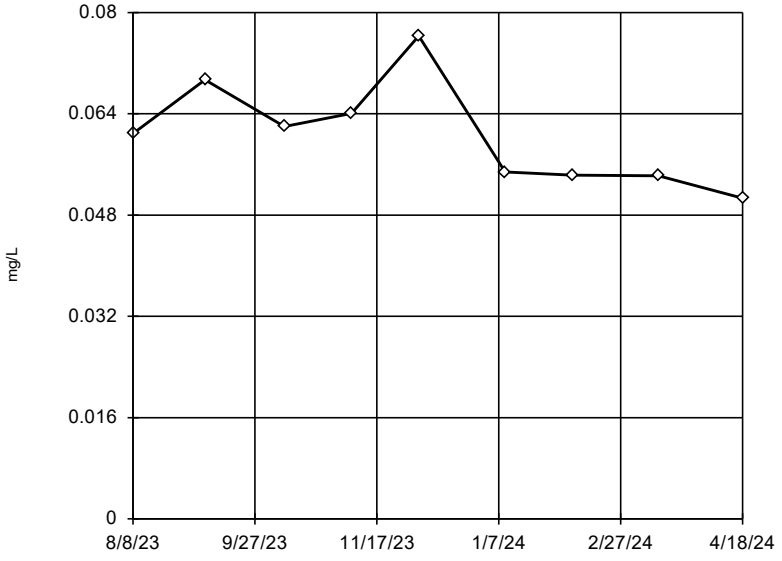
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9724
Critical = 0.923
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.06074, std. dev. 0.008294, critical Tn 2.11

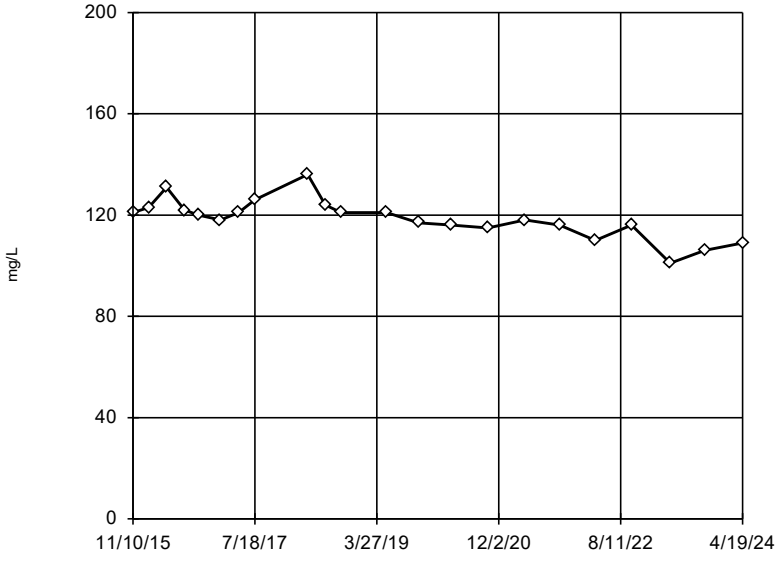
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9299
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 22

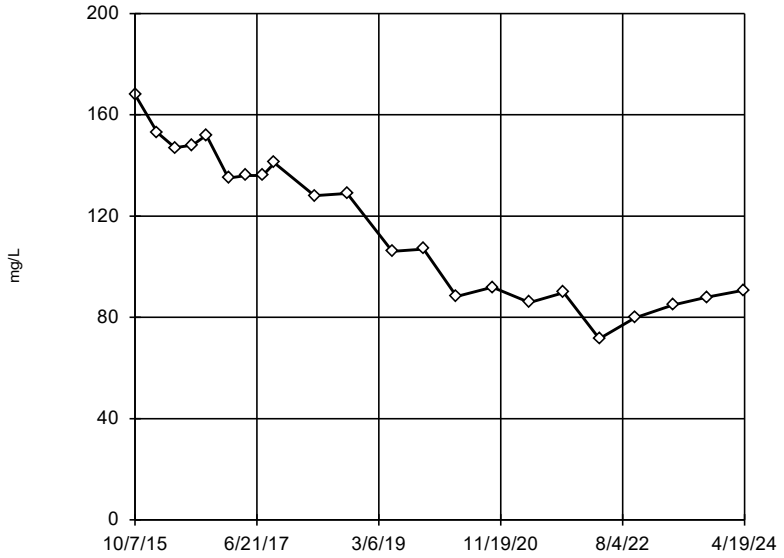
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 118.5, std. dev. 7.769, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9655
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-103



n = 22

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 root transformed to achieve best W statistic (graph shown in original units).

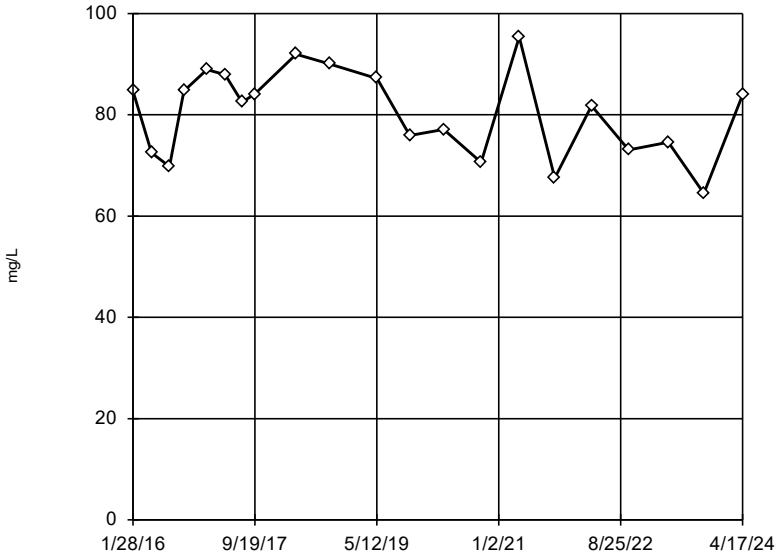
High cutoff = 393.6, low cutoff = 2.392, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 80.41, std. dev. 8.671, critical Tn 2.58

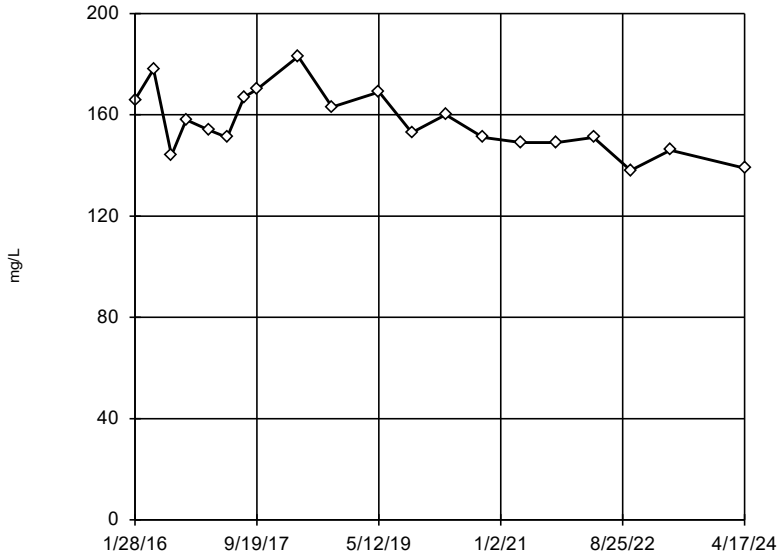
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9662
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 157, std. dev. 12.34, critical Tn 2.557

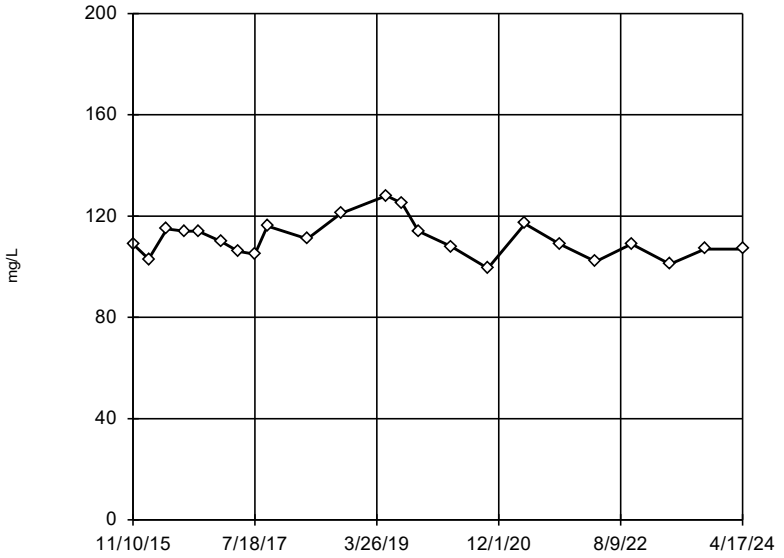
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9621
Critical = 0.92
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-115 (bg)



n = 23

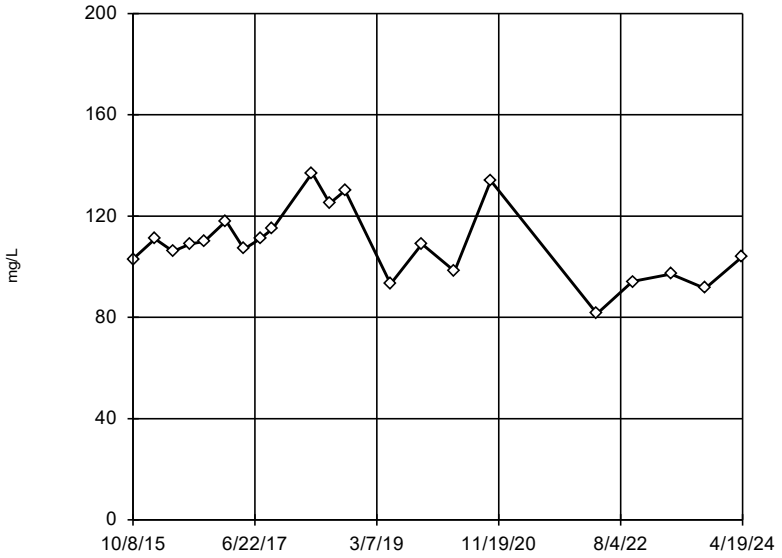
Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 110.9, std. dev. 7.334, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.959
Critical = 0.928
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 108.8, std. dev. 14.33, critical Tn 2.58

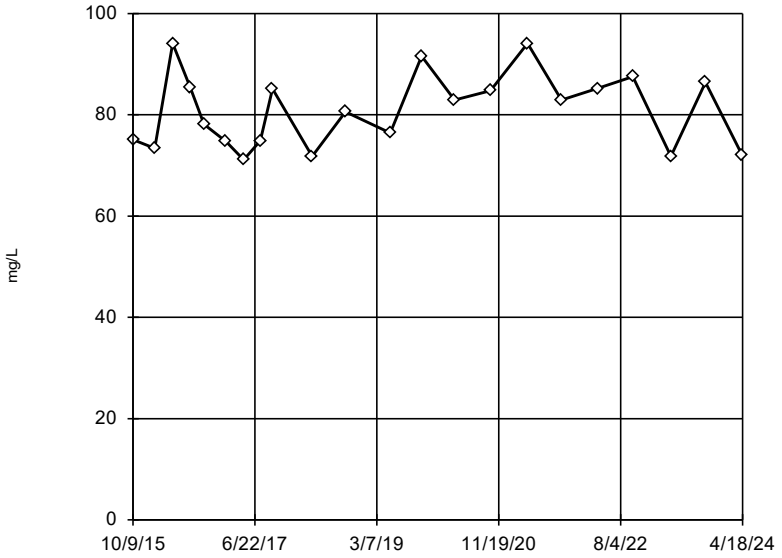
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9696
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-118



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 80.9, std. dev. 7.405, critical Tn 2.603

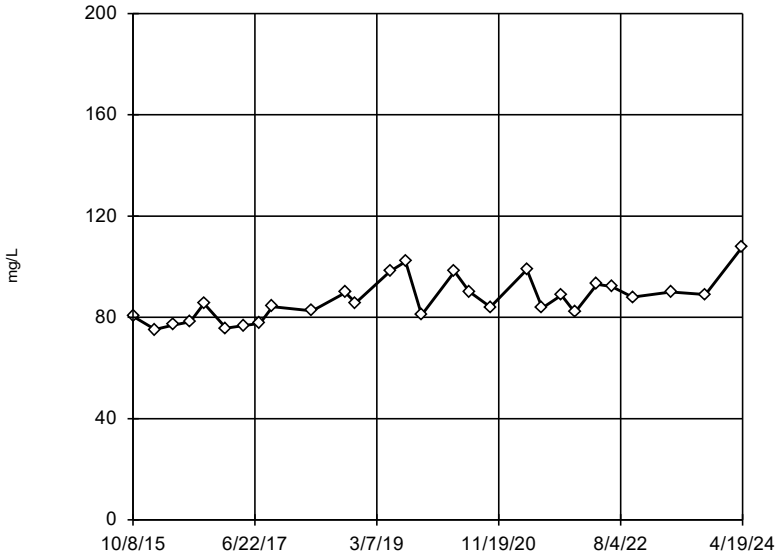
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9271
Critical = 0.926 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-117



n = 28

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 86.98, std. dev. 8.504, critical Tn 2.714

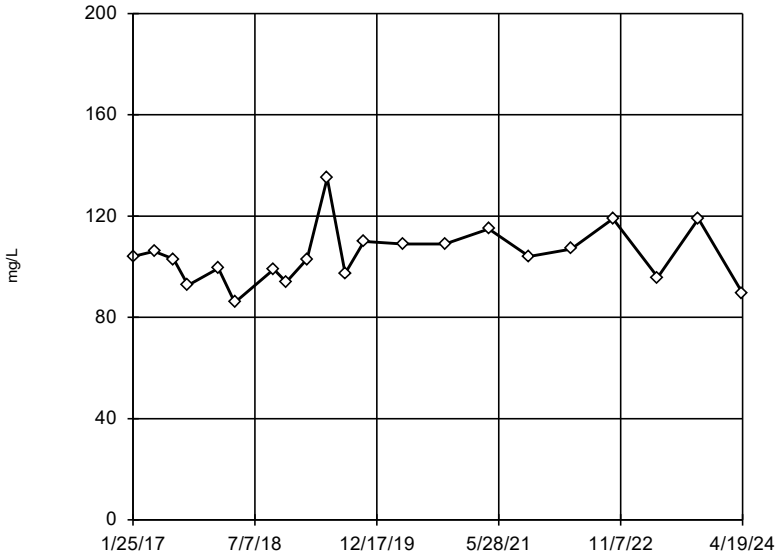
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9488
Critical = 0.936
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:49 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 21

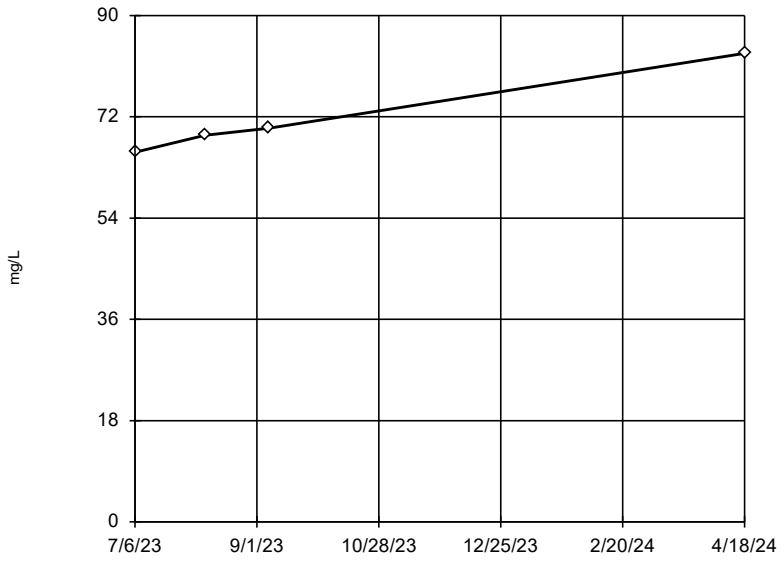
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 104.6, std. dev. 11.29, critical Tn 2.58

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9577
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-120 (bg)



n = 4

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 71.93, std. dev. 7.794, critical Tn 1.463

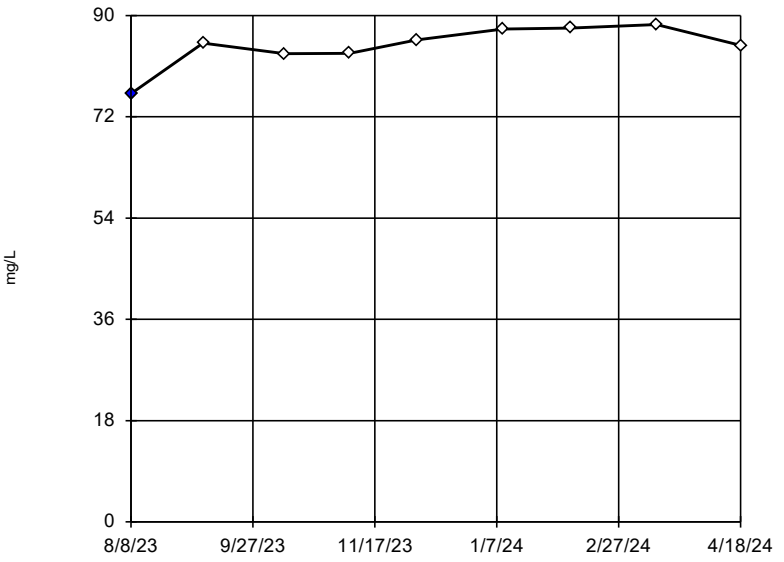
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8319
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-104 (bg)



n = 9

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 84.66.
Std. Dev. = 3.725.
76.1: c = 0.6068
tabl = 0.512.
Alpha = 0.05.

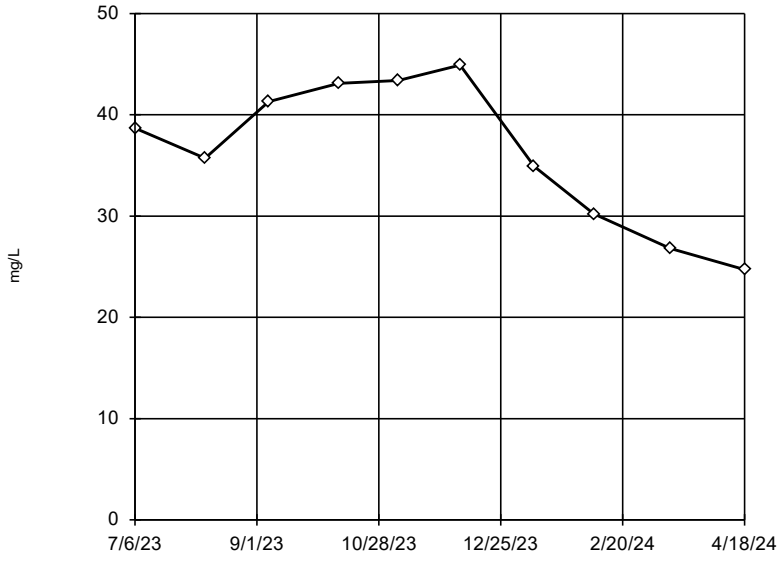
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9106
Critical = 0.851
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121 (bg)



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 36.37, std. dev. 7.193, critical Tn 2.176

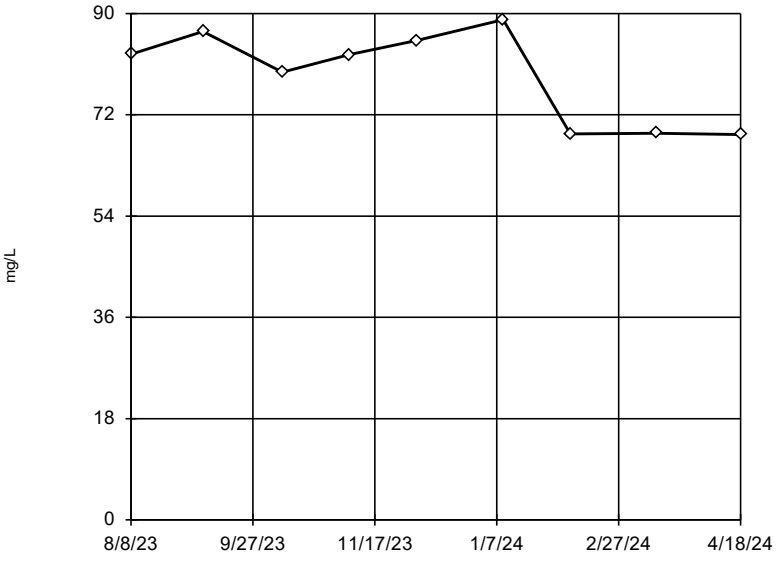
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.922
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110 (bg)



n = 9

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).

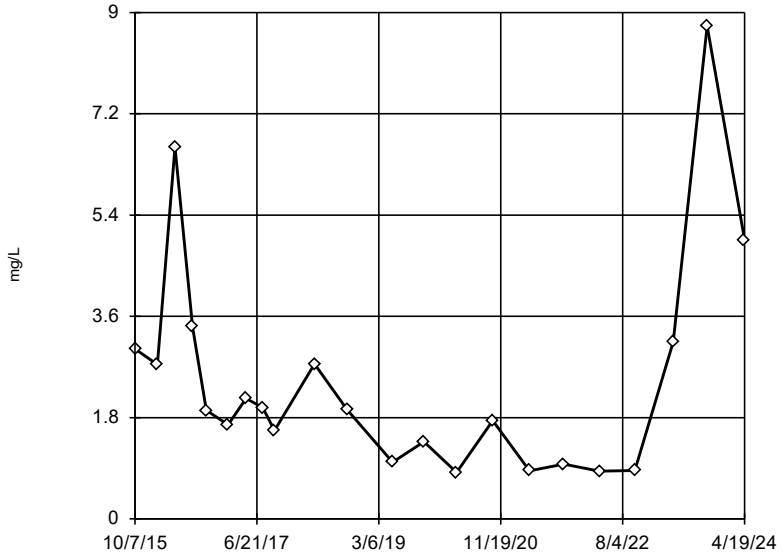
High cutoff = 104.6, low cutoff = -96.28, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-101



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 2.506, std. dev. 1.996, critical Tn 2.603

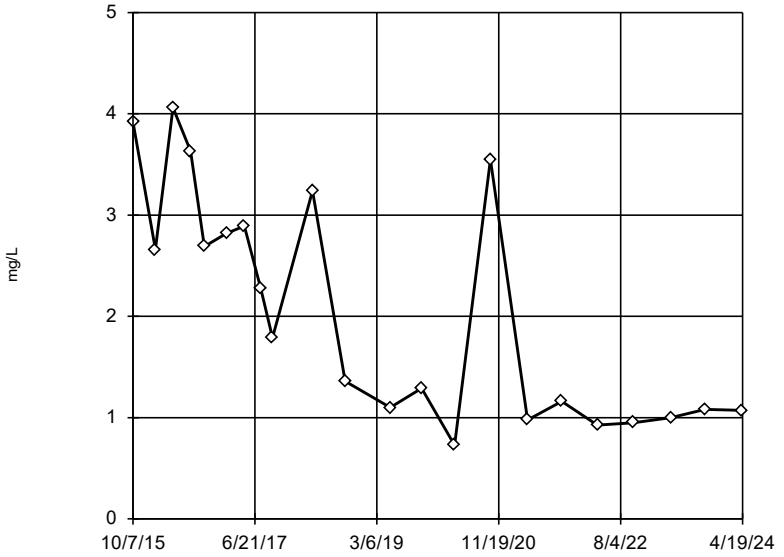
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9433
Critical = 0.926 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-103



n = 22

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).

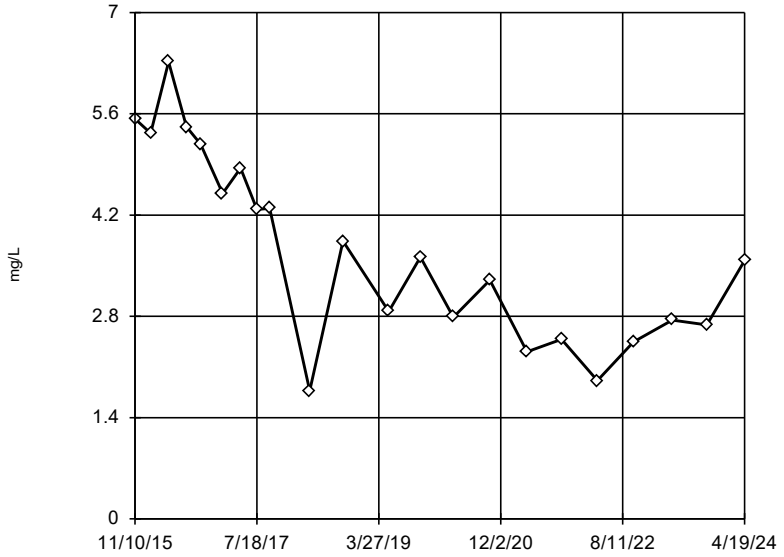
High cutoff = 79.22, low cutoff = 0.03996, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 3.729, std. dev. 1.313, critical Tn 2.603

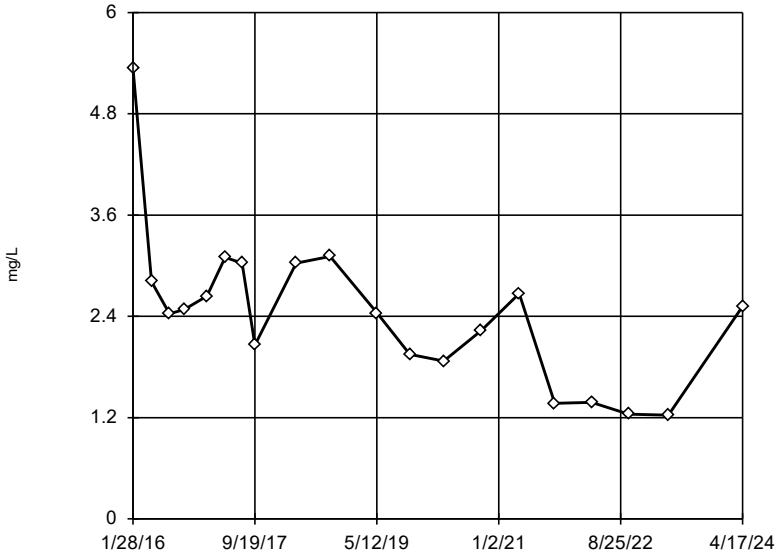
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9526
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 2.447, std. dev. 0.9221, critical Tn 2.557

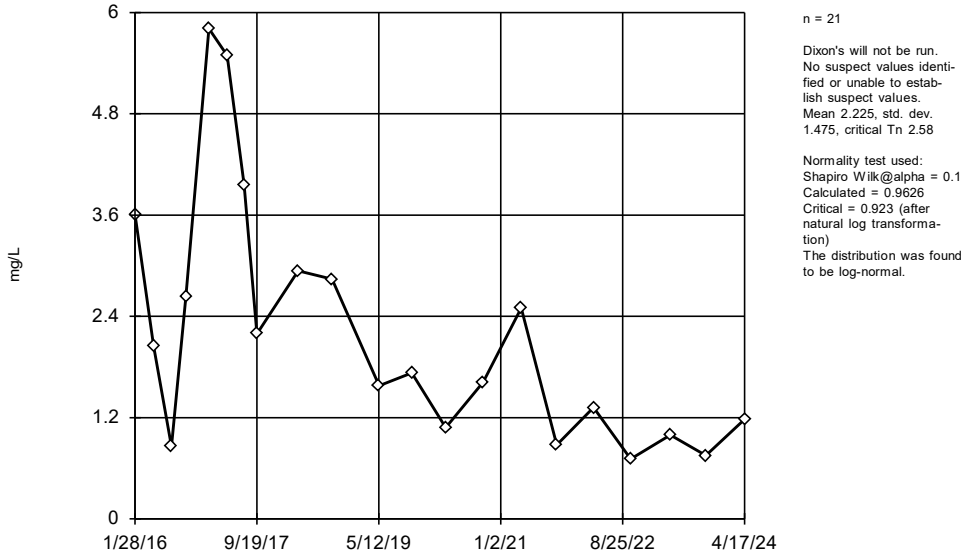
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9302
Critical = 0.92 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 2.225, std. dev. 1.475, critical Tn 2.58

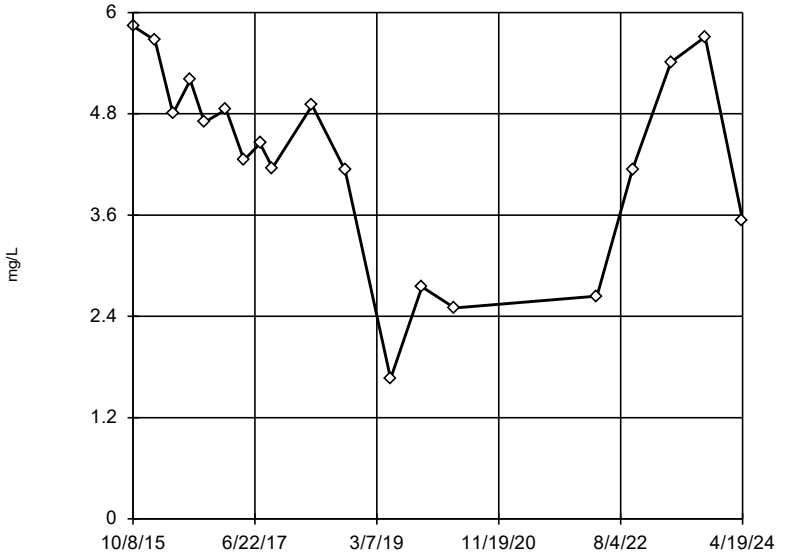
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9626
Critical = 0.923 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-116



n = 19

No statistical outliers.
Testing for 1 low outlier.
Mean = 4.279.
Std. Dev. = 1.188.
1.66: c = 0.2444
tabl = 0.462.
Alpha = 0.05.

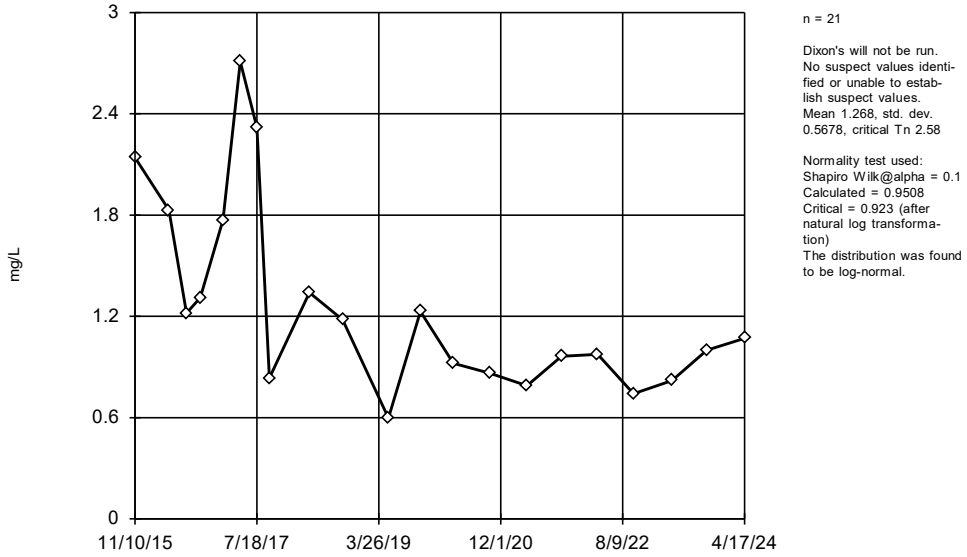
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9286
Critical = 0.914
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.268, std. dev. 0.5678, critical Tn 2.58

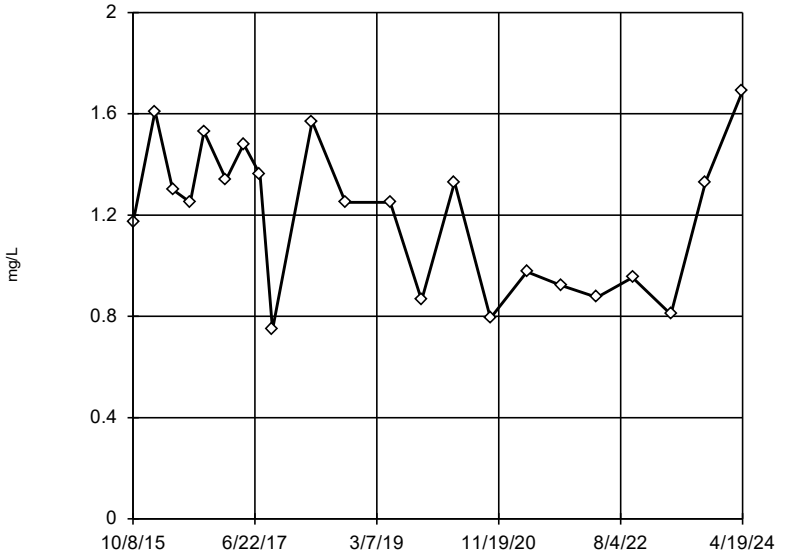
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9508
Critical = 0.923 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-117



n = 22

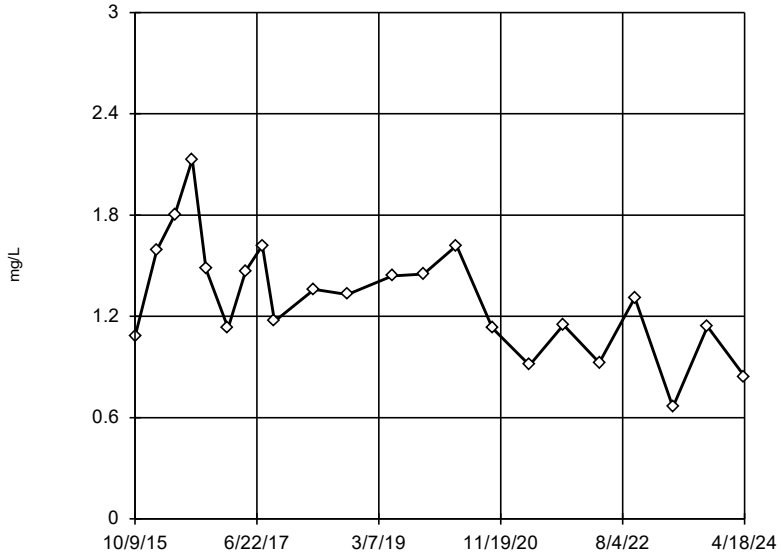
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.2, std. dev. 0.2897, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9385
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.307, std. dev. 0.3389, critical Tn 2.603

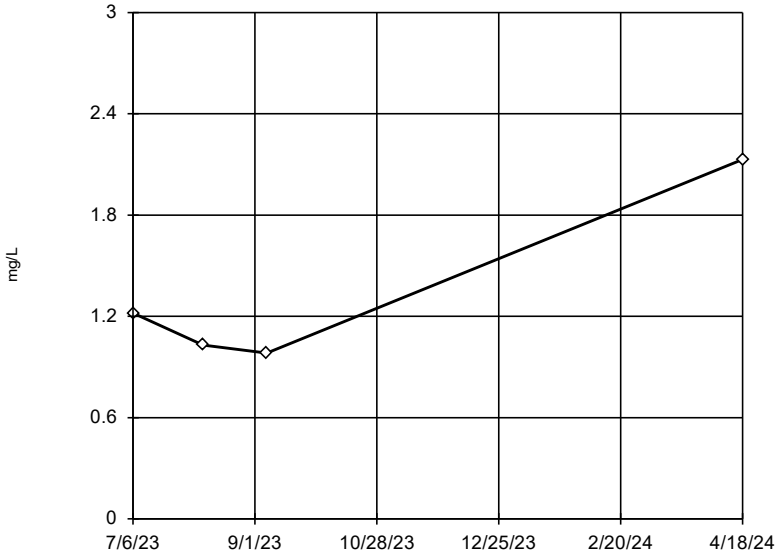
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9801
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120 (bg)



n = 4

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.341, std. dev. 0.5363, critical Tn 1.463

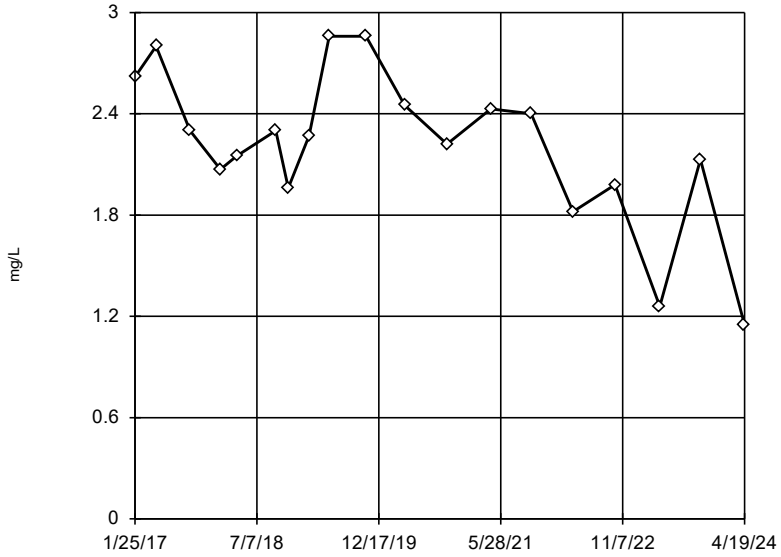
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8289
Critical = 0.792 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-119



n = 19

No statistical outliers.
Testing for 2 low outliers.
Mean = 2.212.
Std. Dev. = 0.4623.
1.26: c = 0.4545
tabl = 0.462.
Alpha = 0.05.
1.15: c = 0.4061
tabl = 0.462.
Alpha = 0.05.

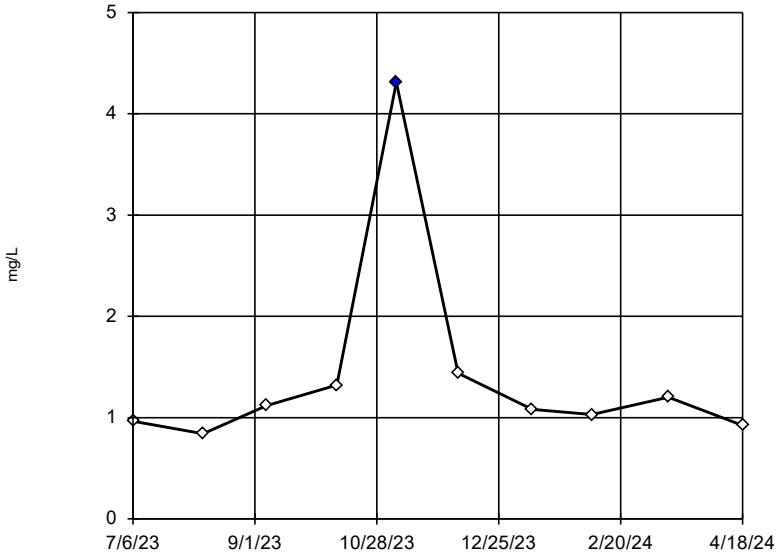
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.947
Critical = 0.914
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-121 (bg)



n = 10

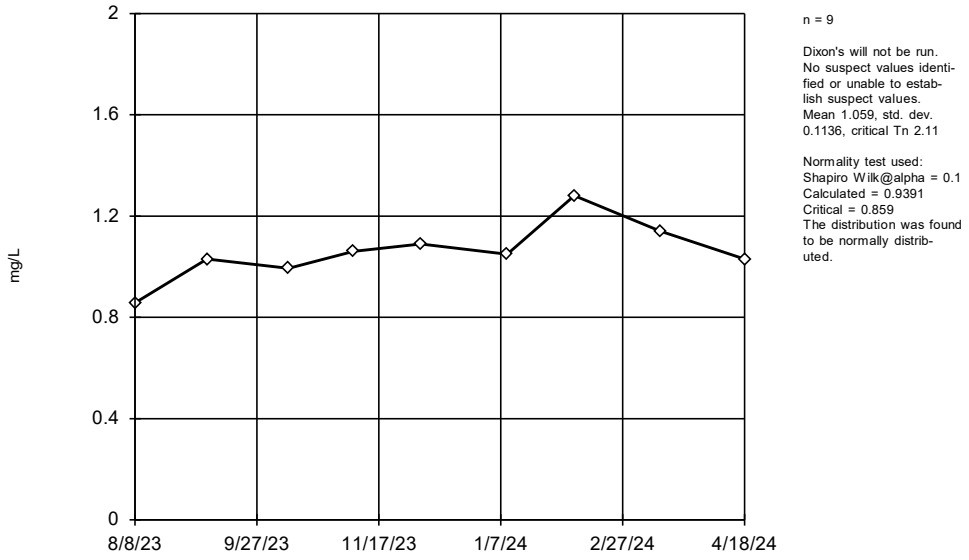
Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 1.423.
Std. Dev. = 1.03.
4.31: c = 0.8476
tabl = 0.477.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.971
Critical = 0.859
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-104 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.059, std. dev. 0.1136, critical Tn 2.11

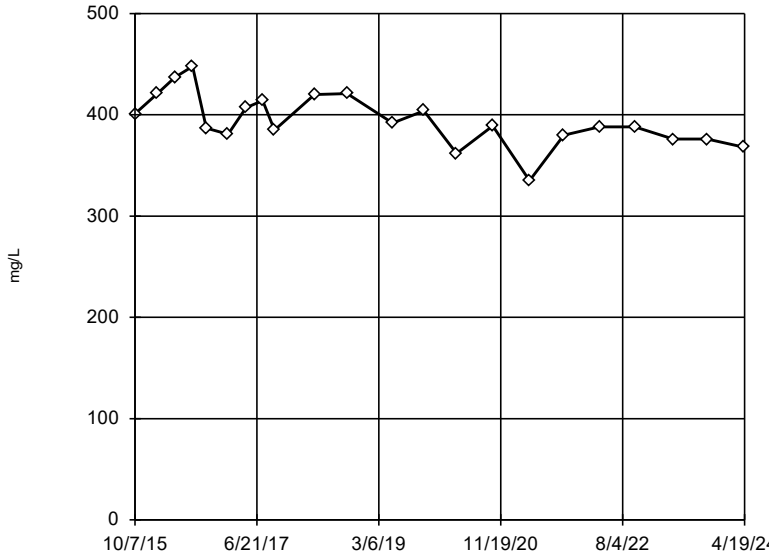
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9391
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-101



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 394.5, std. dev. 25.85, critical Tn 2.603

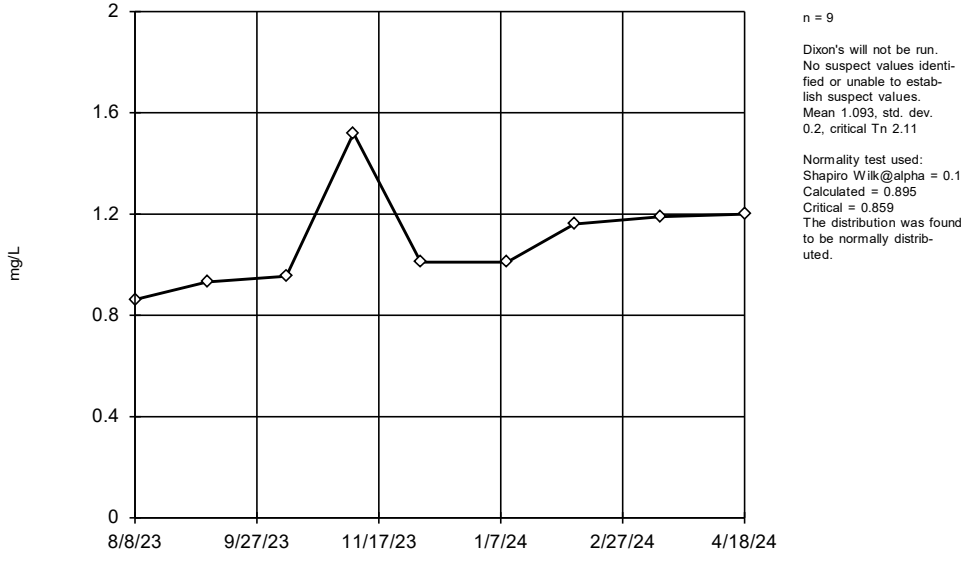
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.977
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.093, std. dev. 0.2, critical Tn 2.11

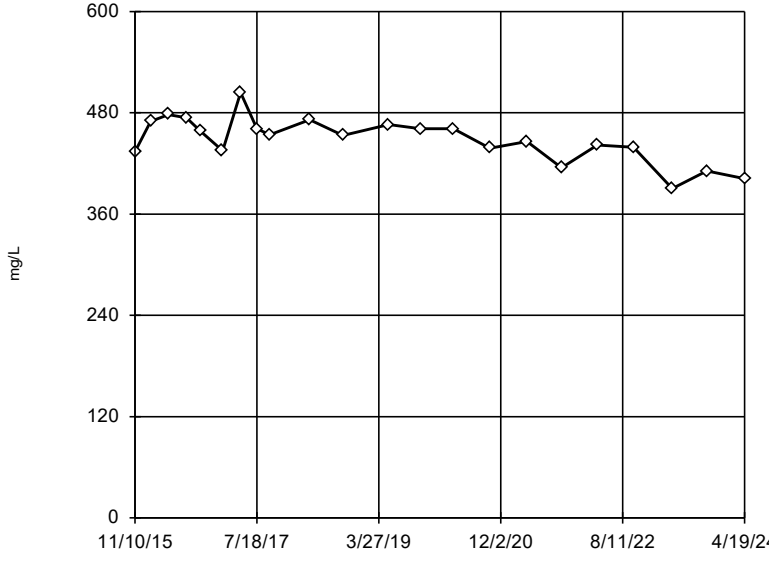
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.895
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 22

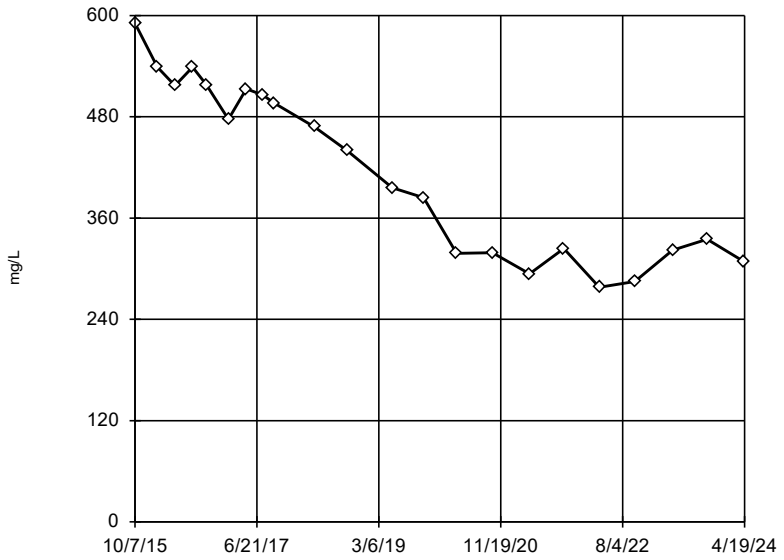
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 448.4, std. dev. 26.98, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9687
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-103



n = 22

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.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 1105, low cutoff = -271, based on IQR multiplier of 3.

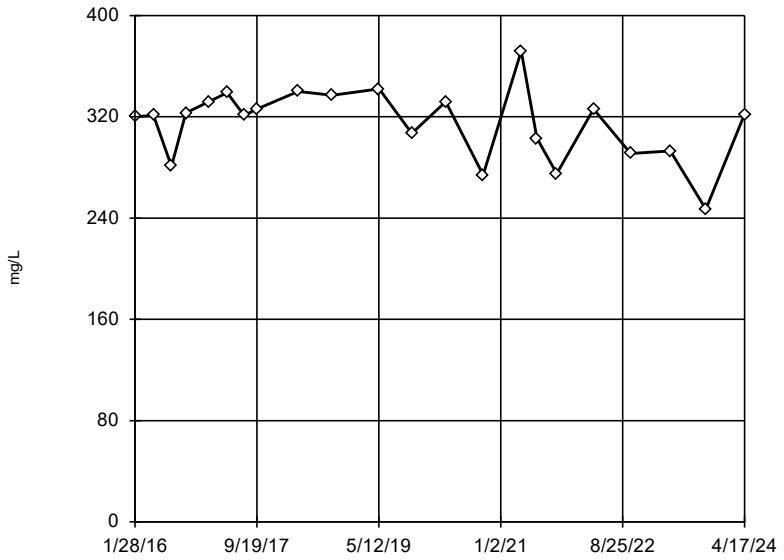
Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 314.7, std. dev. 28.47, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9493
Critical = 0.926
The distribution was found to be normally distributed.

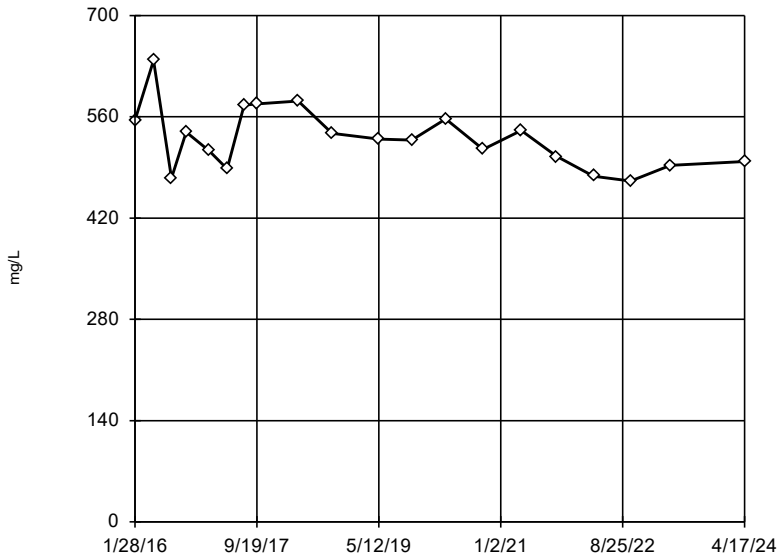
Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 529.8, std. dev. 42.86, critical Tn 2.557

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9516
Critical = 0.92
The distribution was found to be normally distributed.

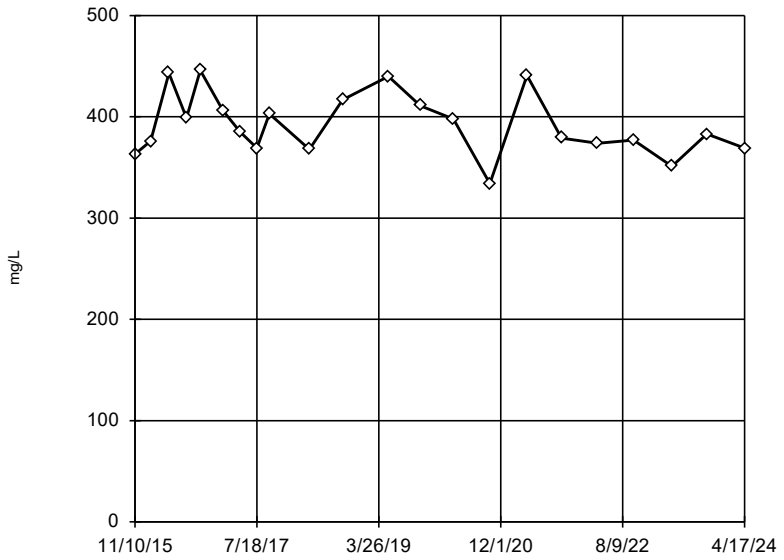
Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 392.4, std. dev. 31.04, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9482
Critical = 0.926
The distribution was found to be normally distributed.

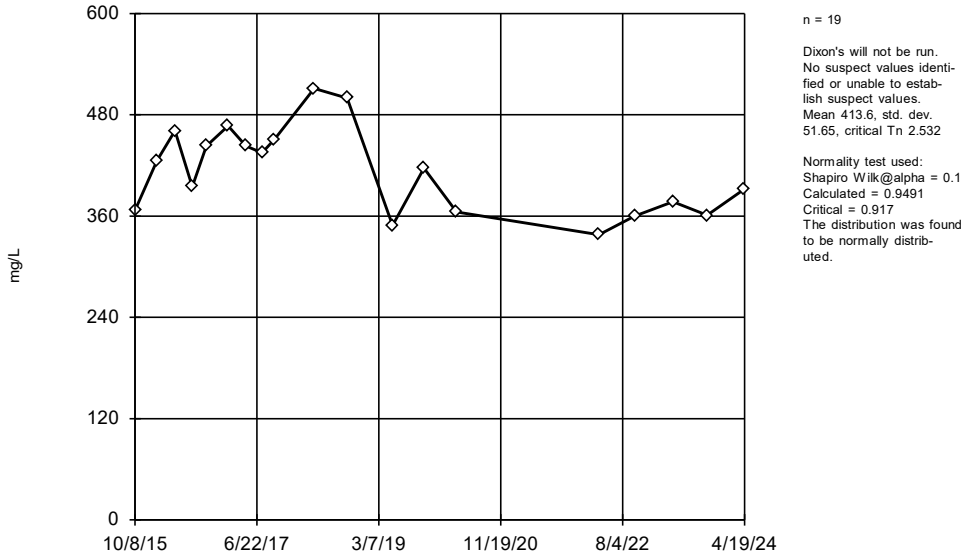
Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-116



n = 19

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 413.6, std. dev. 51.65, critical Tn 2.532

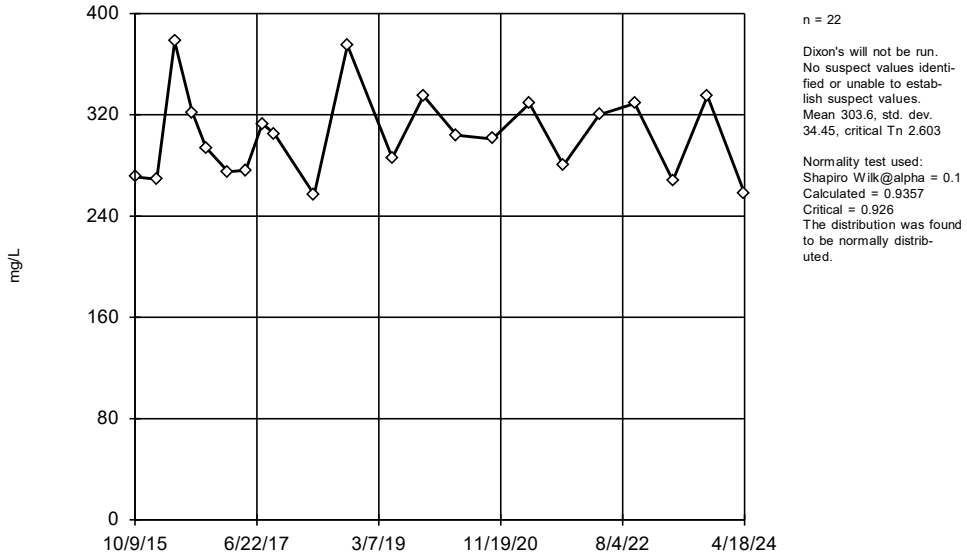
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9491
Critical = 0.917
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-118



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 303.6, std. dev. 34.45, critical Tn 2.603

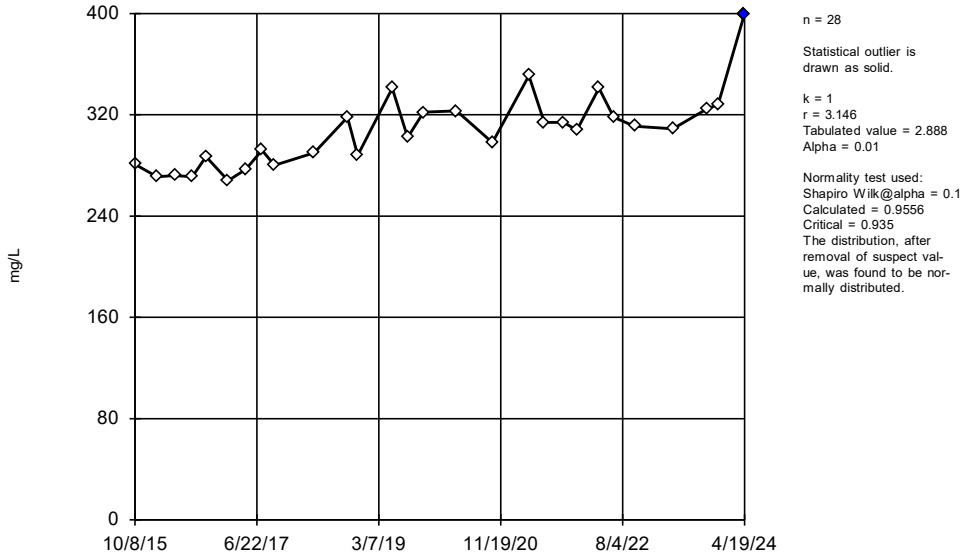
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9357
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Rosner's Outlier Test

MW-117



n = 28

Statistical outlier is drawn as solid.

k = 1
r = 3.146
Tabulated value = 2.888
Alpha = 0.01

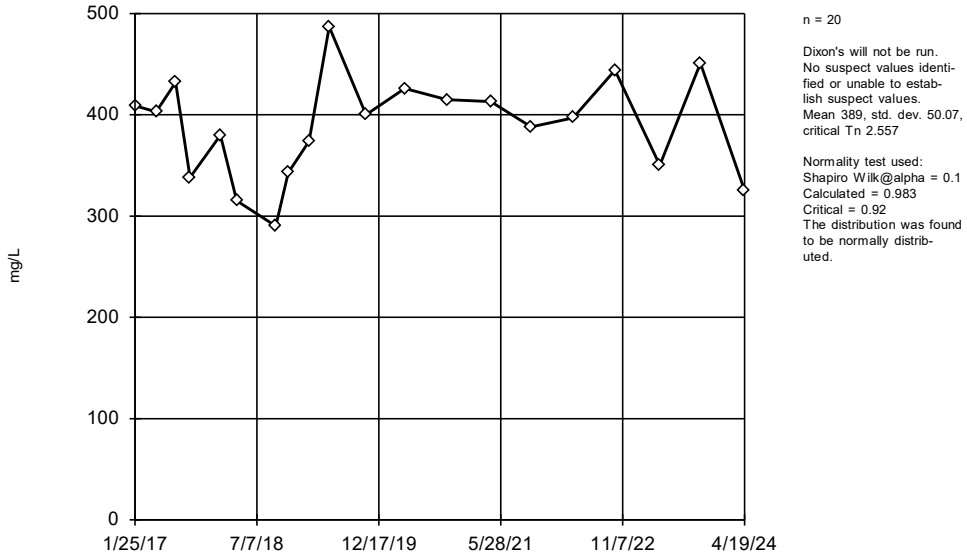
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9556
Critical = 0.935
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 389, std. dev. 50.07, critical Tn 2.557

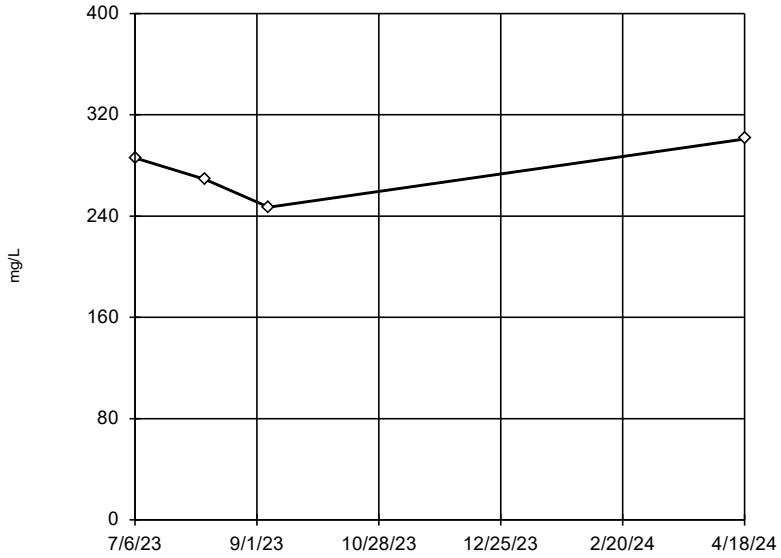
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.983
Critical = 0.92
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120 (bg)



n = 4

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 275.8, std. dev. 23.2, critical Tn 1.463

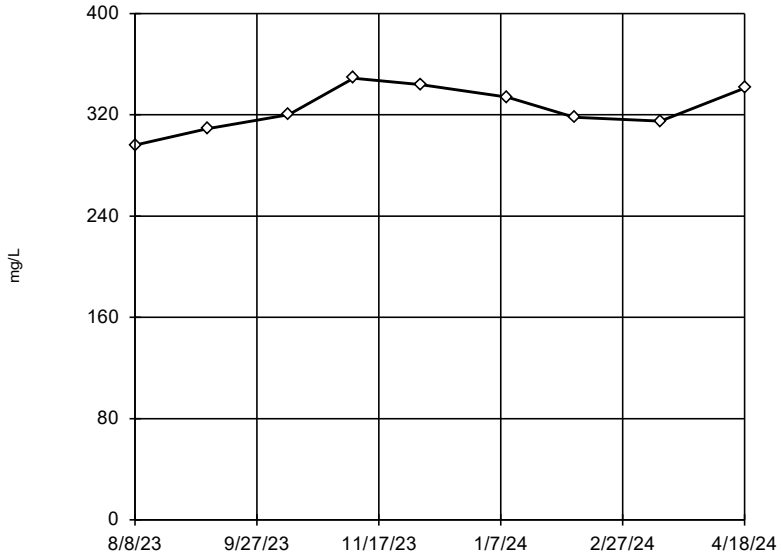
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9889
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-104 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 325.1, std. dev. 17.84, critical Tn 2.11

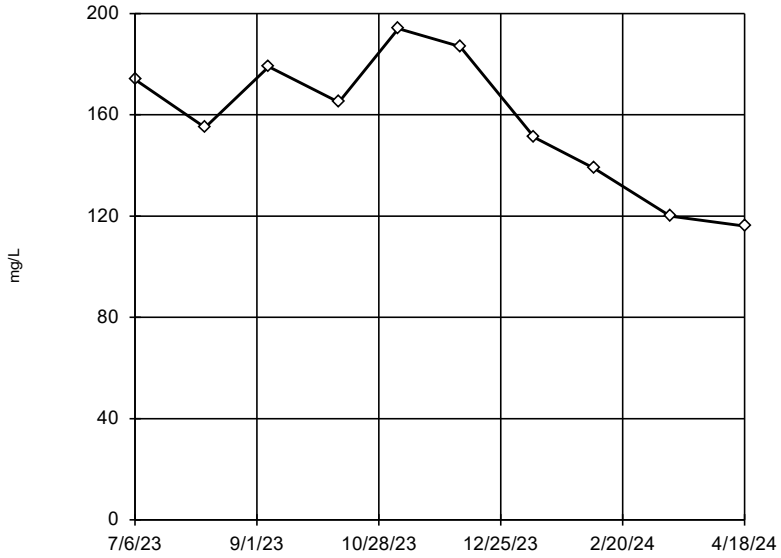
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9517
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121 (bg)



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 158, std. dev. 26.89, critical Tn 2.176

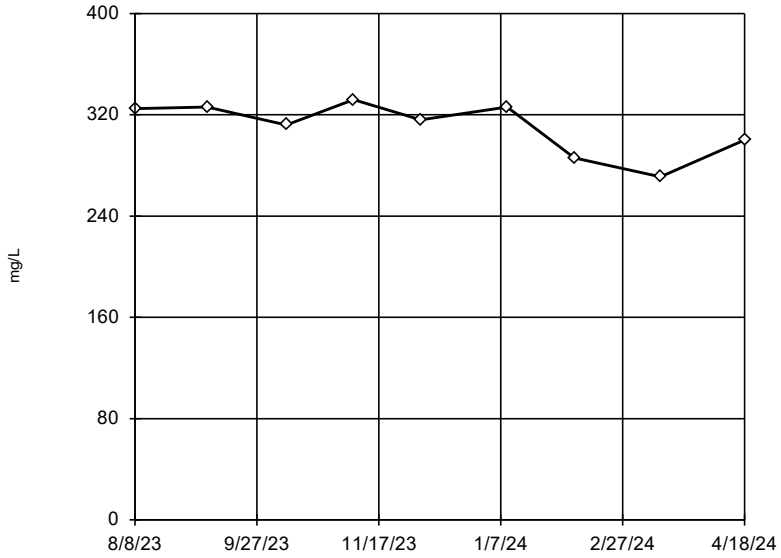
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9488
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110 (bg)



n = 9

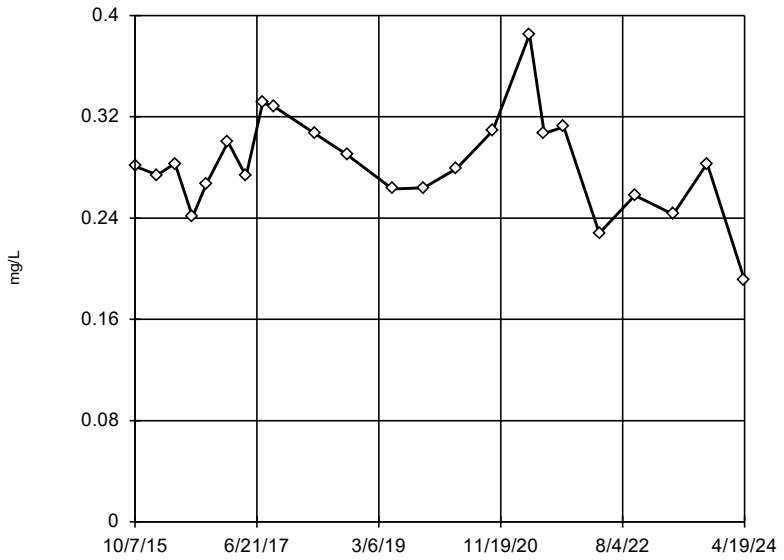
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 310.4, std. dev. 20.79, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8836
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Rosner's Outlier Test

MW-101



n = 23

No statistical outliers.

k = 1
r = 2.592
Tabulated value = 2.808
Alpha = 0.01

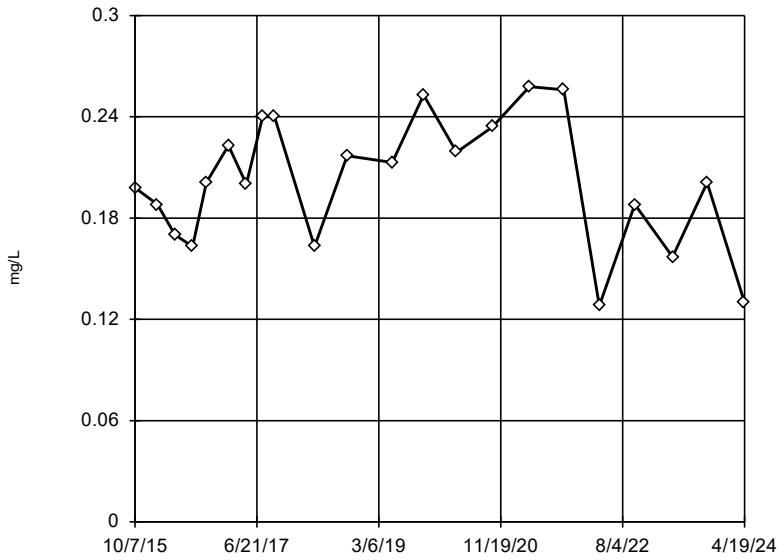
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9632
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-103



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2018, std. dev. 0.0383, critical Tn 2.603

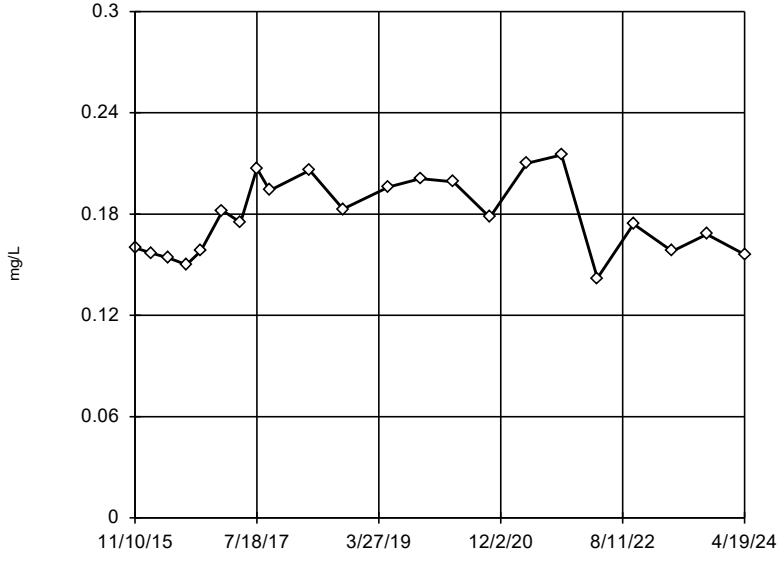
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9575
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1783, std. dev. 0.02229, critical Tn 2.603

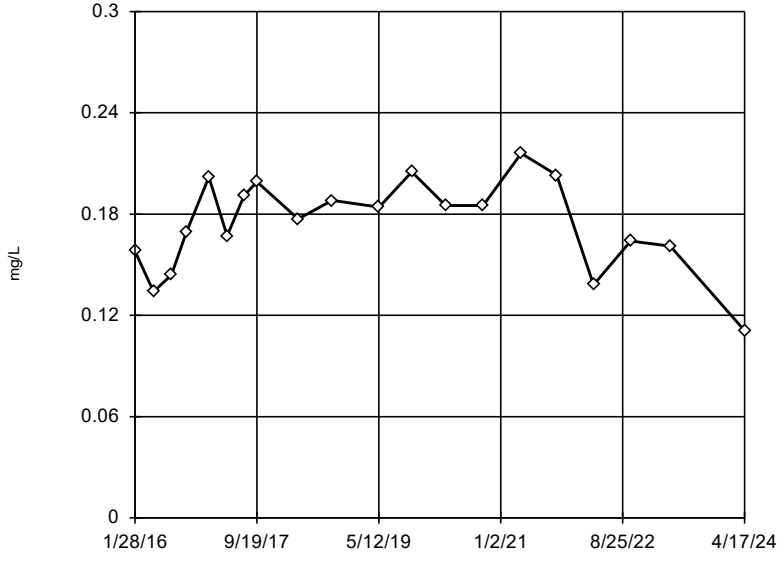
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9394
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-108 (bg)



n = 20

No statistical outliers.
Testing for 1 low outlier.
Mean = 0.1741.
Std. Dev. = 0.02731.
0.111 (J): c = 0.2935
tabl = 0.45.
Alpha = 0.05.

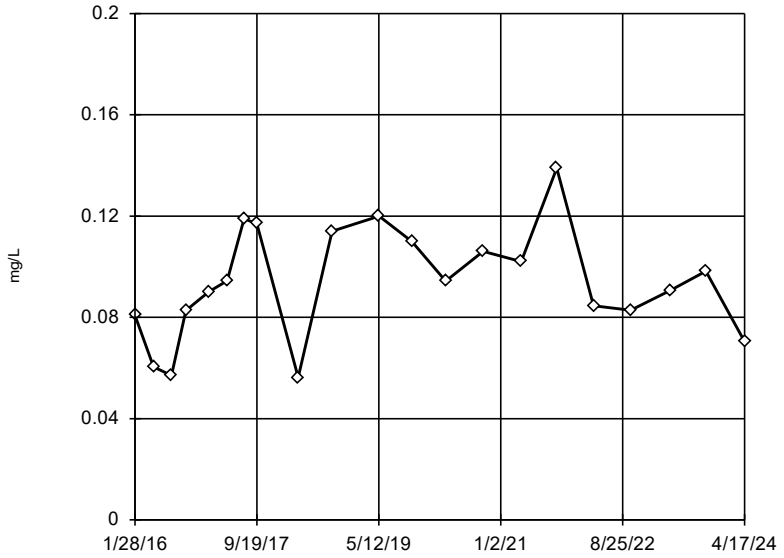
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9632
Critical = 0.917
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



n = 21

Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 0.09379, std. dev. 0.02209, critical Tn 2.58

Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9745 Critical = 0.923 The distribution was found to be normally distributed.

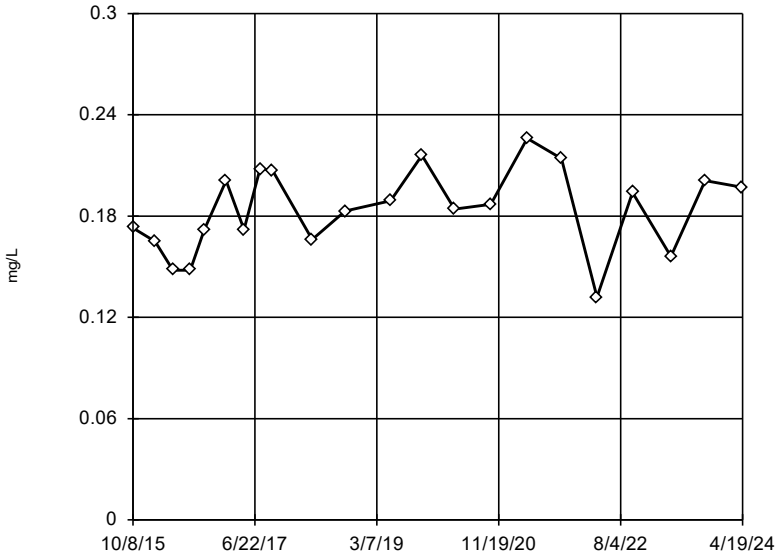
Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-116



n = 22

Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 0.1836, std. dev. 0.02473, critical Tn 2.603

Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9801 Critical = 0.926 The distribution was found to be normally distributed.

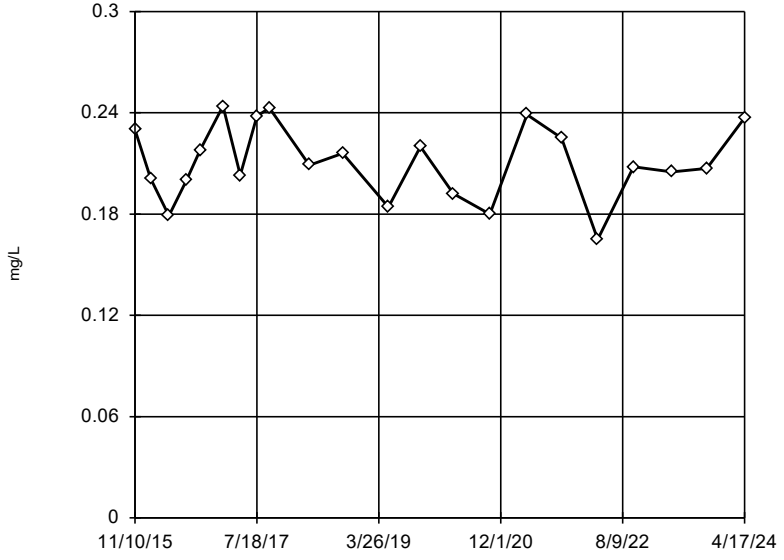
Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



n = 22

Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 0.211, std. dev. 0.02242, critical Tn 2.603

Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9627 Critical = 0.926 The distribution was found to be normally distributed.

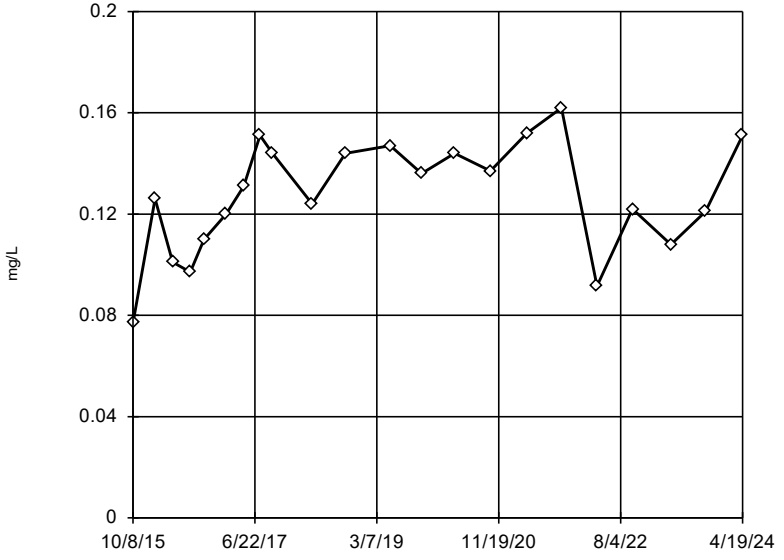
Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-117



n = 22

Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 0.1271, std. dev. 0.02242, critical Tn 2.603

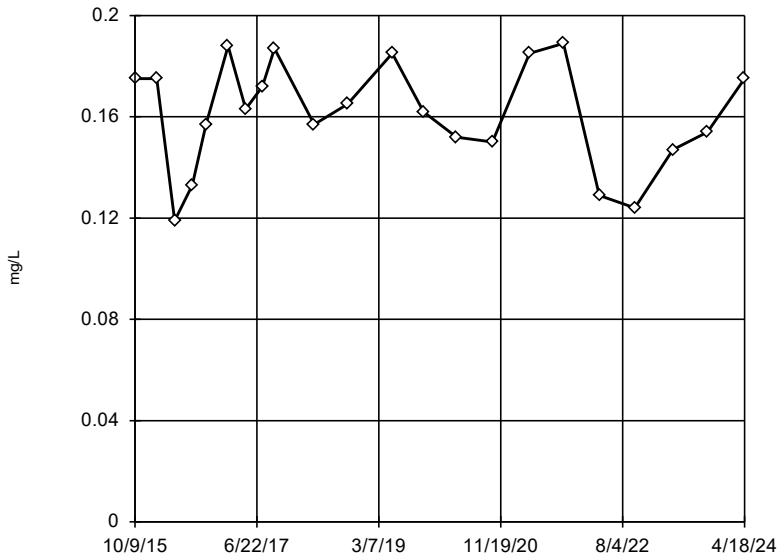
Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9582 Critical = 0.926 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.161, std. dev. 0.02126, critical Tn 2.603

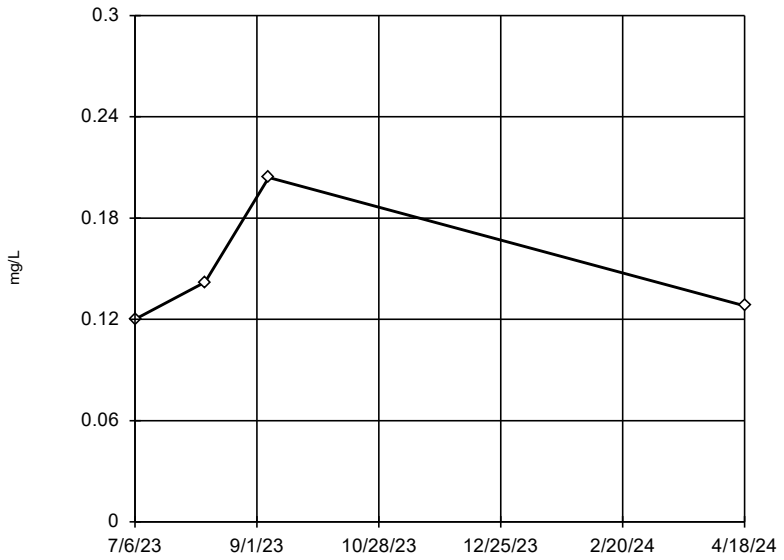
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.938
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120 (bg)



n = 4

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1485, std. dev. 0.0381, critical Tn 1.463

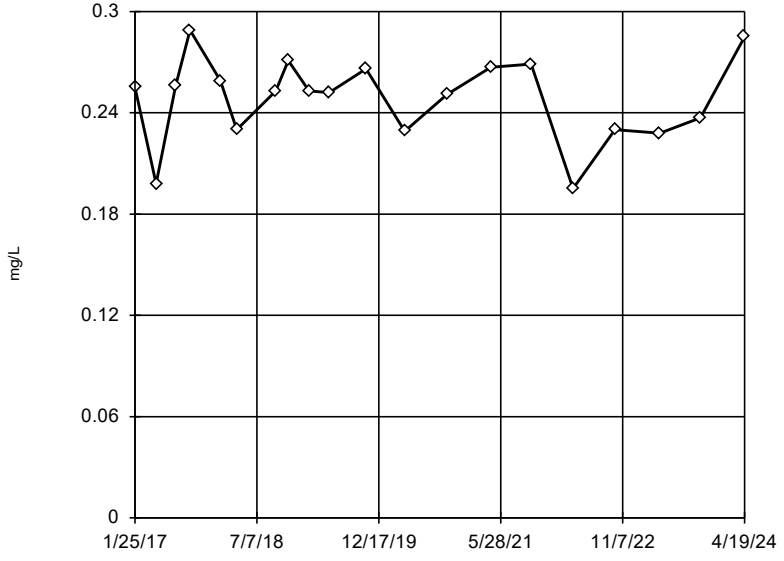
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8286
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2487, std. dev. 0.02497, critical Tn 2.557

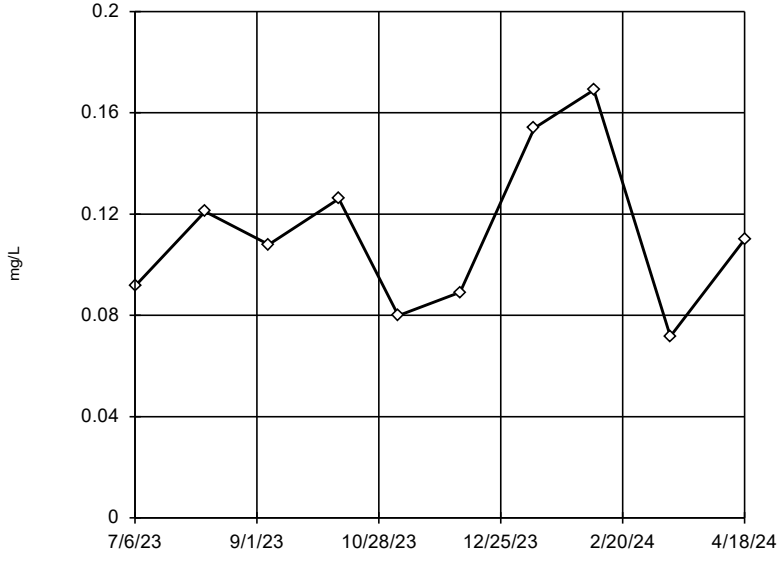
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9407
Critical = 0.92
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121 (bg)



n = 10

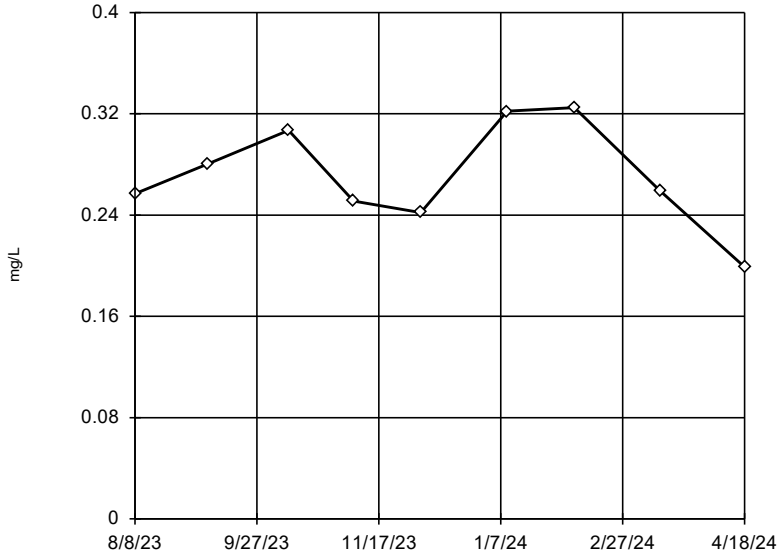
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.112, std. dev. 0.03146, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9463
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-104 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2713, std. dev. 0.04132, critical Tn 2.11

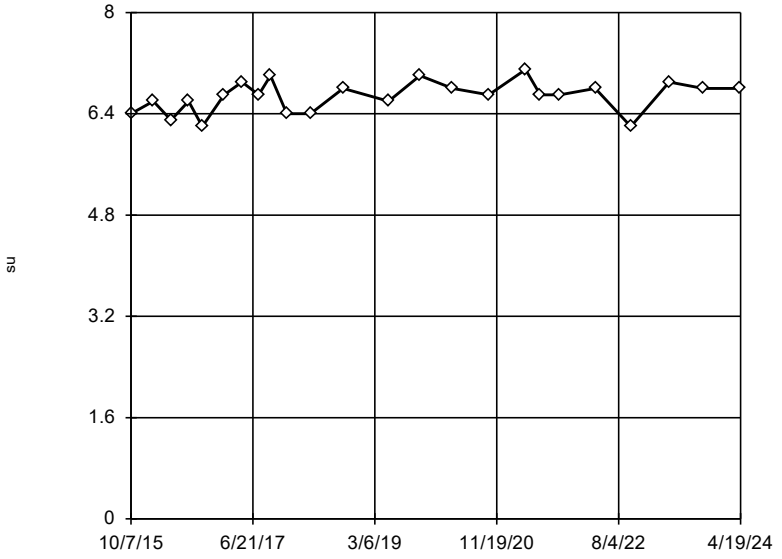
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9413
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
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EPA Screening (suspected outliers for Rosner's Test)

MW-101



n = 24

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.671, std. dev. 0.2476, critical Tn 2.644

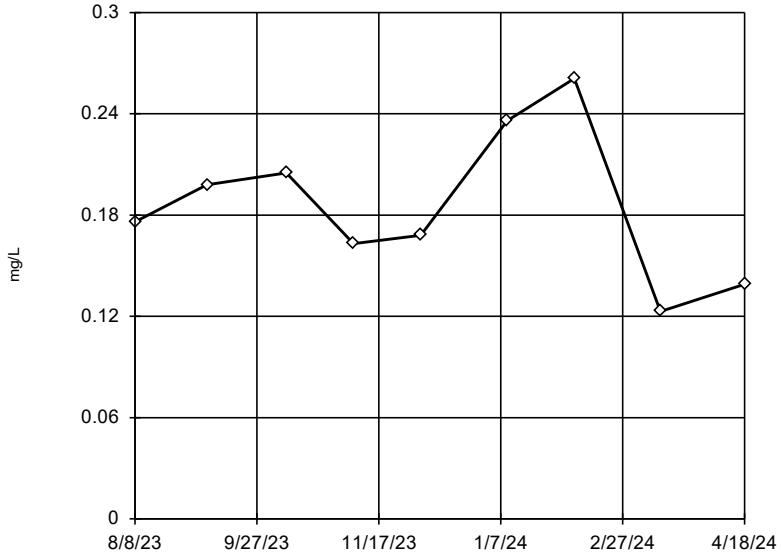
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9457
Critical = 0.93
The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1854, std. dev. 0.04438, critical Tn 2.11

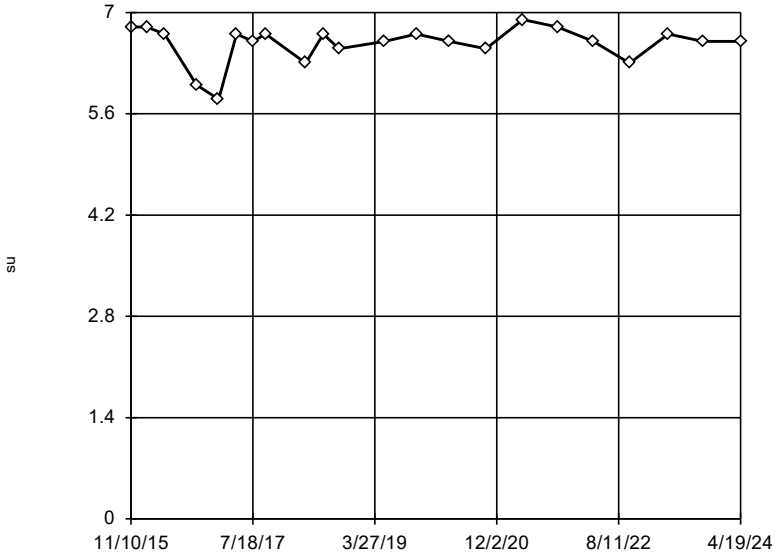
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9736
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-102



n = 22

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.

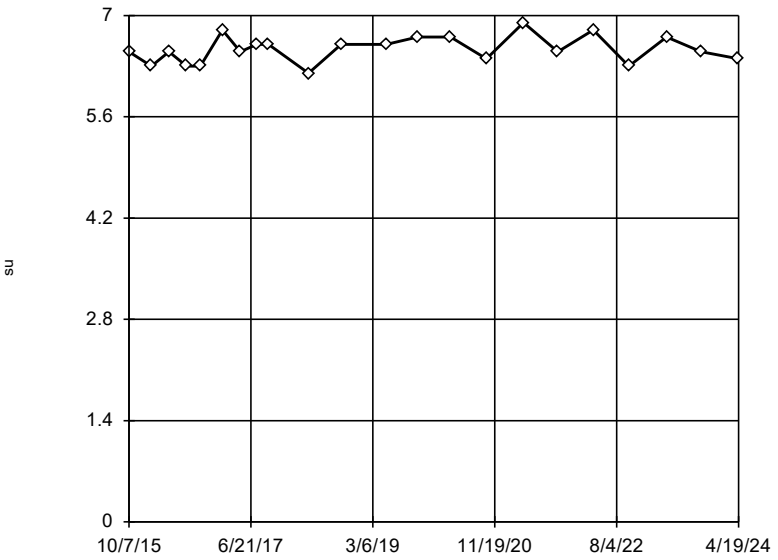
Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.167, low cutoff = 5.584, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/28/2024 1:50 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.532, std. dev. 0.1887, critical Tn 2.603

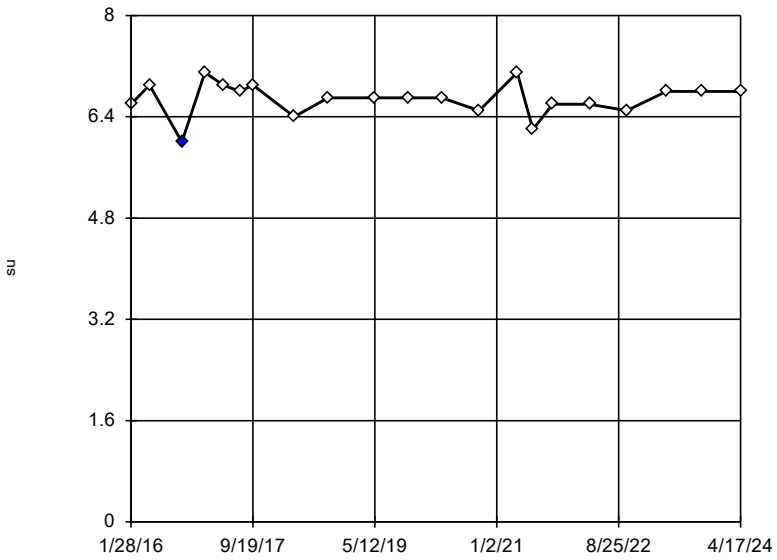
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9626
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-113 (bg)



n = 21

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 6.681.
Std. Dev. = 0.2657.
6: c = 0.4444
tabl = 0.44.
Alpha = 0.05.

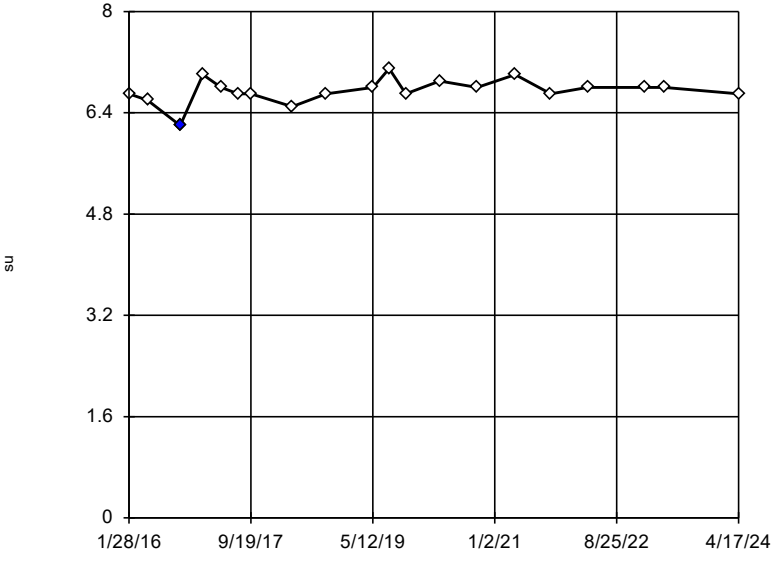
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9663
Critical = 0.92
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-108 (bg)



n = 20

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 6.75.
Std. Dev. = 0.1906.
1.825: c = 0.5152
tabl = 0.45.
Alpha = 0.05.

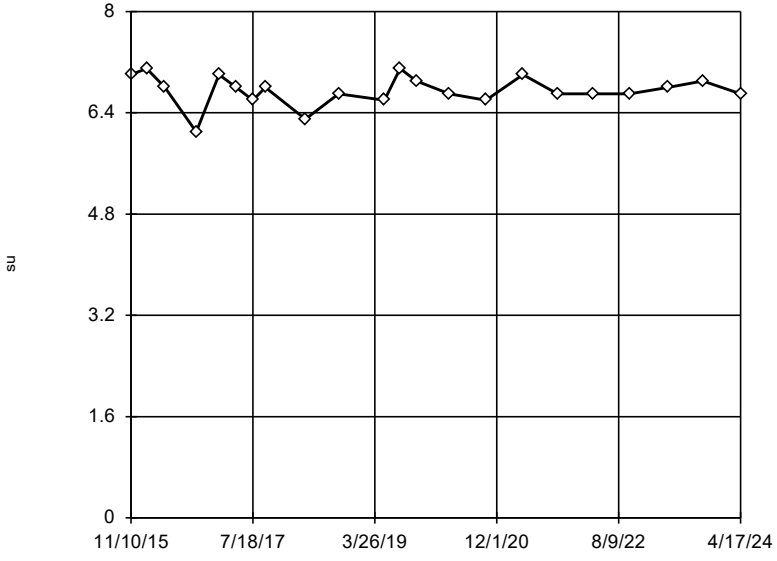
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9186
Critical = 0.917 (after natural log transformation)
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-115 (bg)



n = 22

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.

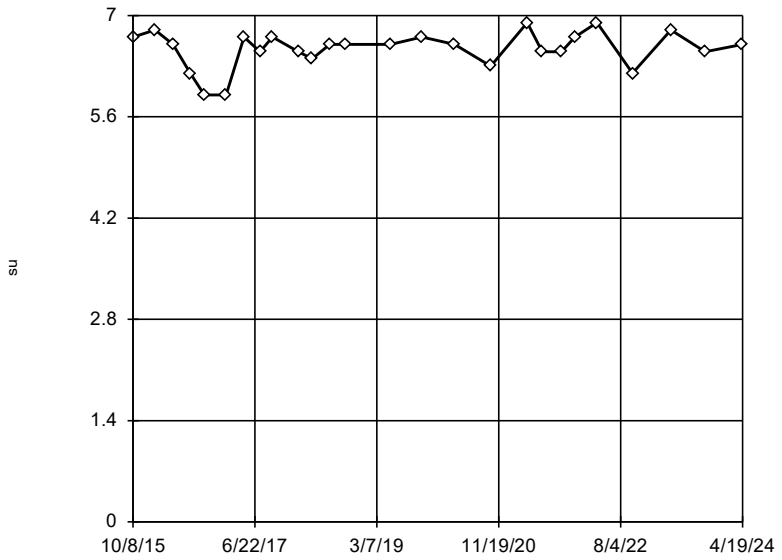
Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.592, low cutoff = 4.46, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-116



n = 26

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).

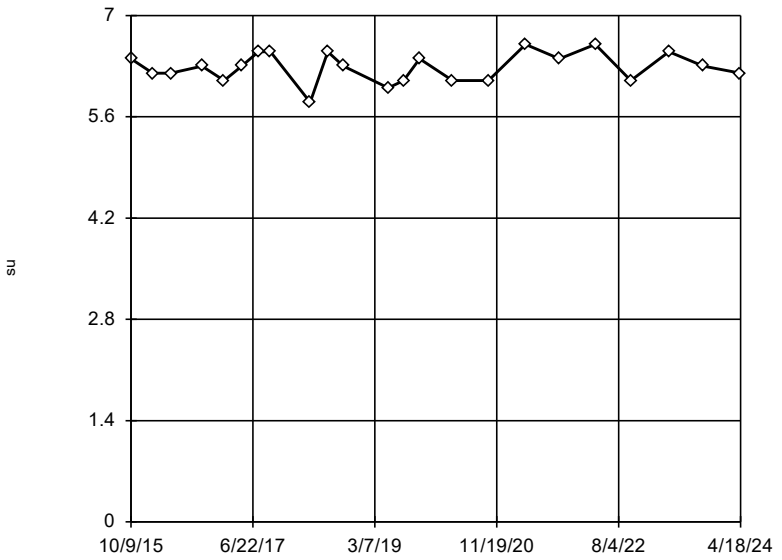
High cutoff = 7.253, low cutoff = 5.066, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-118



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.283, std. dev. 0.2059, critical Tn 2.624

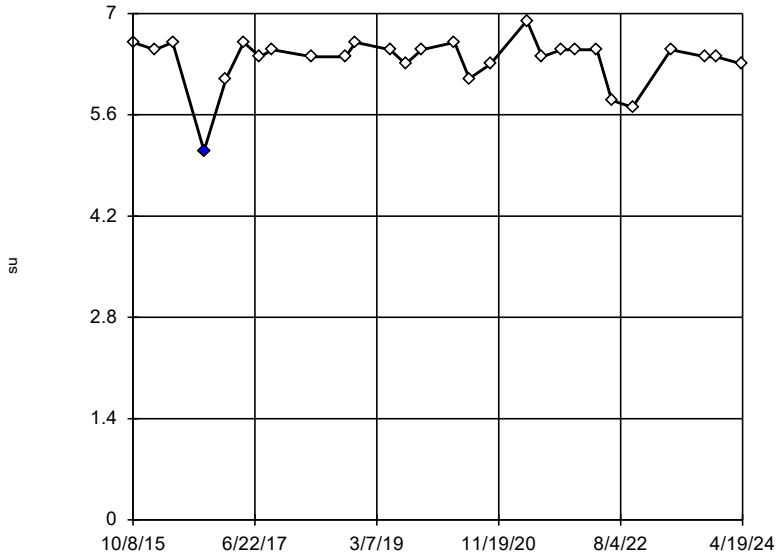
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9531
Critical = 0.928
The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-117



n = 28

Outlier is drawn as solid.
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).

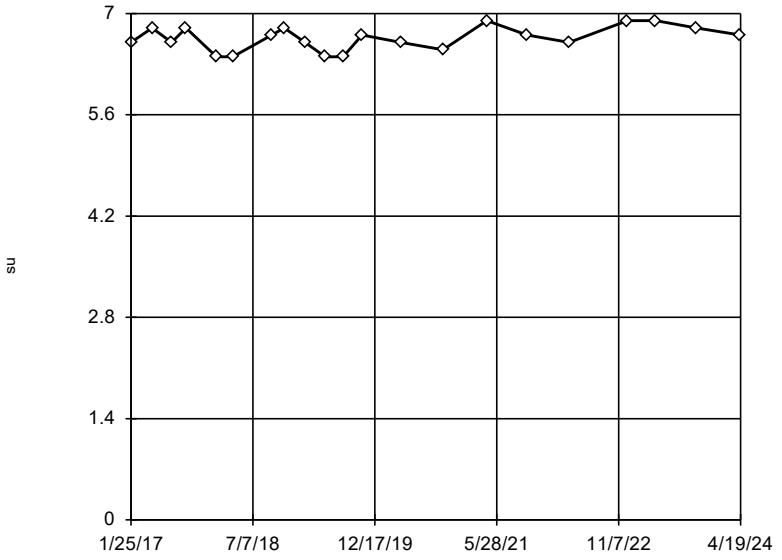
High cutoff = 6.964, low cutoff = 5.365, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-119



n = 21

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.

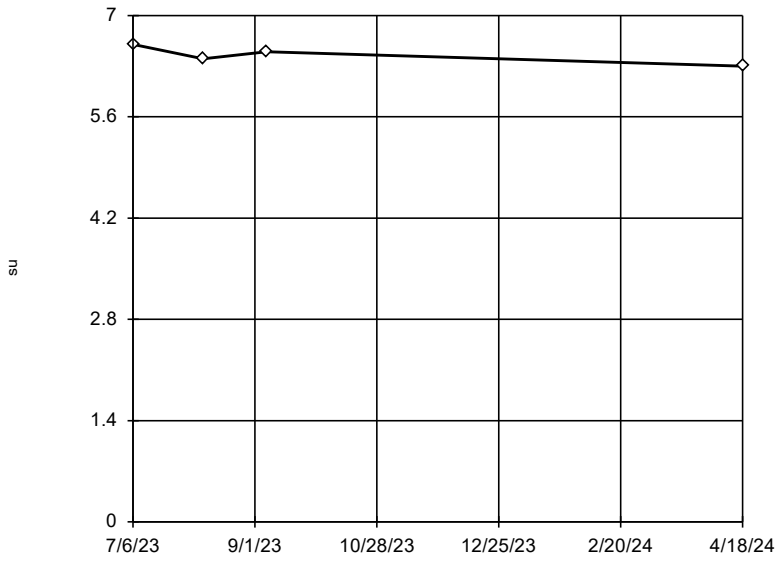
Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.355, low cutoff = 5.19, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-120 (bg)



n = 4

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.45, std. dev. 0.1291, critical Tn 1.463

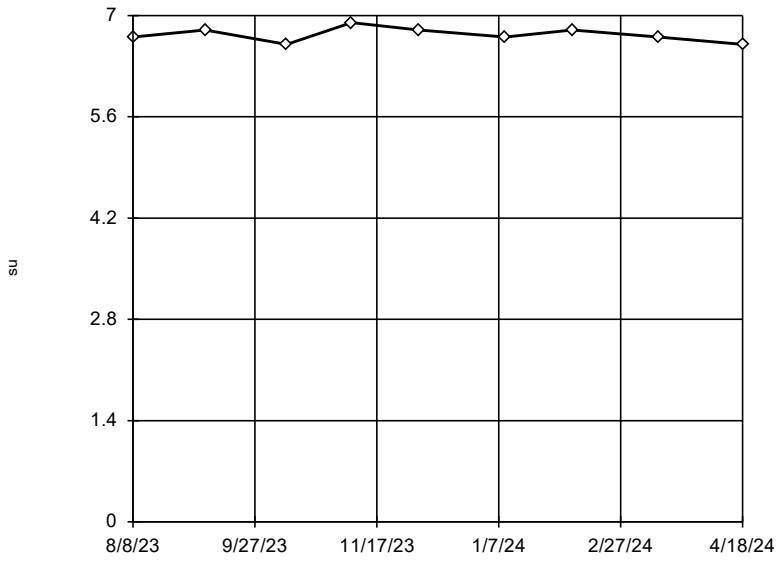
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.994
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-104 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.733, std. dev. 0.1, critical Tn 2.11

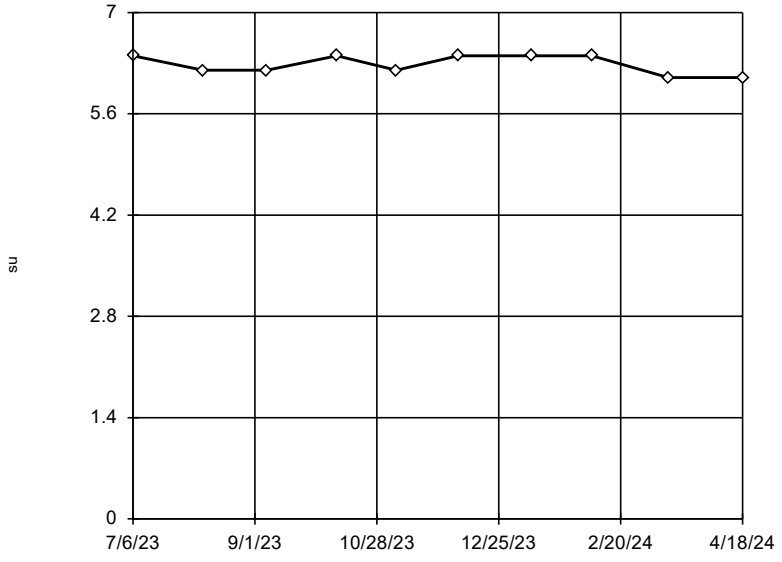
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9163
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121 (bg)



n = 10

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).

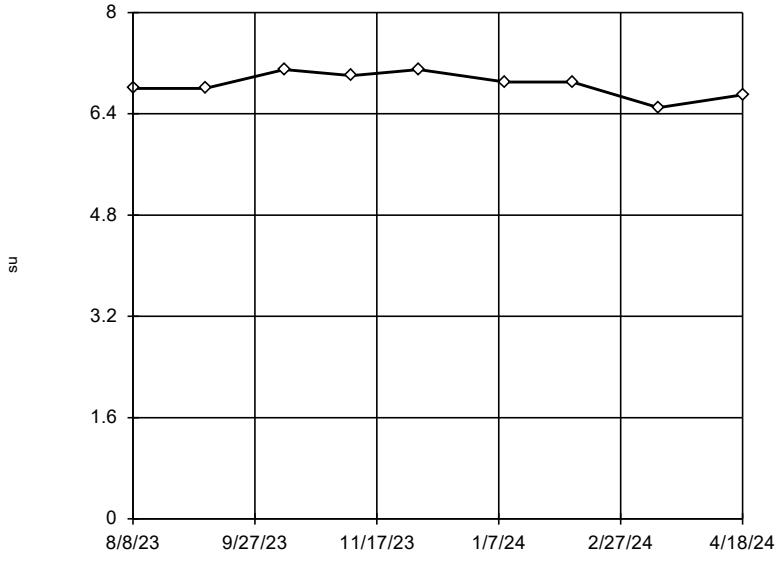
High cutoff = 7.213, low cutoff = 5.456, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110 (bg)



n = 9

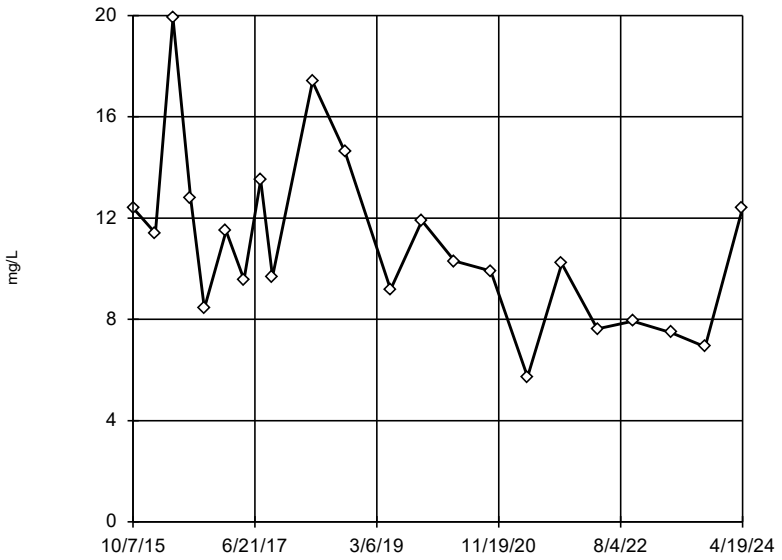
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.867, std. dev. 0.1936, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9435
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-101



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 10.94, std. dev. 3.39, critical Tn 2.603

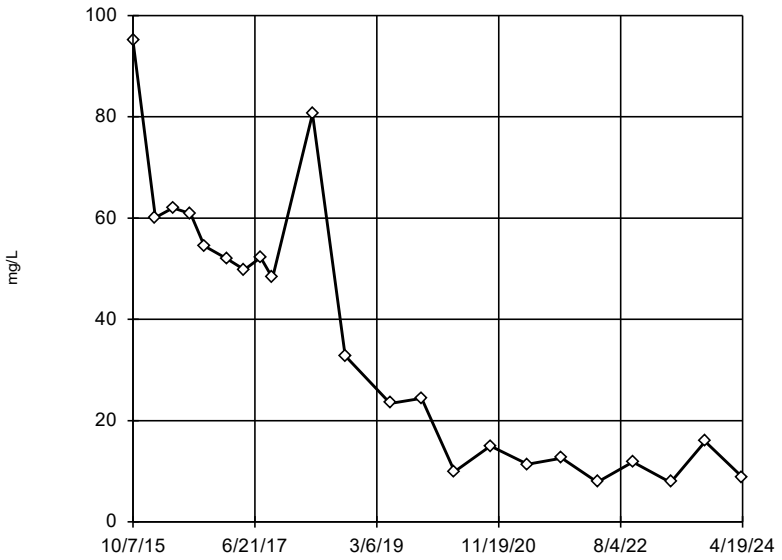
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.941
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-103



n = 22

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 root transformed to achieve best W statistic (graph shown in original units).

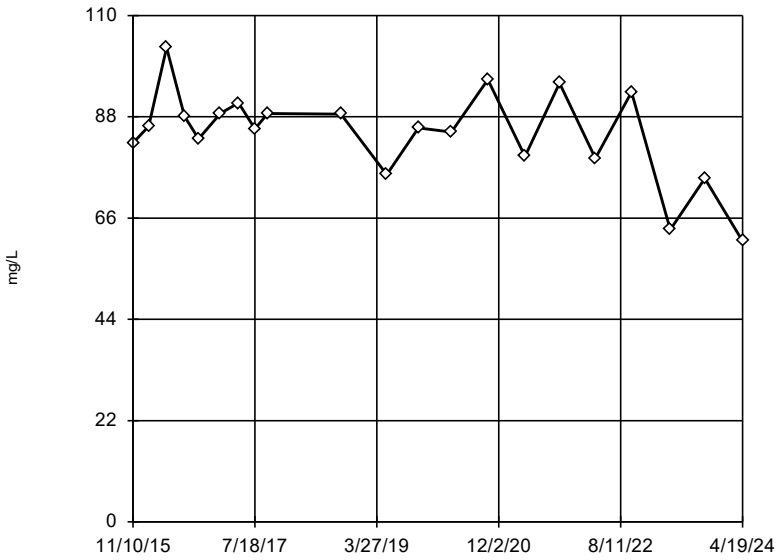
High cutoff = 641.8, low cutoff = -15.78, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 84.43, std. dev. 10.05, critical Tn 2.58

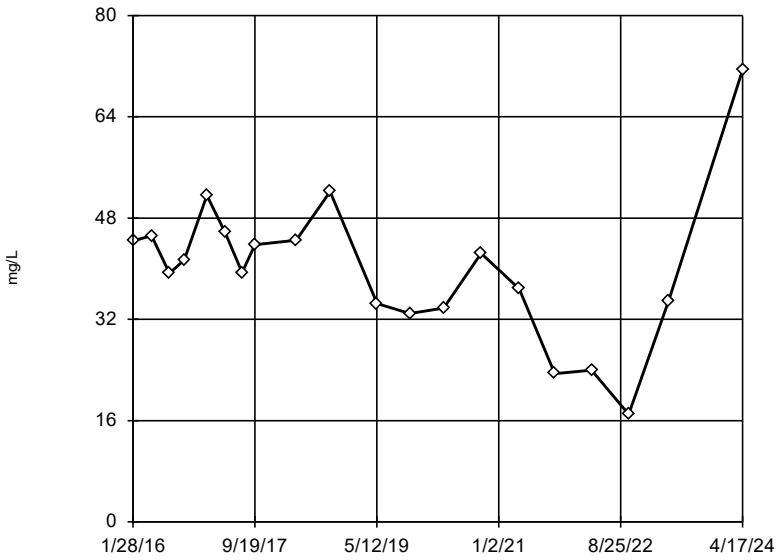
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9472
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-108 (bg)



n = 20

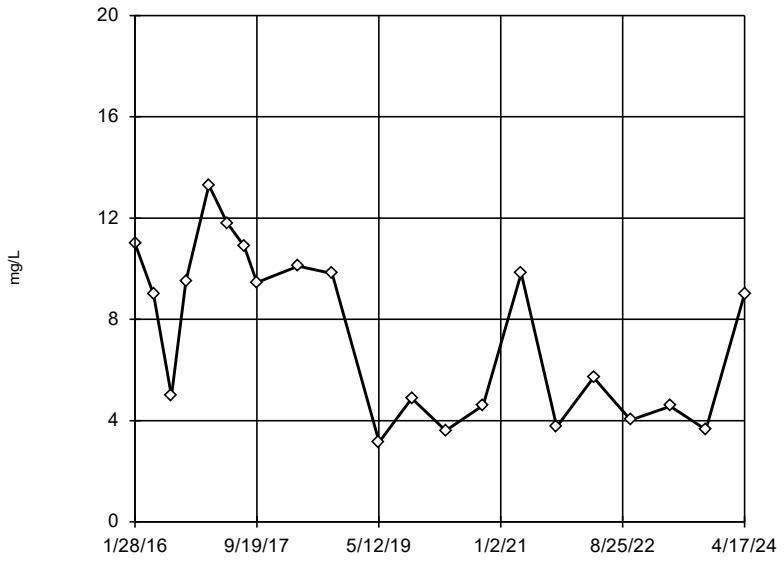
No statistical outliers.
Testing for 1 low outlier.
Mean = 39.93.
Std. Dev. = 11.72.
17: c = 0.2023
tabl = 0.45.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9205
Critical = 0.917
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-113 (bg)



n = 21

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.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

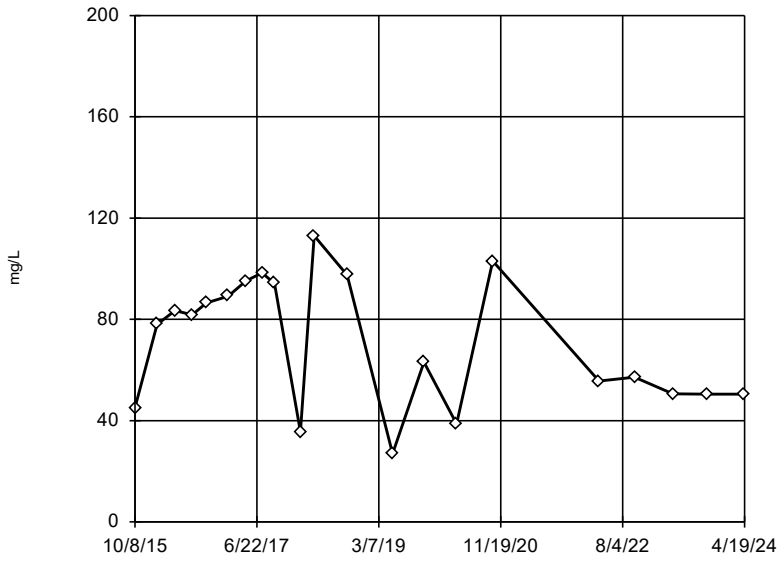
High cutoff = 26.98, low cutoff = -12.72, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-116



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 71.13, std. dev. 25.42, critical Tn 2.58

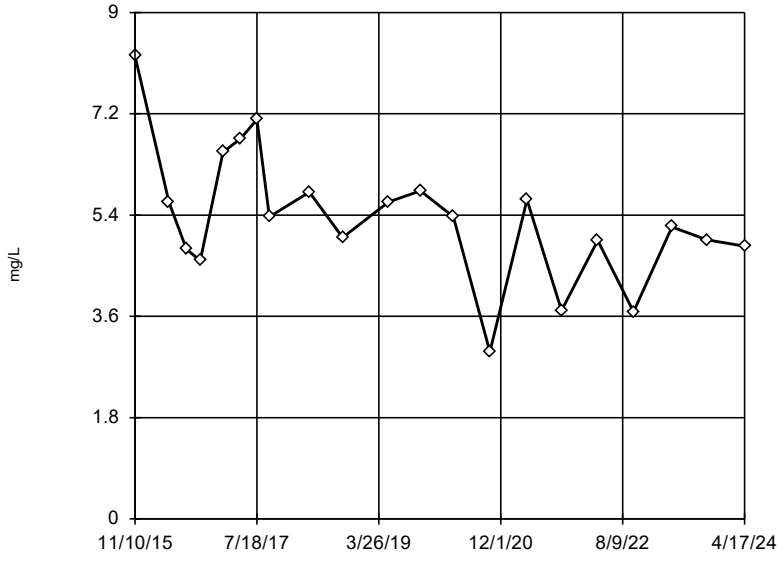
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9432
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 5.361, std. dev. 1.187, critical Tn 2.58

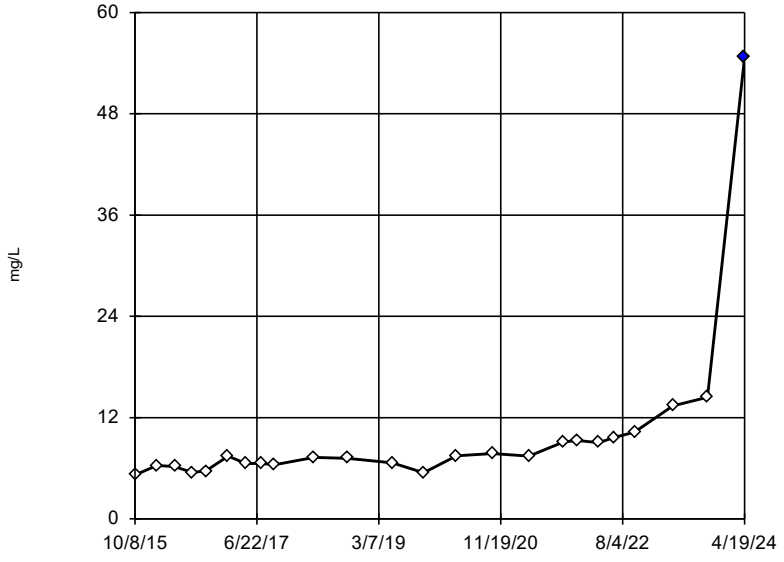
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9647
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-117



n = 24

Outlier is drawn as solid.
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).

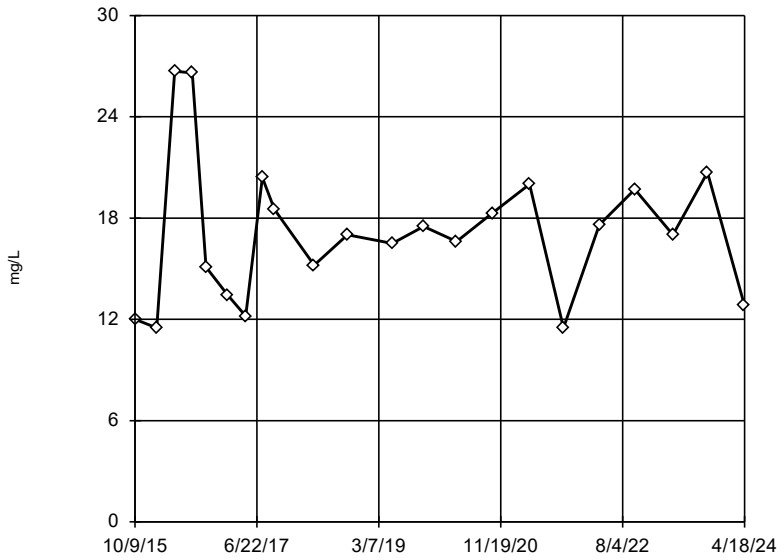
High cutoff = 27.65, low cutoff = 2.121, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-118



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 17.13, std. dev. 4.245, critical Tn 2.603

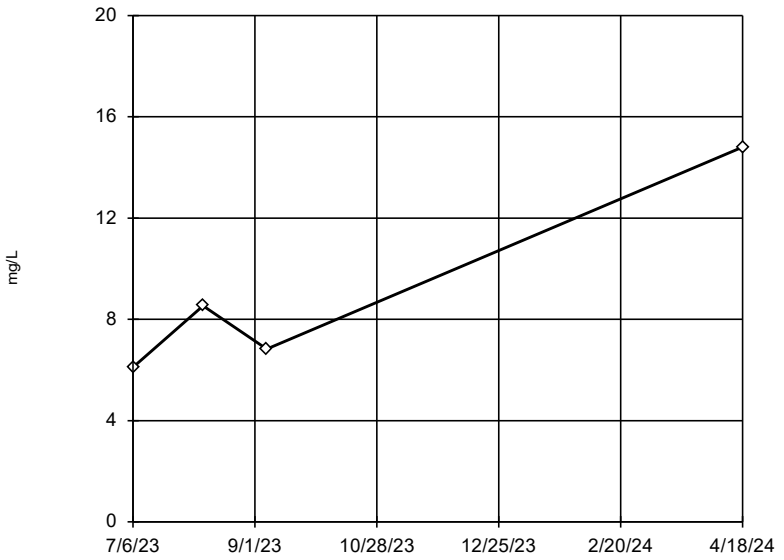
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9486
Critical = 0.926 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120 (bg)



n = 4

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 9.065, std. dev. 3.956, critical Tn 1.463

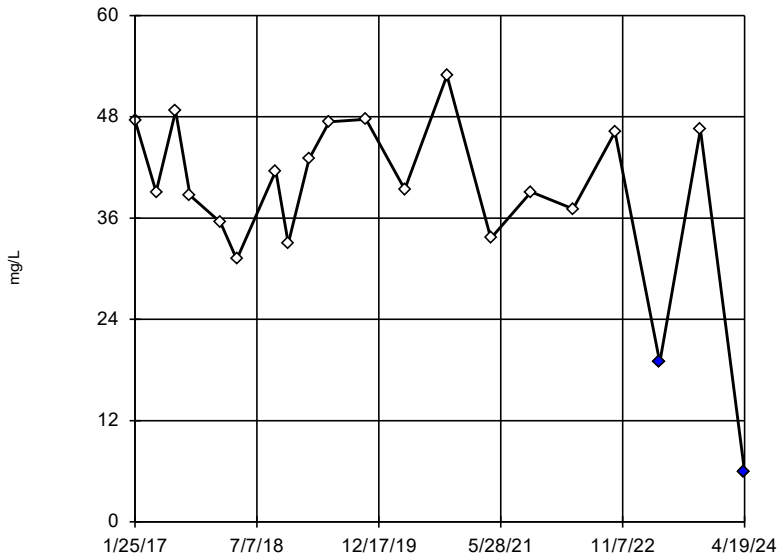
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8343
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-119



n = 20

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 38.65.
Std. Dev. = 10.95.
18.9: c = 0.4896
tabl = 0.45.
Alpha = 0.05.

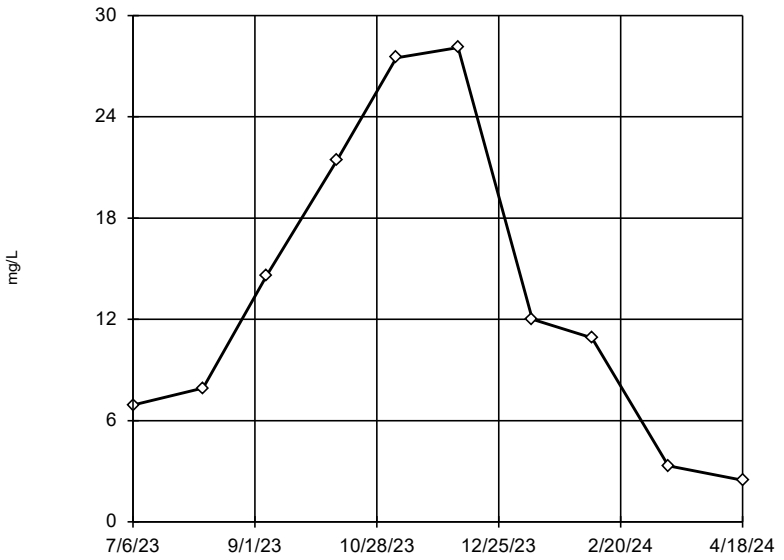
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9574
Critical = 0.914
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121 (bg)



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 13.51, std. dev. 9.318, critical Tn 2.176

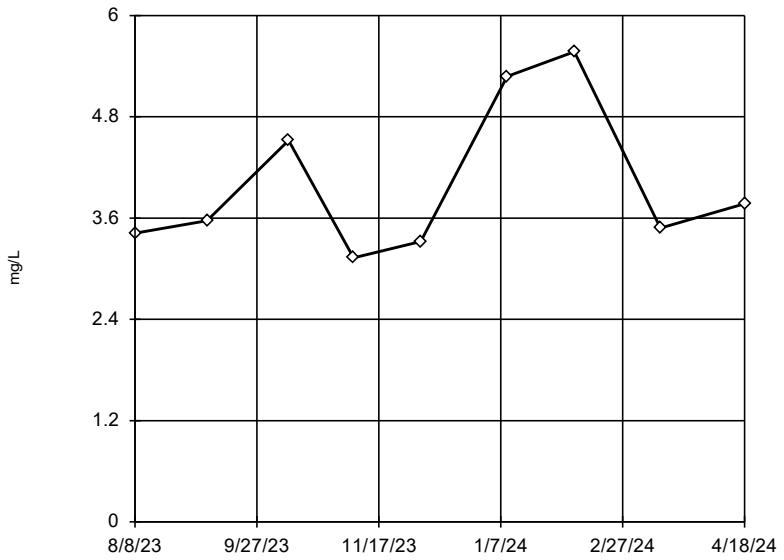
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9075
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional
Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-104 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 4.007, std. dev. 0.897, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8632
Critical = 0.859 (after natural log transformation)
The distribution was found to be log-normal.

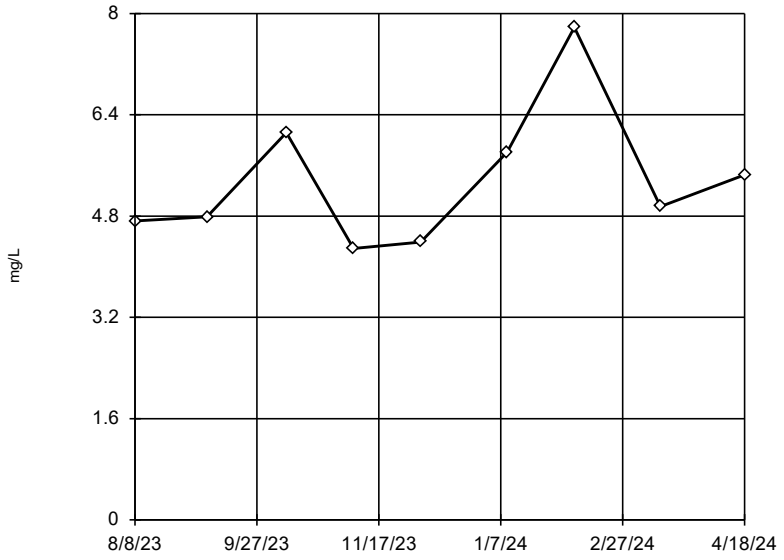
Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

EPA Screening (suspected outliers for Dixon's Test)

MW-110 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 5.367, std. dev. 1.097, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8695
Critical = 0.859
The distribution was found to be normally distributed.

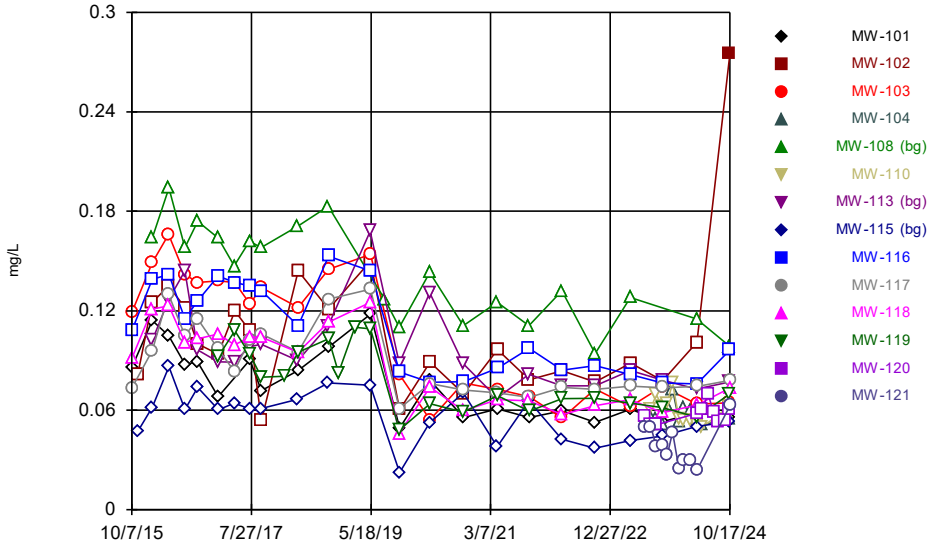
Constituent: Sulfate Analysis Run 5/28/2024 1:51 AM View: 2024-1H distributional

Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

TIME-SERIES PLOTS, SECOND HALF OF 2024 DATA SET

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Hollow symbols indicate censored values.

Time Series

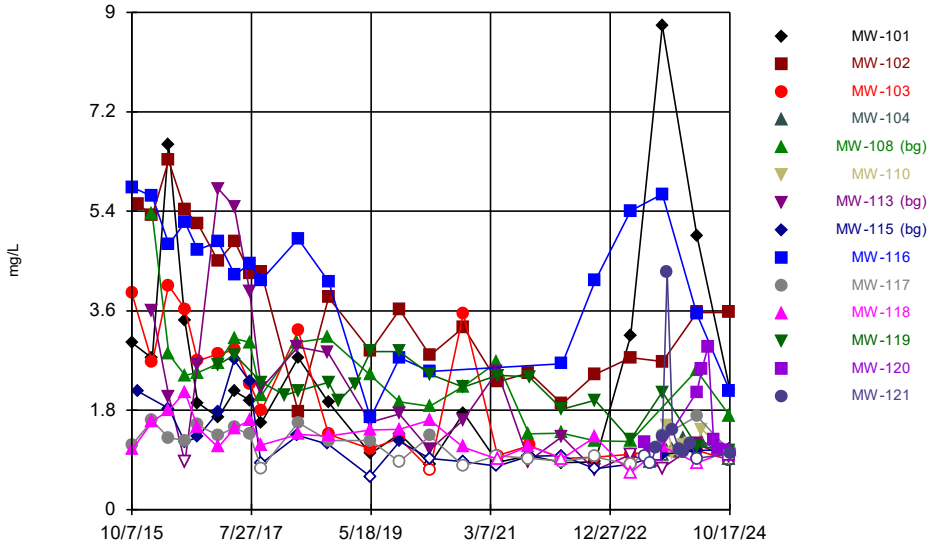


Constituent: Boron Analysis Run 11/12/2024 11:50 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

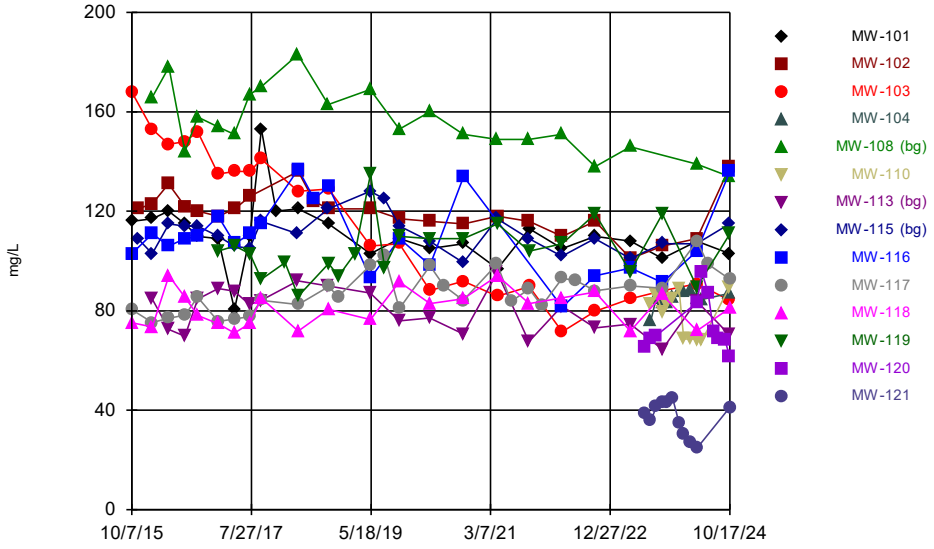


Constituent: Chloride Analysis Run 11/12/2024 11:50 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Time Series

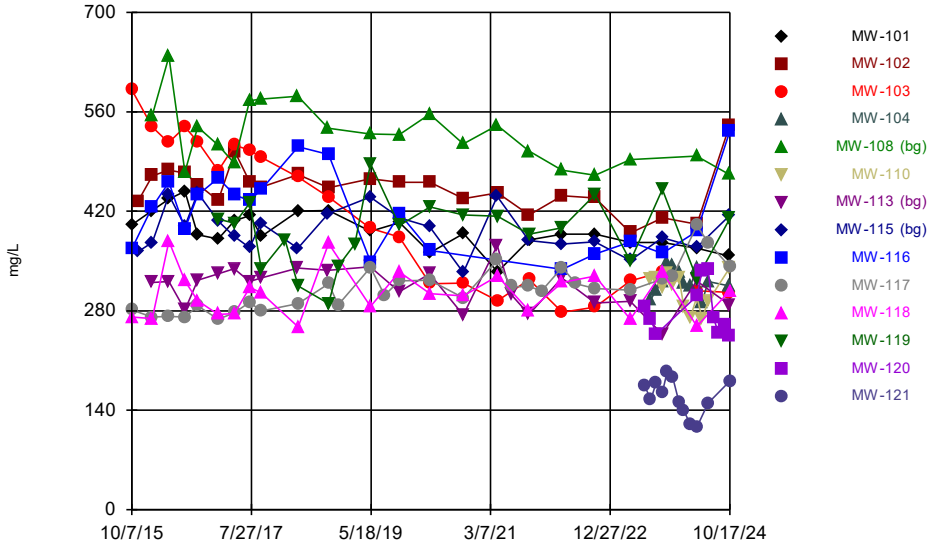


Constituent: Calcium Analysis Run 11/12/2024 11:50 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Time Series

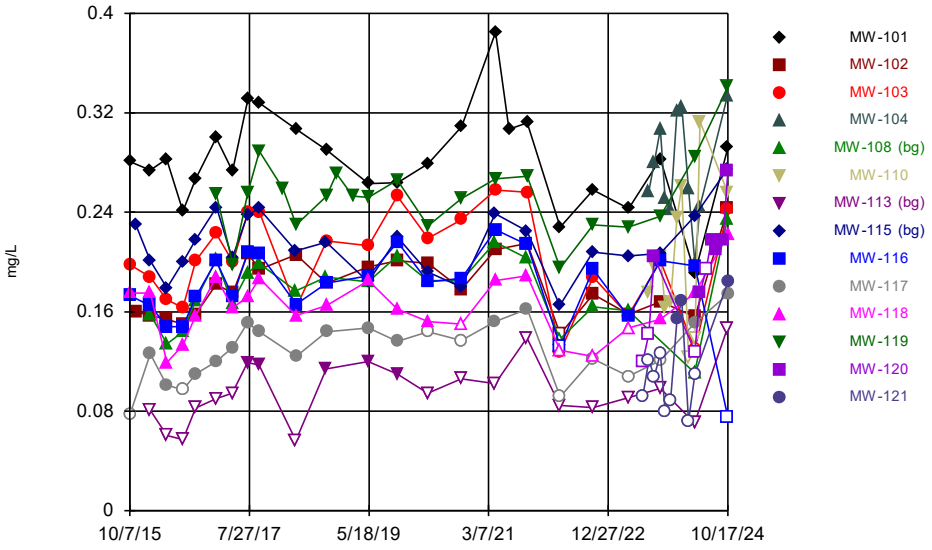


Constituent: Dissolved Solids Analysis Run 11/12/2024 11:50 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

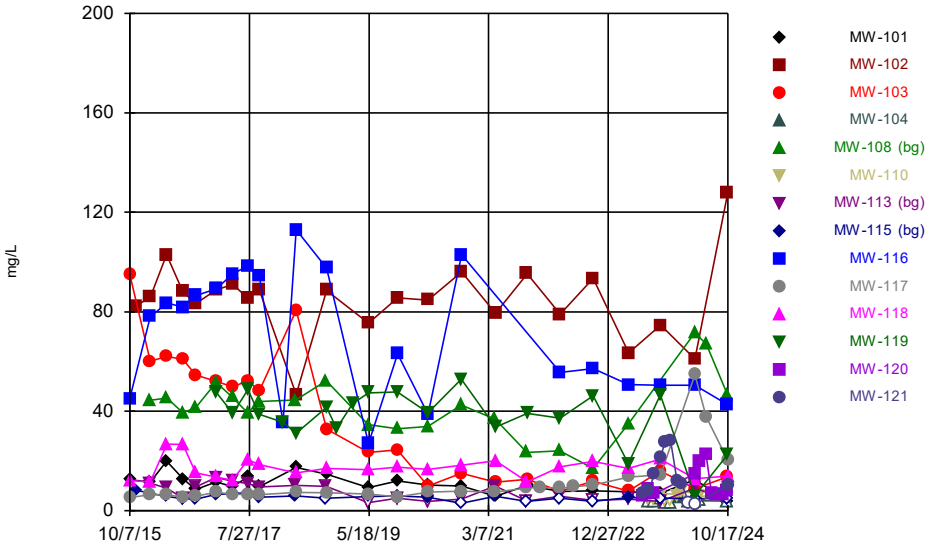


Constituent: Fluoride Analysis Run 11/12/2024 11:50 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

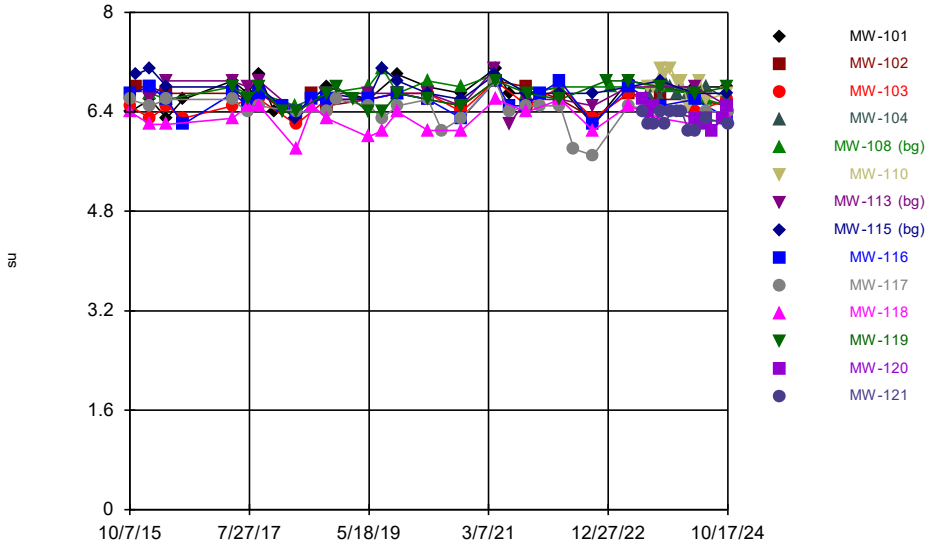


Constituent: Sulfate Analysis Run 11/12/2024 11:50 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Time Series



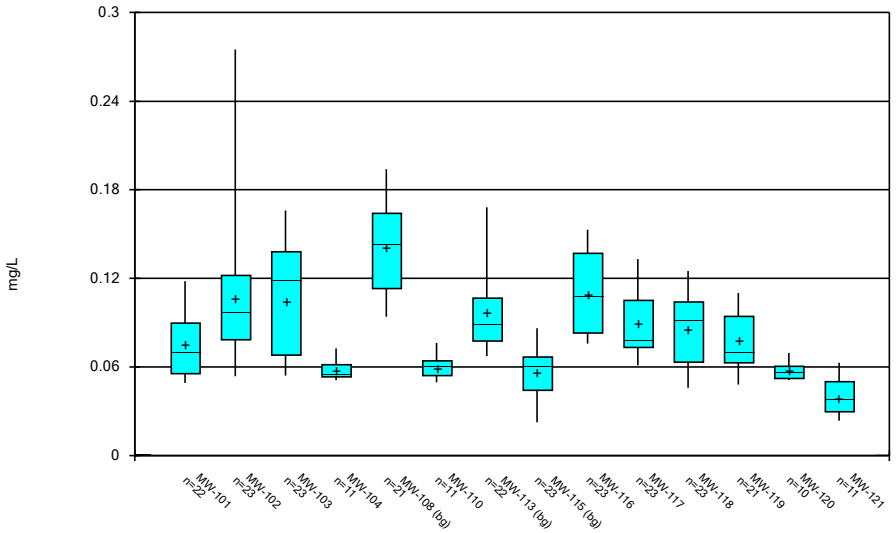
Constituent: pH Analysis Run 11/12/2024 11:50 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

BOX-AND-WHISKER PLOTS
SECOND HALF OF 2024 DATA SET

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Box & Whiskers Plot

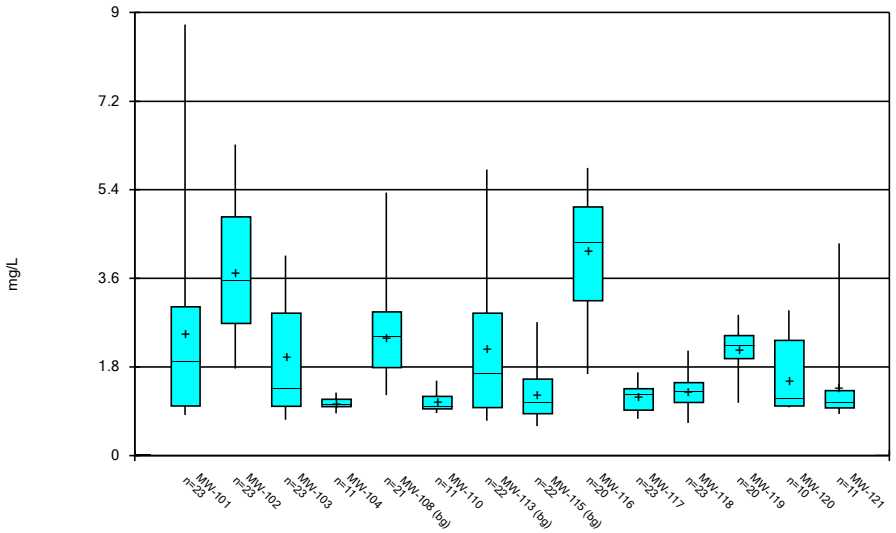


Constituent: Boron Analysis Run 11/12/2024 12:07 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

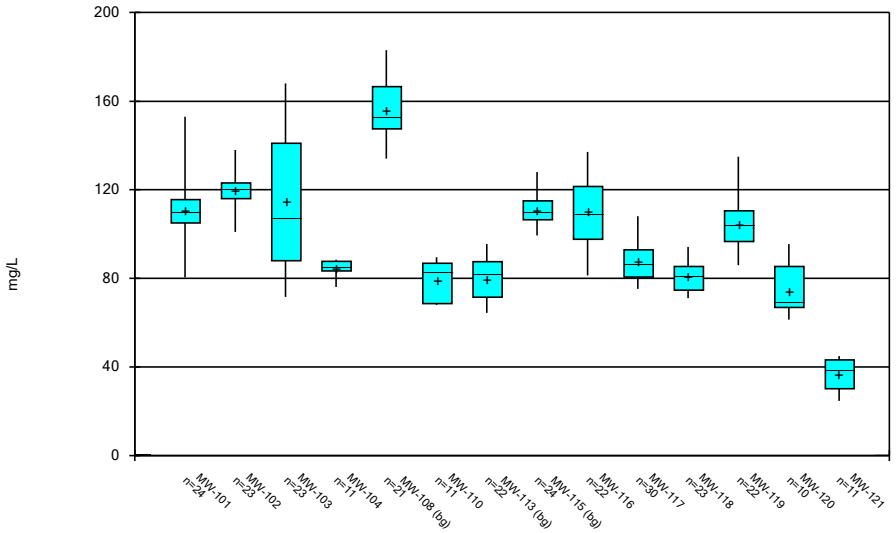


Constituent: Chloride Analysis Run 11/12/2024 12:07 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

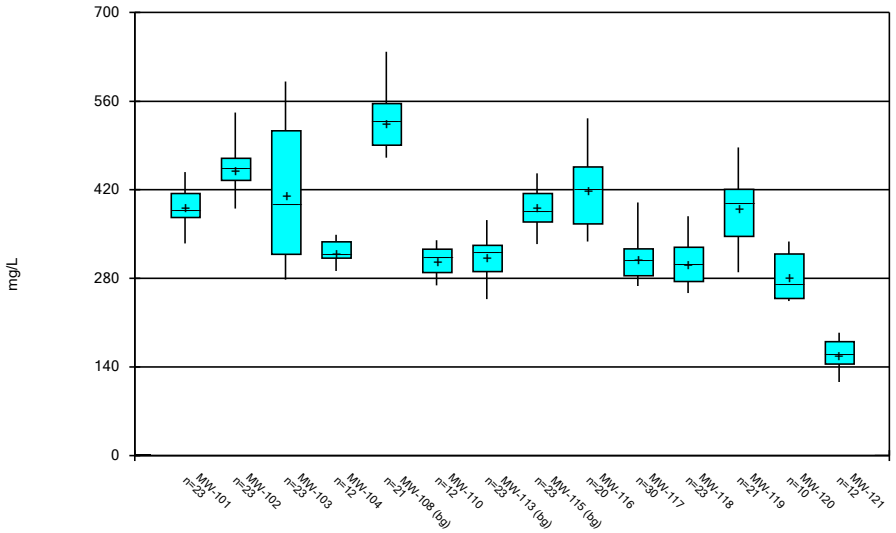


Constituent: Calcium Analysis Run 11/12/2024 12:07 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

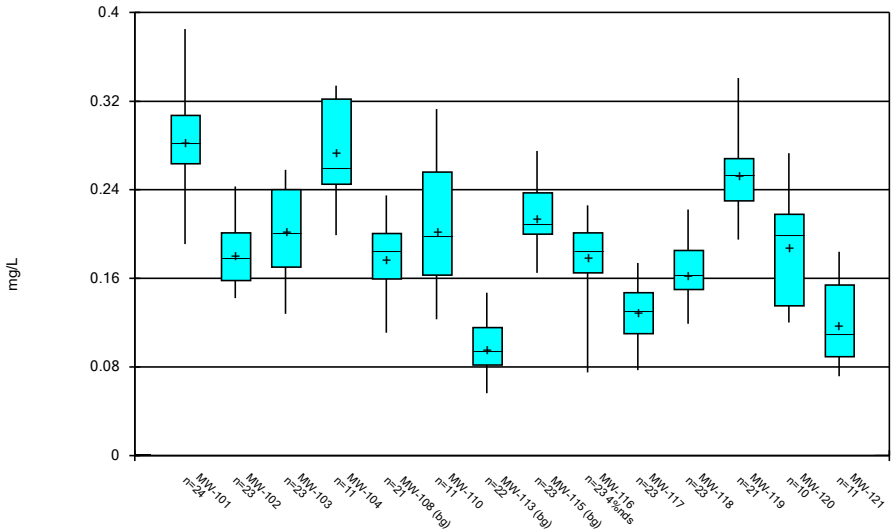


Constituent: Dissolved Solids Analysis Run 11/12/2024 12:07 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

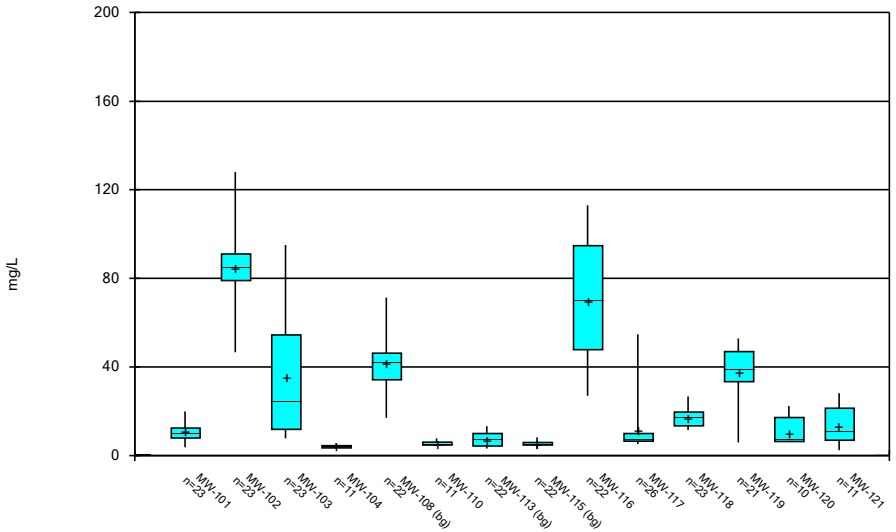


Constituent: Fluoride Analysis Run 11/12/2024 12:07 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot

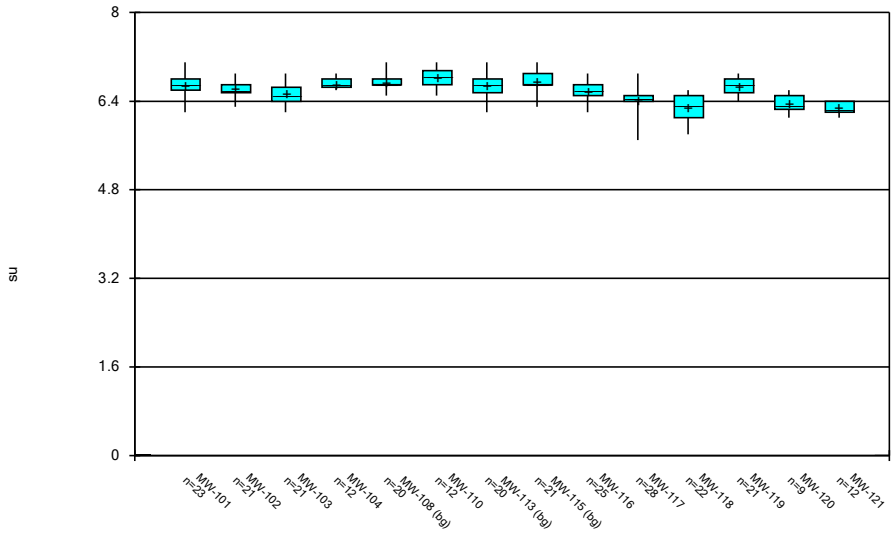


Constituent: Sulfate Analysis Run 11/12/2024 12:07 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Box & Whiskers Plot



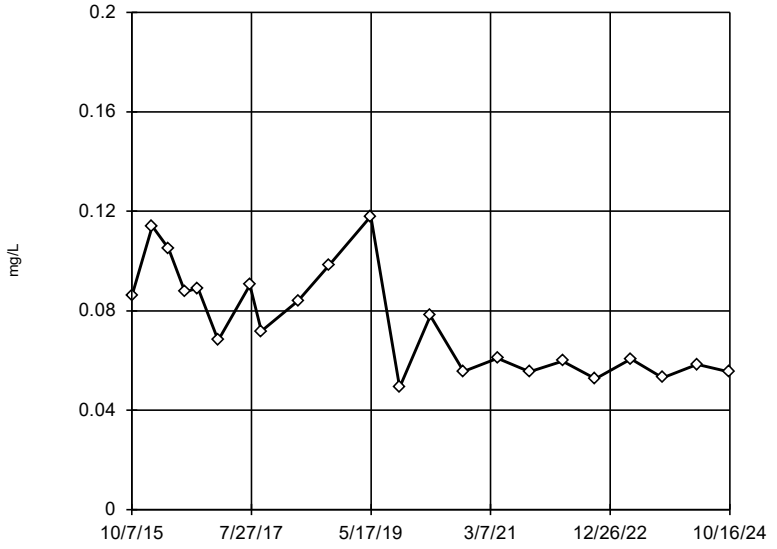
Constituent: pH Analysis Run 11/12/2024 12:07 PM

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 2024 DATA SET

EPA Screening (suspected outliers for Dixon's Test)

MW-101



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.07502, std. dev. 0.02113, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9263
Critical = 0.926 (after natural log transformation)
The distribution was found to be log-normal.

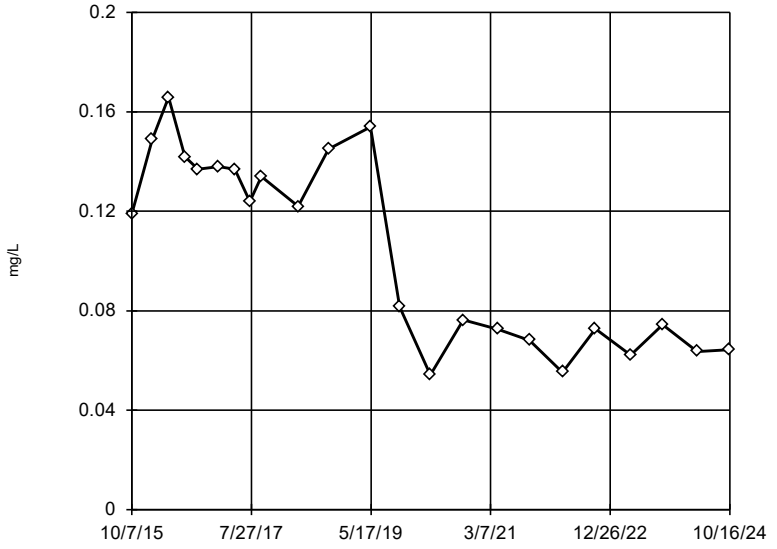
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-103



n = 23

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.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 0.3477, low cutoff = -0.1416, based on IQR multiplier of 3.

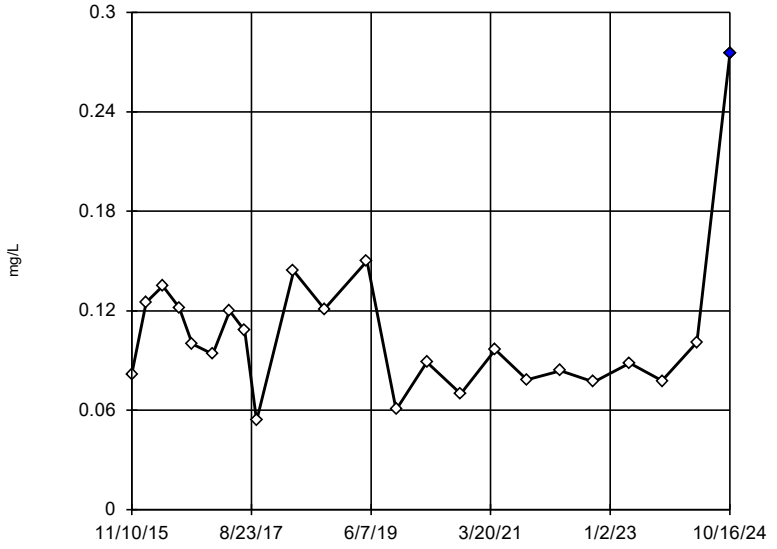
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Rosner's Outlier Test

MW-102



n = 23

Statistical outlier is drawn as solid.

k = 1
r = 3.751
Tabulated value = 2.808
Alpha = 0.01

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9701
Critical = 0.926
The distribution, after removal of suspect value, was found to be normally distributed.

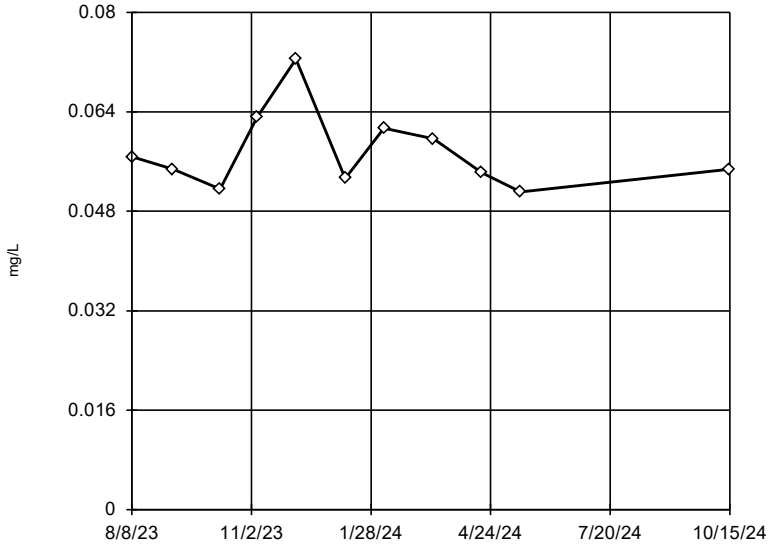
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-104



n = 11

No statistical outliers.
Testing for 1 high outlier.
Mean = 0.05758.
Std. Dev. = 0.006299.
0.0725 (J): c = 0.5311
tabl = 0.576.
Alpha = 0.05.

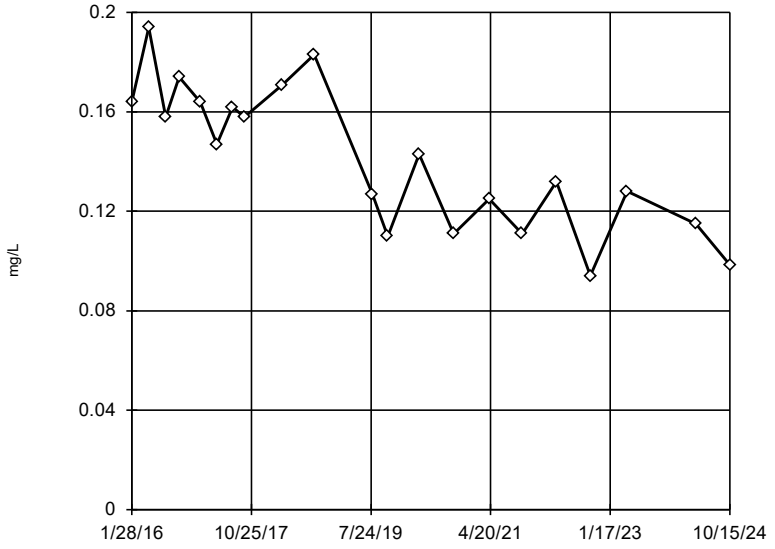
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9249
Critical = 0.869
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

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 = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1414, std. dev. 0.029, critical Tn 2.58

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9602
Critical = 0.923
The distribution was found to be normally distributed.

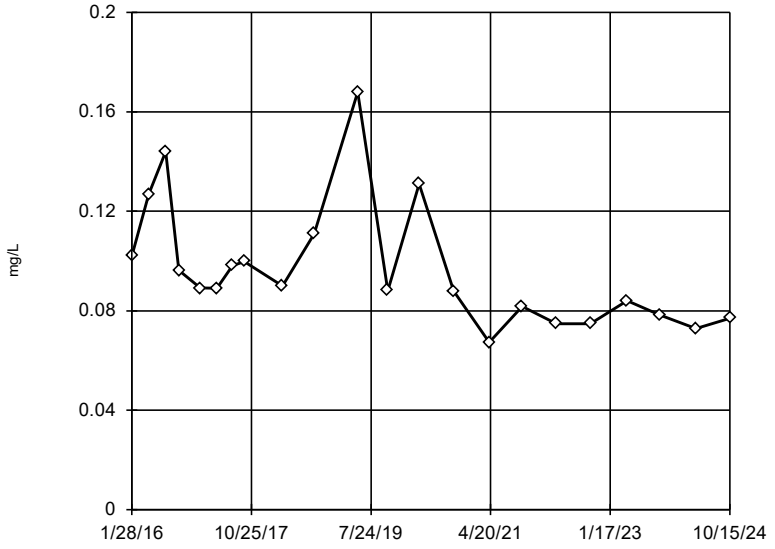
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-113 (bg)



n = 22

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 = 0.2749,
low cutoff = 0.03002,
based on IQR multiplier of 3.

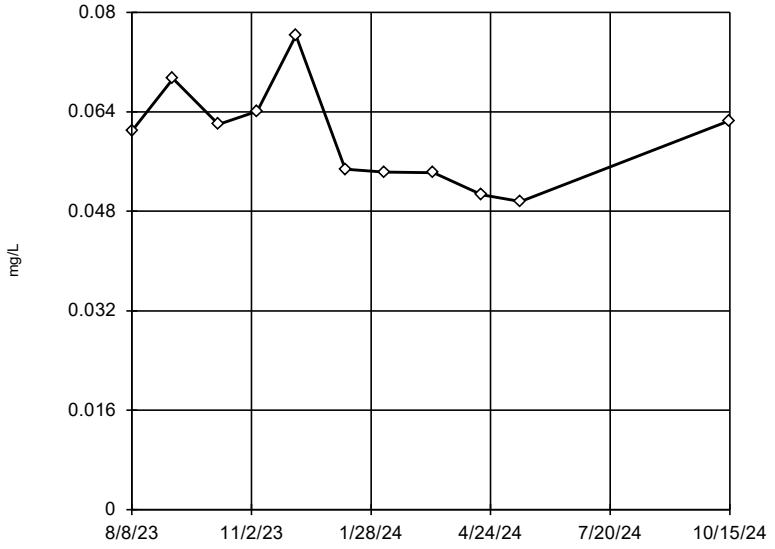
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0599, std. dev. 0.008186, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9384
Critical = 0.876
The distribution was found to be normally distributed.

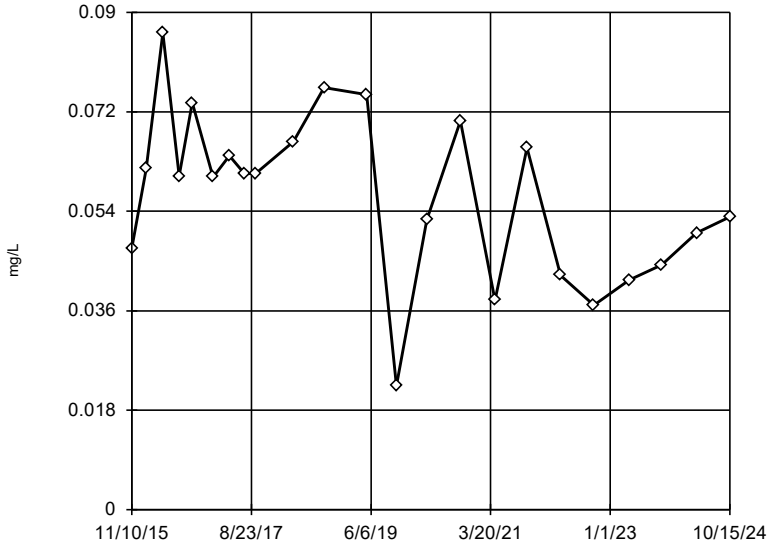
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Rosner's Outlier Test

MW-115 (bg)



n = 23

No statistical outliers.

k = 1
r = 2.28
Tabulated value = 2.808
Alpha = 0.01

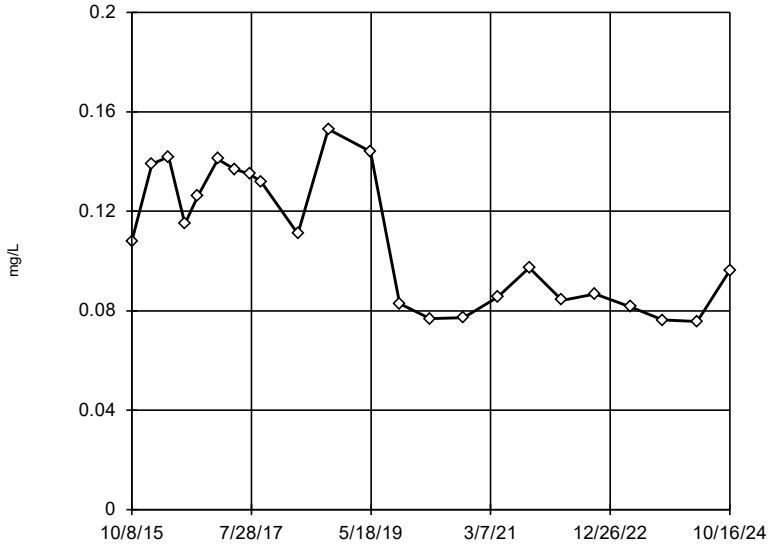
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9704
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-116



n = 23

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 root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.4286, low cutoff = 0.007714, based on IQR multiplier of 3.

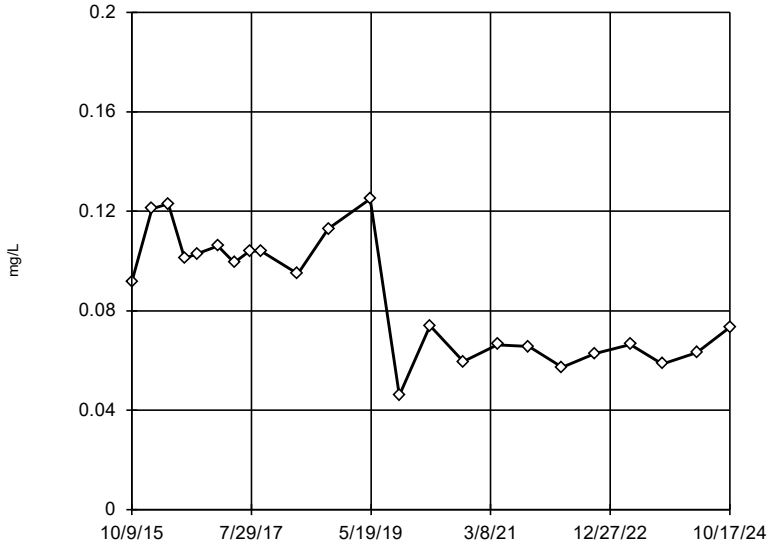
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-118



n = 23

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 root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.323, low cutoff = 0.006079, based on IQR multiplier of 3.

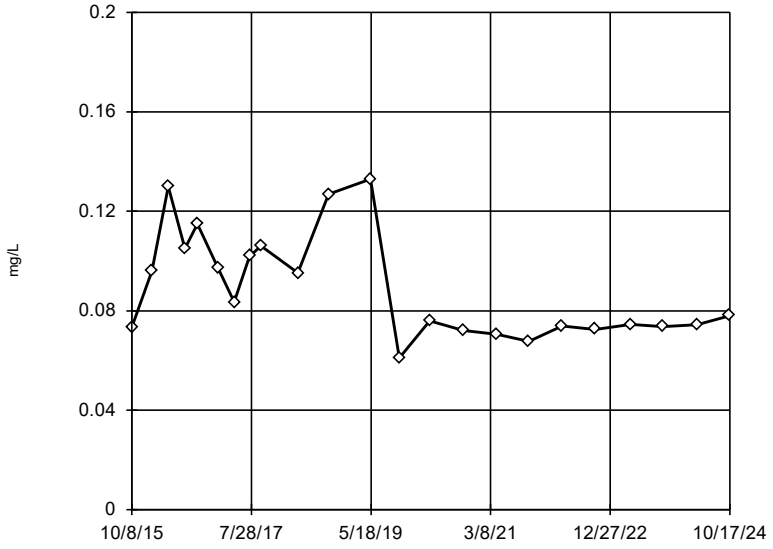
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-117



n = 23

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 = 0.3086, low cutoff = 0.02494, based on IQR multiplier of 3.

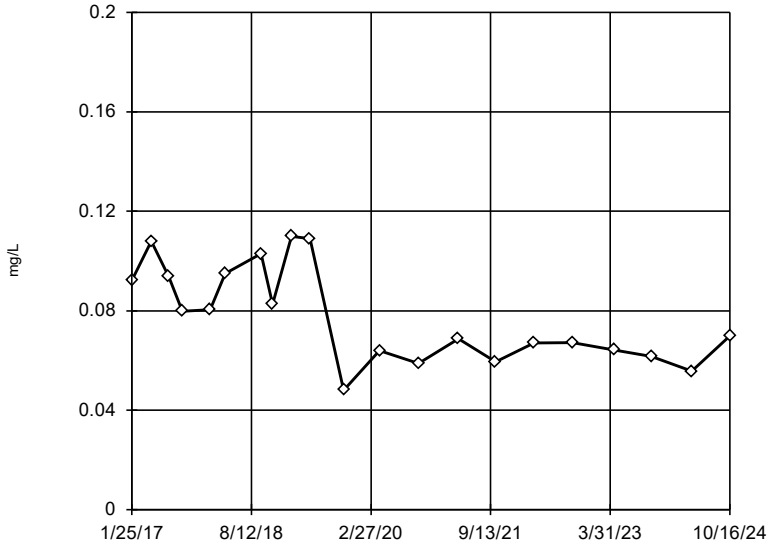
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.078, std. dev. 0.01928, critical Tn 2.58

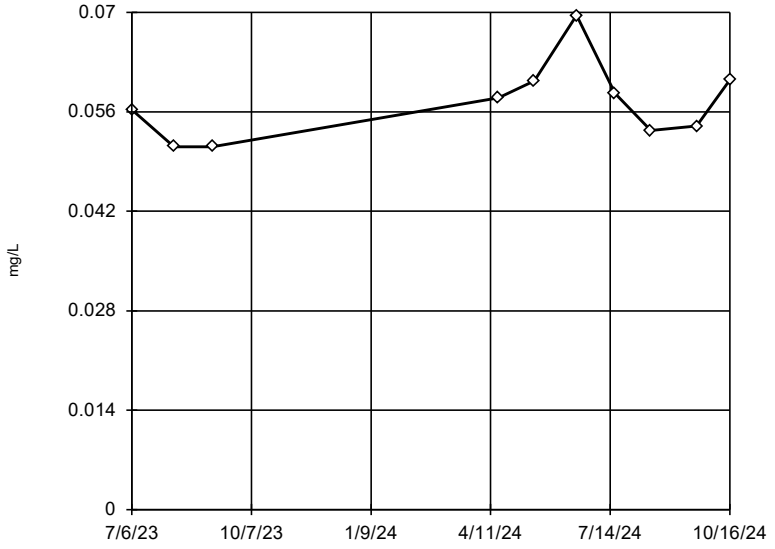
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9253
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

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-120



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0573, std. dev. 0.005551, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9048
Critical = 0.869
The distribution was found to be normally distributed.

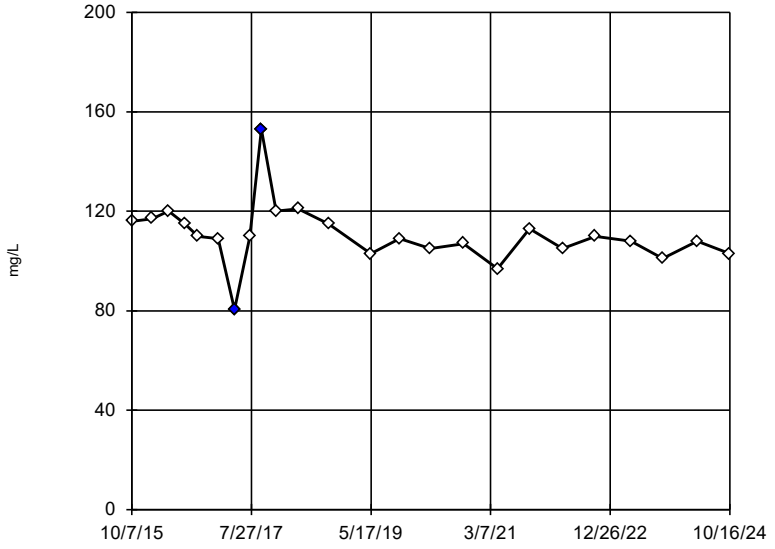
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Rosner's Outlier Test

MW-101



n = 24

Statistical outliers are drawn as solid.

k = 2
r = 3.199
Tabulated value = 3.194
Alpha = 0.01

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9725
Critical = 0.926
The distribution, after removal of suspect values, was found to be normally distributed.

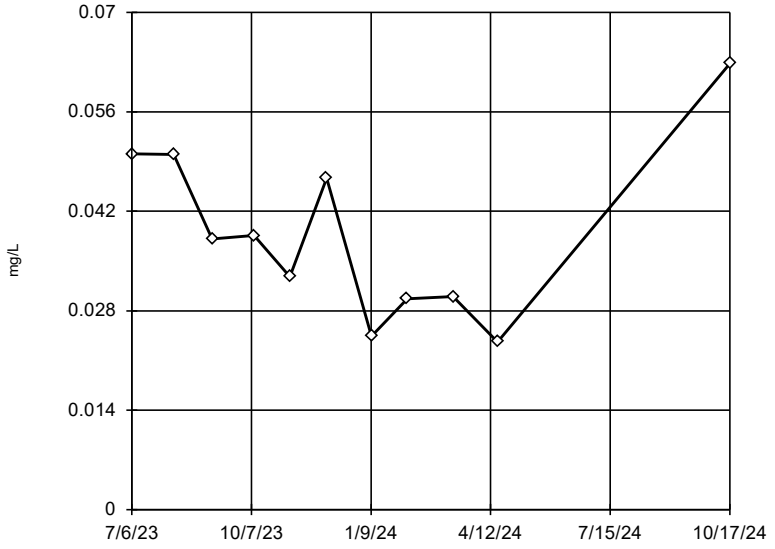
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0388, std. dev. 0.01236, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9385
Critical = 0.876
The distribution was found to be normally distributed.

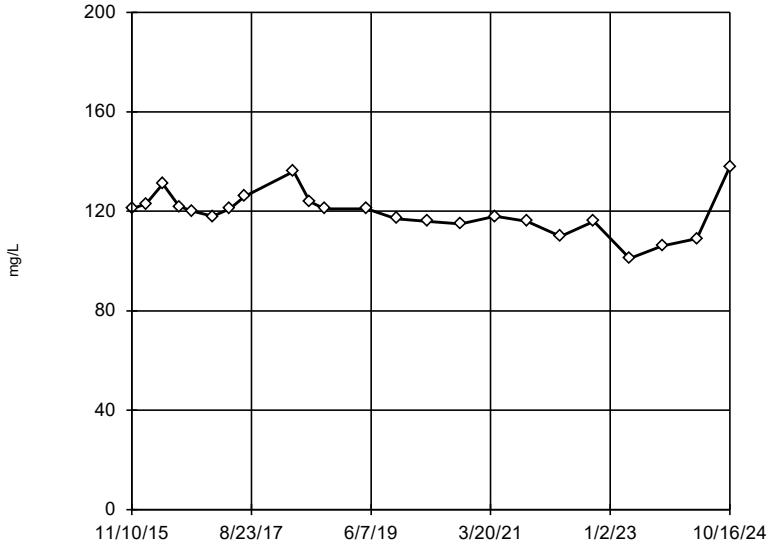
Constituent: Boron Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-102



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 119.4, std. dev. 8.606, critical Tn 2.624

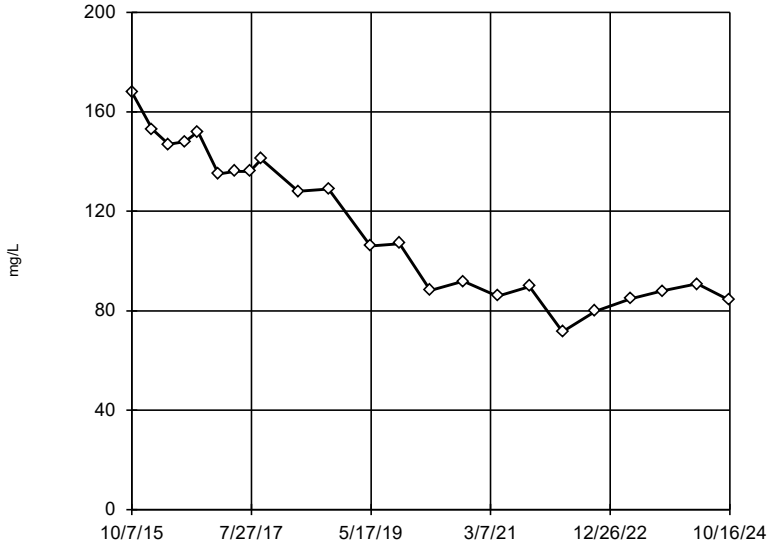
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9606
Critical = 0.928
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-103



n = 23

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 = 580, low cutoff = 21.39, based on IQR multiplier of 3.

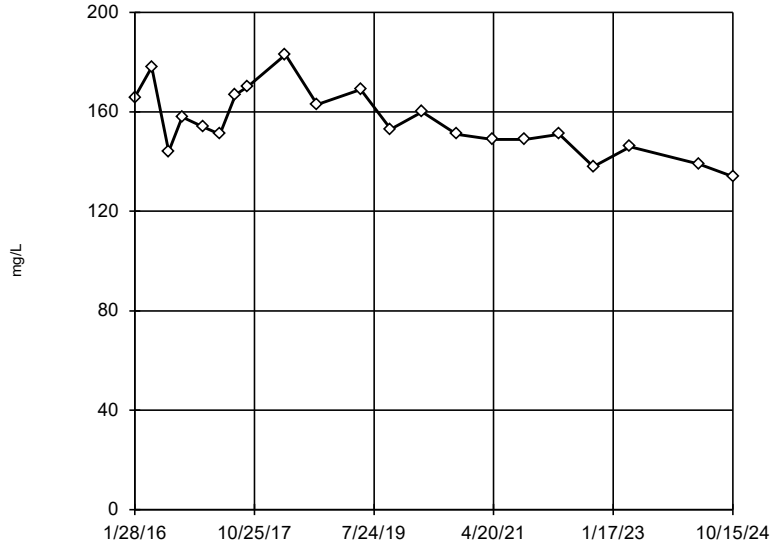
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 155.9, std. dev. 13.03, critical Tn 2.58

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9742
Critical = 0.923
The distribution was found to be normally distributed.

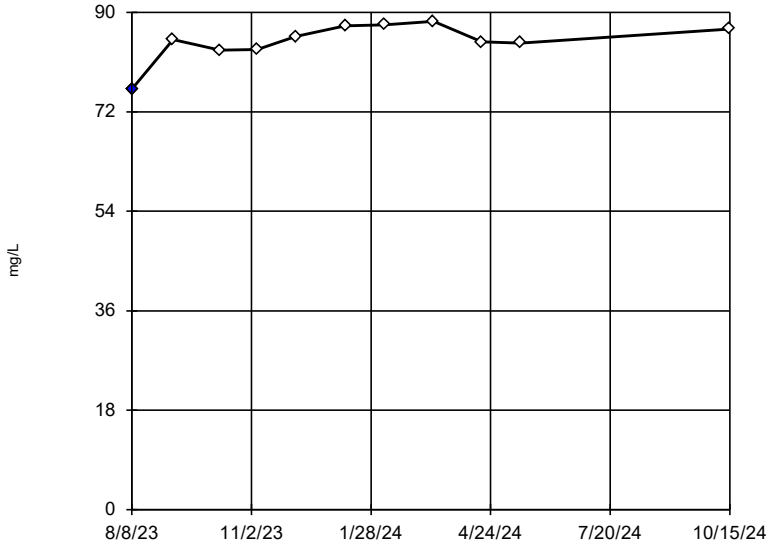
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-104



n = 11

Statistical outlier is drawn as solid.
Testing for 1 low outlier.
Mean = 84.85.
Std. Dev. = 3.407.
76.1: c = 0.6154
tabl = 0.576.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9287
Critical = 0.869
The distribution, after removal of suspect value, was found to be normally distributed.

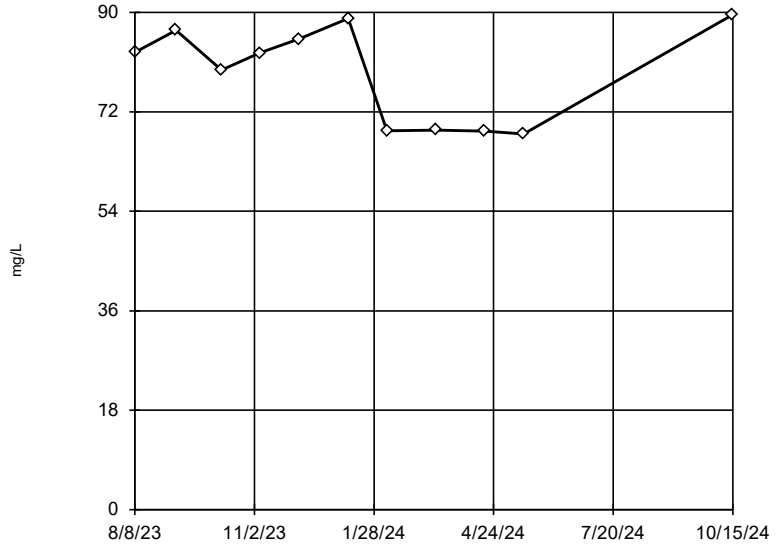
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-110



n = 11

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).

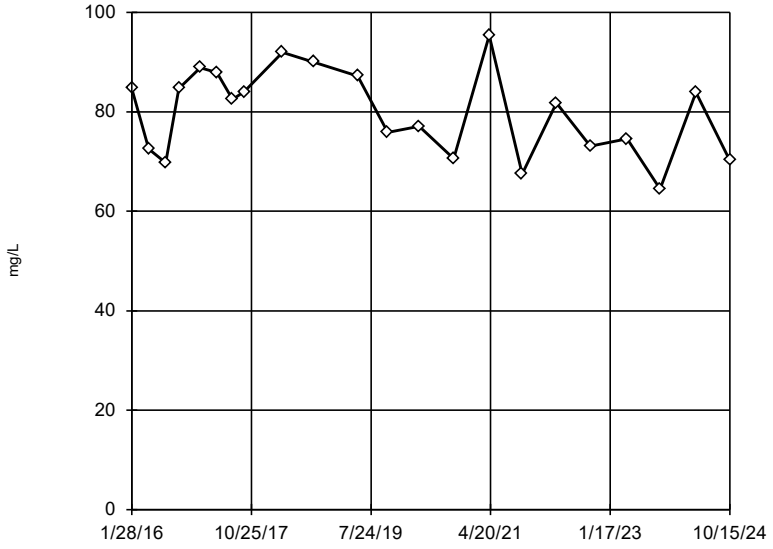
High cutoff = 105.7, low cutoff = -97.63, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

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 = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 79.95, std. dev. 8.738, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9609
Critical = 0.926
The distribution was found to be normally distributed.

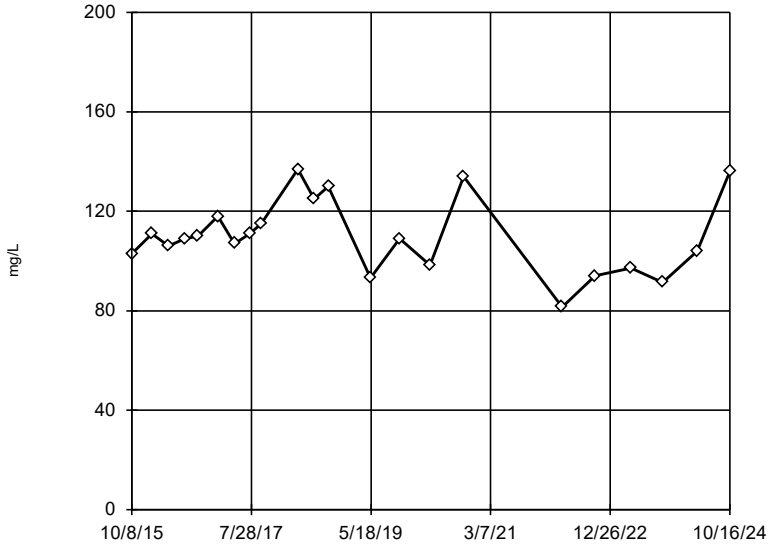
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-116



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 110, std. dev. 15.14, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9587
Critical = 0.926
The distribution was found to be normally distributed.

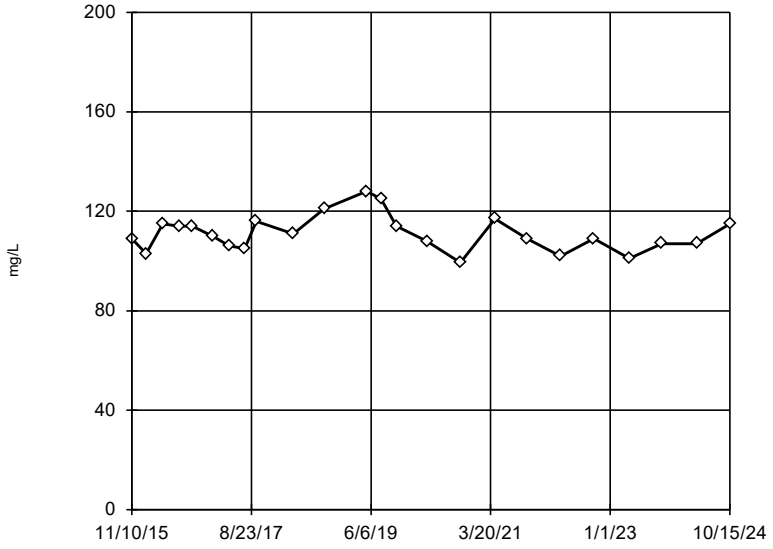
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-115 (bg)



n = 24

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 111.1, std. dev. 7.222, critical Tn 2.644

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.963
Critical = 0.93
The distribution was found to be normally distributed.

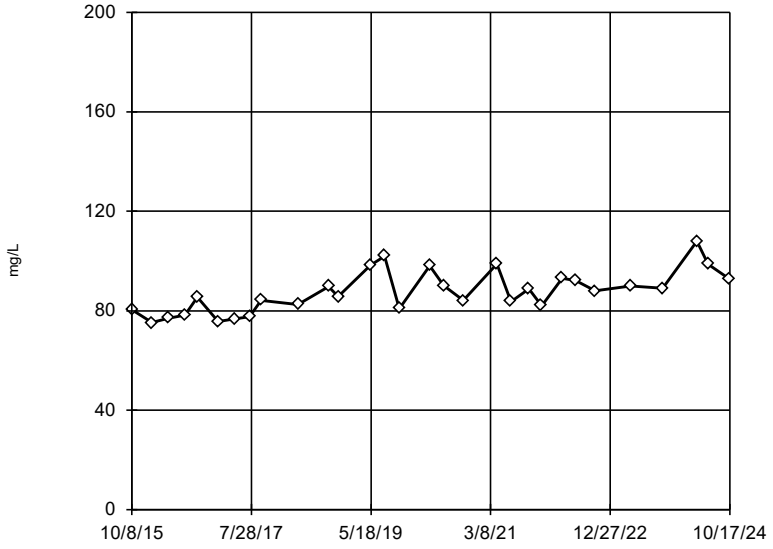
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-117



n = 30

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 87.56, std. dev. 8.533, critical Tn 2.745

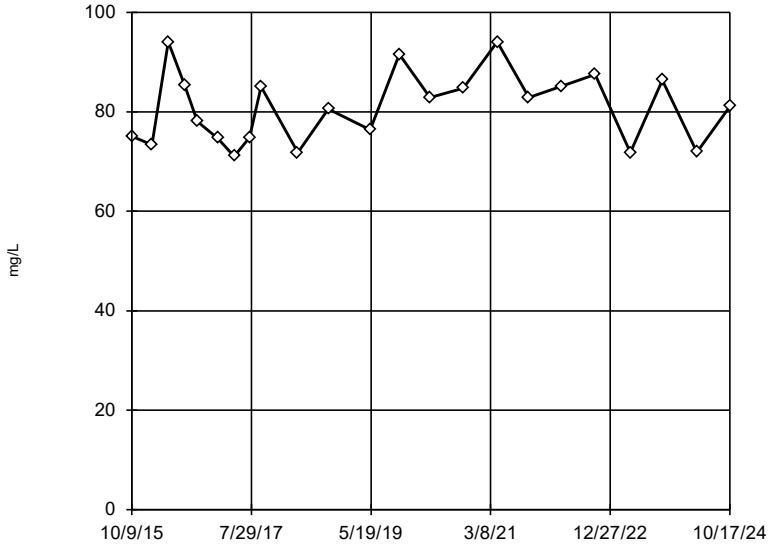
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9565
Critical = 0.939
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Rosner's Test)

MW-118



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 80.91, std. dev. 7.235, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9326
Critical = 0.928
The distribution was found to be normally distributed.

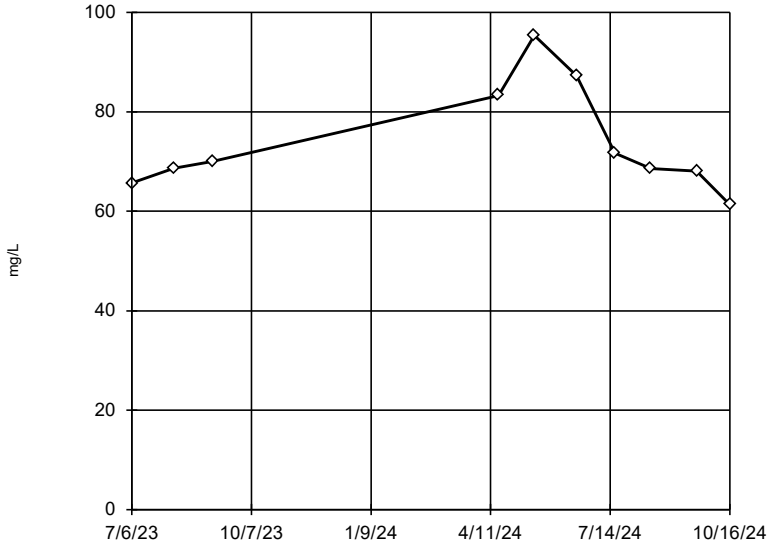
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 74.01, std. dev. 10.88, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8895
Critical = 0.869 (after natural log transformation)
The distribution was found to be log-normal.

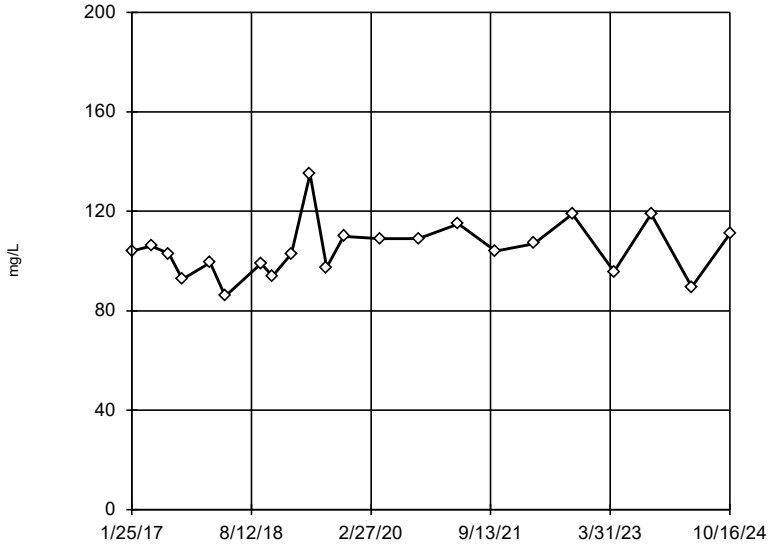
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 104.9, std. dev. 11.1, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9638
Critical = 0.926
The distribution was found to be normally distributed.

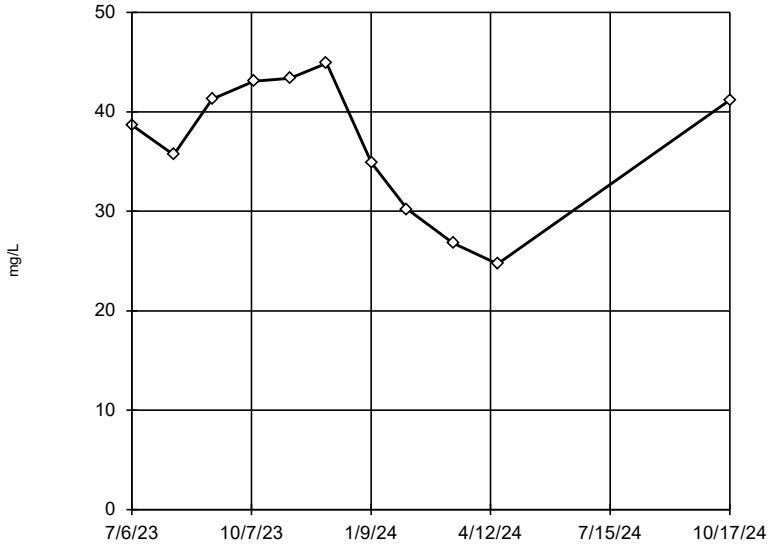
Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 36.81, std. dev. 6.978, critical Tn 2.234

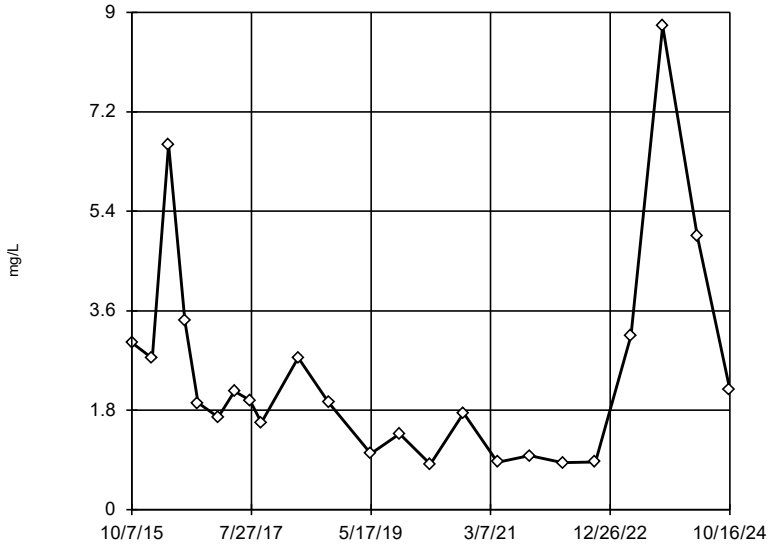
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9083
Critical = 0.876
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Rosner's Test)

MW-101



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 2.491, std. dev. 1.952, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9451
Critical = 0.928 (after natural log transformation)
The distribution was found to be log-normal.

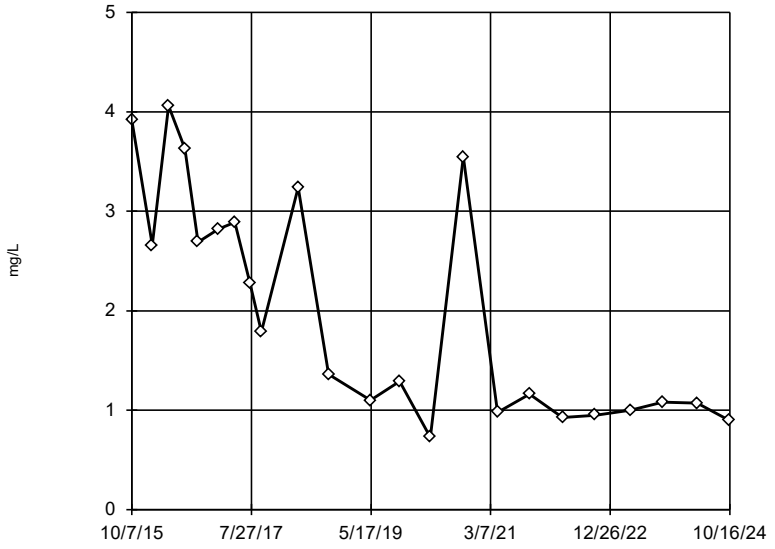
Constituent: Chloride Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-103



n = 23

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 = 69.76, low cutoff = 0.04143, based on IQR multiplier of 3.

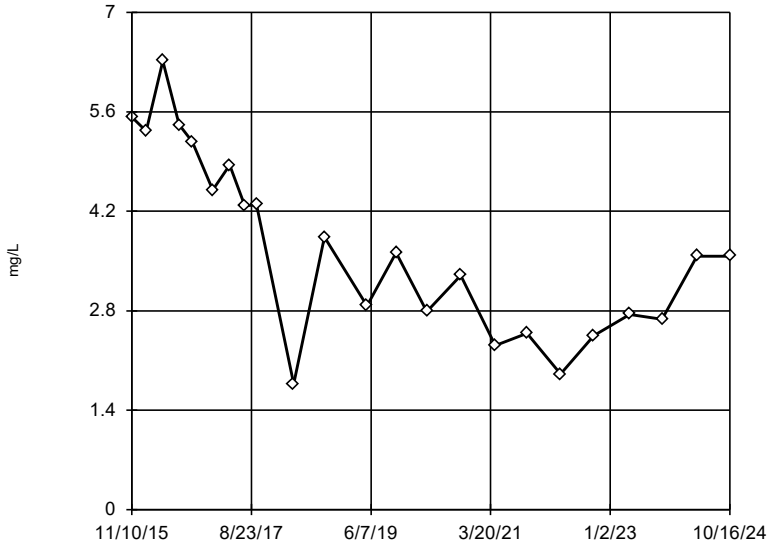
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-102



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 3.722, std. dev. 1.284, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9572
Critical = 0.928
The distribution was found to be normally distributed.

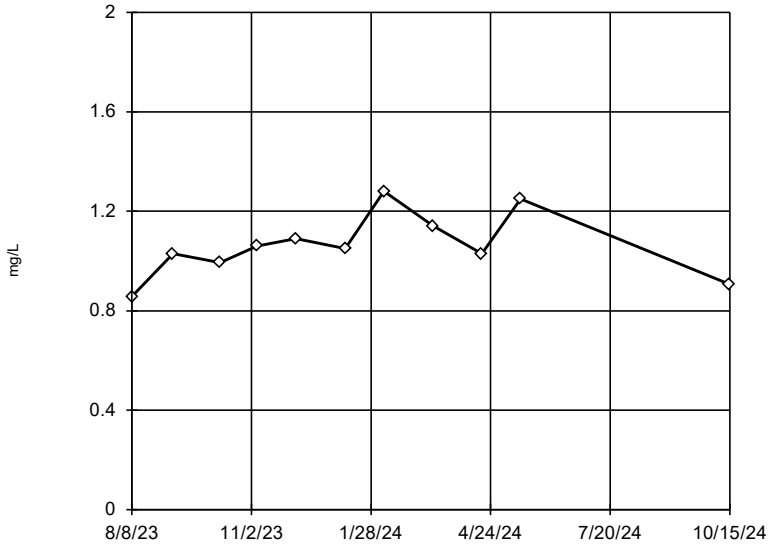
Constituent: Chloride Analysis Run 11/12/2024 11:52 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-104



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.062, std. dev. 0.1277, critical Tn 2.234

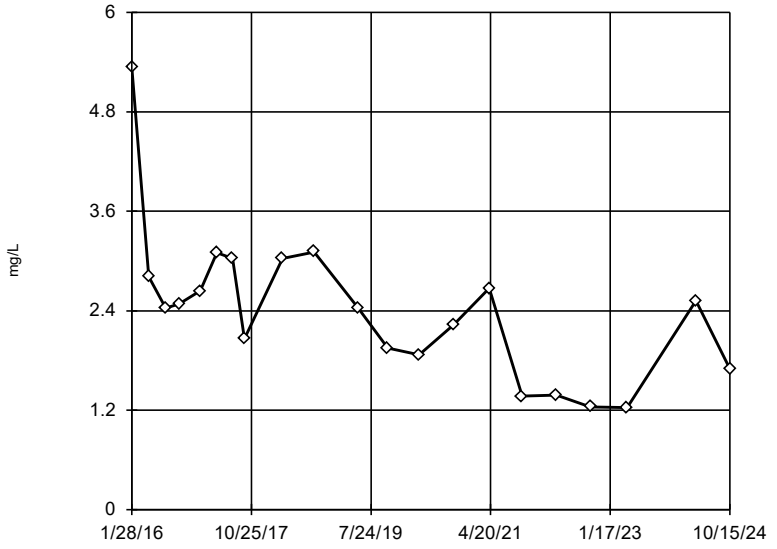
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9561
Critical = 0.876
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

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 = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 2.411, std. dev. 0.9134, critical Tn 2.58

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9427
Critical = 0.923 (after natural log transformation)
The distribution was found to be log-normal.

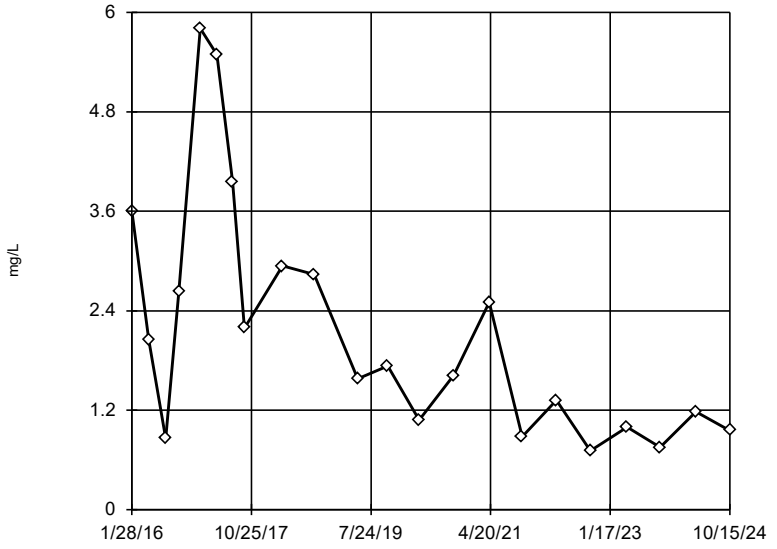
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 2.167, std. dev. 1.465, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9549
Critical = 0.926 (after natural log transformation)
The distribution was found to be log-normal.

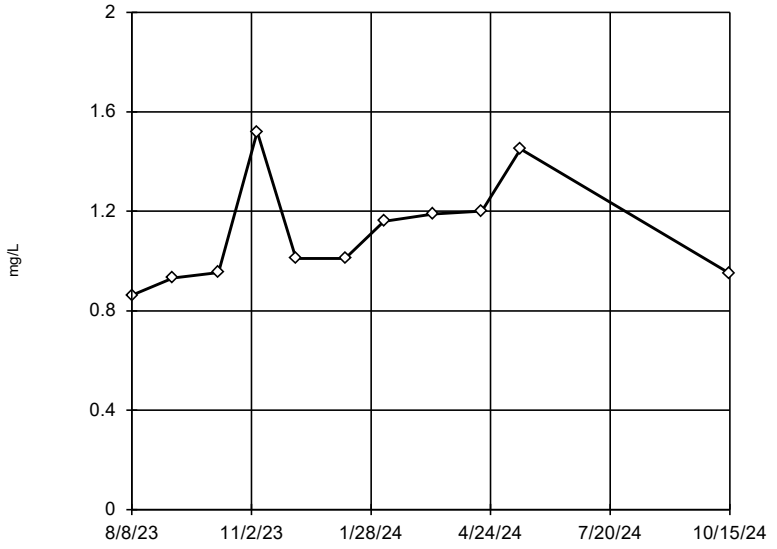
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.113, std. dev. 0.2153, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8857
Critical = 0.876
The distribution was found to be normally distributed.

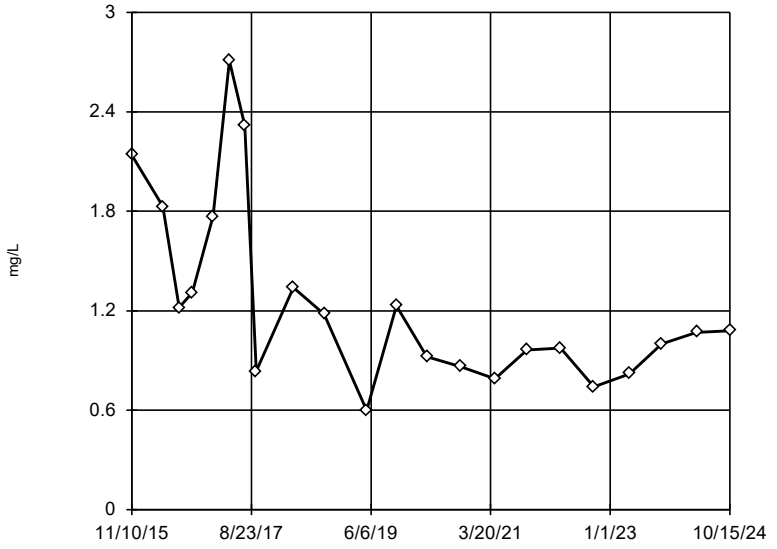
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.26, std. dev. 0.5556, critical Tn 2.603

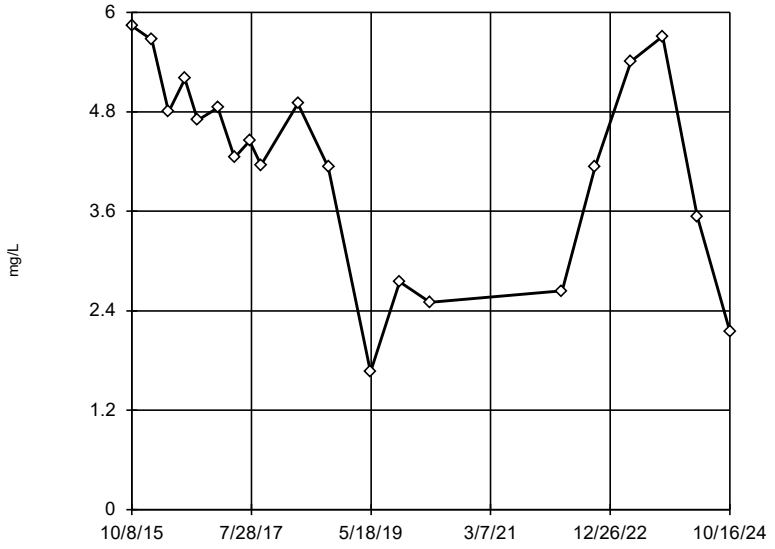
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9498
Critical = 0.926 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

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 = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 4.173, std. dev. 1.25, critical Tn 2.557

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9291
Critical = 0.92
The distribution was found to be normally distributed.

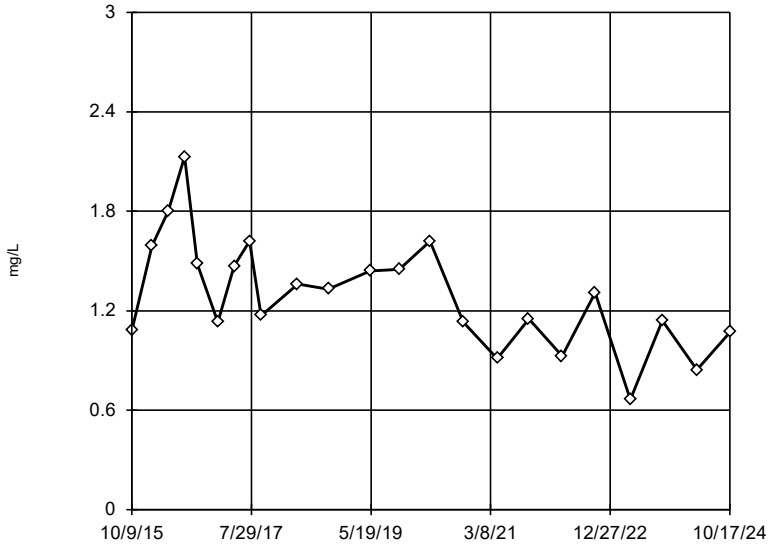
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-118



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.296, std. dev. 0.3348, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9781
Critical = 0.928
The distribution was found to be normally distributed.

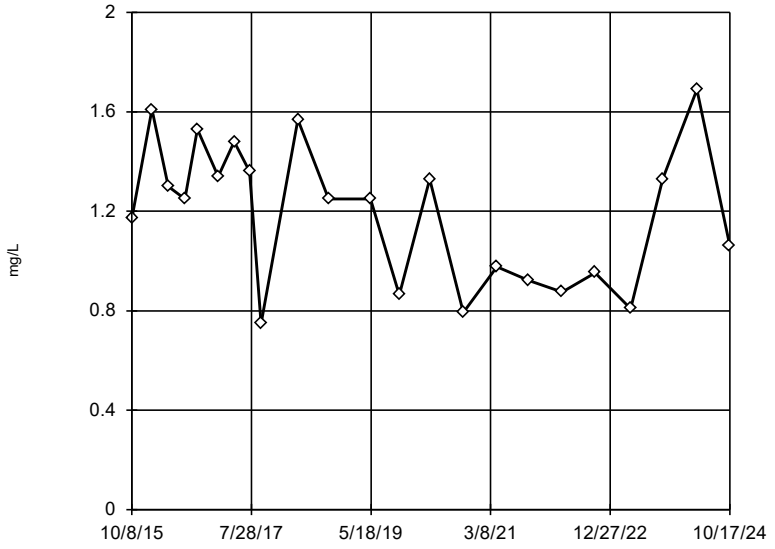
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-117



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 1.194, std. dev. 0.2845, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9478
Critical = 0.928
The distribution was found to be normally distributed.

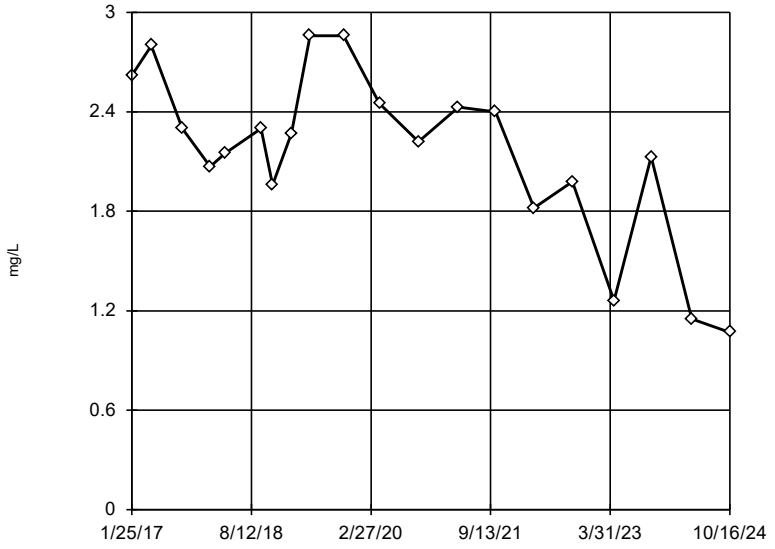
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-119



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 square transformed to achieve best W statistic (graph shown in original units).

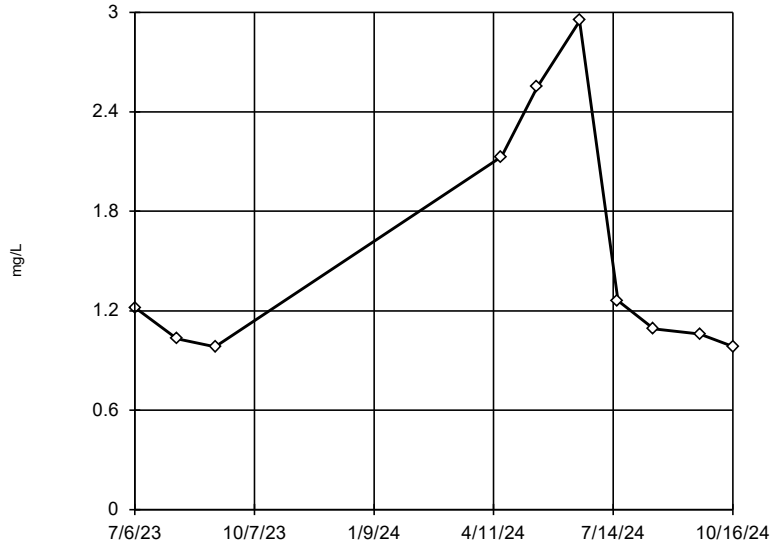
High cutoff = 3.489, low cutoff = -1.529, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-120



n = 10

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 = 28.96, low cutoff = 0.08098, based on IQR multiplier of 3.

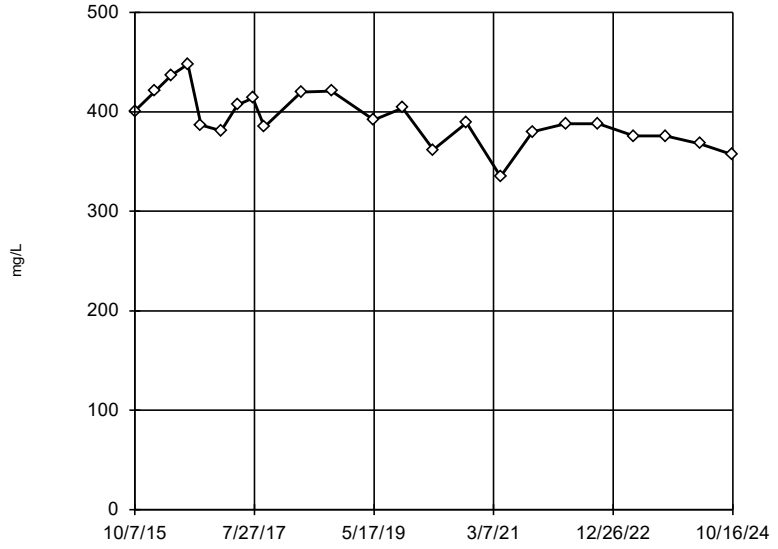
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-101



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 392.9, std. dev. 26.44, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9842
Critical = 0.928
The distribution was found to be normally distributed.

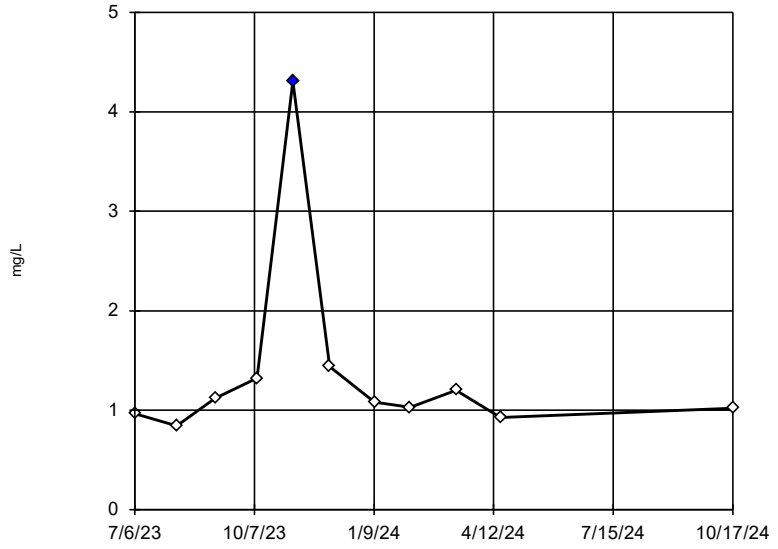
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-121



n = 11

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 1.387.
Std. Dev. = 0.985.
4.31: c = 0.883
tabl = 0.576.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9602
Critical = 0.869
The distribution, after removal of suspect value, was found to be normally distributed.

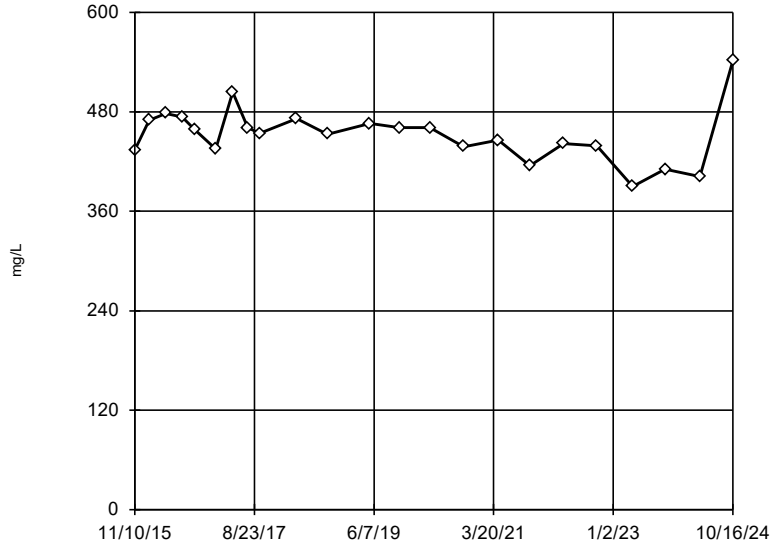
Constituent: Chloride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-102



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 452.4, std. dev. 32.8, critical Tn 2.624

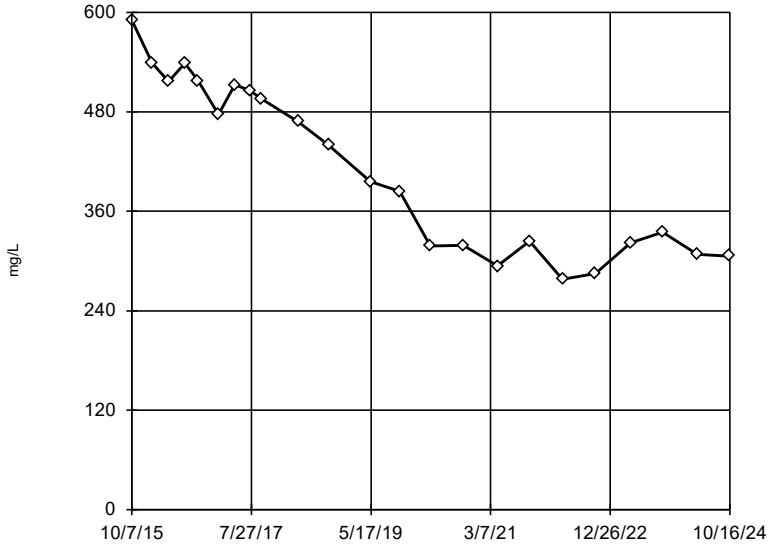
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9536
Critical = 0.928
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-103



n = 23

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 root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1376, low cutoff = 11.44, based on IQR multiplier of 3.

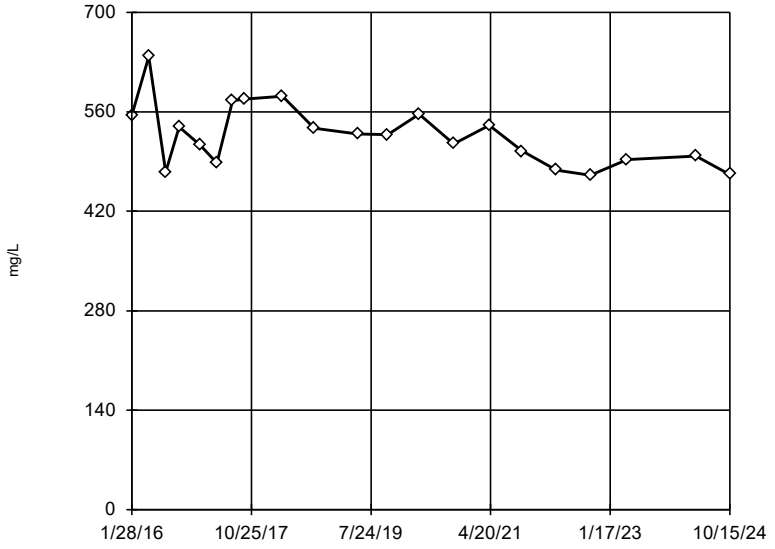
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 527, std. dev. 43.64, critical Tn 2.58

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.944
Critical = 0.923
The distribution was found to be normally distributed.

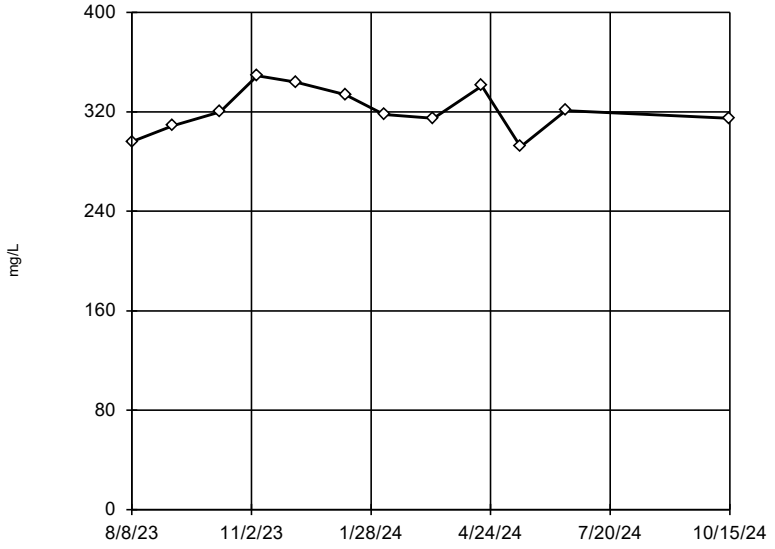
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-104



n = 12

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 321.2, std. dev. 18.02, critical Tn 2.285

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9513
Critical = 0.883
The distribution was found to be normally distributed.

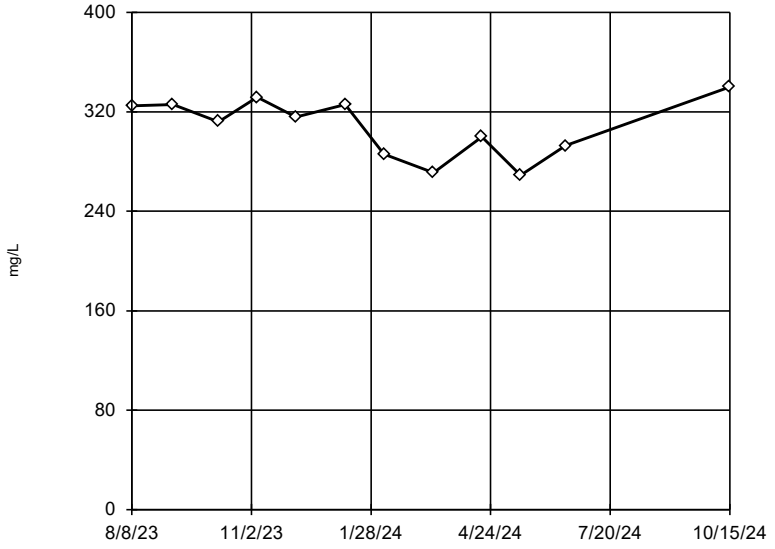
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 12

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 308, std. dev. 23.89, critical Tn 2.285

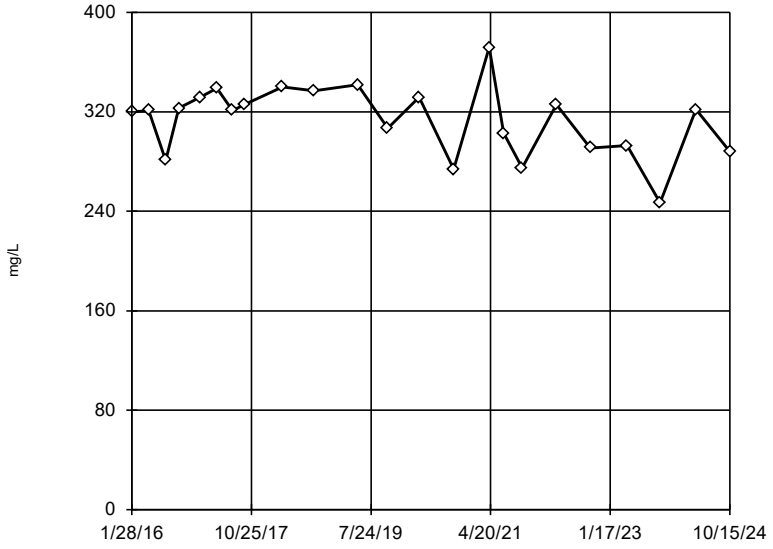
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9247
Critical = 0.883
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Rosner's Test)

MW-113 (bg)



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 313.6, std. dev. 28.37, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9583
Critical = 0.928
The distribution was found to be normally distributed.

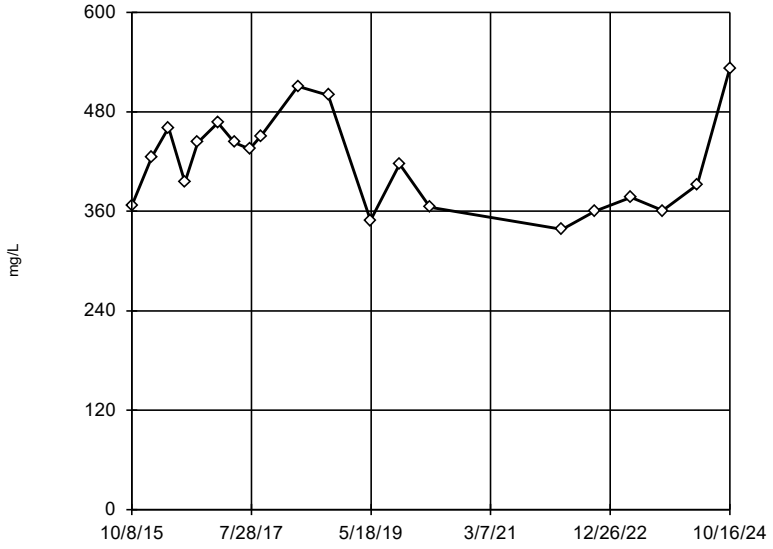
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-116



n = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 419.6, std. dev. 56.92, critical Tn 2.557

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9502
Critical = 0.92
The distribution was found to be normally distributed.

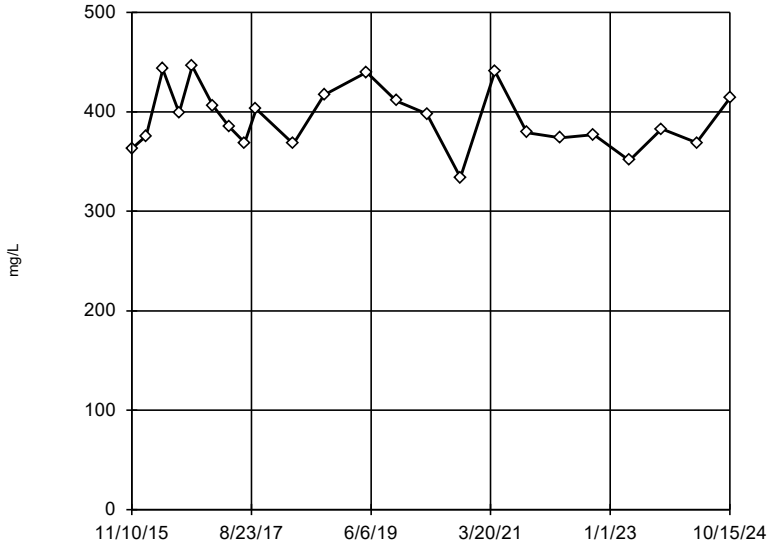
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-115 (bg)



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 393.3, std. dev. 30.66, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9559
Critical = 0.928
The distribution was found to be normally distributed.

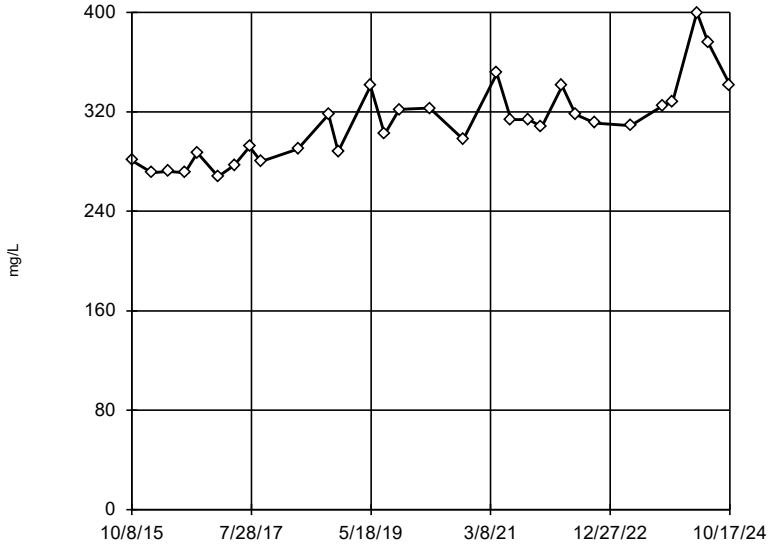
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-117



n = 30

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 310.6, std. dev. 31.69, critical Tn 2.745

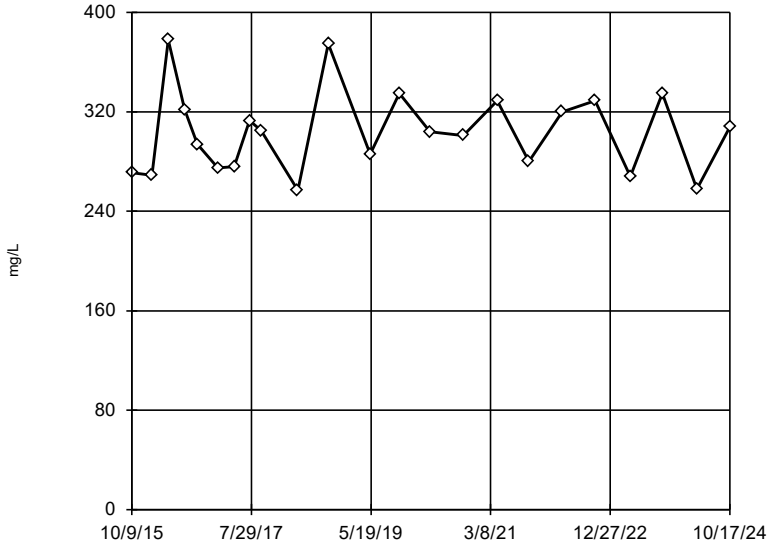
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9537
Critical = 0.939 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Rosner's Test)

MW-118



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 303.8, std. dev. 33.67, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9398
Critical = 0.928
The distribution was found to be normally distributed.

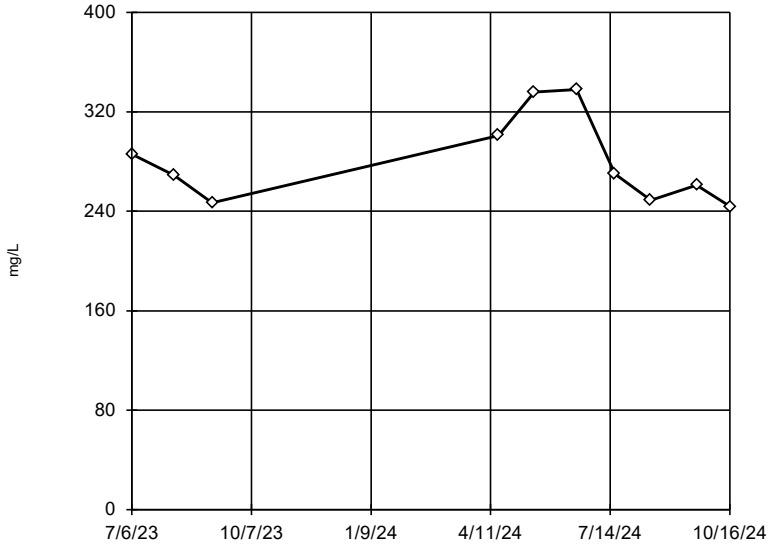
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 280.1, std. dev. 34.81, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8712
Critical = 0.869
The distribution was found to be normally distributed.

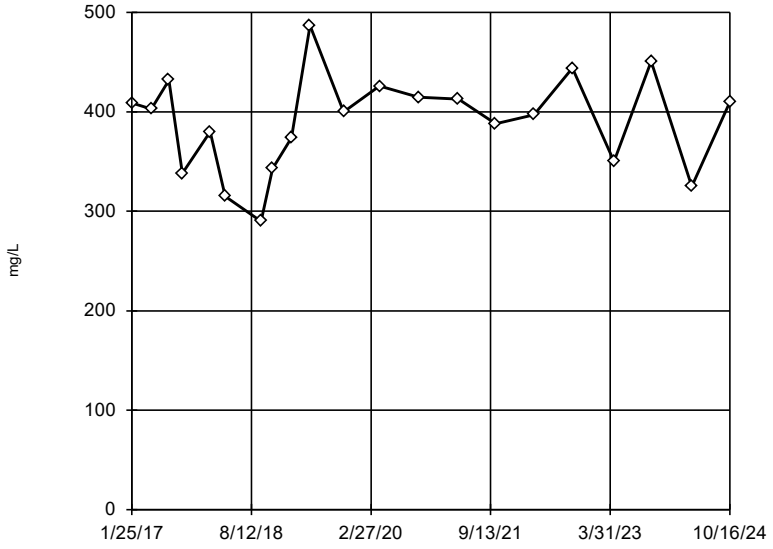
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 390, std. dev. 49.02, critical Tn 2.58

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9782
Critical = 0.923
The distribution was found to be normally distributed.

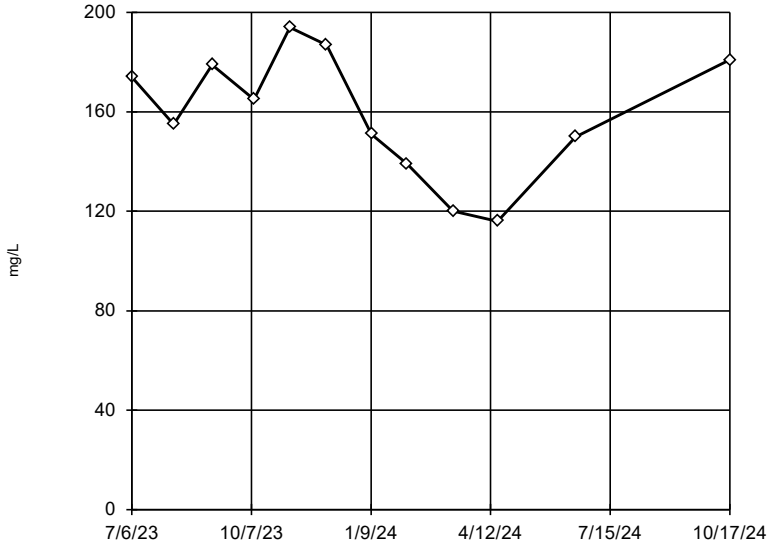
Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 12

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 159.3, std. dev. 25.38, critical Tn 2.285

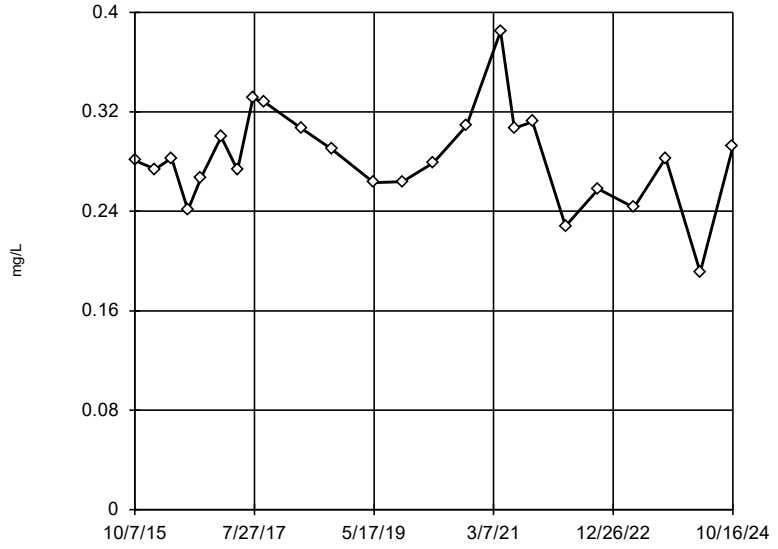
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.946
Critical = 0.883
The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Rosner's Outlier Test

MW-101



n = 24

No statistical outliers.

k = 1
r = 2.636
Tabulated value = 2.824
Alpha = 0.01

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9621
Critical = 0.928
The distribution was found to be normally distributed.

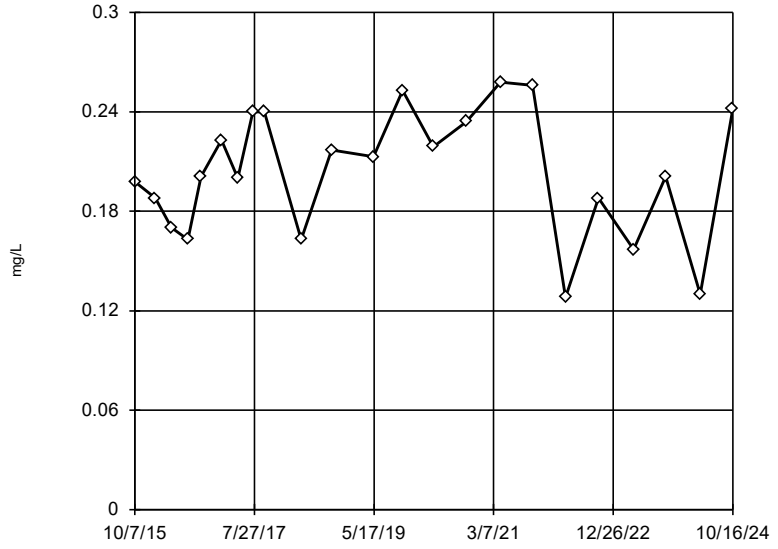
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-103



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2036, std. dev. 0.03835, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9509
Critical = 0.928
The distribution was found to be normally distributed.

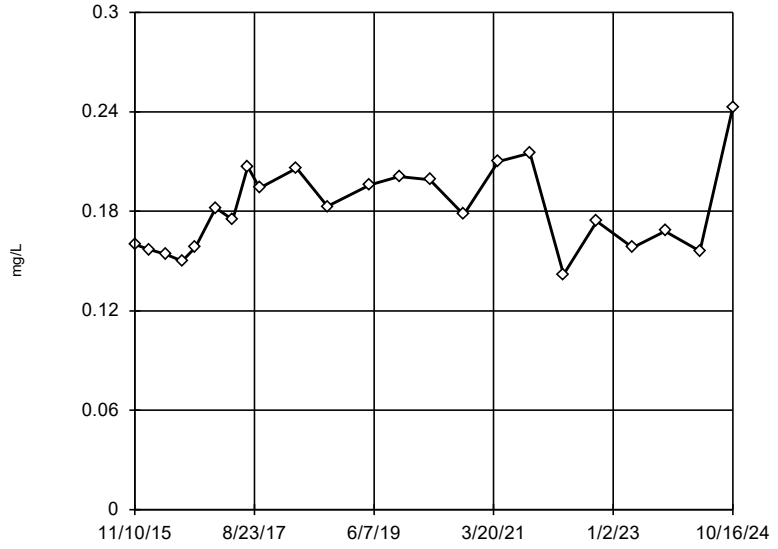
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-102



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1811, std. dev. 0.02562, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9525
Critical = 0.928
The distribution was found to be normally distributed.

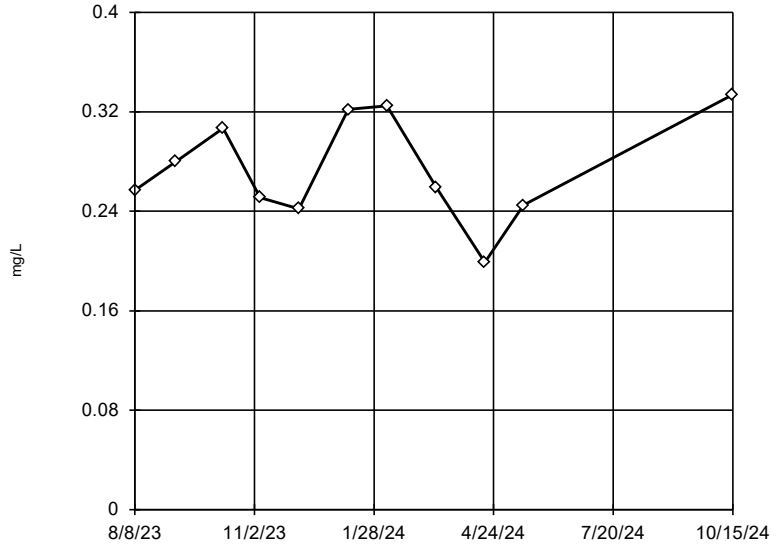
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-104



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2746, std. dev. 0.04261, critical Tn 2.234

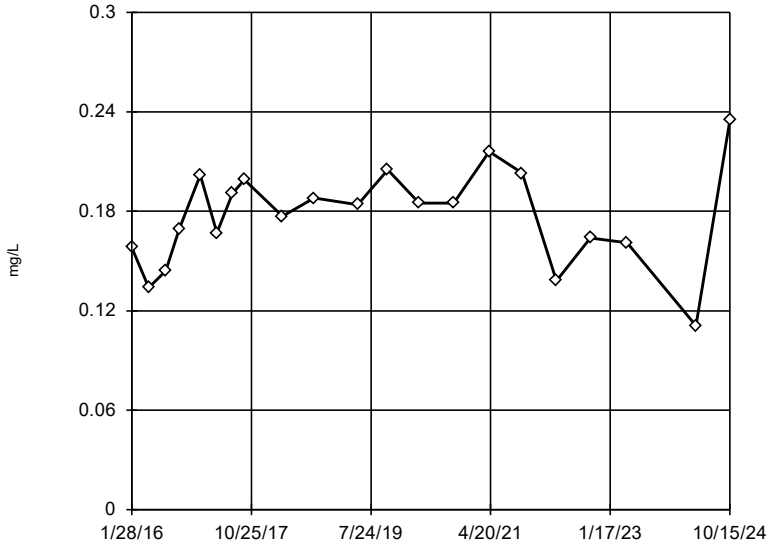
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9326
Critical = 0.876
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

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 = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.177, std. dev. 0.02976, critical Tn 2.58

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9854
Critical = 0.923
The distribution was found to be normally distributed.

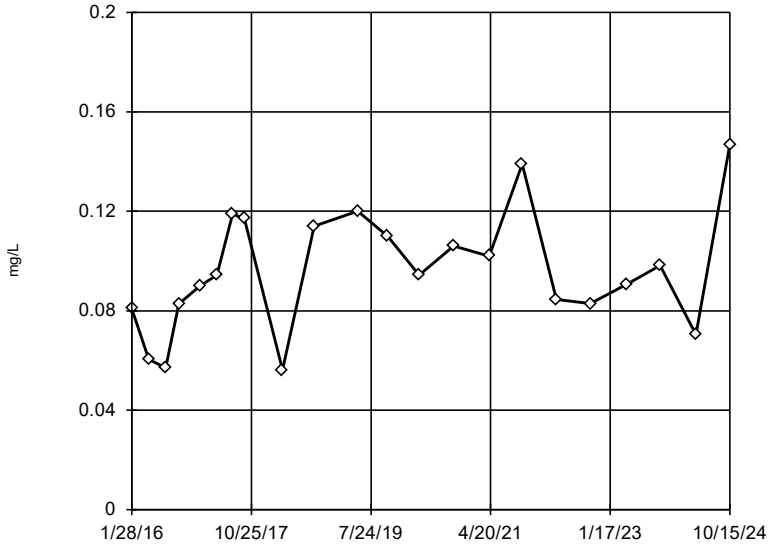
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.09621, std. dev. 0.02436, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9736
Critical = 0.926
The distribution was found to be normally distributed.

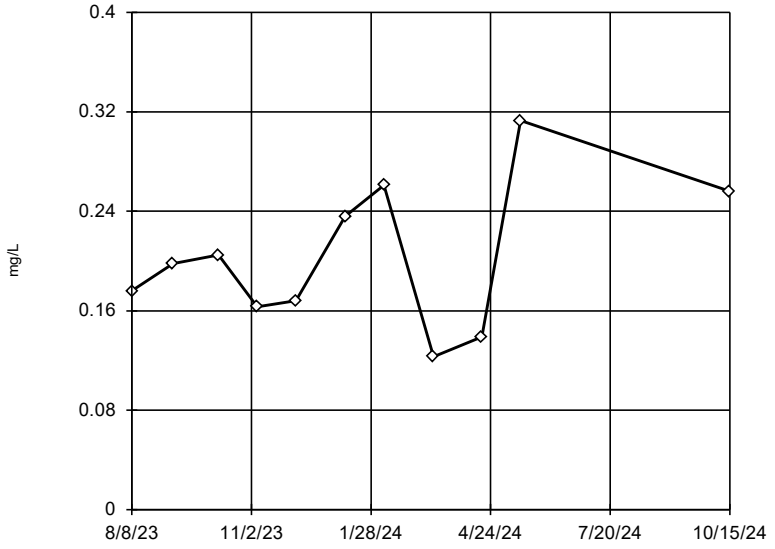
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2035, std. dev. 0.05783, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9648
Critical = 0.876
The distribution was found to be normally distributed.

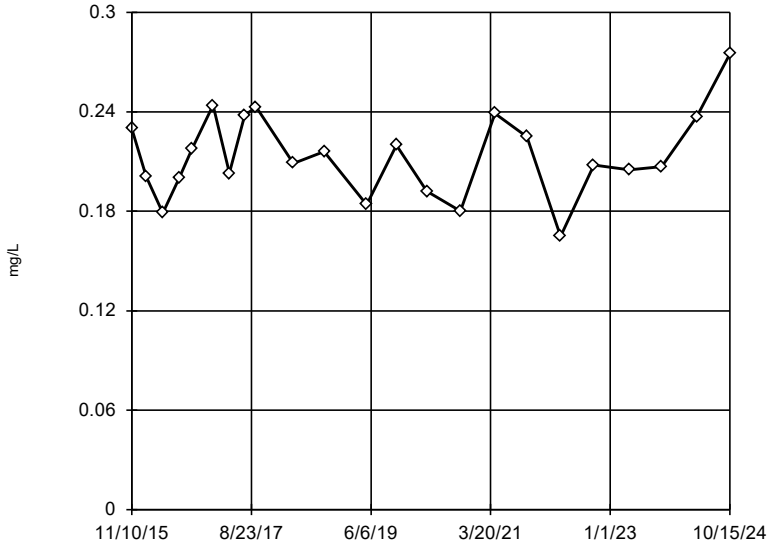
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-115 (bg)



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.2138, std. dev. 0.02564, critical Tn 2.624

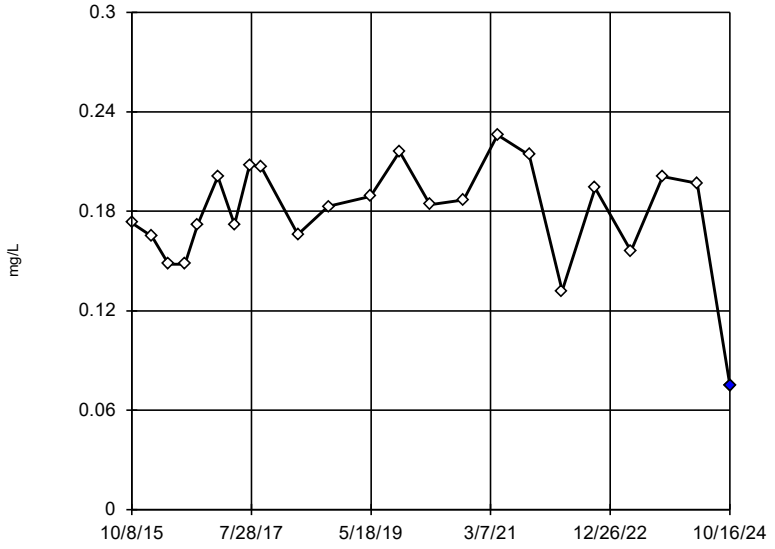
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9817
Critical = 0.928
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Rosner's Outlier Test

MW-116



n = 23

Statistical outlier is drawn as solid.

k = 1
r = 3.137
Tabulated value = 2.808
Alpha = 0.01

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9801
Critical = 0.926
The distribution, after removal of suspect value, was found to be normally distributed.

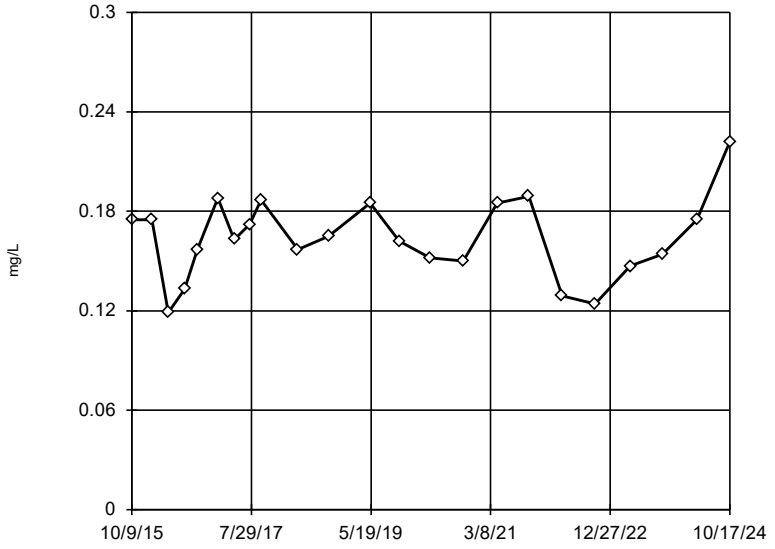
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-118



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1637, std. dev. 0.02435, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9701
Critical = 0.928
The distribution was found to be normally distributed.

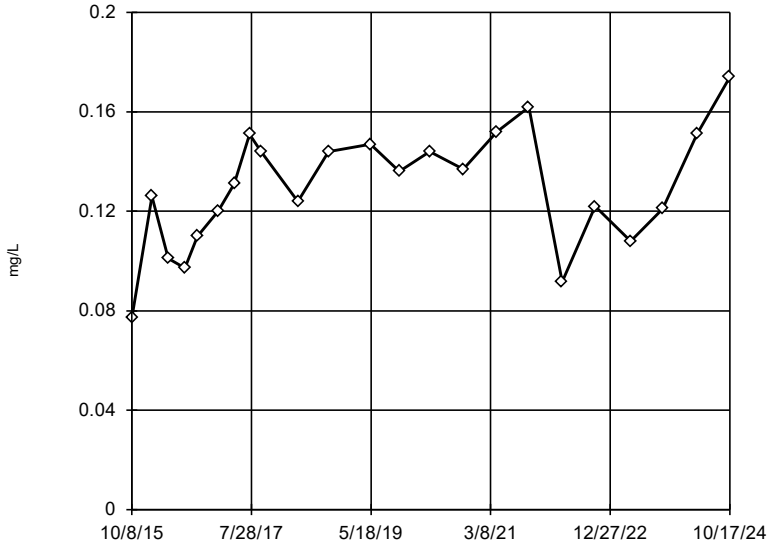
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

EPA Screening (suspected outliers for Rosner's Test)

MW-117



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1292, std. dev. 0.02399, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9801
Critical = 0.928
The distribution was found to be normally distributed.

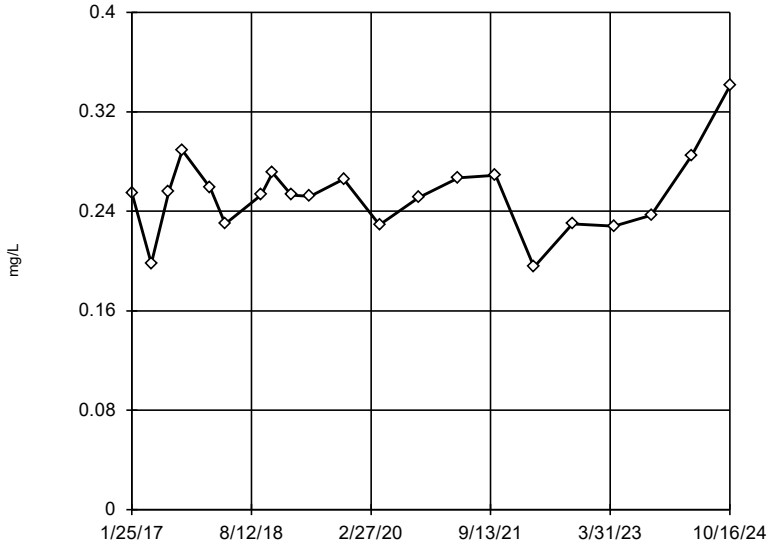
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.253, std. dev. 0.0316, critical Tn 2.58

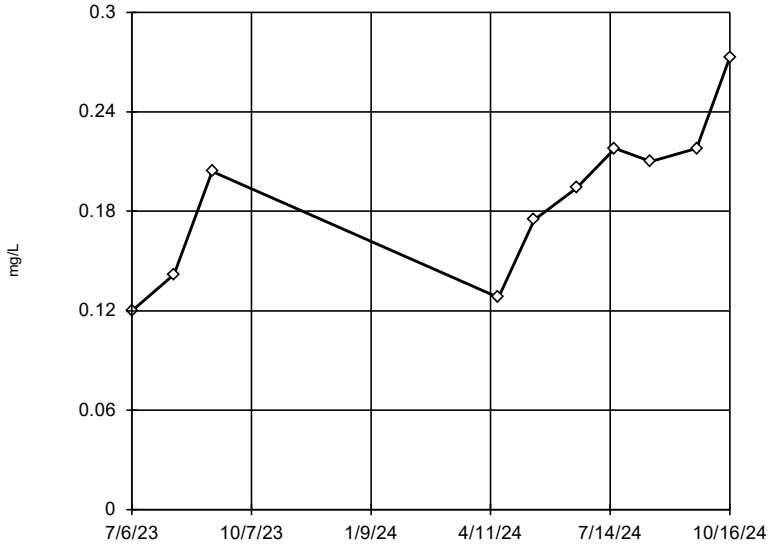
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9316
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

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-120



n = 10

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1882, std. dev. 0.0475, critical Tn 2.176

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9429
Critical = 0.869
The distribution was found to be normally distributed.

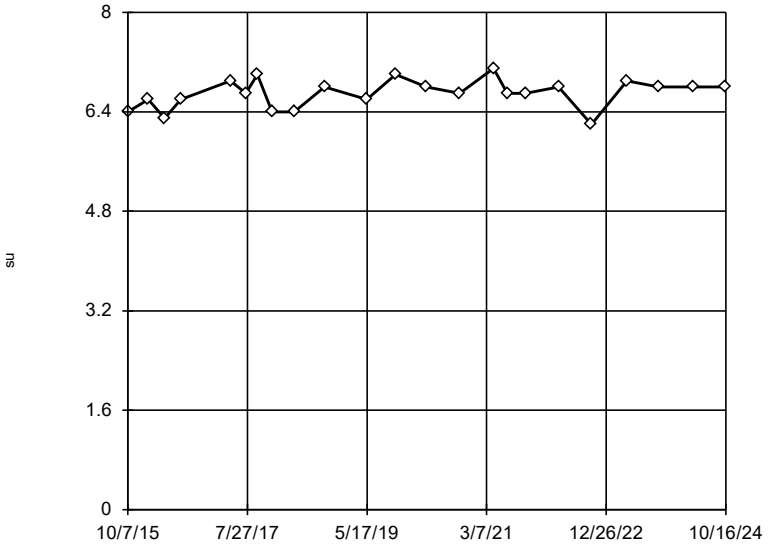
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-101



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.696, std. dev. 0.2325, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9516
Critical = 0.928
The distribution was found to be normally distributed.

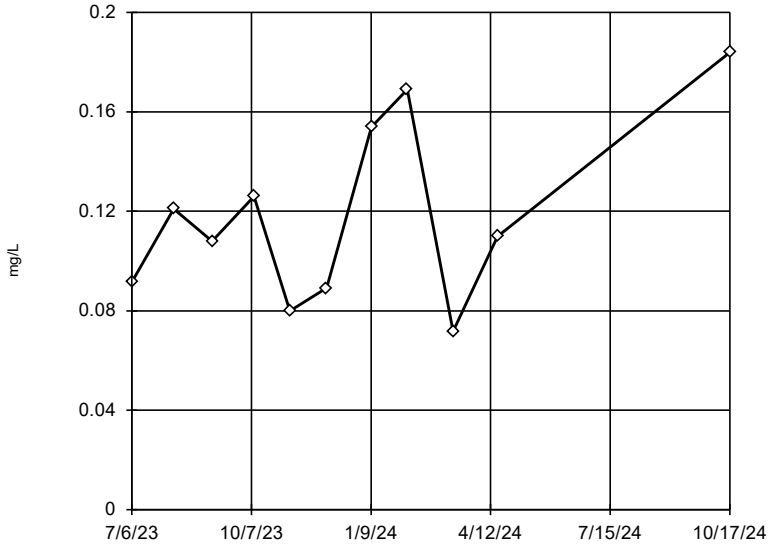
Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.1186, std. dev. 0.0369, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9365
Critical = 0.876
The distribution was found to be normally distributed.

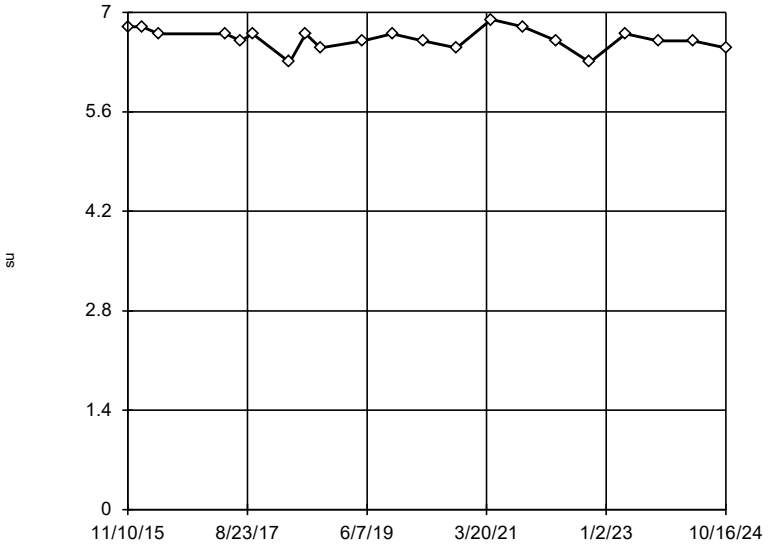
Constituent: Fluoride Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.629, std. dev. 0.1521, critical Tn 2.58

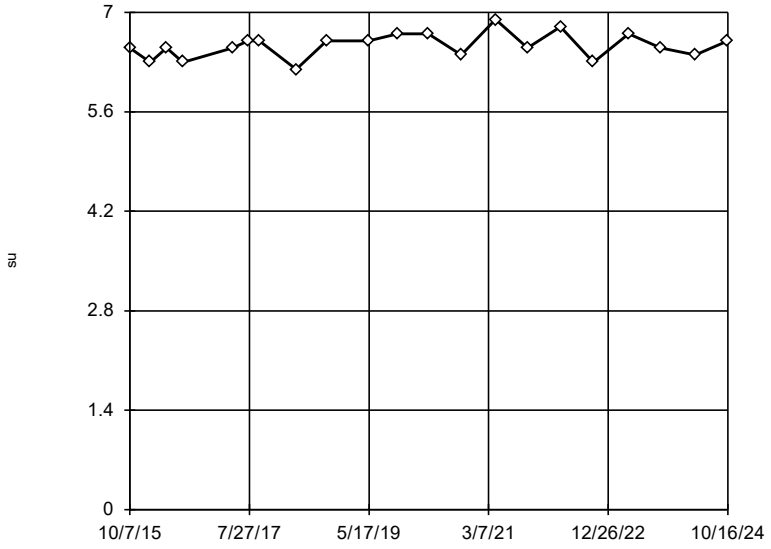
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.925
Critical = 0.923
The distribution was found to be normally distributed.

Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

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 = 21

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.533, std. dev. 0.177, critical Tn 2.58

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9686
Critical = 0.923
The distribution was found to be normally distributed.

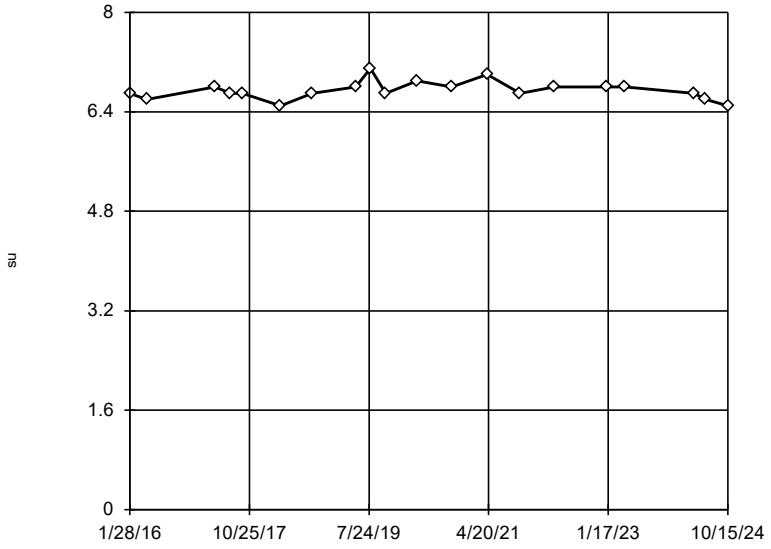
Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.745, std. dev. 0.1468, critical Tn 2.557

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9233
Critical = 0.92
The distribution was found to be normally distributed.

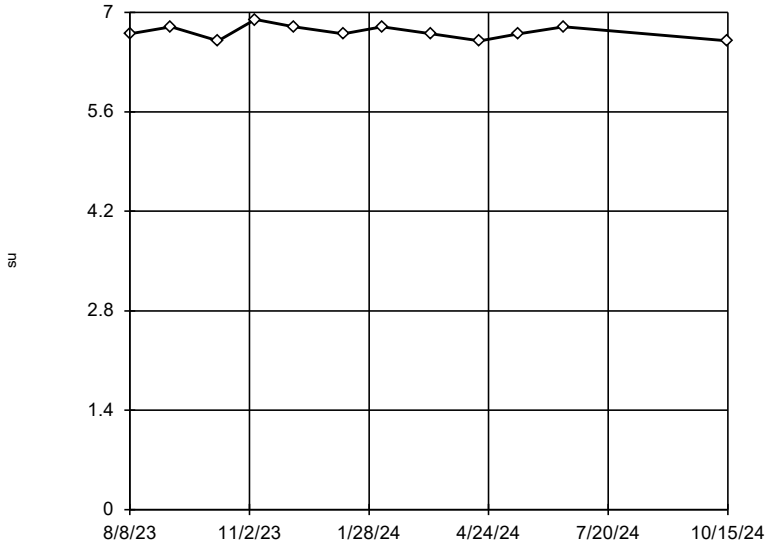
Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-104



n = 12

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.725, std. dev. 0.09653, critical Tn 2.285

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8943
Critical = 0.883
The distribution was found to be normally distributed.

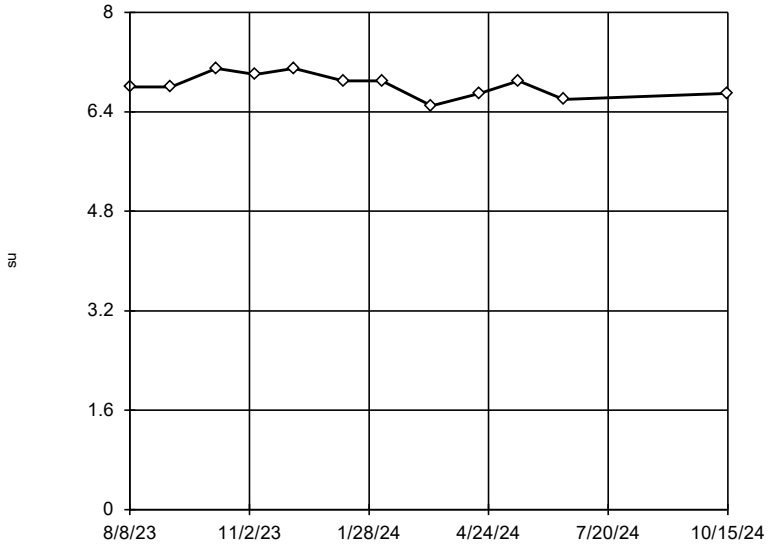
Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 12

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.833, std. dev. 0.1875, critical Tn 2.285

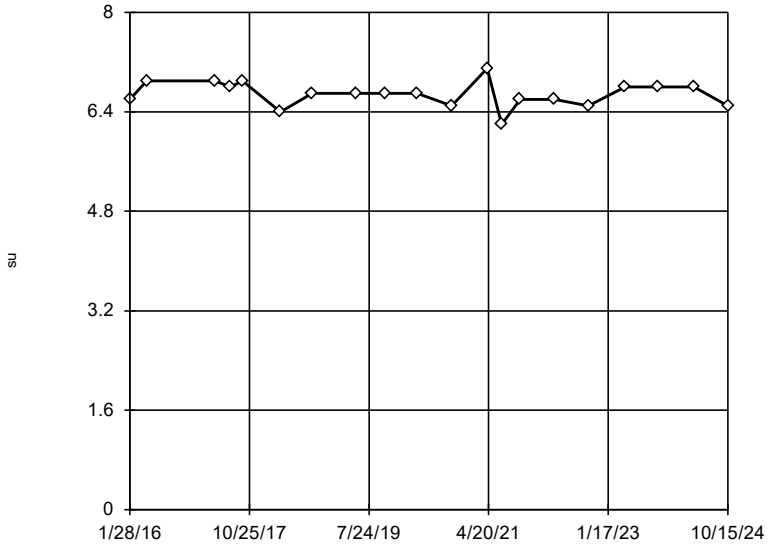
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9596
Critical = 0.883
The distribution was found to be normally distributed.

Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

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 = 20

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.685, std. dev. 0.2059, critical Tn 2.557

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9709
Critical = 0.92
The distribution was found to be normally distributed.

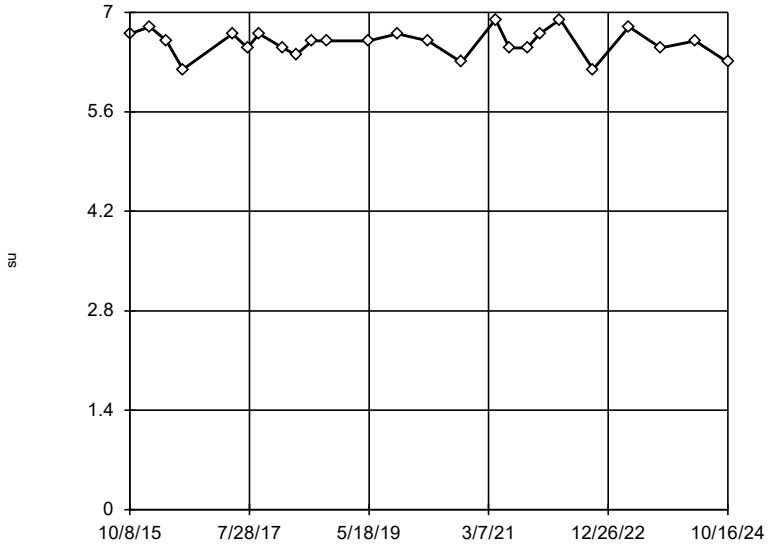
Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-116



n = 25

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.576, std. dev. 0.1921, critical Tn 2.663

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9463
Critical = 0.931
The distribution was found to be normally distributed.

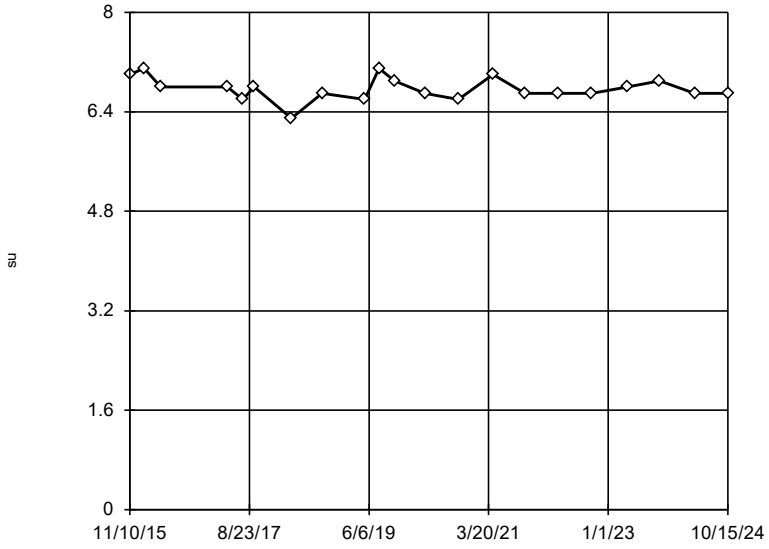
Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-115 (bg)



n = 21

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 = 7.439, low cutoff = 6.014, based on IQR multiplier of 3.

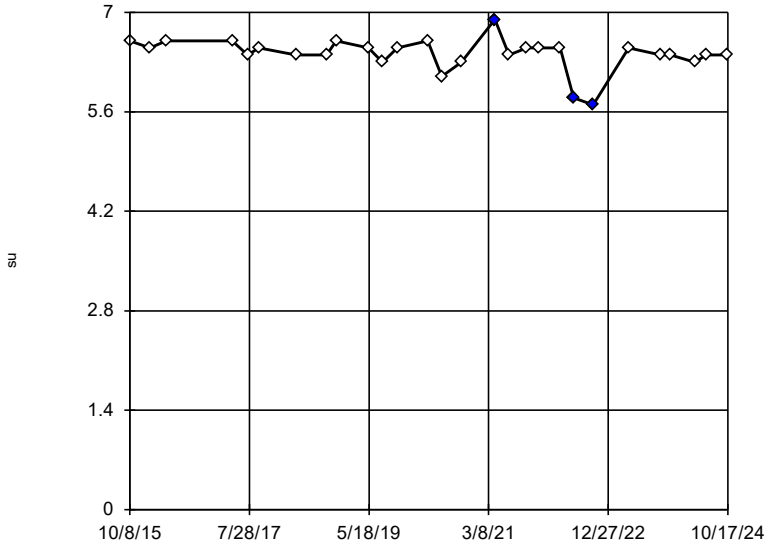
Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-117



n = 28

Outliers are drawn as solid.
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).

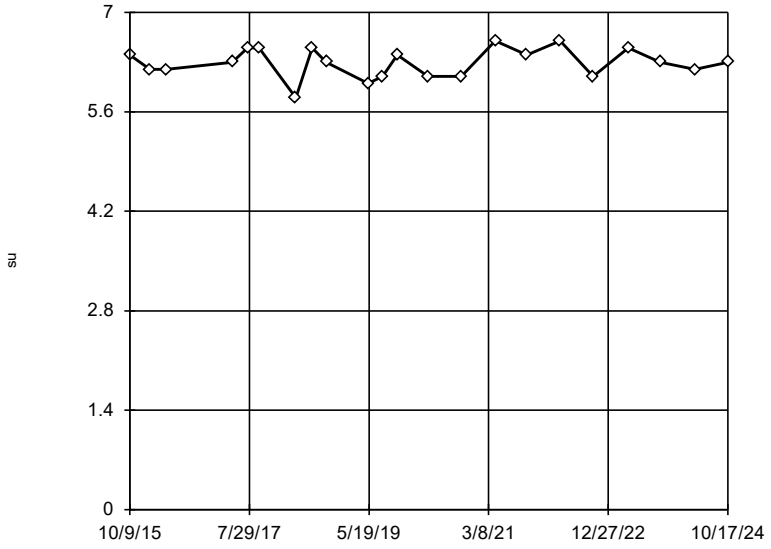
High cutoff = 6.761, low cutoff = 6.041, based on IQR multiplier of 3.

Constituent: pH Analysis Run 11/12/2024 11:53 AM View: 2024-2H all

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 = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.291, std. dev. 0.2068, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9543
Critical = 0.926
The distribution was found to be normally distributed.

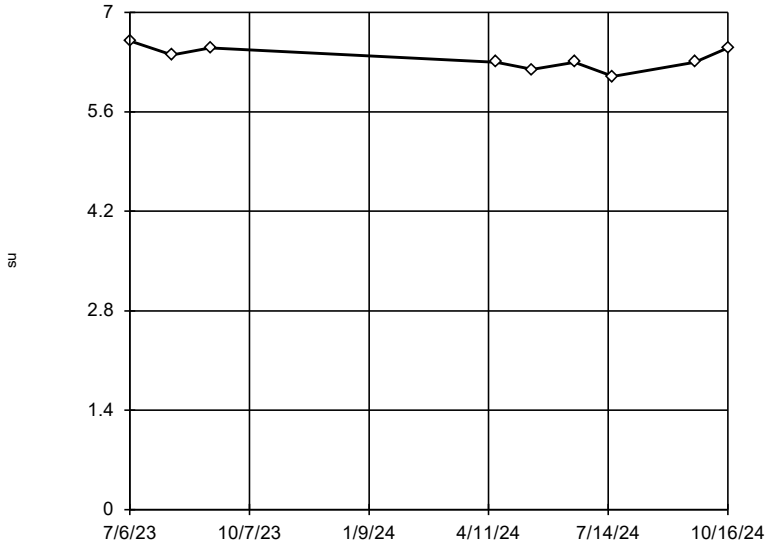
Constituent: pH Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-120



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 6.356, std. dev. 0.159, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9605
Critical = 0.859
The distribution was found to be normally distributed.

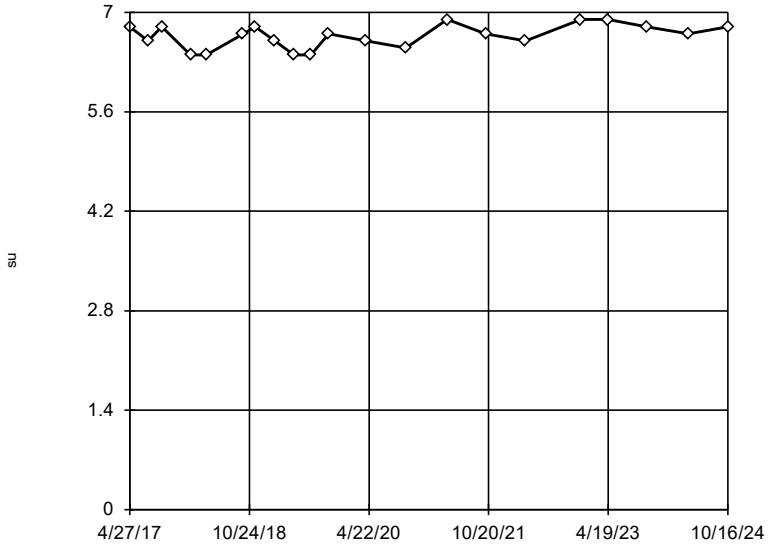
Constituent: pH Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-119



n = 21

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 = 7.355, low cutoff = 5.19, based on IQR multiplier of 3.

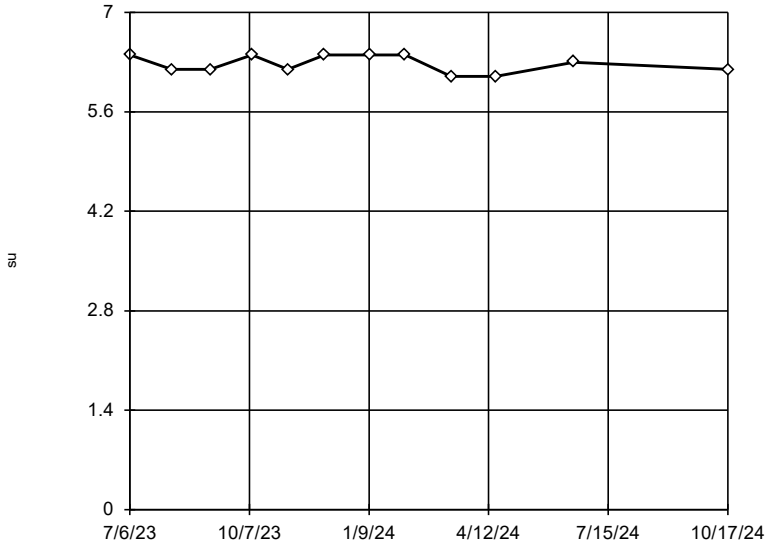
Constituent: pH Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-121



n = 12

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).

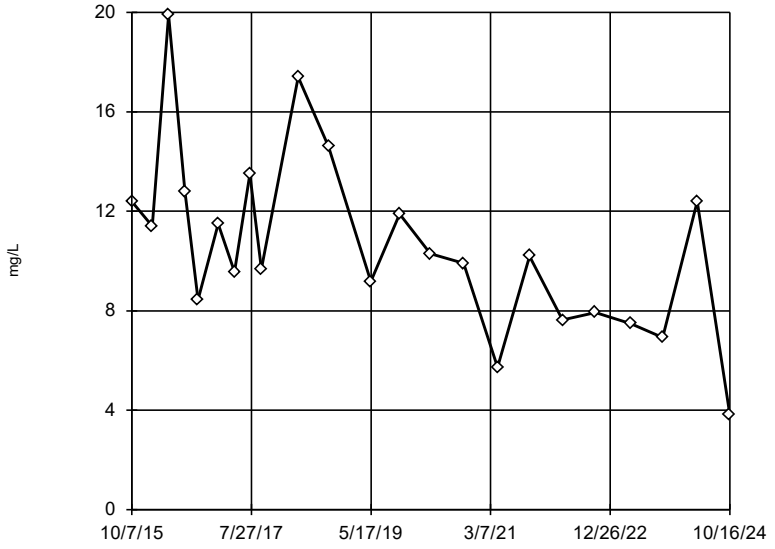
High cutoff = 7.04, low cutoff = 5.637, based on IQR multiplier of 3.

Constituent: pH Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Rosner's Outlier Test

MW-101



n = 23

No statistical outliers.

k = 1
r = 2.552
Tabulated value = 2.808
Alpha = 0.01

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9918
Critical = 0.926
The distribution was found to be normally distributed.

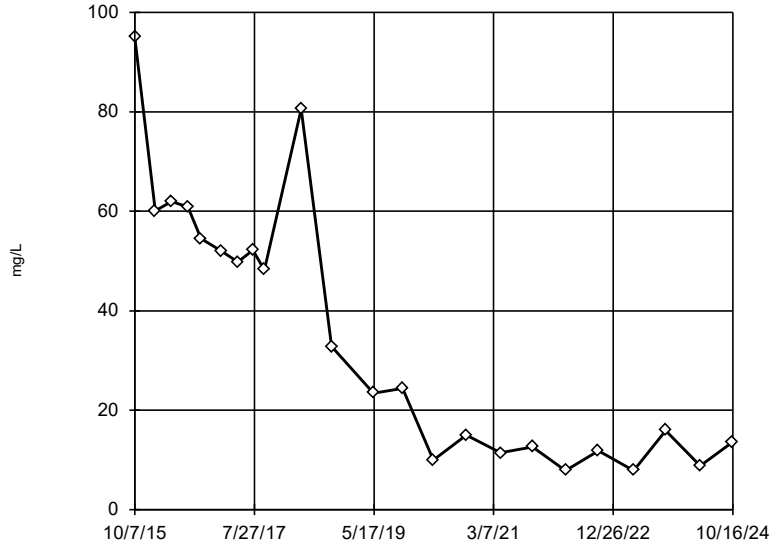
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-103



n = 23

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 = 5370, low cutoff = 0.1198, based on IQR multiplier of 3.

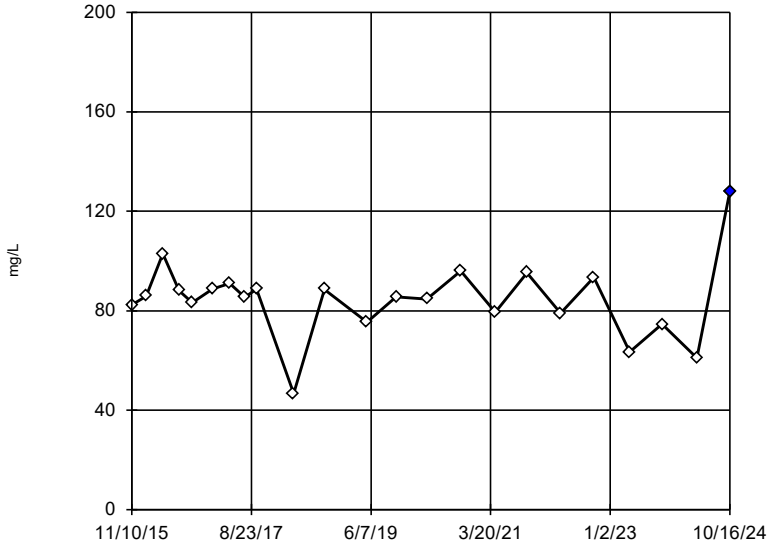
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-102



n = 23

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 127, low cutoff = 43, based on IQR multiplier of 3.

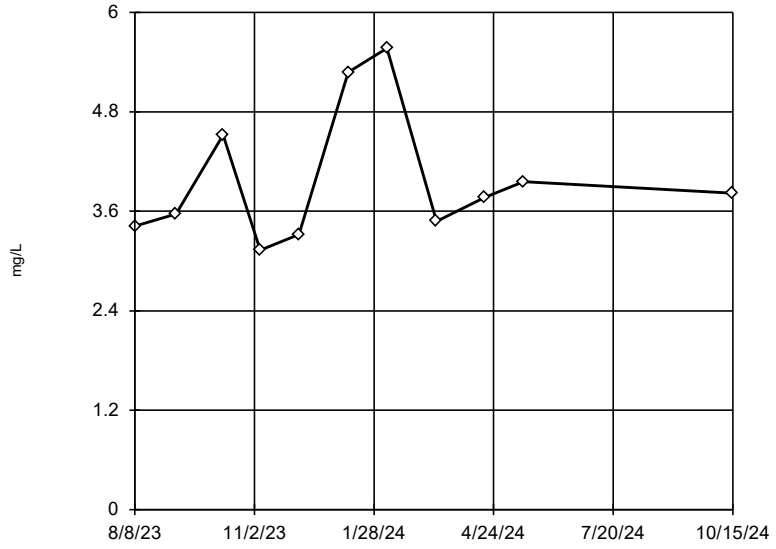
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-104



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 3.985, std. dev. 0.8043, critical Tn 2.234

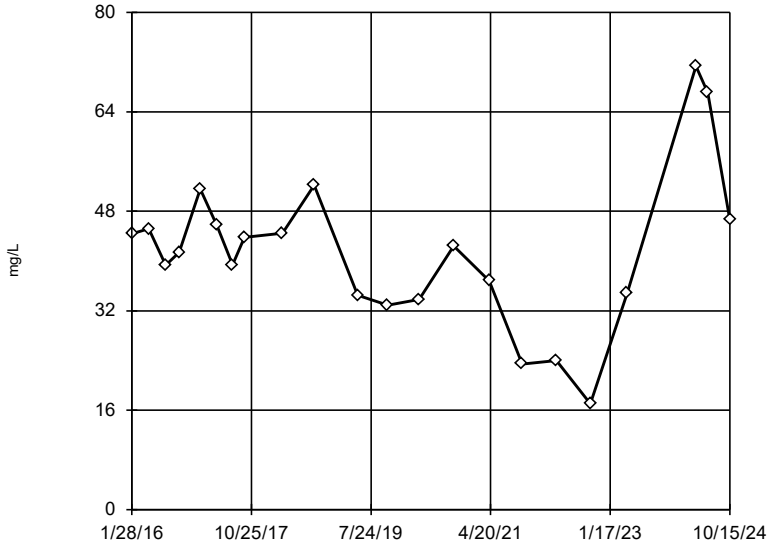
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8936
Critical = 0.876 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

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 = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 41.46, std. dev. 12.61, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9469
Critical = 0.926
The distribution was found to be normally distributed.

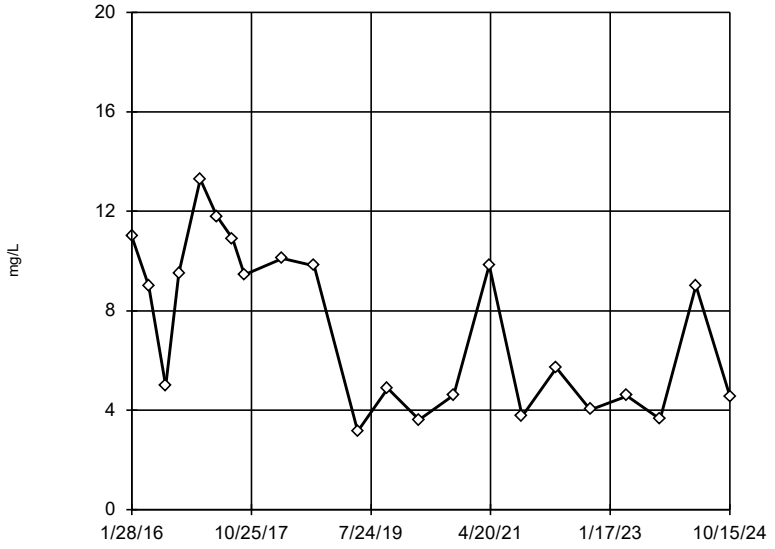
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-113 (bg)



n = 22

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 root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 52.11, low cutoff = 0.00006892, based on IQR multiplier of 3.

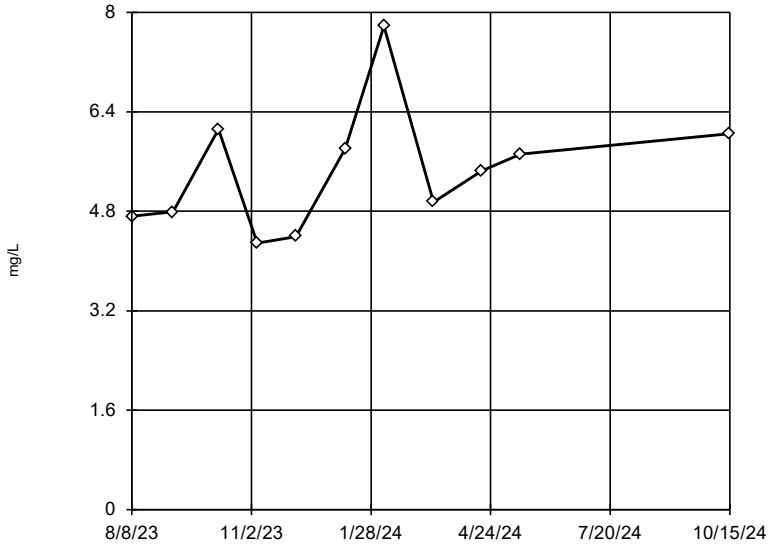
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-110



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 5.461, std. dev. 1.006, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9055
Critical = 0.876
The distribution was found to be normally distributed.

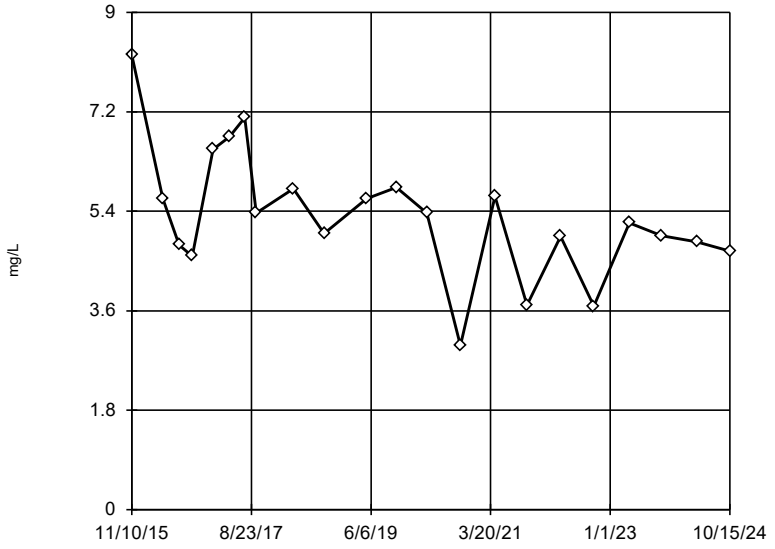
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



n = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 5.33, std. dev. 1.167, critical Tn 2.603

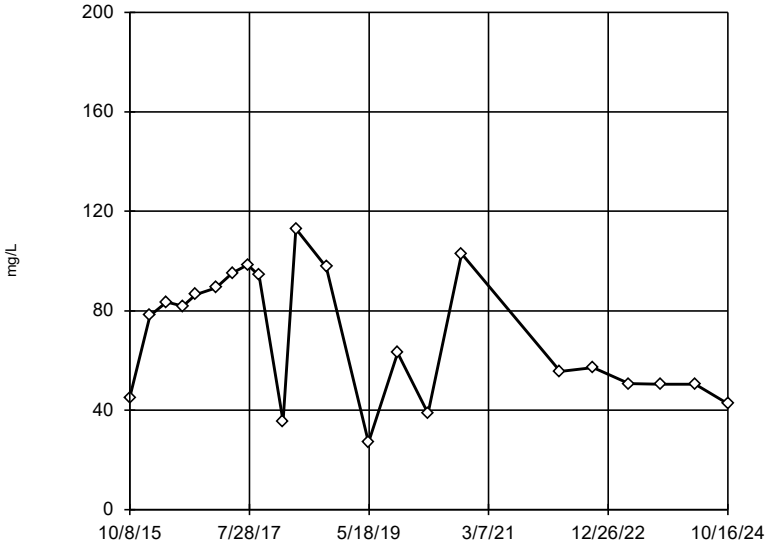
Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9637
Critical = 0.926
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

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 = 22

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 69.83, std. dev. 25.55, critical Tn 2.603

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9386
Critical = 0.926
The distribution was found to be normally distributed.

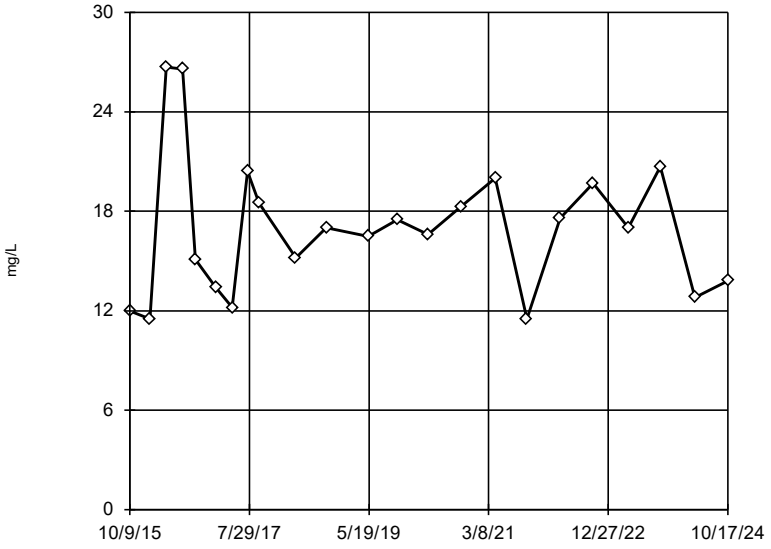
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Rosner's Test)

MW-118



n = 23

Rosner's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 16.98, std. dev. 4.205, critical Tn 2.624

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9527
Critical = 0.928 (after natural log transformation)
The distribution was found to be log-normal.

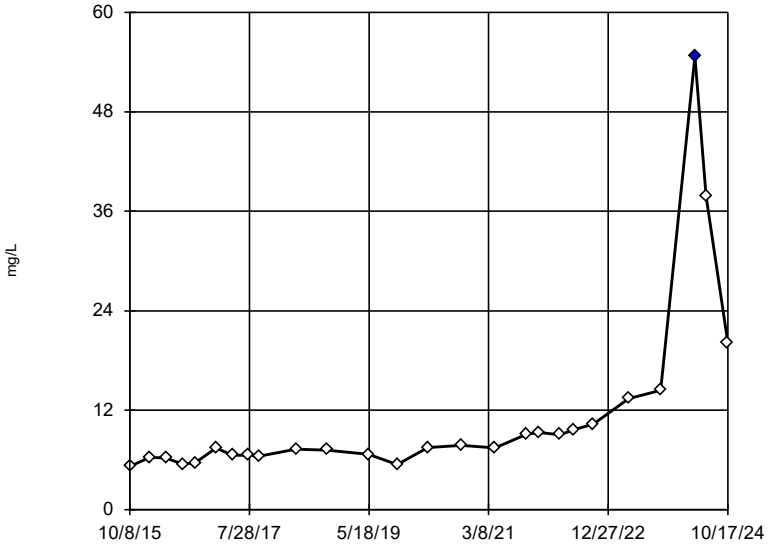
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-117



n = 26

Outlier is drawn as solid.
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 = 37.98, low cutoff = 1.672, based on IQR multiplier of 3.

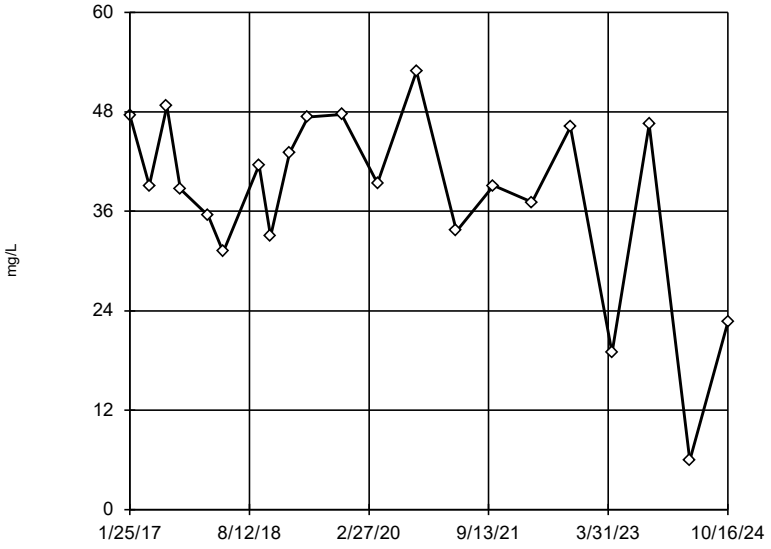
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Dixon's Outlier Test

MW-119



n = 21

No statistical outliers.
Testing for 3 low outliers.
Mean = 37.89.
Std. Dev. = 11.23.
22.6: c = 0.4143
tabl = 0.44.
Alpha = 0.05.
18.9: c = 0.4236
tabl = 0.44.
Alpha = 0.05.
5.93 (B): c = 0.3991
tabl = 0.44.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9393
Critical = 0.92
The distribution was found to be normally distributed.

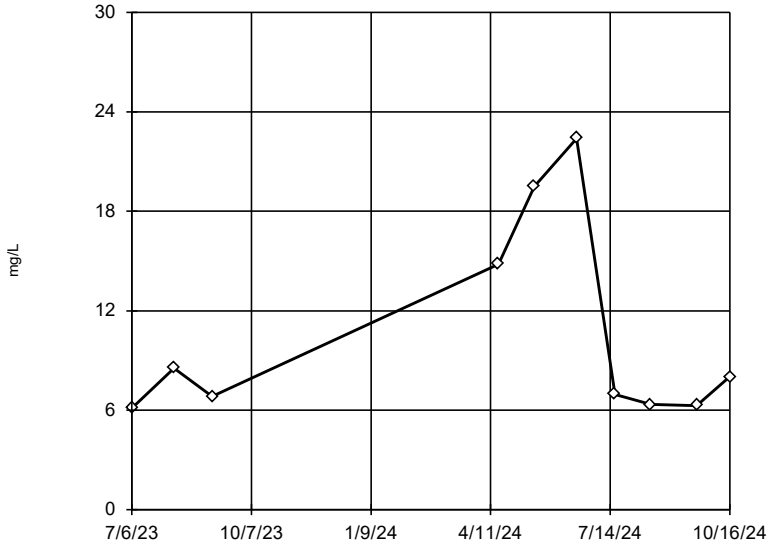
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Tukey's Outlier Screening

MW-120



n = 10

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 = 330.7, low cutoff = 0.3244, based on IQR multiplier of 3.

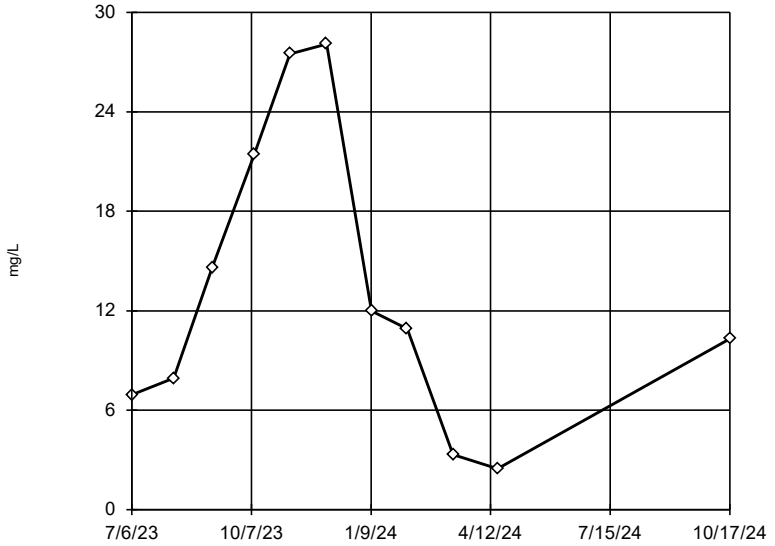
Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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EPA Screening (suspected outliers for Dixon's Test)

MW-121



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 13.22, std. dev. 8.893, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9026
Critical = 0.876
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 11/12/2024 11:54 AM View: 2024-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

APPENDIX G
STATISTICAL EVALUATION RESULTS

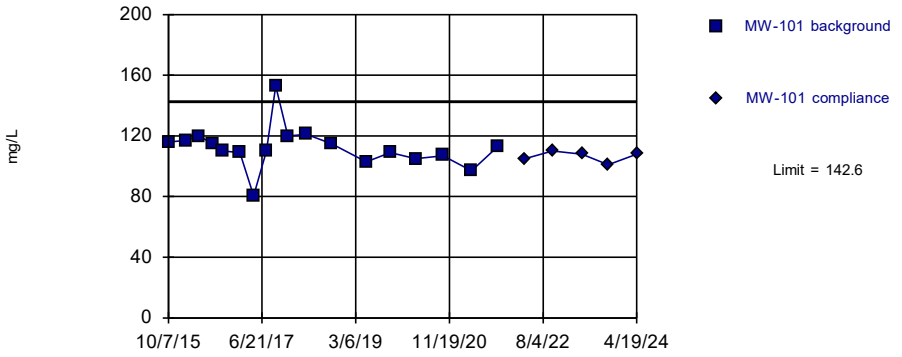
PREDICTION LIMITS
FIRST HALF 2024 MONITORING EVENT

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=112.2, Std. Dev.=14.04, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8661, critical = 0.858. Kappa = 2.163 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

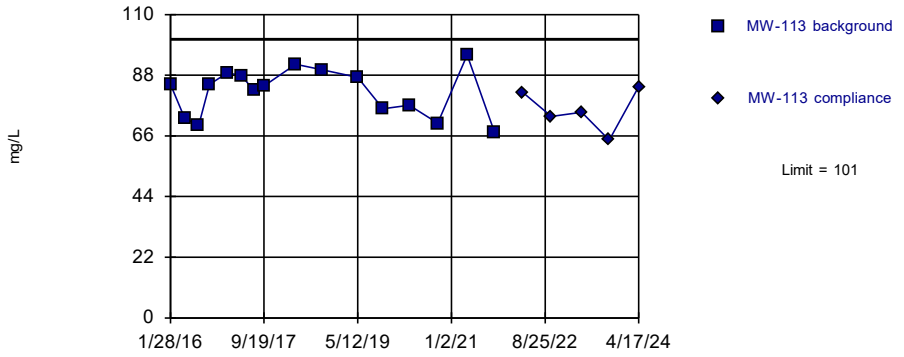
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=81.93, Std. Dev.=8.613, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.942, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

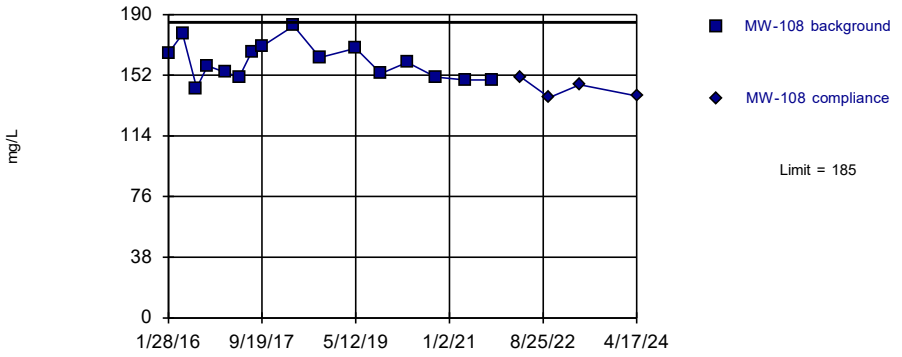
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=160.3, Std. Dev.=11.18, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9513, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

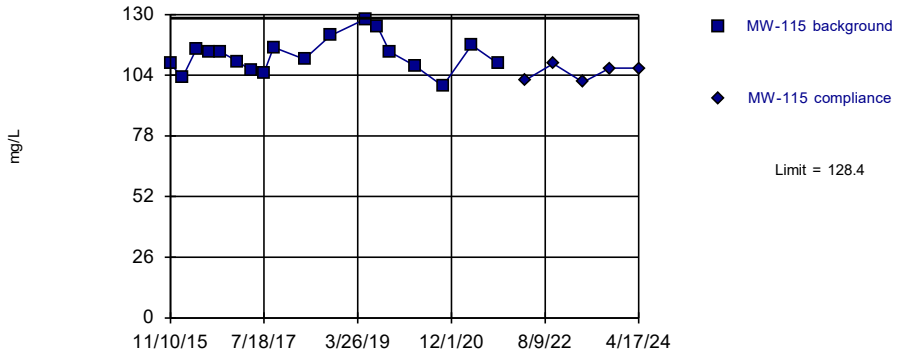
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=112.5, Std. Dev.=7.388, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9764, critical = 0.858. Kappa = 2.163 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

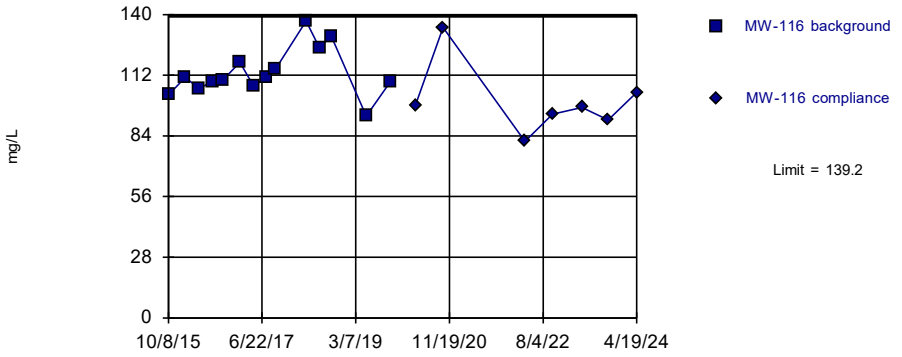
Constituent: Calcium Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

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=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 5/27/2024 10:45 PM View: 2024-1H PL

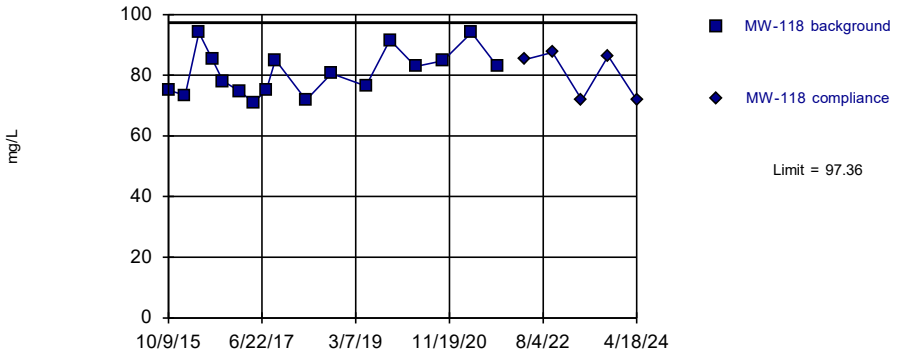
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=81, Std. Dev.=7.48, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9232, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

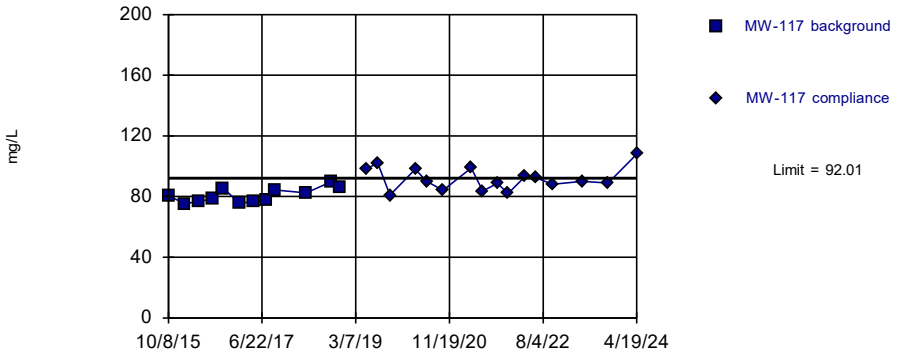
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=80.69, Std. Dev.=4.731, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9147, 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 5/27/2024 10:45 PM View: 2024-1H PL

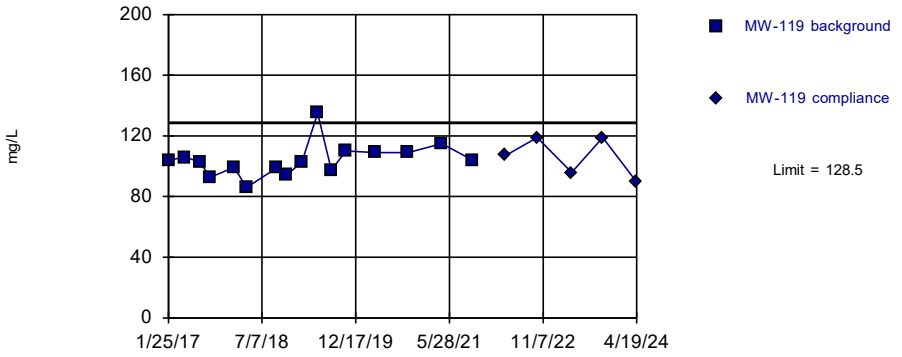
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=104.1, Std. Dev.=11.01, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9078, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

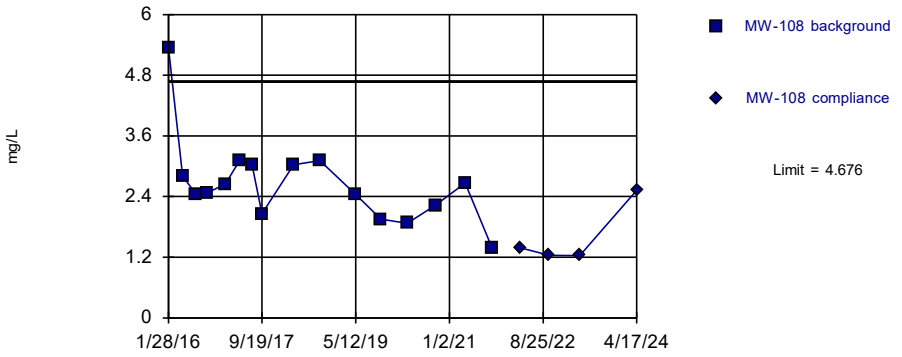
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=1.613, Std. Dev.=0.2483, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8972, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

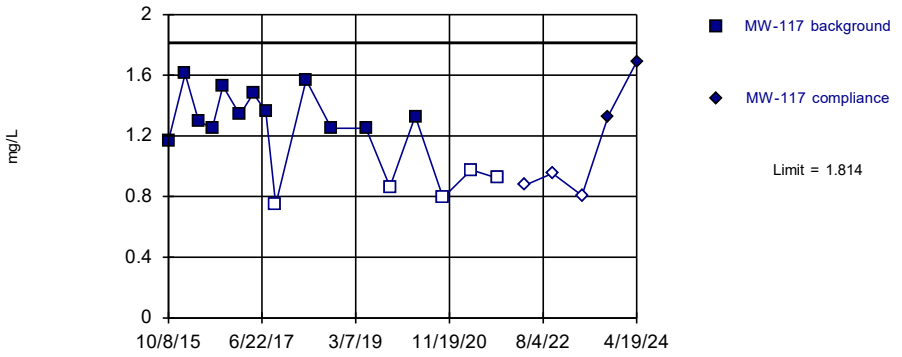
Sanitas™ v.10.0.16 Software licensed to Olsson. UG

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.22, Std. Dev.=0.2713, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9331, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

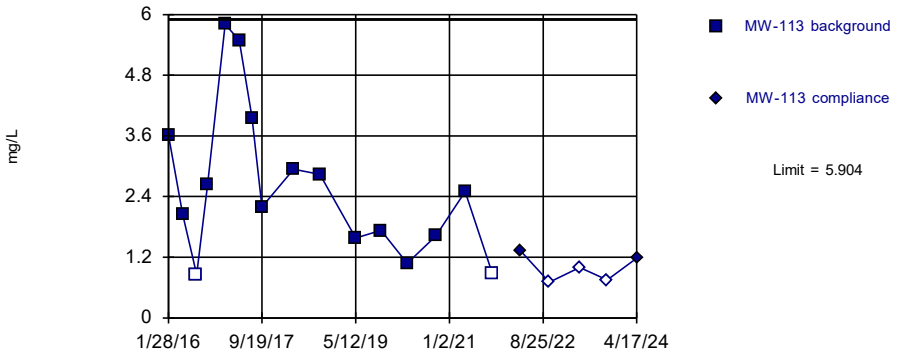
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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.61, Std. Dev.=1.489, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9047, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

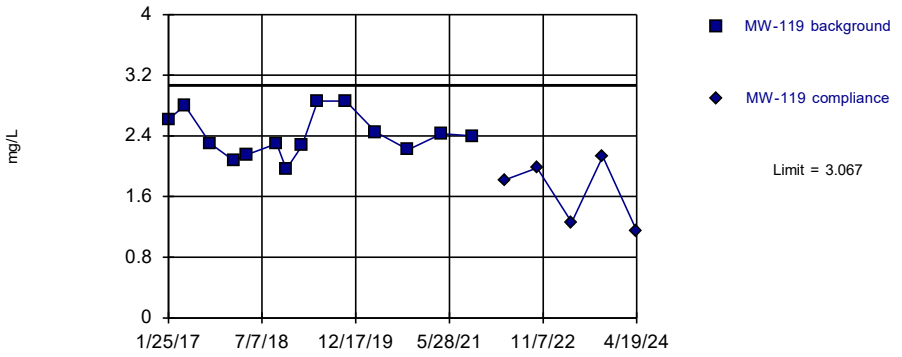
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.406, Std. Dev.=0.2867, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9373, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

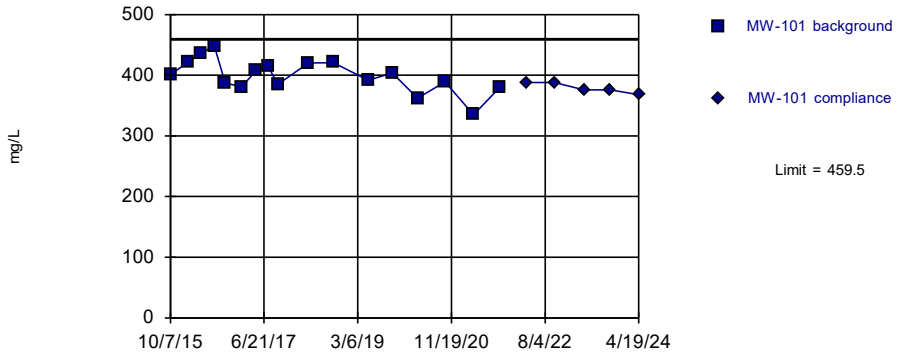
Constituent: Chloride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

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=399.1, Std. Dev.=27.63, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9751, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

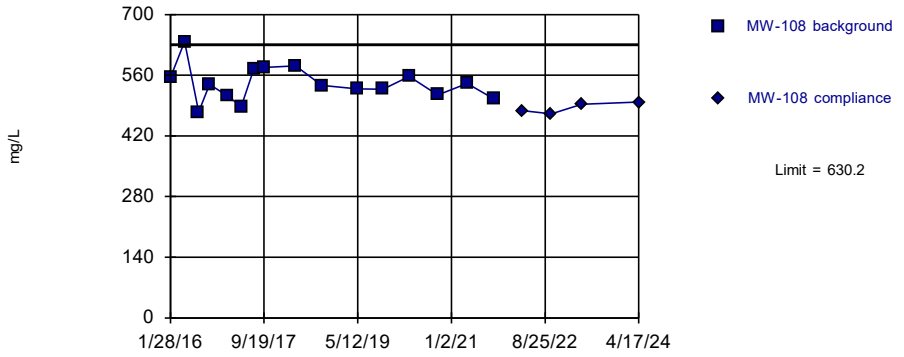
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=541, Std. Dev.=40.32, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9661, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

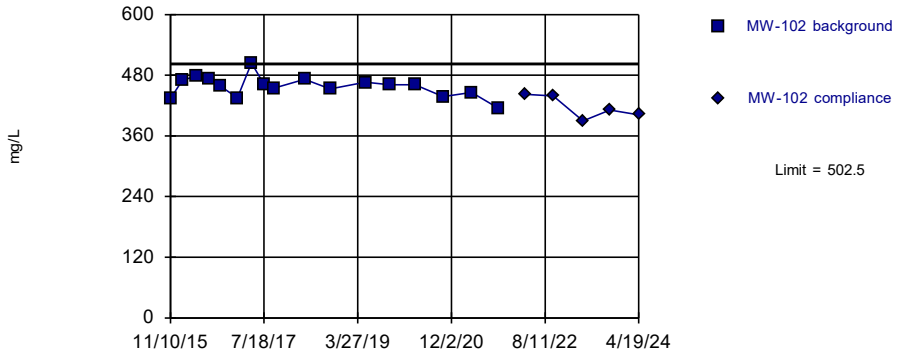
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=457.6, Std. Dev.=20.52, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9734, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

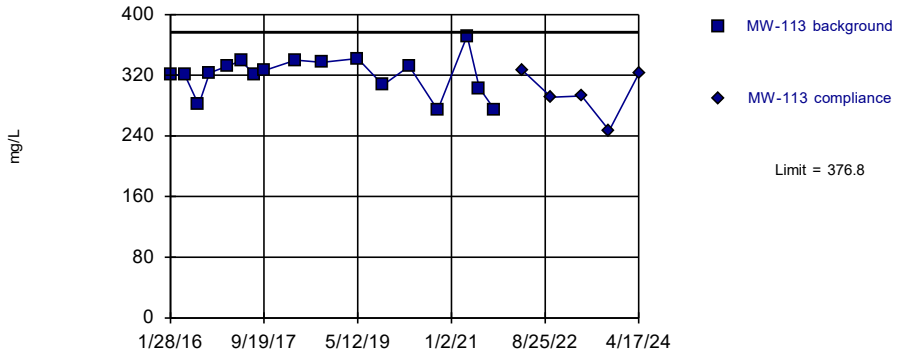
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=320.3, Std. Dev.=25.85, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9286, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

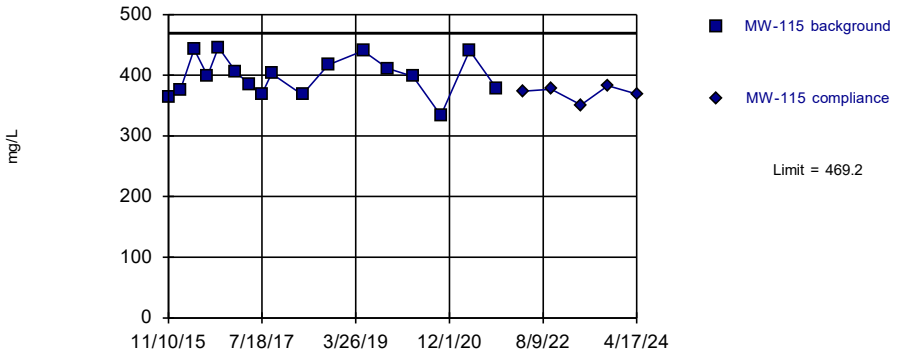
Constituent: Dissolved Solids Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

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=398.7, Std. Dev.=32.24, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9544, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

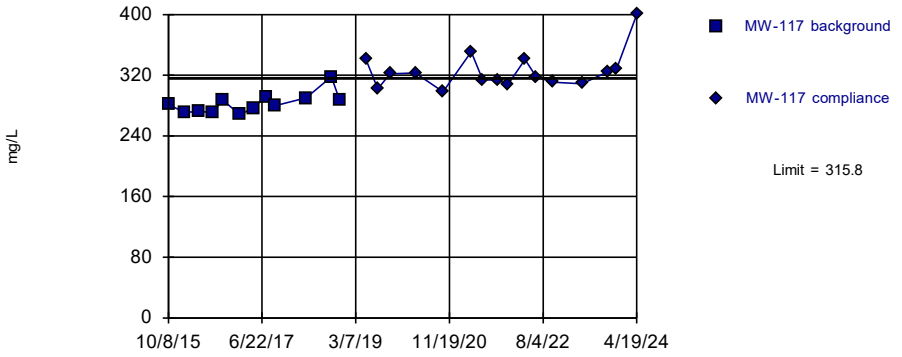
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=282.9, Std. Dev.=13.75, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.861, 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 5/27/2024 10:45 PM View: 2024-1H PL

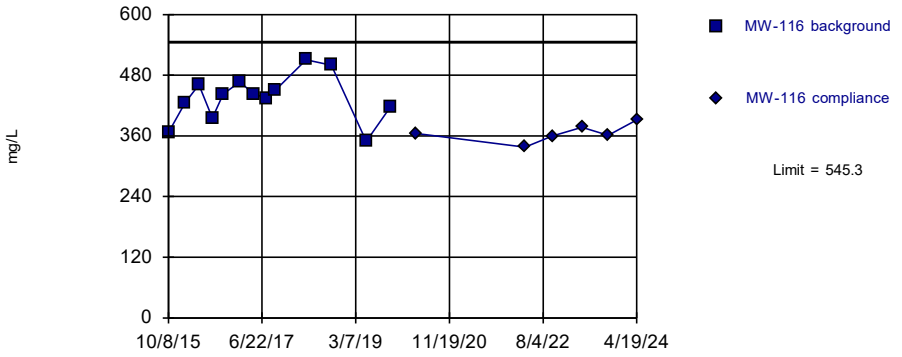
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=435.8, Std. Dev.=46.64, n=13. Seasonality was not detected with 95% confidence. 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 5/27/2024 10:45 PM View: 2024-1H PL

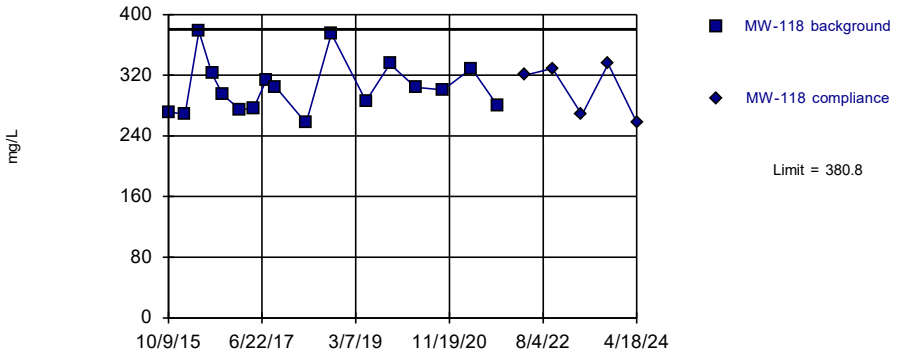
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=304.1, Std. Dev.=35.06, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9158, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

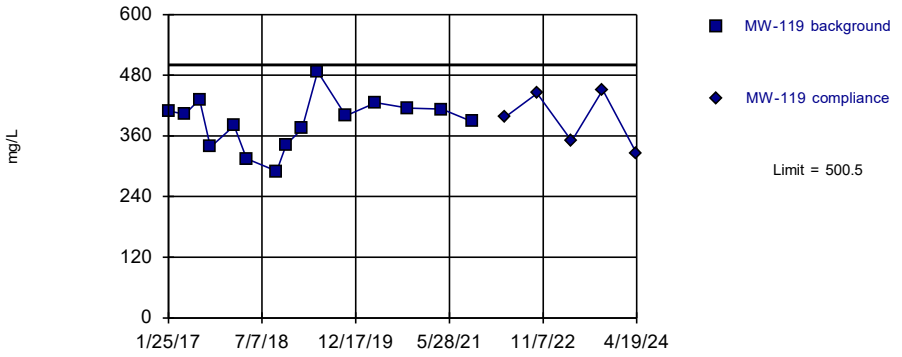
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=387.5, Std. Dev.=50.04, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9666, critical = 0.835. Kappa = 2.257 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

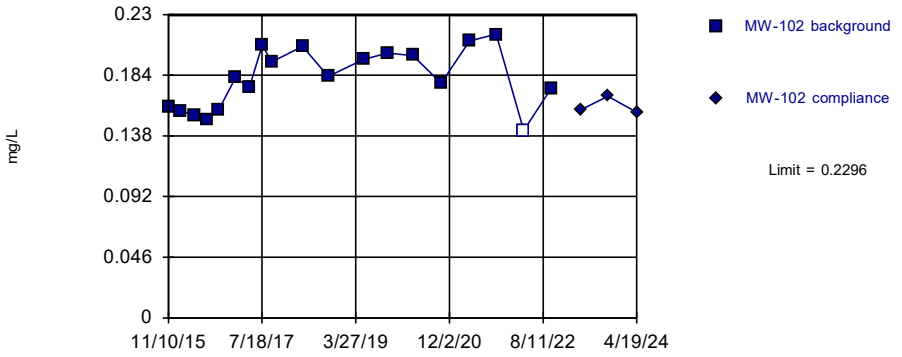
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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1811, Std. Dev.=0.0227, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9435, critical = 0.863. Kappa = 2.139 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

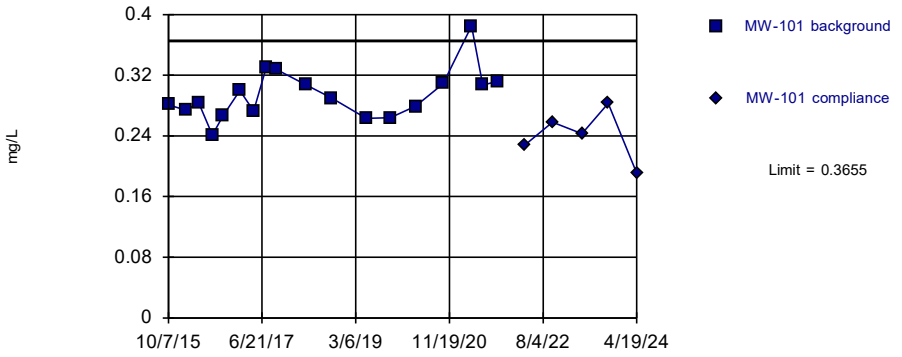
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2941, Std. Dev.=0.03299, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9277, critical = 0.858. Kappa = 2.163 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

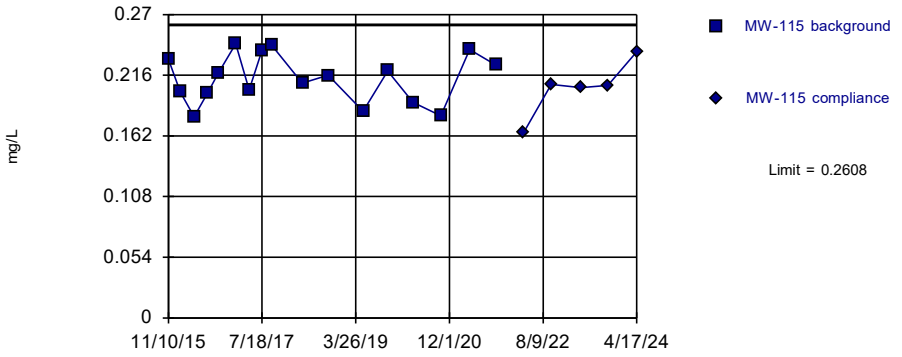
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.213, Std. Dev.=0.02184, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9423, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

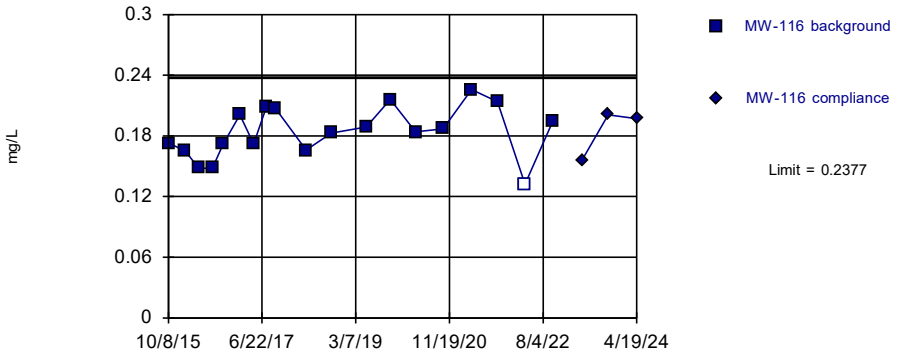
Constituent: Fluoride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1834, Std. Dev.=0.02539, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9776, critical = 0.863. Kappa = 2.139 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

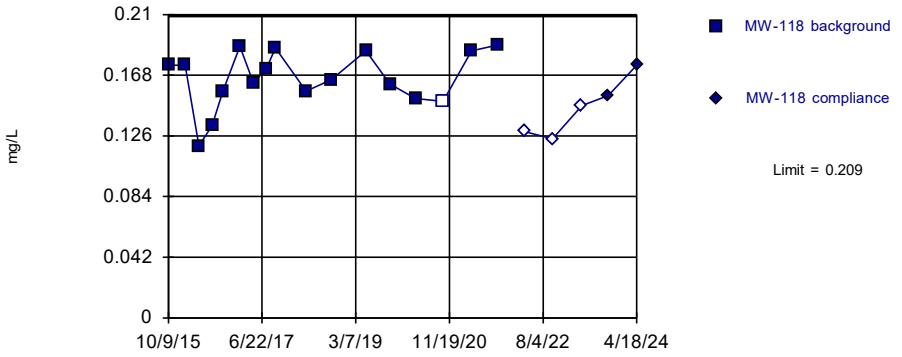
Constituent: Fluoride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1655, Std. Dev.=0.01986, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.922, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

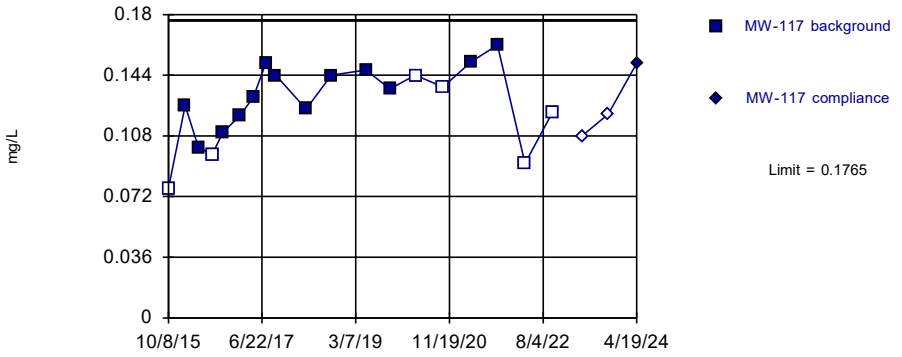
Constituent: Fluoride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.
Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1272, Std. Dev.=0.02308, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9503, critical = 0.863. Kappa = 2.139 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

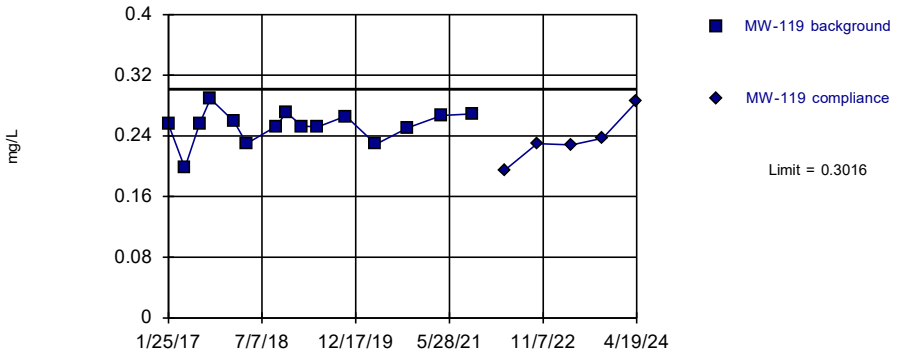
Constituent: Fluoride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2532, Std. Dev.=0.02142, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9, critical = 0.835. Kappa = 2.257 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

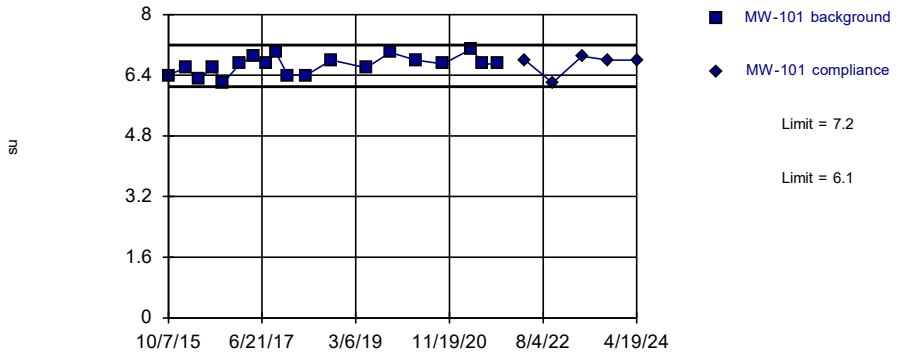
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.663, Std. Dev.=0.2454, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9635, critical = 0.863. Kappa = 2.139 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

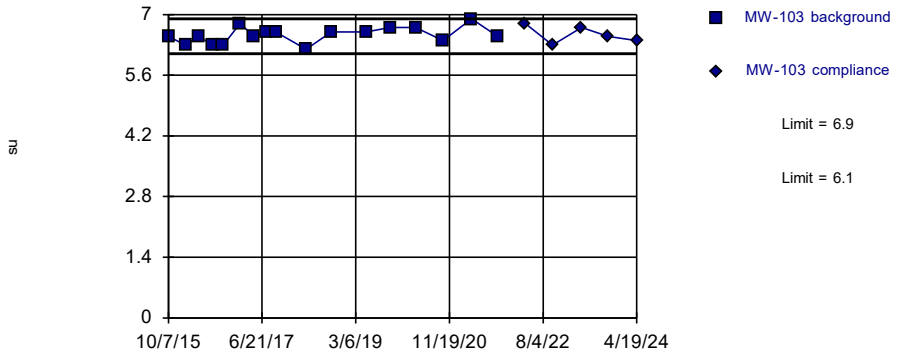
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.529, Std. Dev.=0.1896, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9646, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

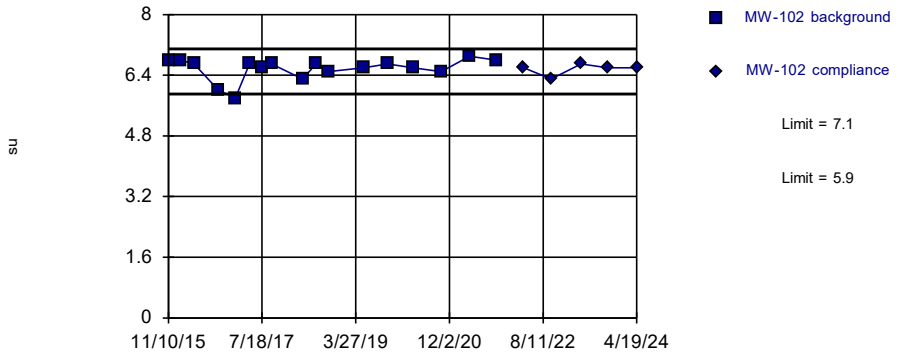
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on x^4 transformation): Mean=1884, Std. Dev.=301.4, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8532, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

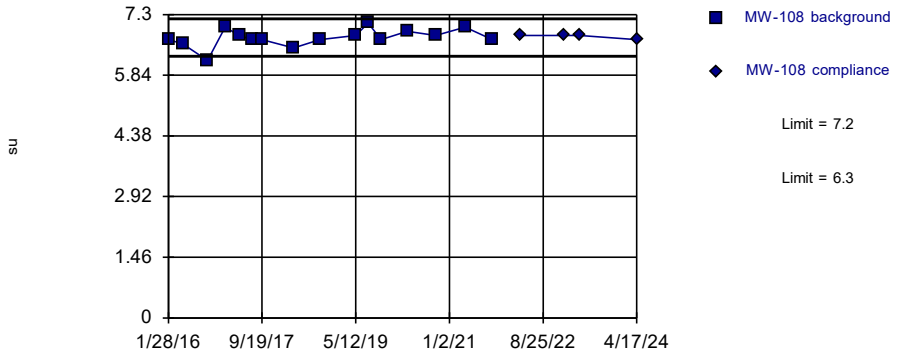
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.744, Std. Dev.=0.2128, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9177, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

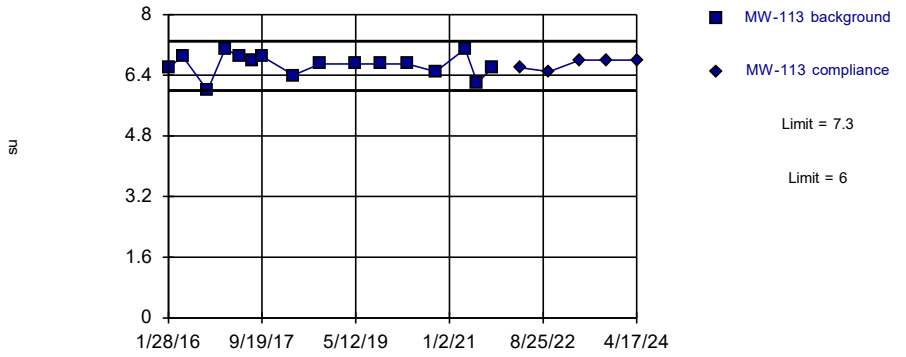
Constituent: pH Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

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=6.675, Std. Dev.=0.2978, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9421, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

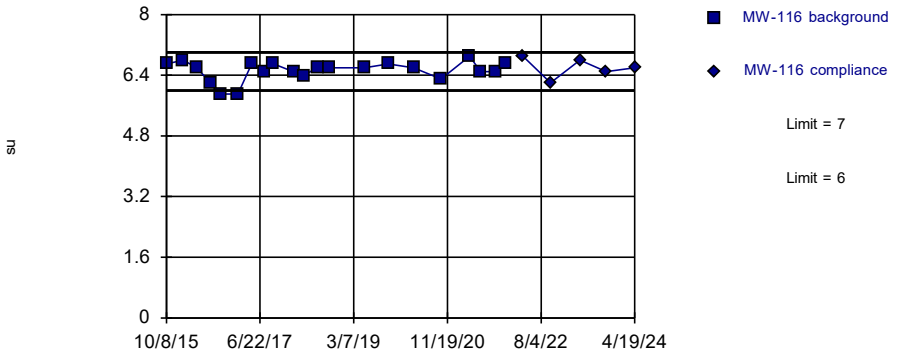
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square transformation): Mean=42.56, Std. Dev.=3.313, n=21. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8756, critical = 0.873. Kappa = 2.1 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

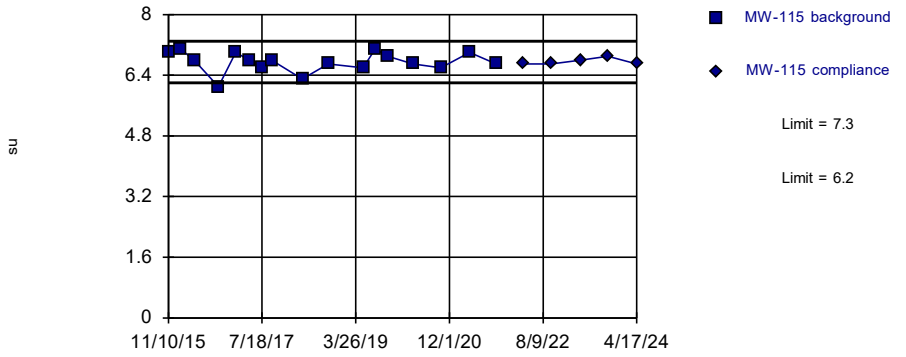
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.753, Std. Dev.=0.2695, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9194, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/27/2024 10:45 PM View: 2024-1H PL

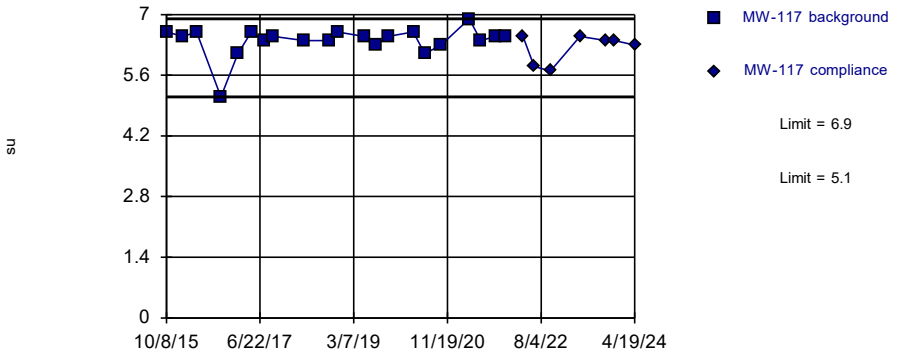
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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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 21 background values. Well-constituent pair annual alpha = 0.01596. Individual comparison alpha = 0.007998 (1 of 2). Seasonality was not detected with 95% confidence.

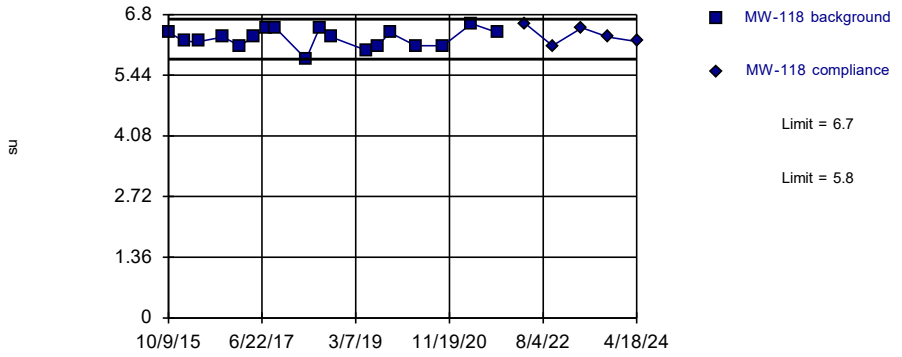
Constituent: pH Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

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=6.267, Std. Dev.=0.2086, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9579, critical = 0.858. Kappa = 2.163 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

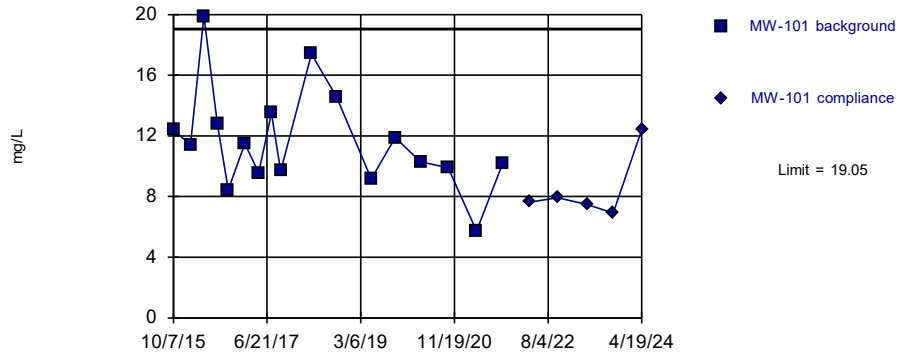
Constituent: pH Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

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=11.67, Std. Dev.=3.372, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9362, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

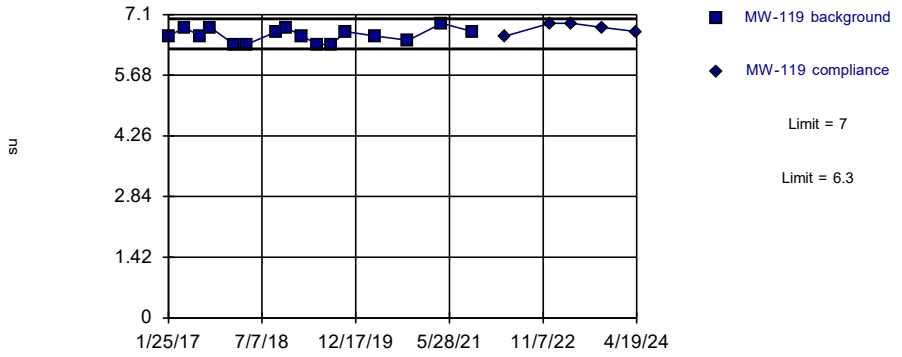
Constituent: Sulfate Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

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=6.619, Std. Dev.=0.1642, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9133, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

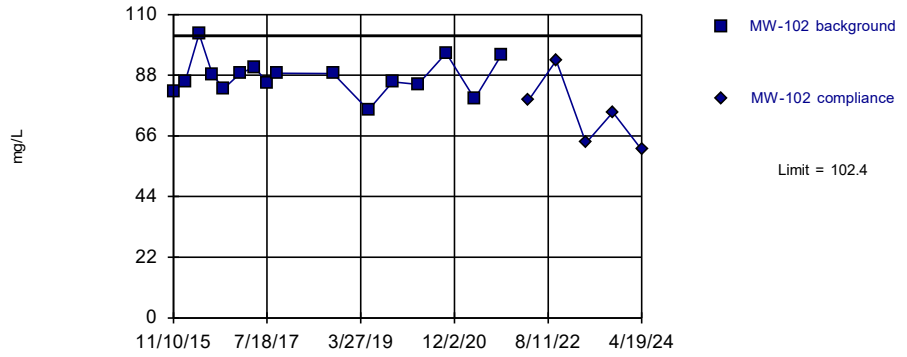
Constituent: pH Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

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=87.59, Std. Dev.=6.672, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9649, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

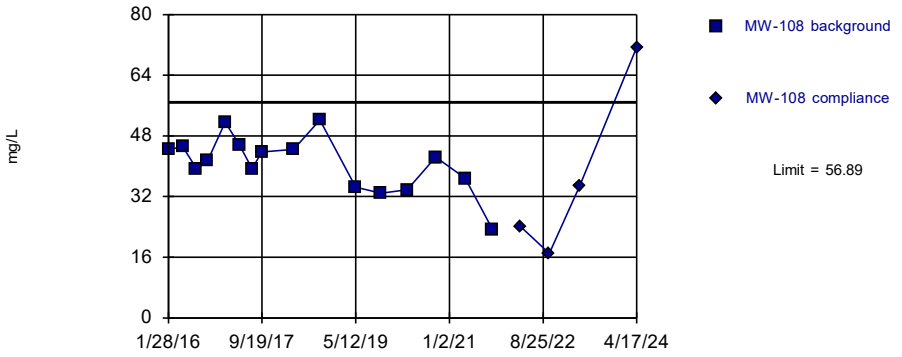
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=40.71, Std. Dev.=7.314, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9559, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

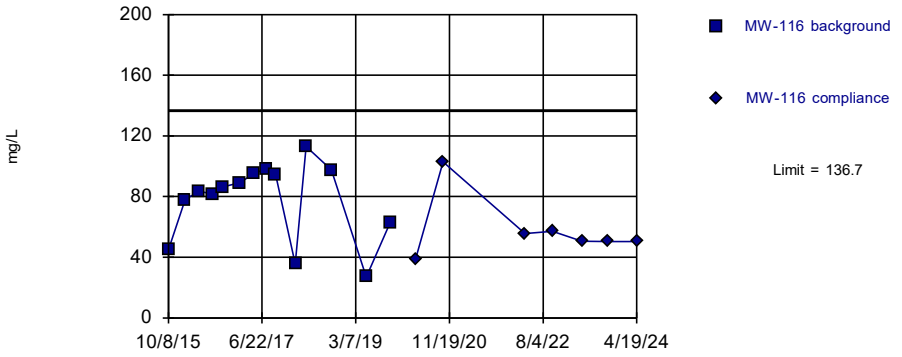
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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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 5/27/2024 10:46 PM View: 2024-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

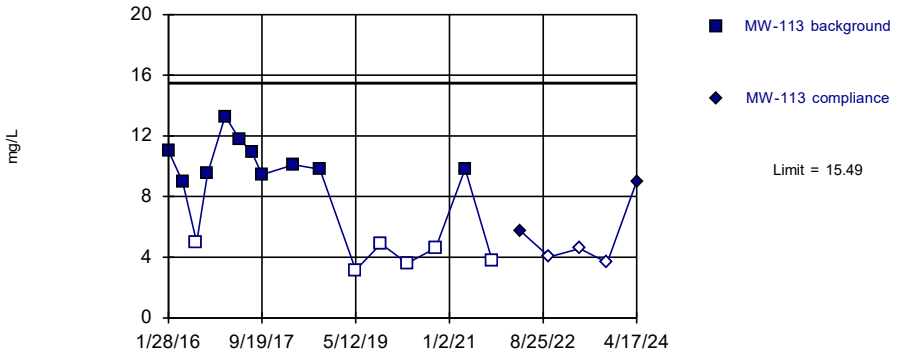
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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=8.104, Std. Dev.=3.341, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8842, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

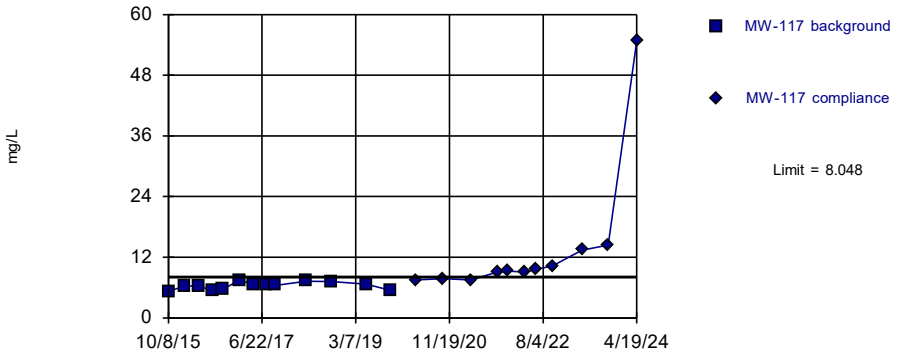
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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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 5/27/2024 10:46 PM View: 2024-1H PL

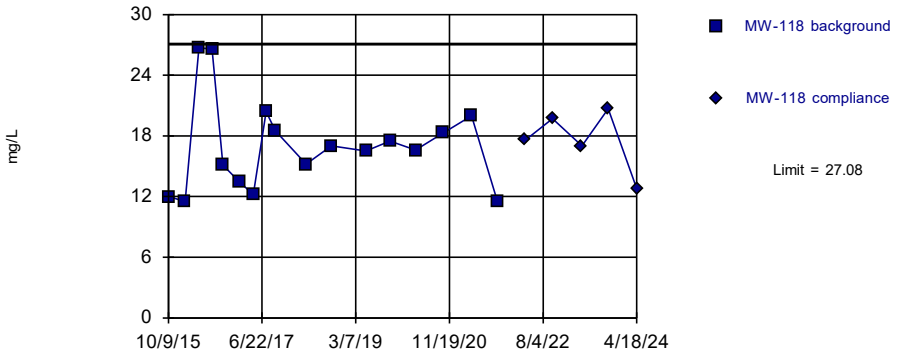
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=17, Std. Dev.=4.608, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9008, critical = 0.851. Kappa = 2.188 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

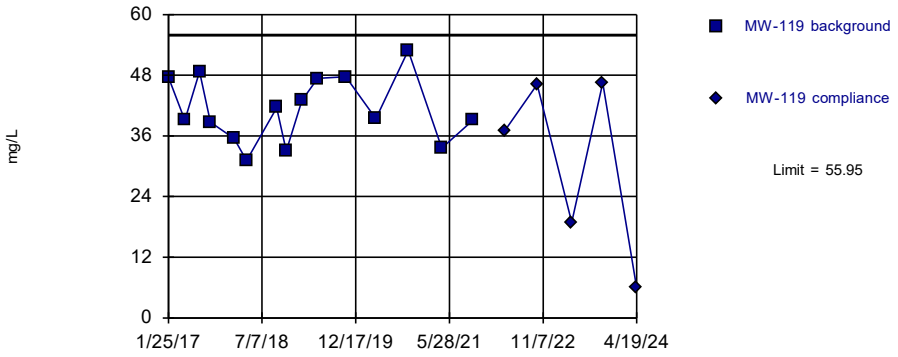
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.16 Software licensed to Olsson. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=41.23, Std. Dev.=6.525, n=15. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9533, critical = 0.835. Kappa = 2.257 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/27/2024 10:46 PM View: 2024-1H PL

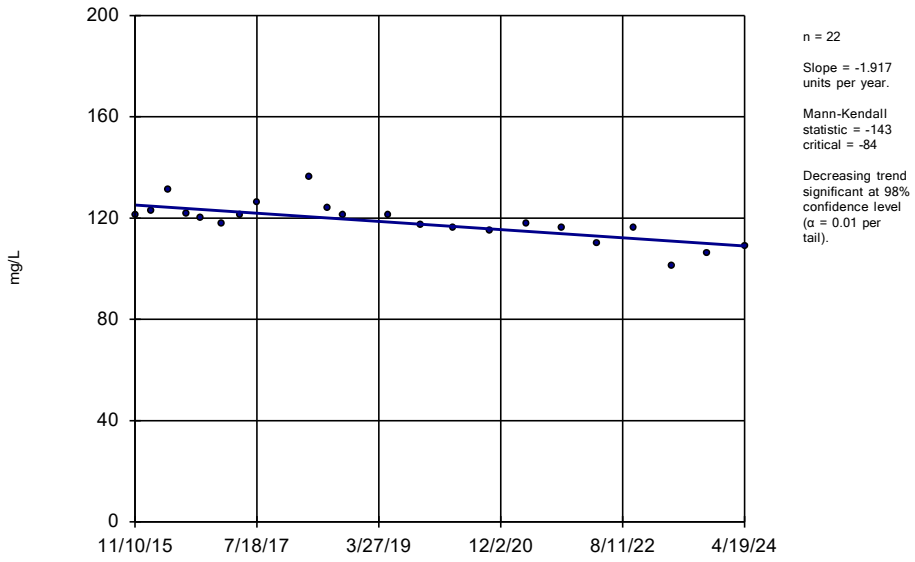
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

TREND TESTS
FIRST HALF 2024 MONITORING EVENT

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Sen's Slope Estimator

MW-102



n = 22

Slope = -1.917 units per year.

Mann-Kendall statistic = -143 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Calcium Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

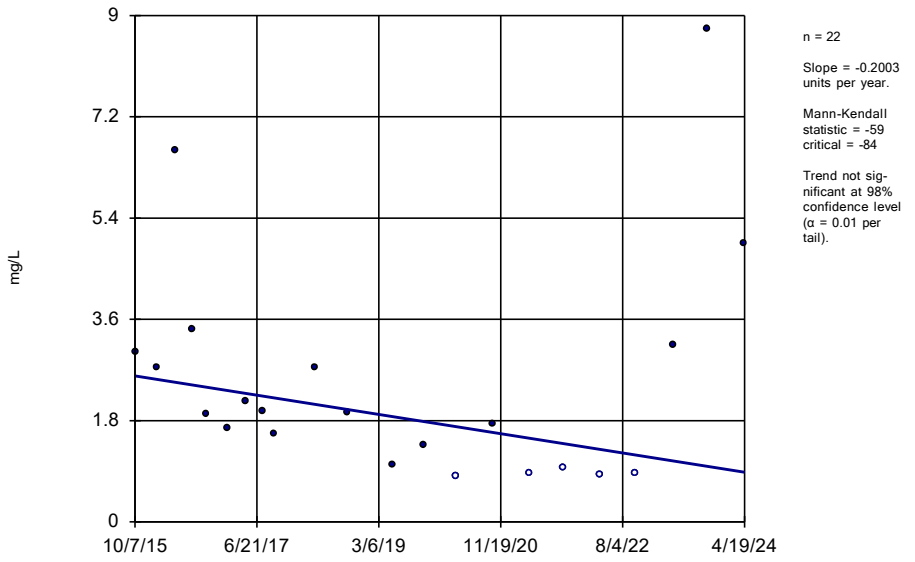
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-101



n = 22

Slope = -0.2003 units per year.

Mann-Kendall statistic = -59 critical = -84

Trend not significant at 98% confidence level (α = 0.01 per tail).

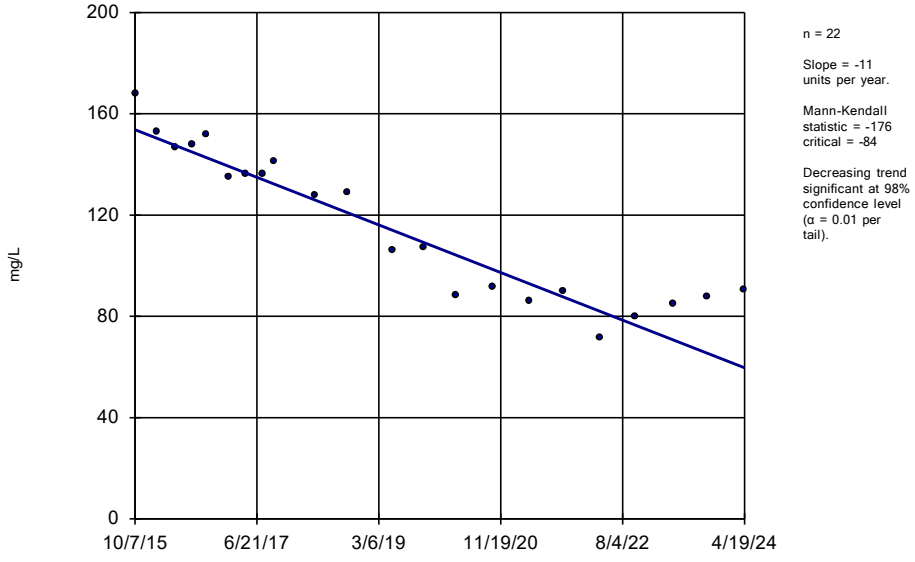
Constituent: Chloride Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-103



n = 22

Slope = -11 units per year.

Mann-Kendall statistic = -176 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

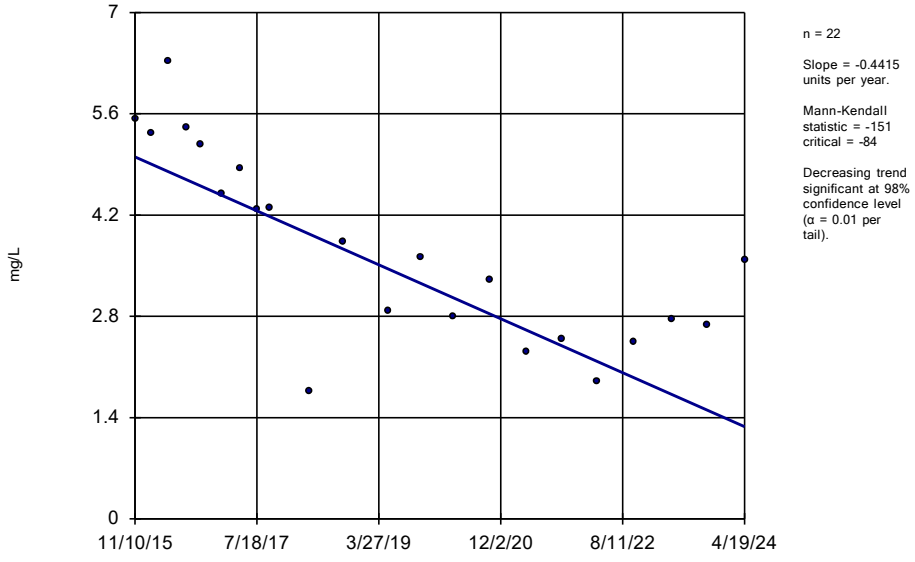
Constituent: Calcium Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-102



n = 22

Slope = -0.4415 units per year.

Mann-Kendall statistic = -151 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

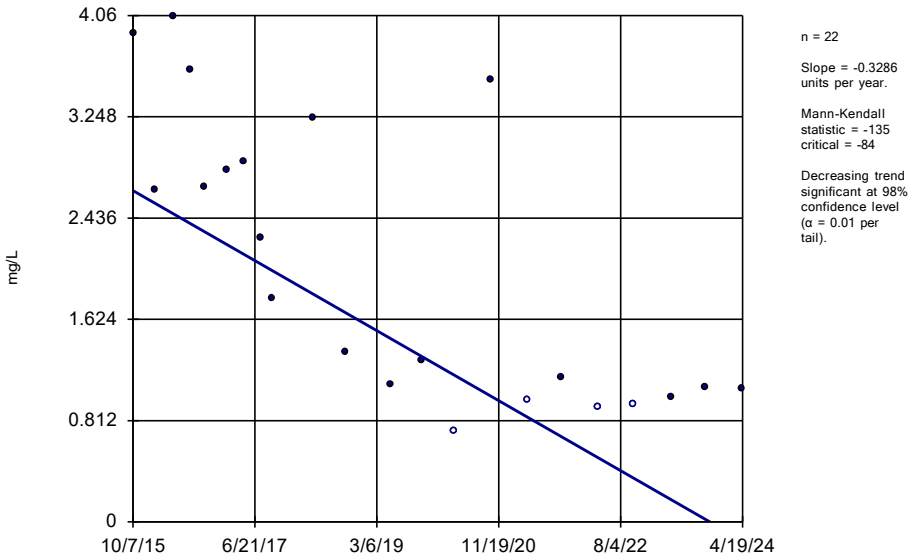
Constituent: Chloride Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-103



n = 22

Slope = -0.3286 units per year.

Mann-Kendall statistic = -135 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

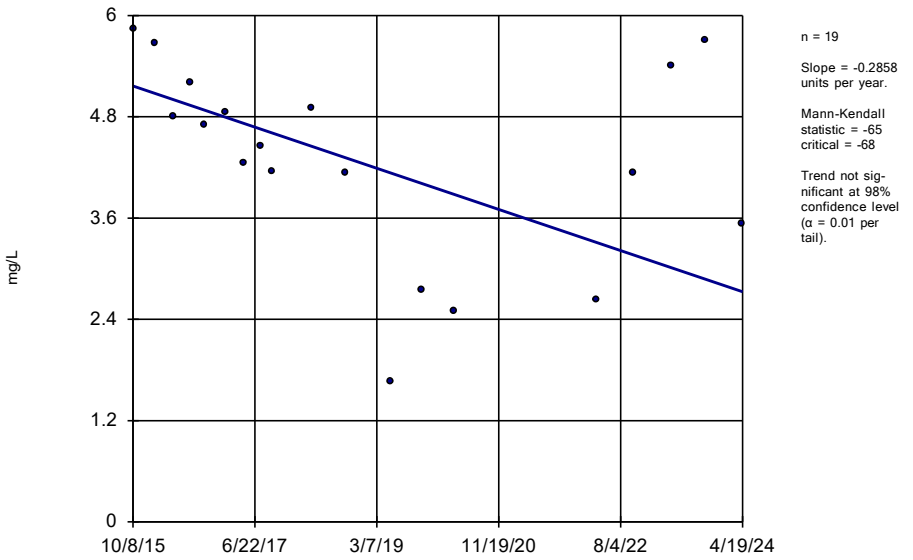
Constituent: Chloride Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-116



n = 19

Slope = -0.2858 units per year.

Mann-Kendall statistic = -65 critical = -68

Trend not significant at 98% confidence level (α = 0.01 per tail).

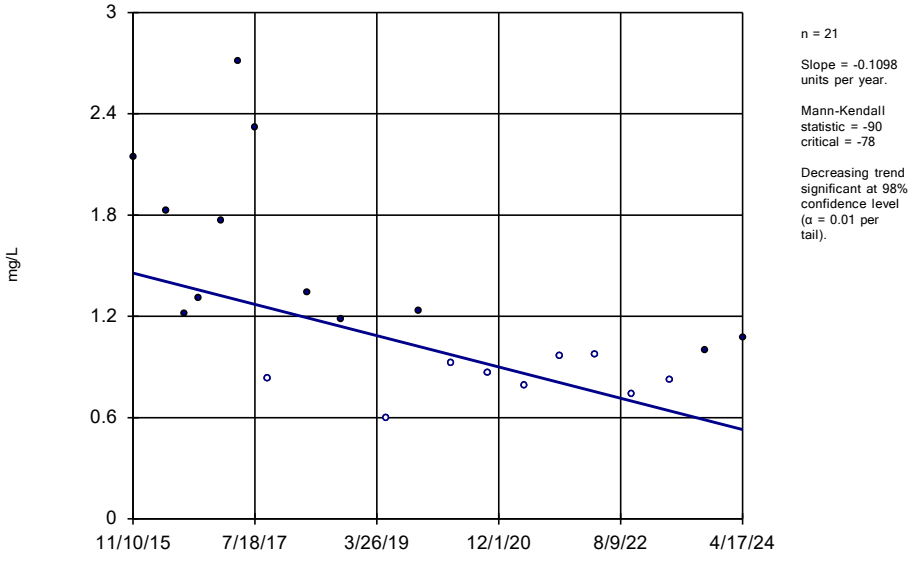
Constituent: Chloride Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-115 (bg)



n = 21

Slope = -0.1098 units per year.

Mann-Kendall statistic = -90 critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

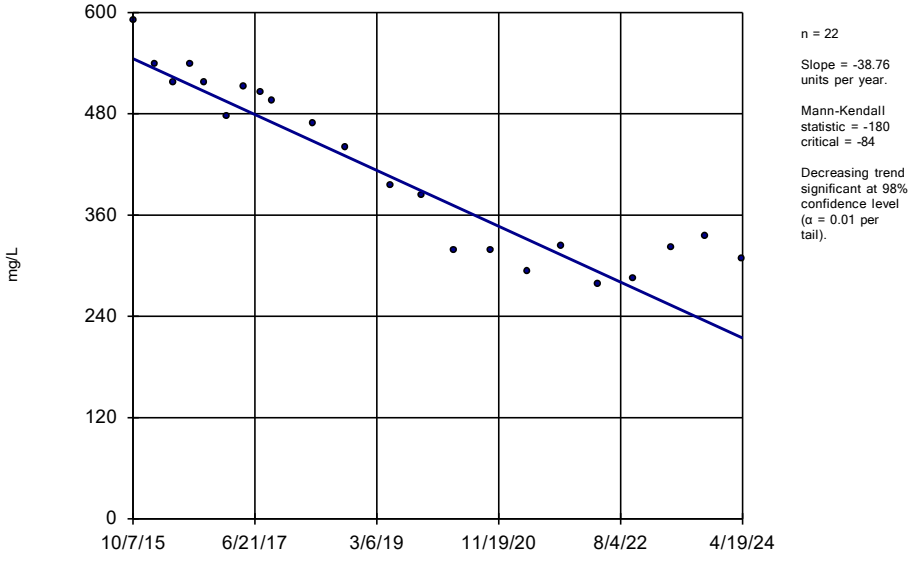
Constituent: Chloride Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-103



n = 22

Slope = -38.76 units per year.

Mann-Kendall statistic = -180 critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

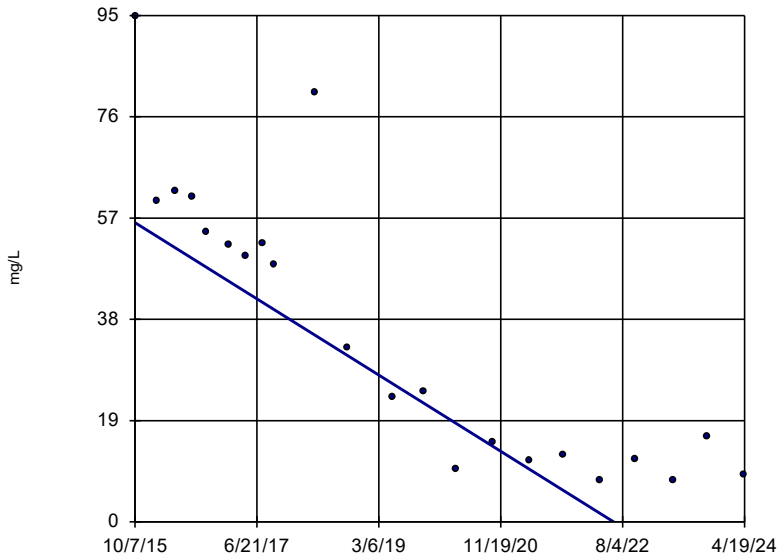
Constituent: Dissolved Solids Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-103



n = 22

Slope = -8.371 units per year.

Mann-Kendall statistic = -173
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Sulfate Analysis Run 5/27/2024 10:53 PM View: 2024-1H trend

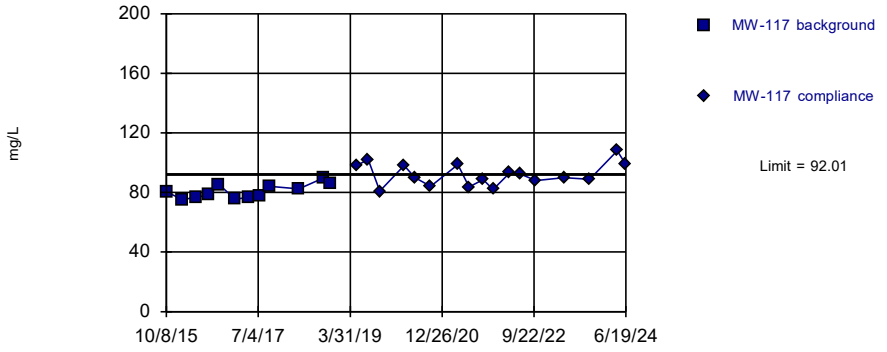
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

PREDICTION LIMITS
FIRST HALF 2024 VERIFICATION SAMPLING EVENT

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=80.69, Std. Dev.=4.731, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9147, 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 9/16/2024 4:36 PM View: 2024-1H ASD

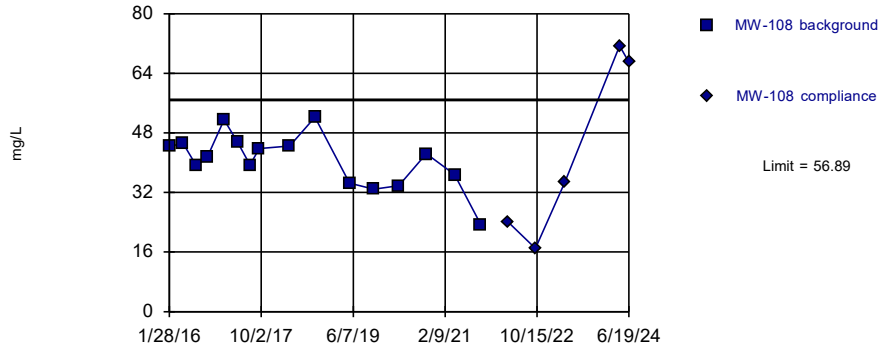
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=40.71, Std. Dev.=7.314, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9559, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 9/16/2024 4:36 PM View: 2024-1H ASD

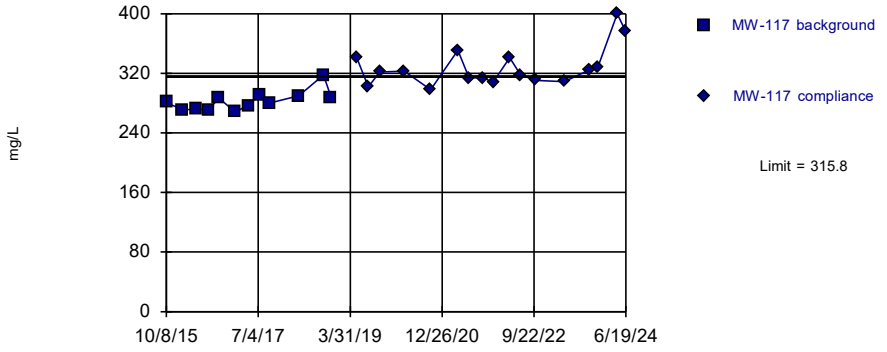
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=282.9, Std. Dev.=13.75, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.861, 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 9/16/2024 4:36 PM View: 2024-1H ASD

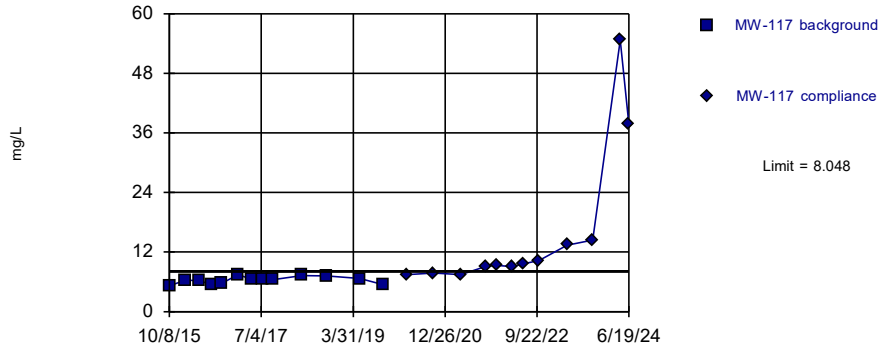
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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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 9/16/2024 4:36 PM View: 2024-1H ASD

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

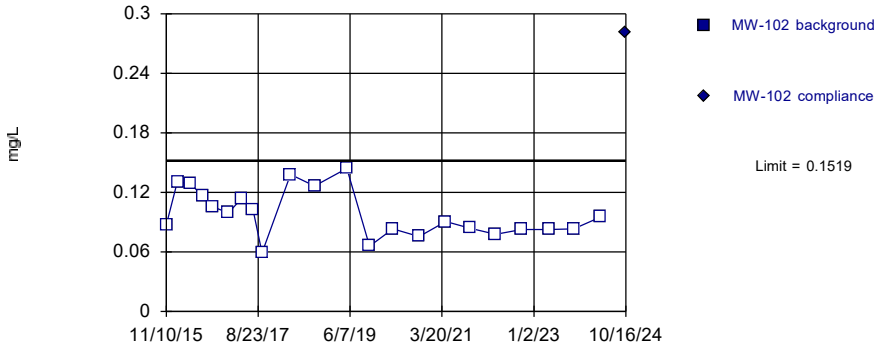
PREDICTION LIMITS
SECOND HALF 2024 MONITORING EVENT

Sanitas™ v.10.0.24 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.09866, Std. Dev.=0.02389, n=22. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9496, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Boron Analysis Run 1/14/2025 1:17 PM View: 2024-2H PL

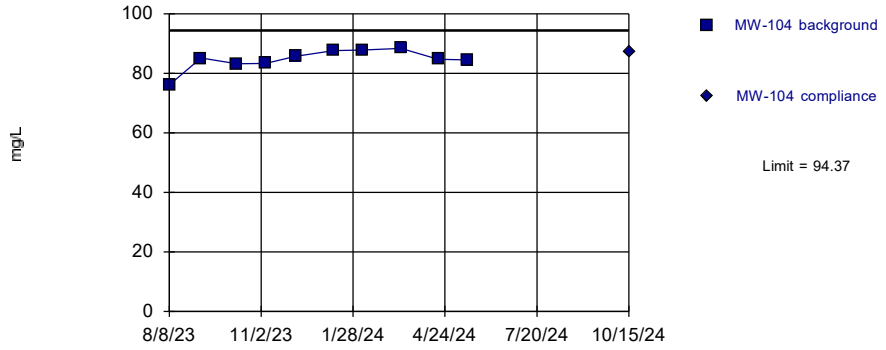
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=84.64, Std. Dev.=3.513, n=10. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8397, critical = 0.781. Kappa = 2.77 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

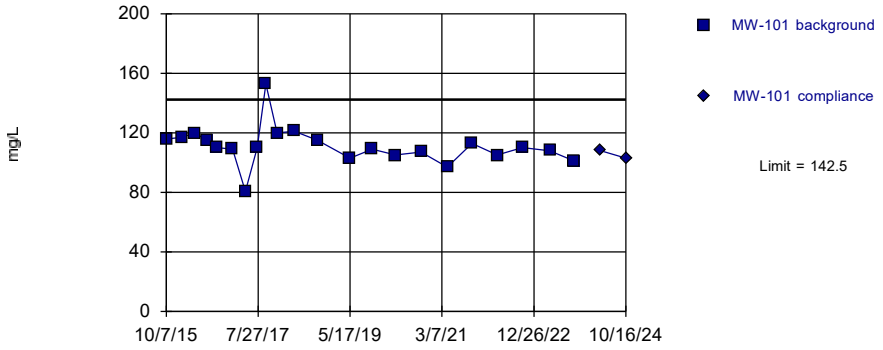
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on natural log transformation): Mean=4.704, Std. Dev.=0.1144, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8791, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

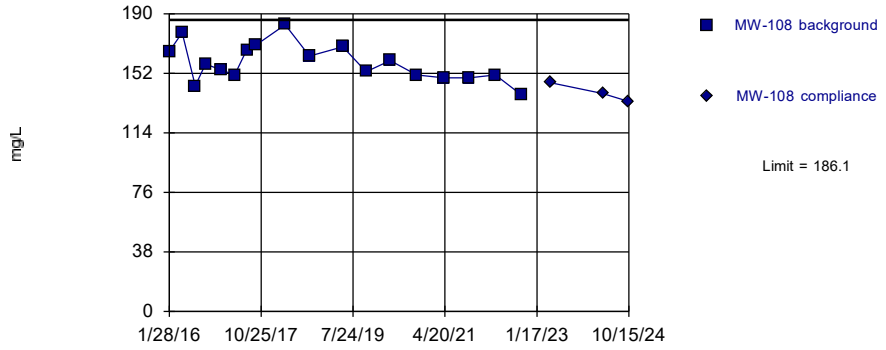
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=158.6, Std. Dev.=11.89, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9668, critical = 0.858. Kappa = 2.317 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

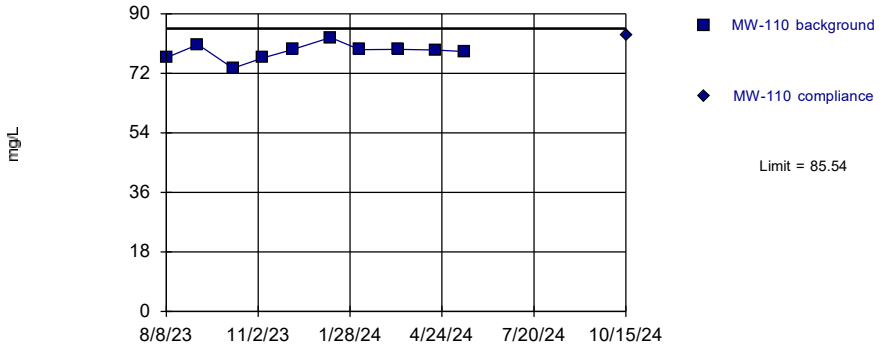
Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

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=78.58, Std. Dev.=2.511, n=10. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9402, critical = 0.781. Kappa = 2.77 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

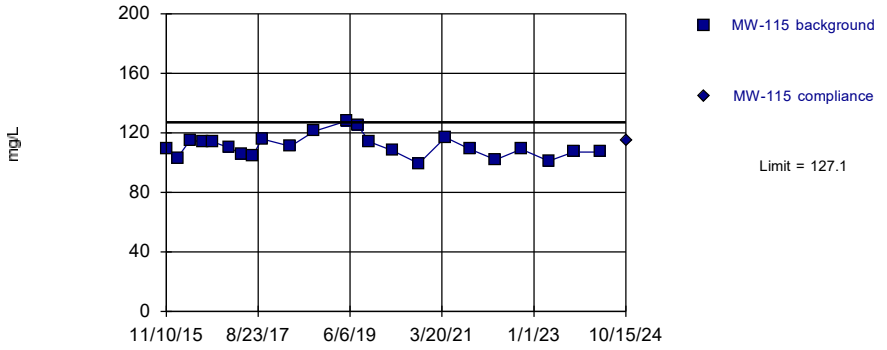
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=110.9, Std. Dev.=7.334, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.959, critical = 0.881. Kappa = 2.213 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

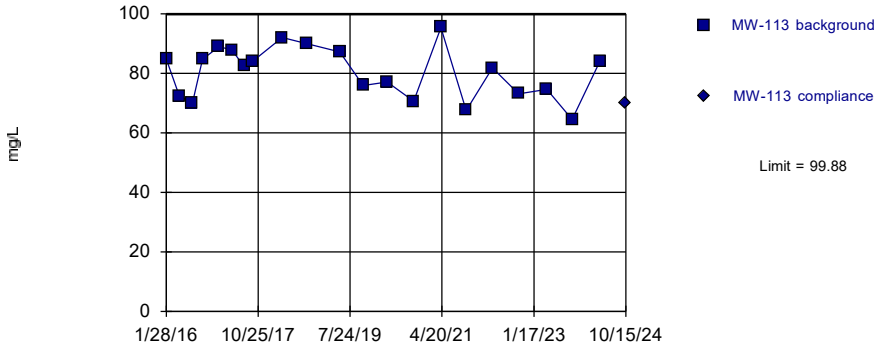
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=80.41, Std. Dev.=8.671, n=21. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9662, critical = 0.873. Kappa = 2.245 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

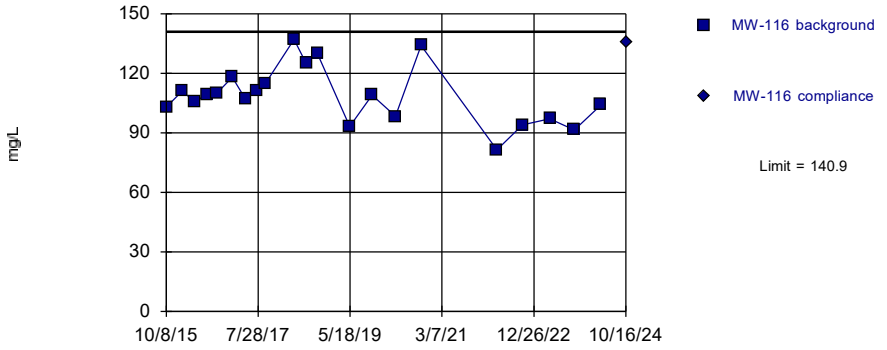
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=108.8, Std. Dev.=14.33, n=21. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9696, critical = 0.873. Kappa = 2.245 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

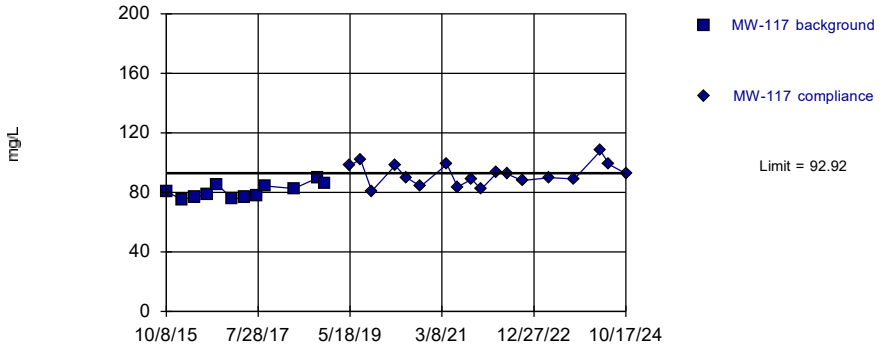
Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

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=80.69, Std. Dev.=4.731, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9147, critical = 0.805. Kappa = 2.585 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

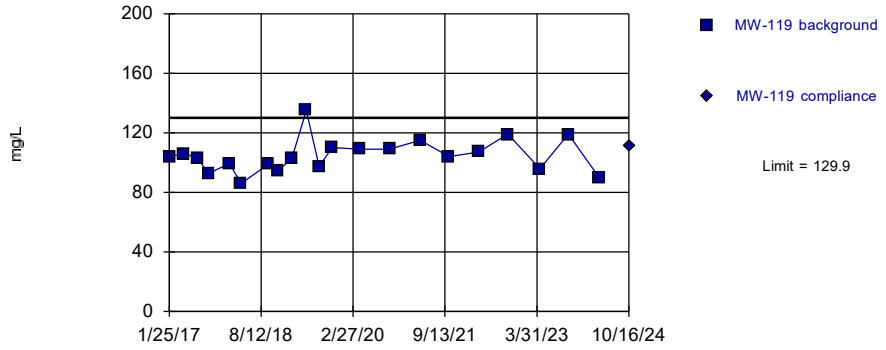
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=104.6, Std. Dev.=11.29, n=21. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9577, critical = 0.873. Kappa = 2.245 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

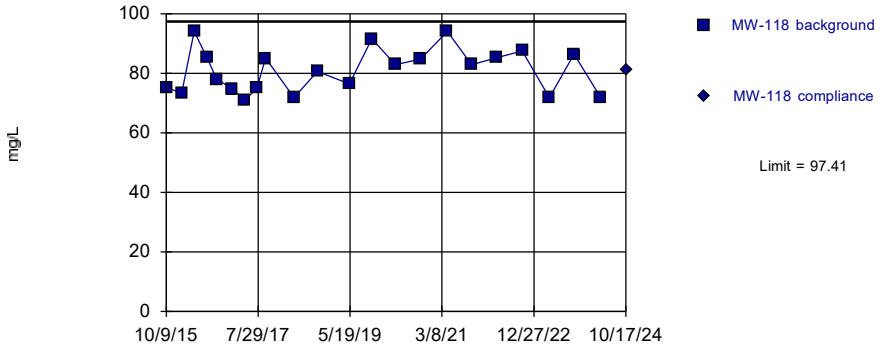
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=80.9, Std. Dev.=7.405, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9248, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

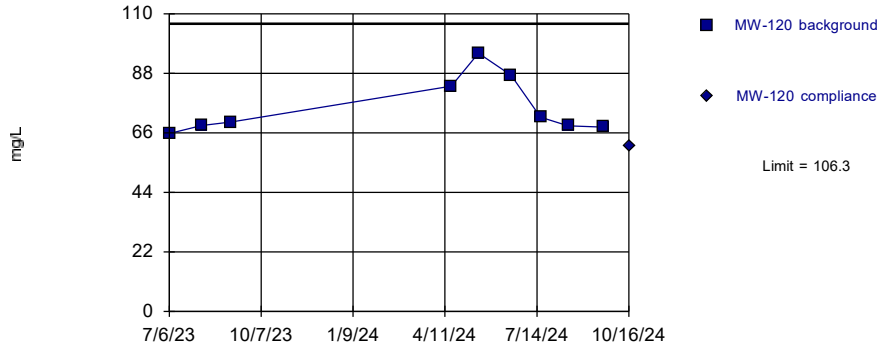
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=75.42, Std. Dev.=10.52, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8176, critical = 0.764. Kappa = 2.939 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

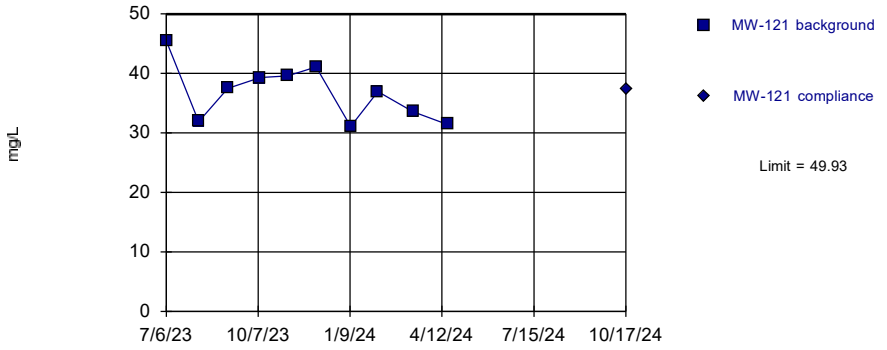
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=36.75, Std. Dev.=4.756, n=10. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9334, critical = 0.781. Kappa = 2.77 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Calcium Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

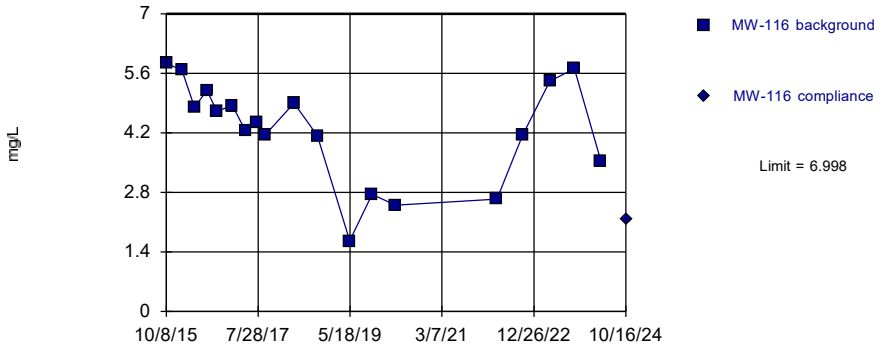
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=4.279, Std. Dev.=1.188, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9304, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Chloride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

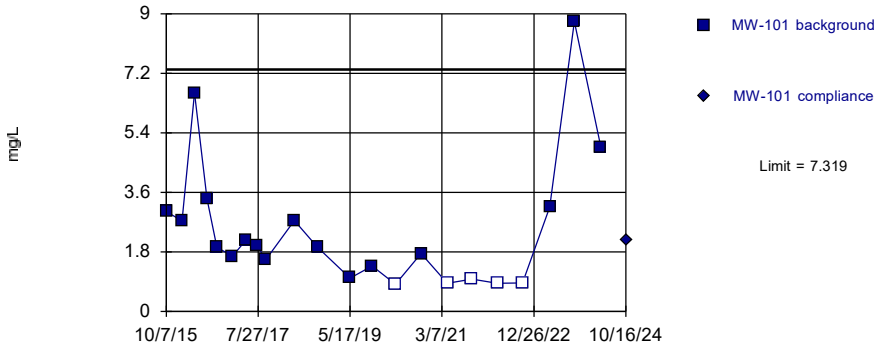
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=1.491, Std. Dev.=0.545, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8804, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Chloride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

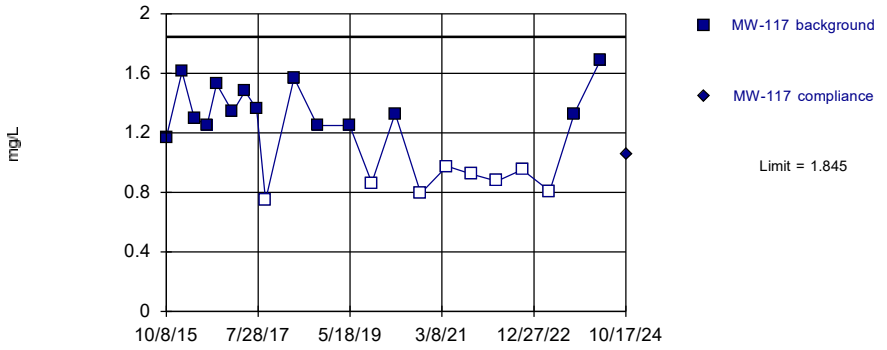
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.2, Std. Dev.=0.2897, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9385, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Chloride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

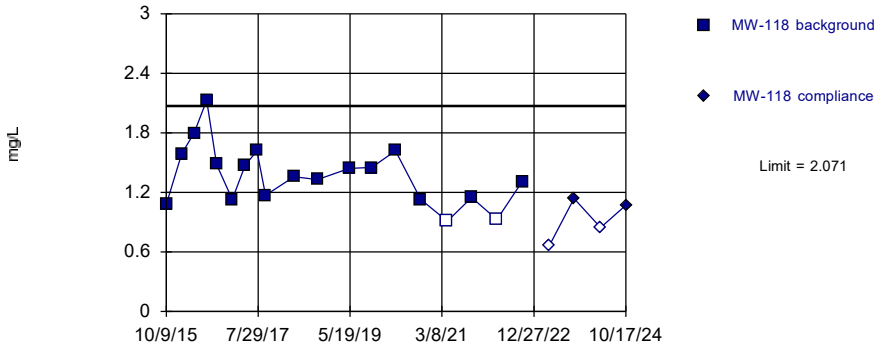
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=1.374, Std. Dev.=0.3046, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9584, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Chloride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

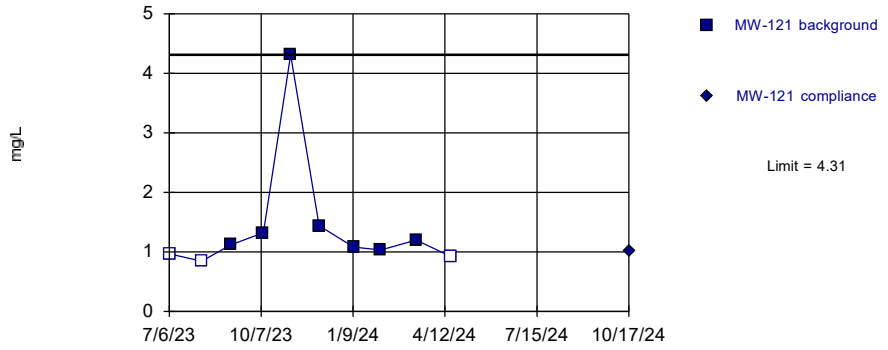
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

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 10 background values. Well-constituent pair annual alpha = 0.0293. Individual comparison alpha = 0.01476 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

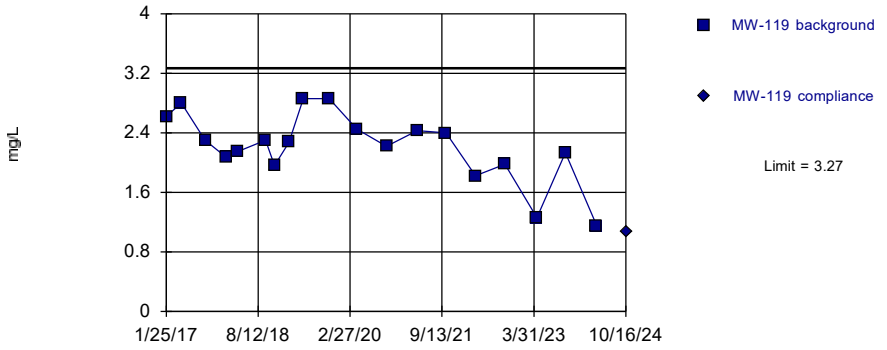
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.212, Std. Dev.=0.4623, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9246, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Chloride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

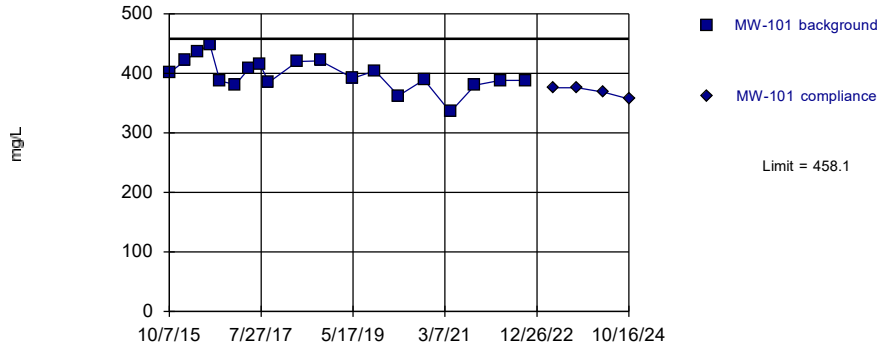
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=397.9, Std. Dev.=26.28, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9663, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

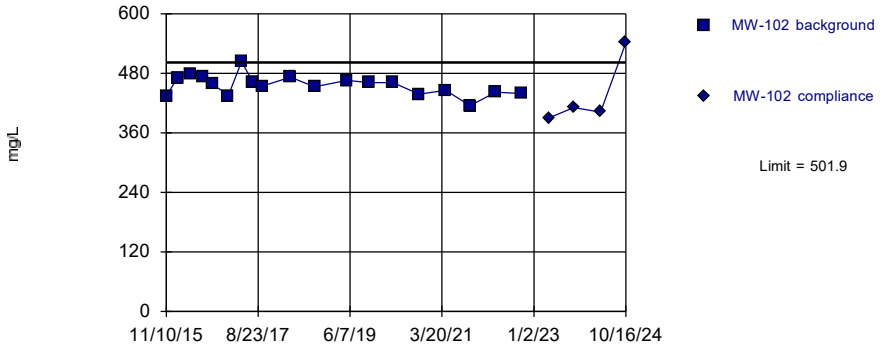
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=455.8, Std. Dev.=20.1, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.976, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

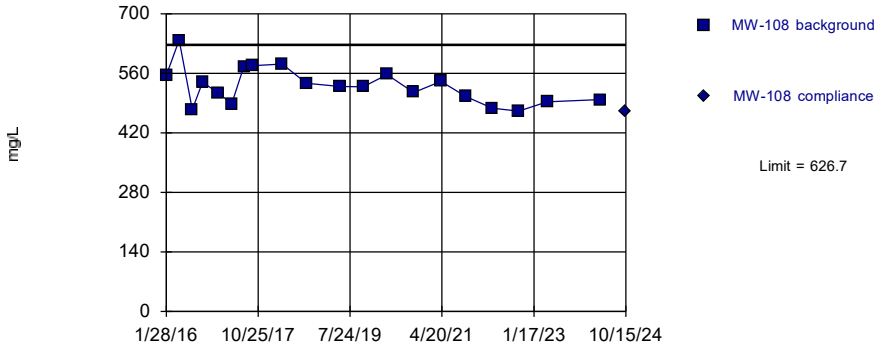
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=529.8, Std. Dev.=42.86, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9516, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

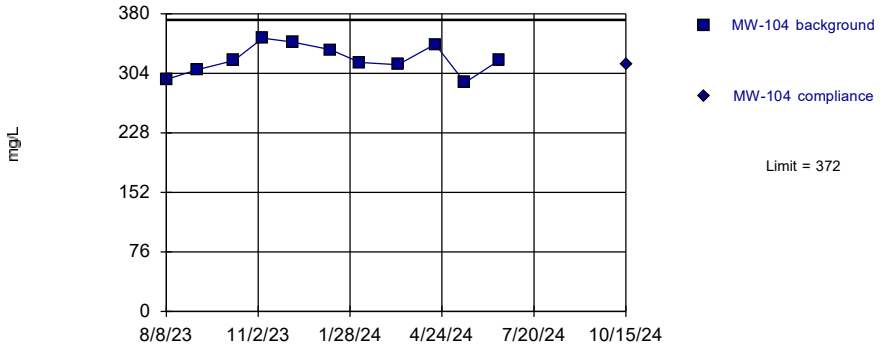
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=321.7, Std. Dev.=18.79, n=11. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9522, critical = 0.792. Kappa = 2.678 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

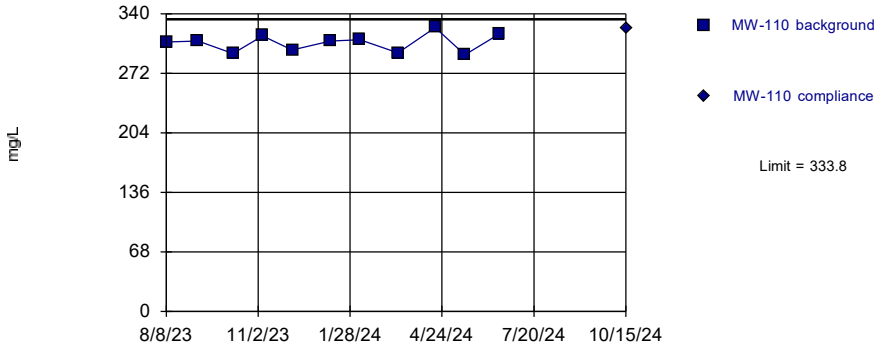
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=306.7, Std. Dev.=10.12, n=11. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9347, critical = 0.792. Kappa = 2.678 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

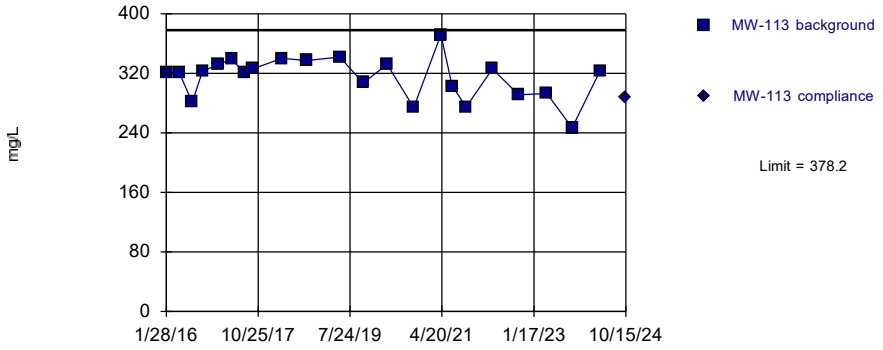
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=314.7, Std. Dev.=28.47, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9493, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

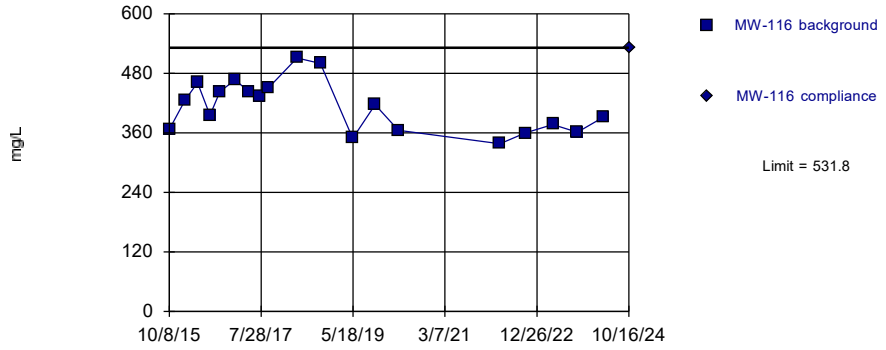
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=413.6, Std. Dev.=51.65, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9491, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

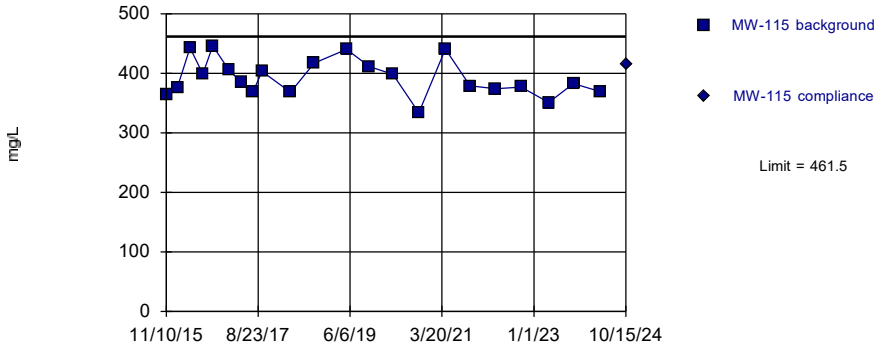
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=392.4, Std. Dev.=31.04, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9482, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

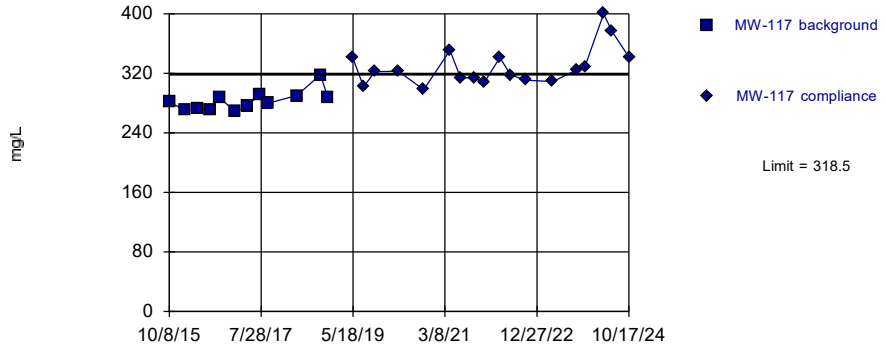
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=282.9, Std. Dev.=13.75, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.861, critical = 0.805. Kappa = 2.585 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

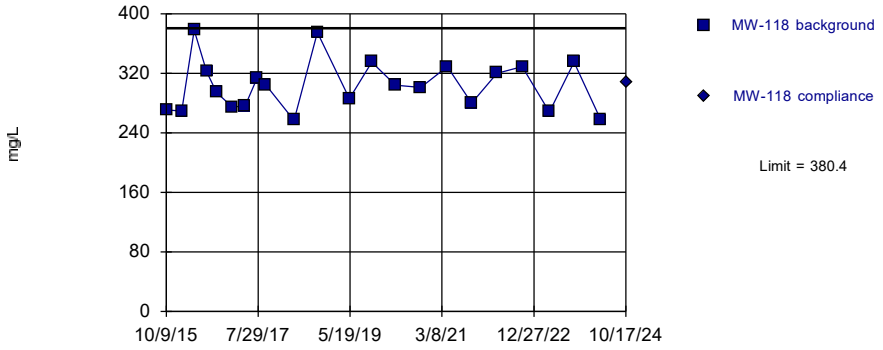
Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

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=303.6, Std. Dev.=34.45, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9357, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

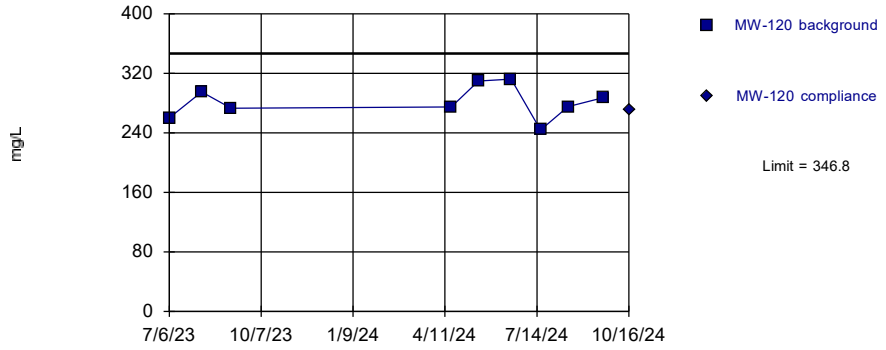
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=281.2, Std. Dev.=22.31, n=9. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.958, critical = 0.764. Kappa = 2.939 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

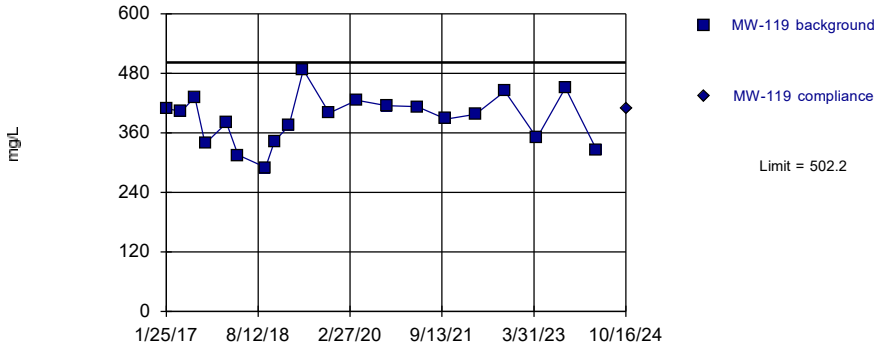
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=389, Std. Dev.=50.07, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.983, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

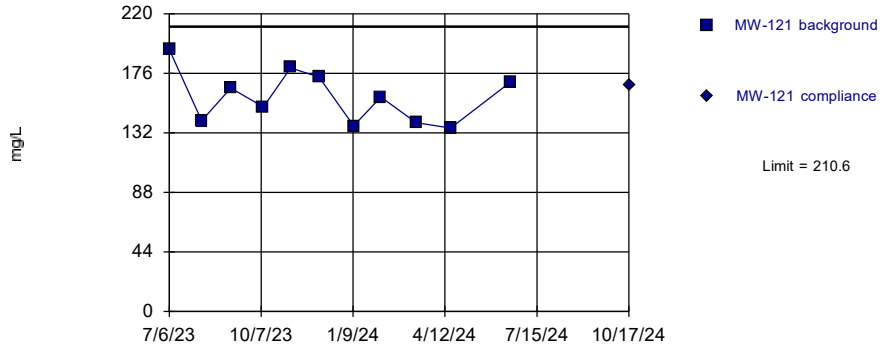
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=158.5, Std. Dev.=19.43, n=11. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9339, critical = 0.792. Kappa = 2.678 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

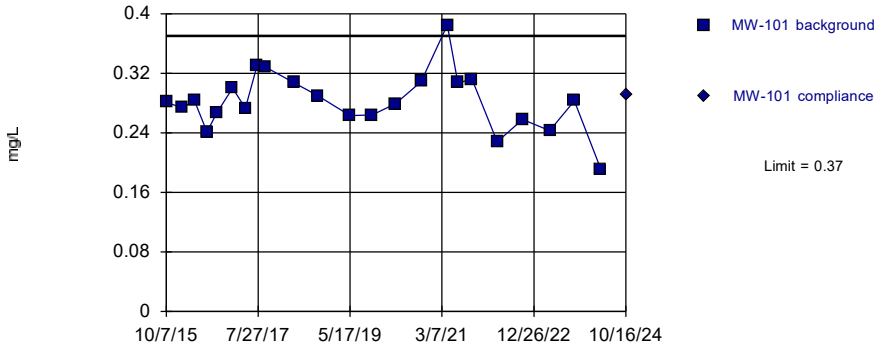
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2825, Std. Dev.=0.03956, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9722, critical = 0.881. Kappa = 2.213 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

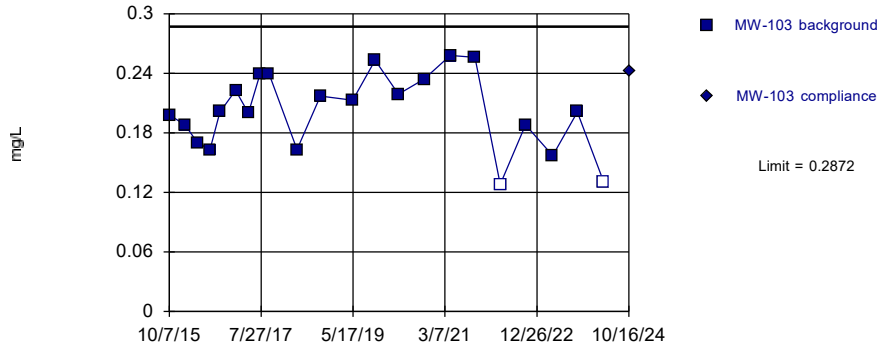
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2018, Std. Dev.=0.0383, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9575, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

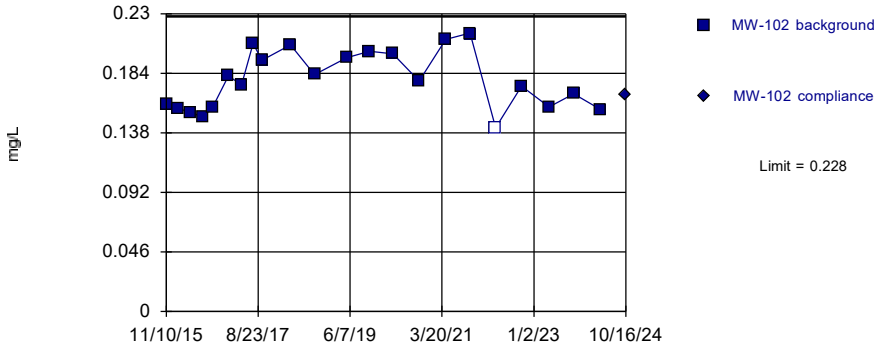
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1783, Std. Dev.=0.02229, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9394, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/18/2024 12:46 PM View: 2024-2H PL

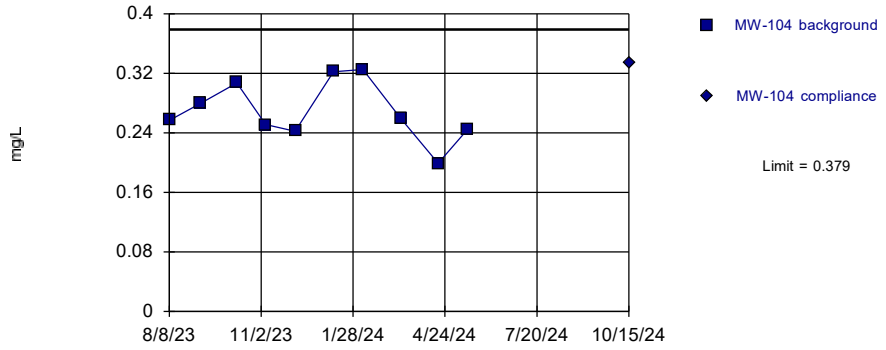
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2687, Std. Dev.=0.03984, n=10. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9347, critical = 0.781. Kappa = 2.77 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

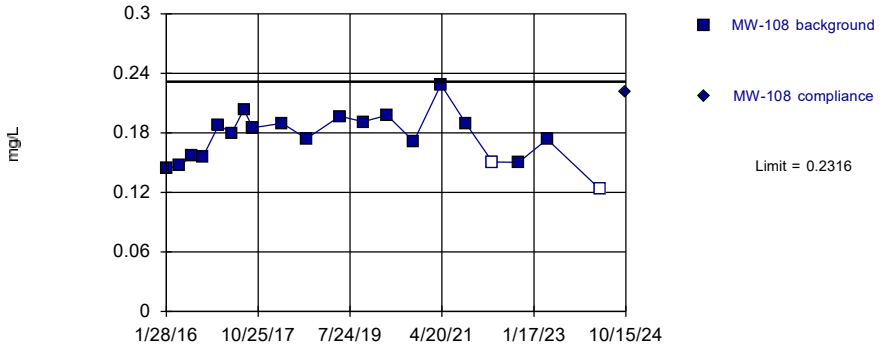
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1747, Std. Dev.=0.02513, n=20. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.973, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

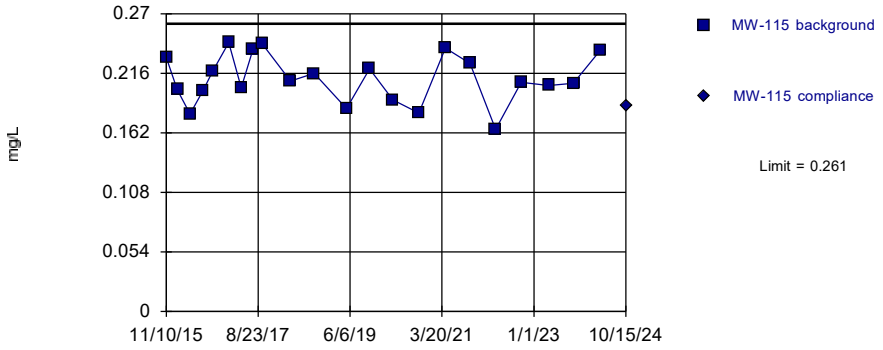
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.211, Std. Dev.=0.02242, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9627, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/18/2024 12:46 PM View: 2024-2H PL

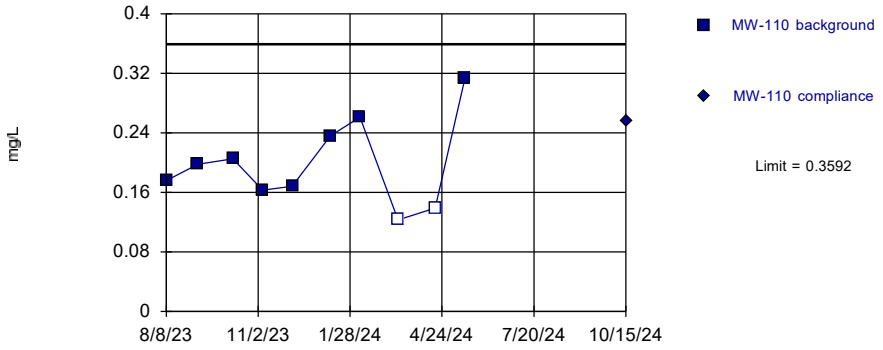
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1982, Std. Dev.=0.05812, n=10. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9531, critical = 0.781. Kappa = 2.77 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

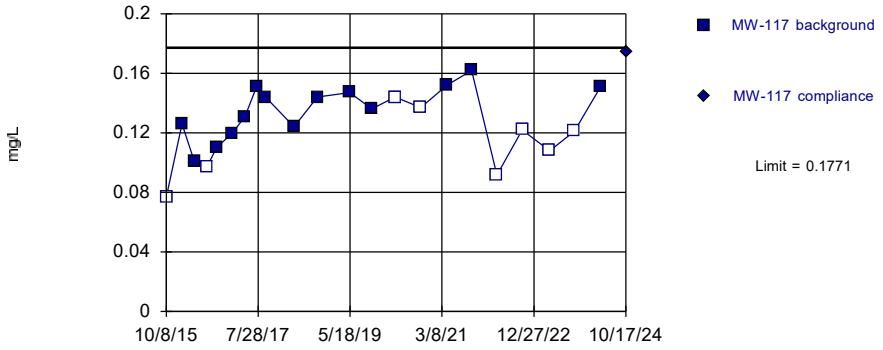
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1271, Std. Dev.=0.02242, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9582, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/12/2024 12:28 PM View: 2024-2H PL

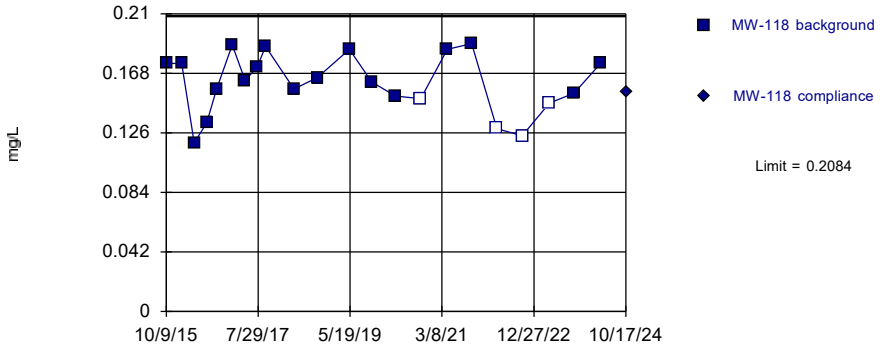
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.161, Std. Dev.=0.02126, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.938, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/18/2024 12:46 PM View: 2024-2H PL

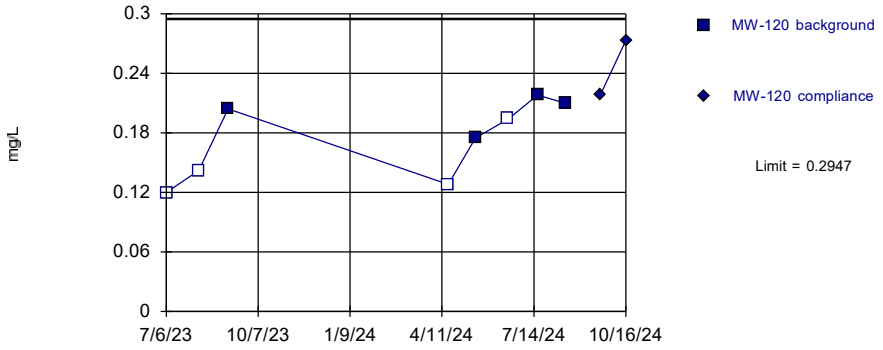
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1739, Std. Dev.=0.03889, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8909, critical = 0.749. Kappa = 3.108 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

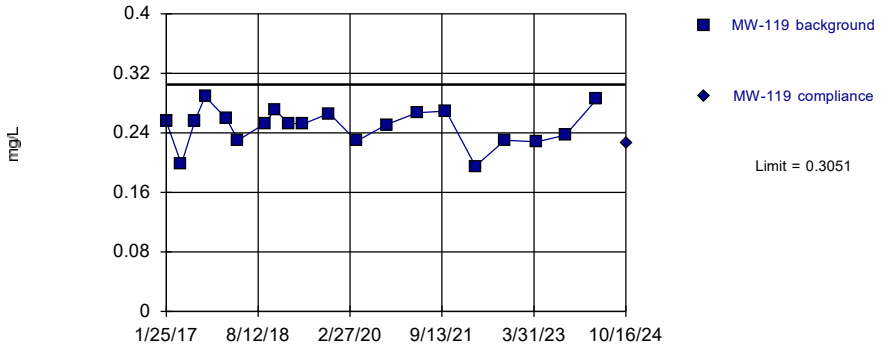
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2487, Std. Dev.=0.02497, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9407, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Fluoride Analysis Run 11/18/2024 12:46 PM View: 2024-2H PL

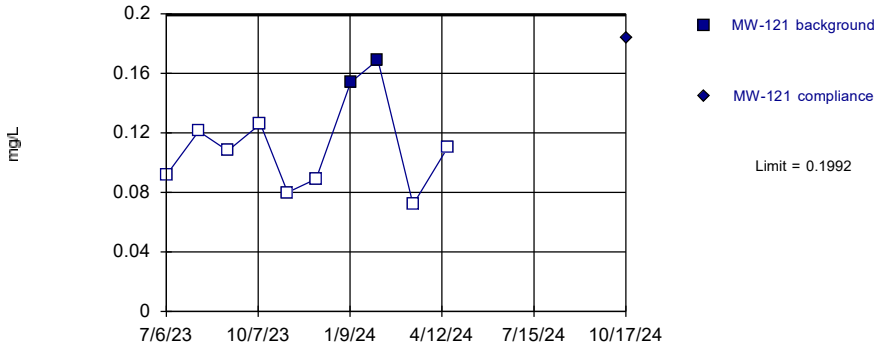
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.112, Std. Dev.=0.03146, n=10. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9463, critical = 0.781. Kappa = 2.77 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

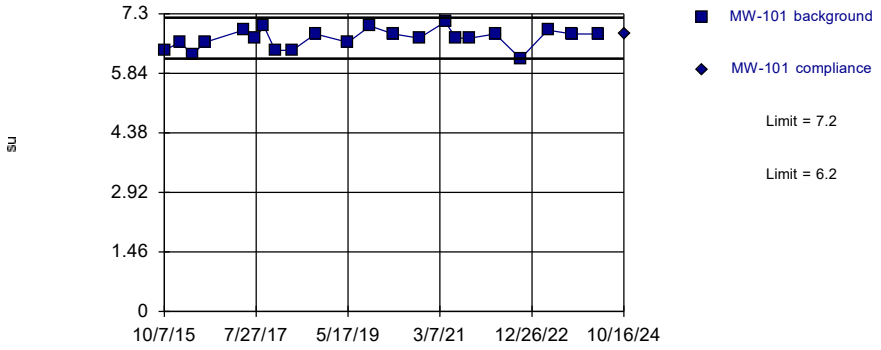
Constituent: Fluoride Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

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=6.691, Std. Dev.=0.2369, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9578, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

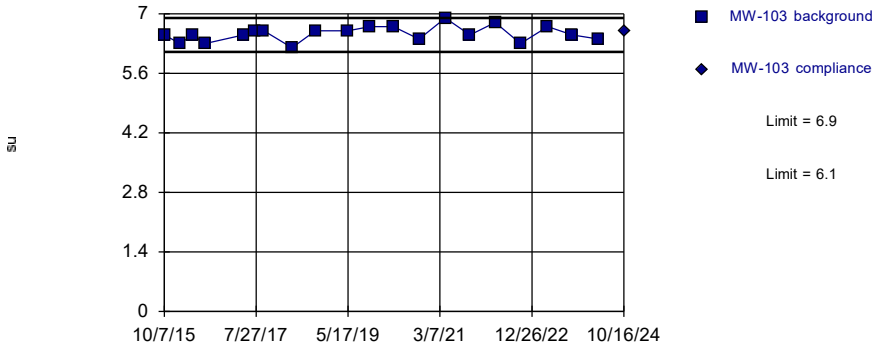
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.53, Std. Dev.=0.1809, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9698, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

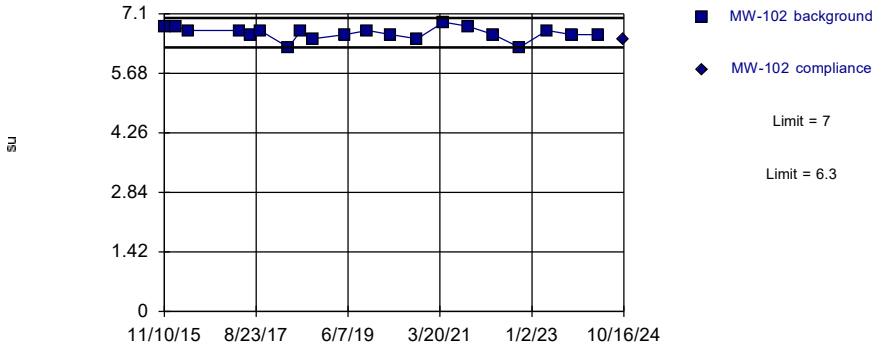
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.635, Std. Dev.=0.1531, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9112, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

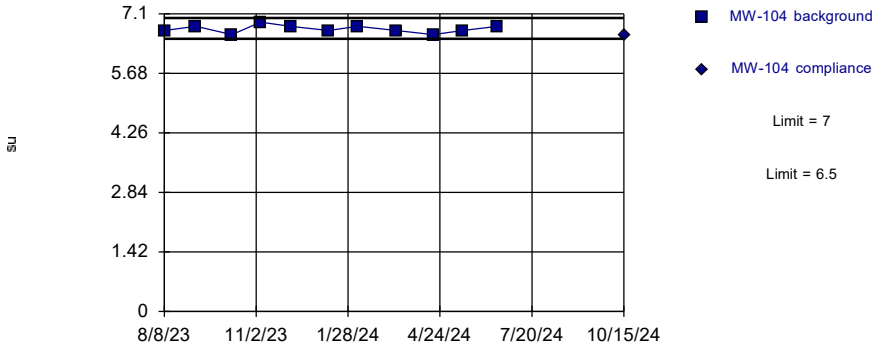
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.736, Std. Dev.=0.09244, n=11. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9055, critical = 0.792. Kappa = 2.678 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

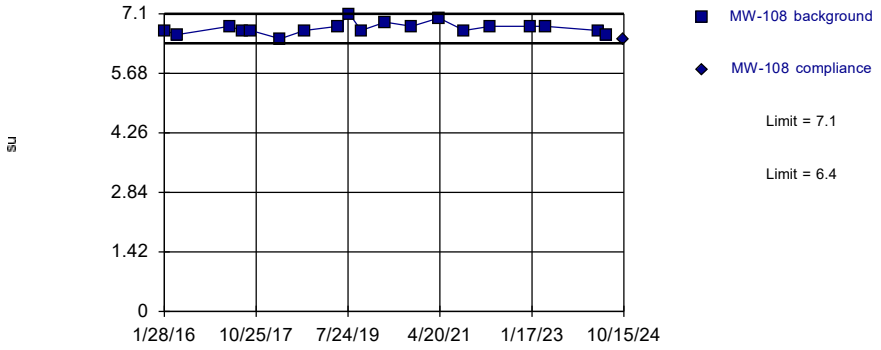
Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

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=6.758, Std. Dev.=0.1387, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9145, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

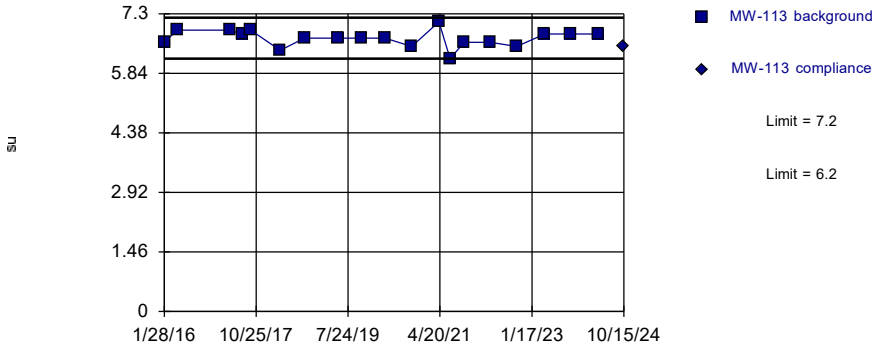
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.695, Std. Dev.=0.2068, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9659, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

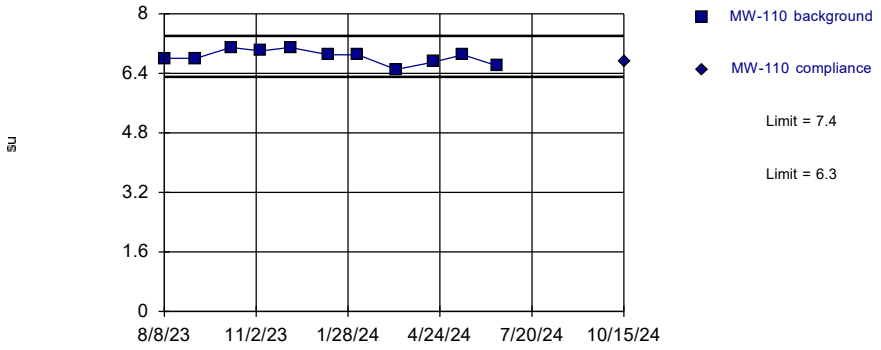
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.845, Std. Dev.=0.1916, n=11. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9505, critical = 0.792. Kappa = 2.678 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

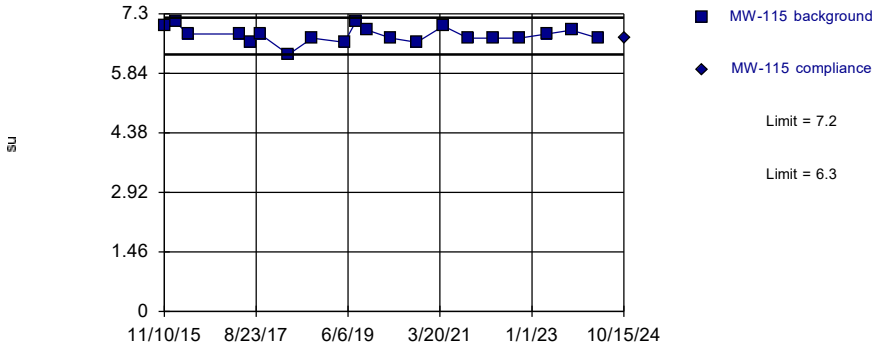
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.775, Std. Dev.=0.1916, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9372, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

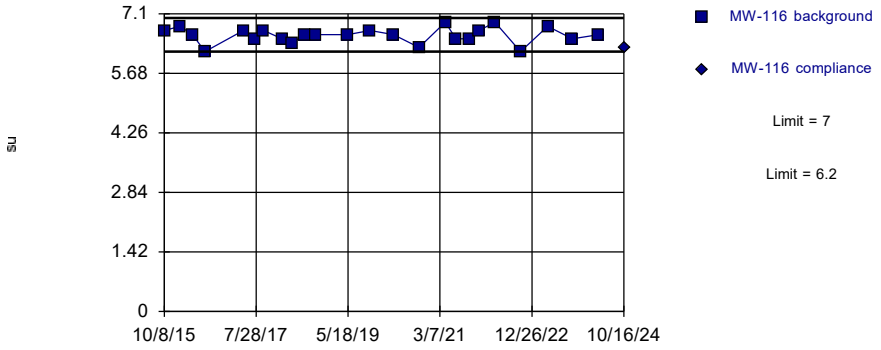
Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

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=6.588, Std. Dev.=0.1872, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9417, critical = 0.884. Kappa = 2.196 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

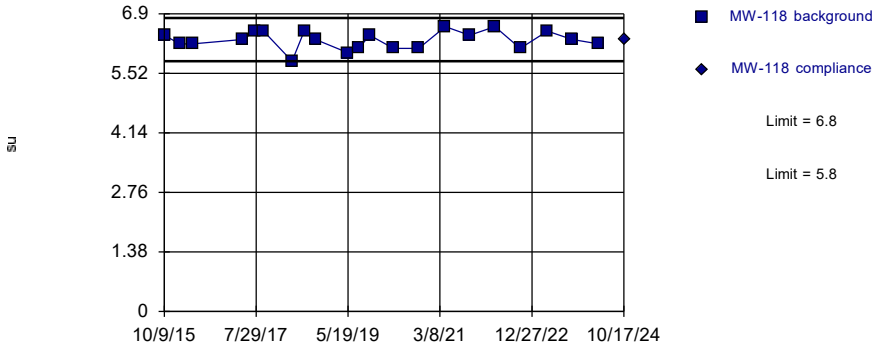
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.29, Std. Dev.=0.2119, n=21. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9514, critical = 0.873. Kappa = 2.245 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

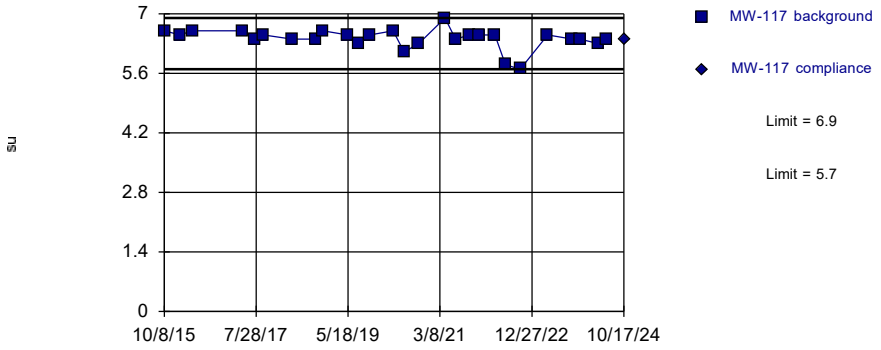
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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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 27 background values. Well-constituent pair annual alpha = 0.009996. Individual comparison alpha = 0.005004 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

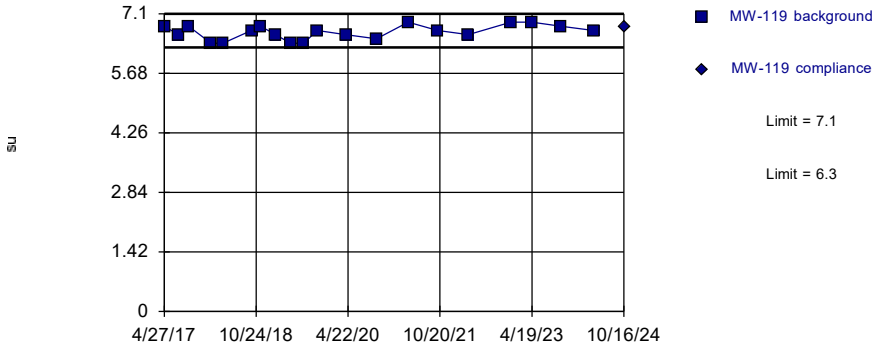
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.66, Std. Dev.=0.1729, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.907, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

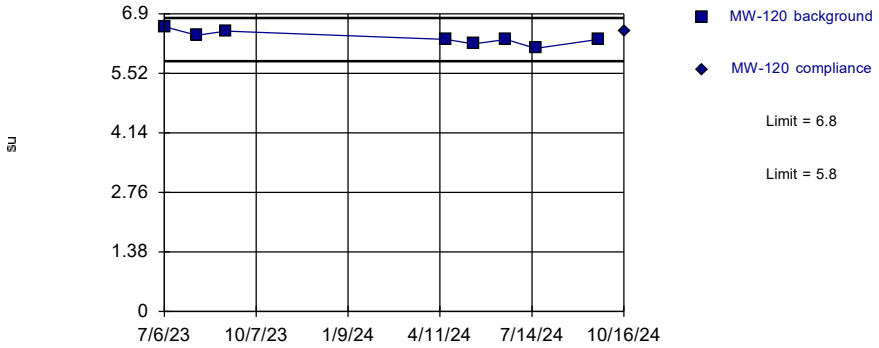
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.338, Std. Dev.=0.1598, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9633, critical = 0.749. Kappa = 3.108 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

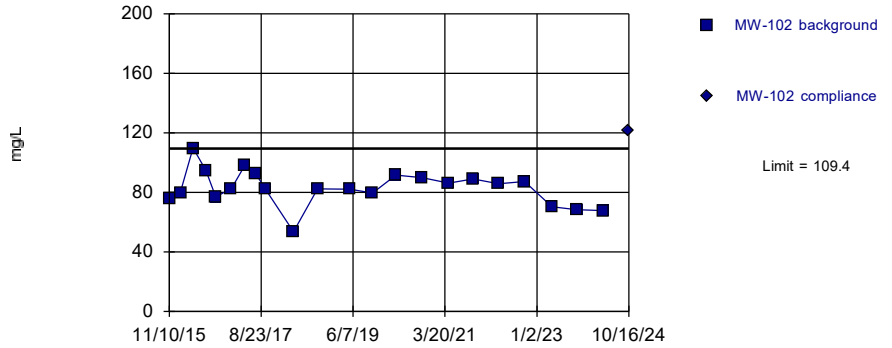
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=83, Std. Dev.=11.83, n=22. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9736, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

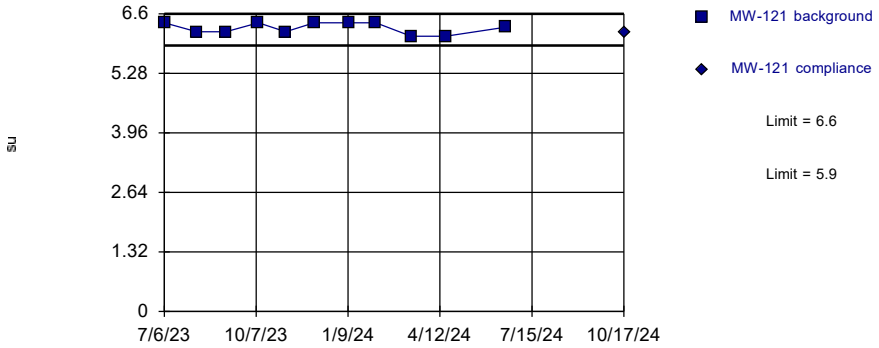
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limits

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.282, Std. Dev.=0.125, n=11. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8067, critical = 0.792. Kappa = 2.678 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: pH Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

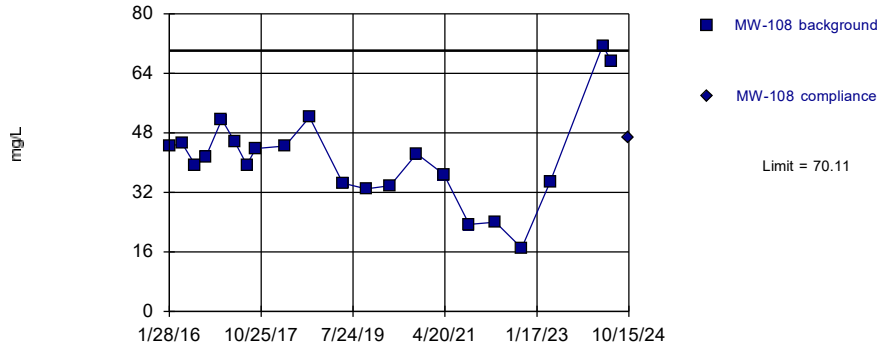
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=41.22, Std. Dev.=12.87, n=21. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9456, critical = 0.873. Kappa = 2.245 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

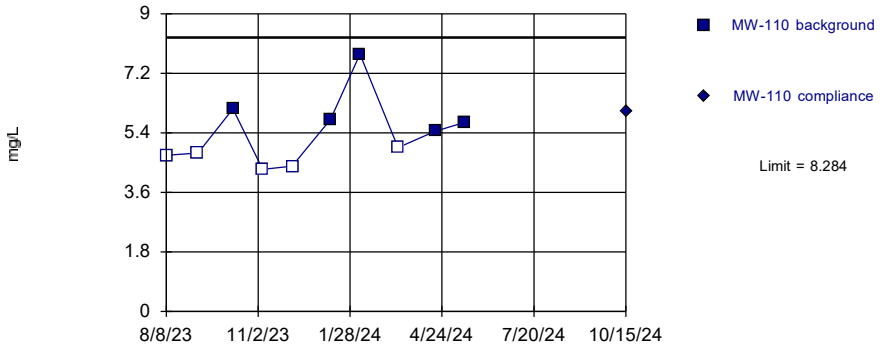
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=5.402, Std. Dev.=1.041, n=10. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8866, critical = 0.781. Kappa = 2.77 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

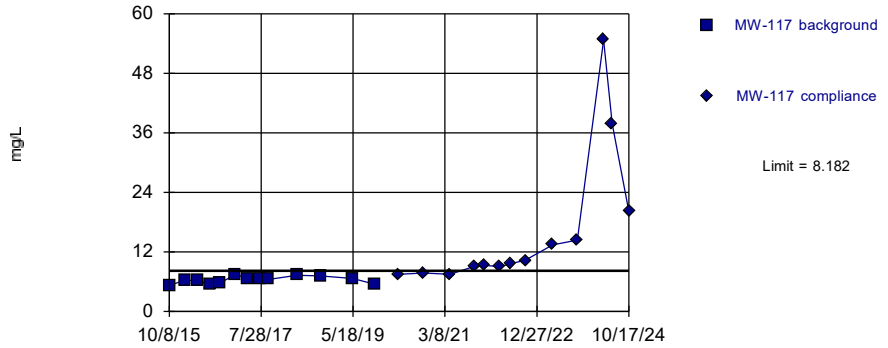
Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

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. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9459, critical = 0.814. Kappa = 2.532 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

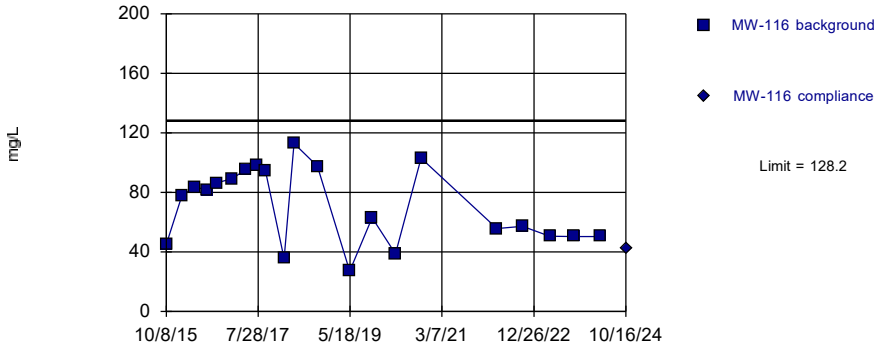
Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

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=71.13, Std. Dev.=25.42, n=21. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9432, critical = 0.873. Kappa = 2.245 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

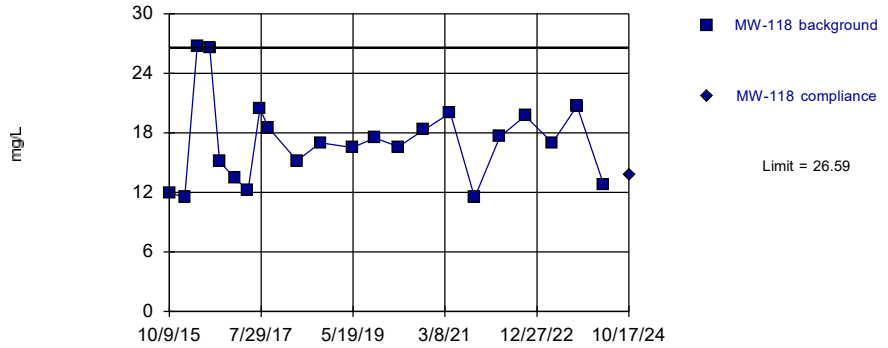
Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

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=17.13, Std. Dev.=4.245, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9212, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

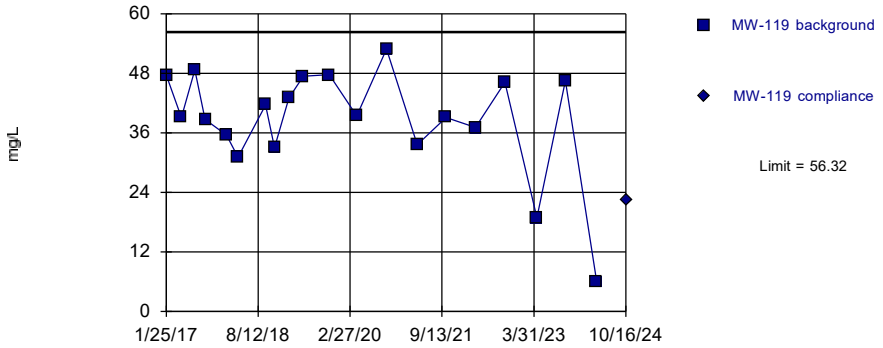
Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

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=1608, Std. Dev.=691.8, n=20. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9604, critical = 0.868. Kappa = 2.262 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

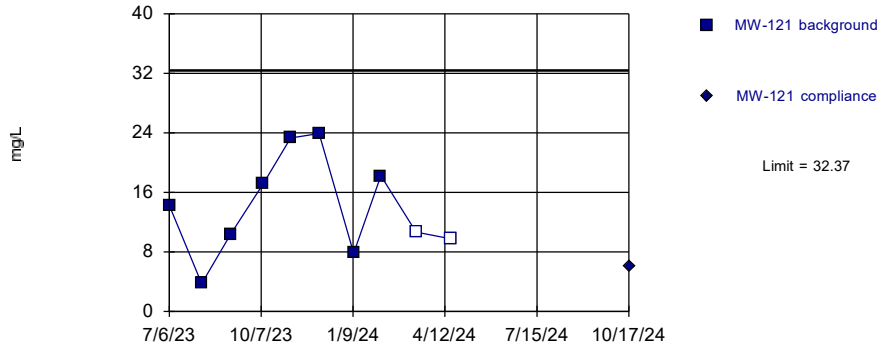
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=13.93, Std. Dev.=6.655, n=10. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.95, critical = 0.781. Kappa = 2.77 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

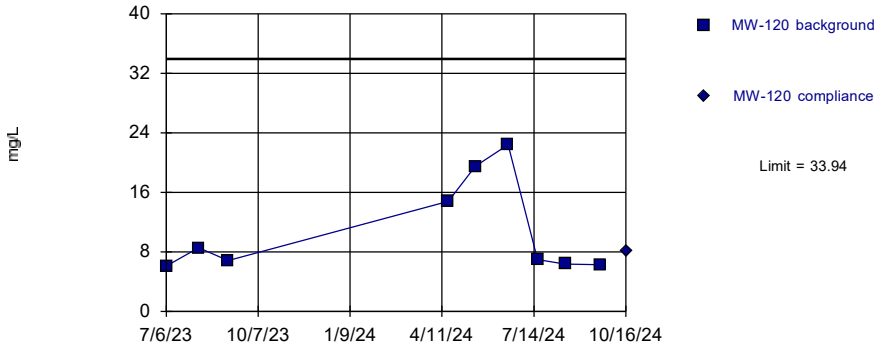
Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

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=3.185, Std. Dev.=0.8987, n=9. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7782, critical = 0.764. Kappa = 2.939 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

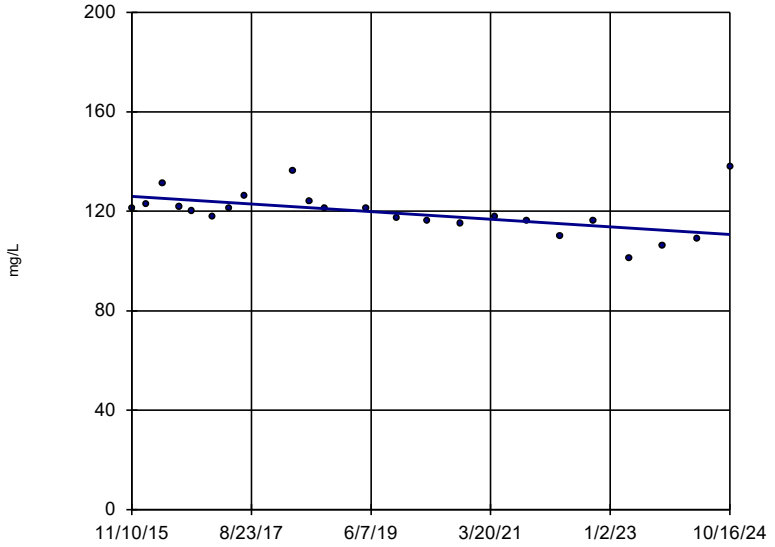
Constituent: Sulfate Analysis Run 11/12/2024 12:29 PM View: 2024-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

TREND TESTS
SECOND HALF 2024 MONITORING EVENT

Sen's Slope Estimator

MW-102



n = 23

Slope = -1.701 units per year.

Mann-Kendall statistic = -121
critical = -89

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

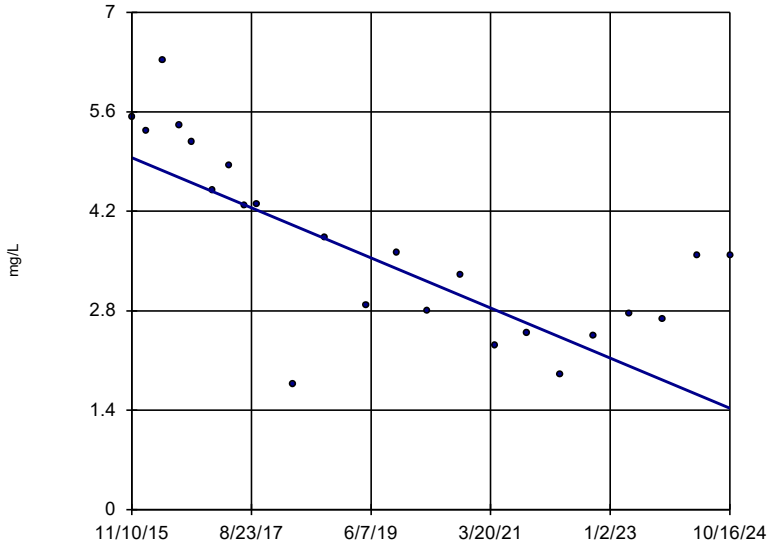
Constituent: Calcium Analysis Run 11/12/2024 11:58 AM View: 2024-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-102



n = 23

Slope = -0.3949 units per year.

Mann-Kendall statistic = -152
critical = -89

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

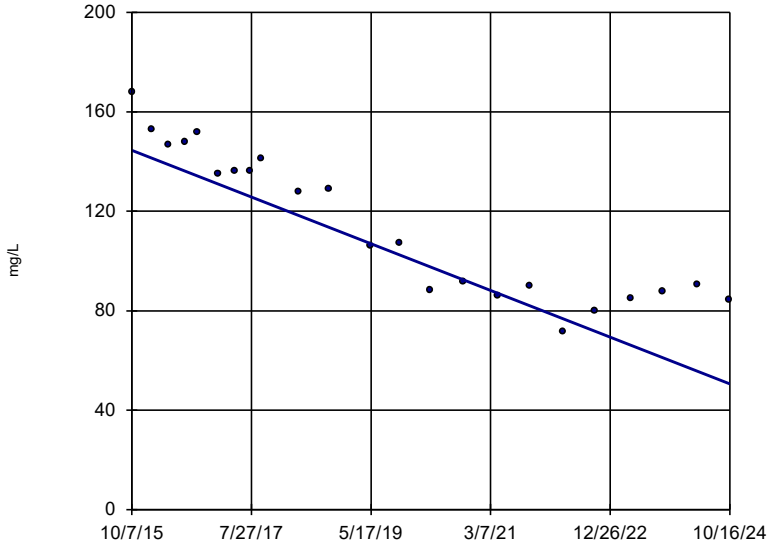
Constituent: Chloride Analysis Run 11/12/2024 11:58 AM View: 2024-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-103



n = 23

Slope = -10.41 units per year.

Mann-Kendall statistic = -194
critical = -89

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

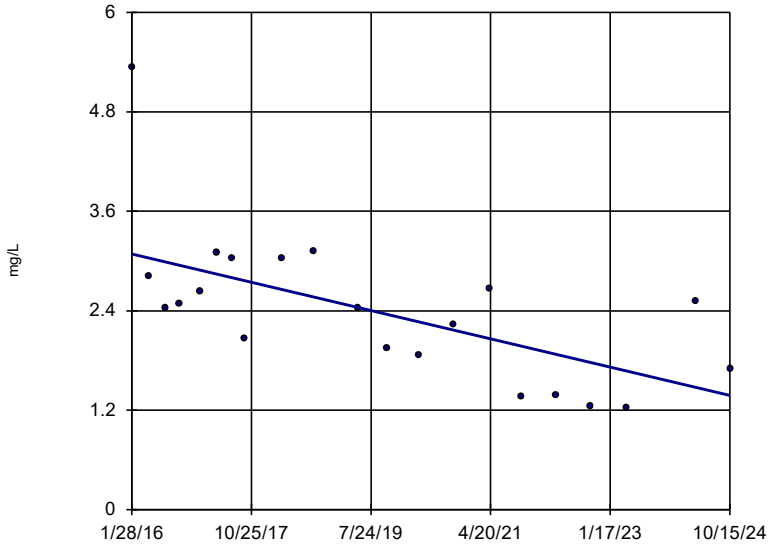
Constituent: Calcium Analysis Run 11/12/2024 11:58 AM View: 2024-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG

Sen's Slope Estimator

MW-108 (bg)



n = 21

Slope = -0.1961 units per year.

Mann-Kendall statistic = -103
critical = -78

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

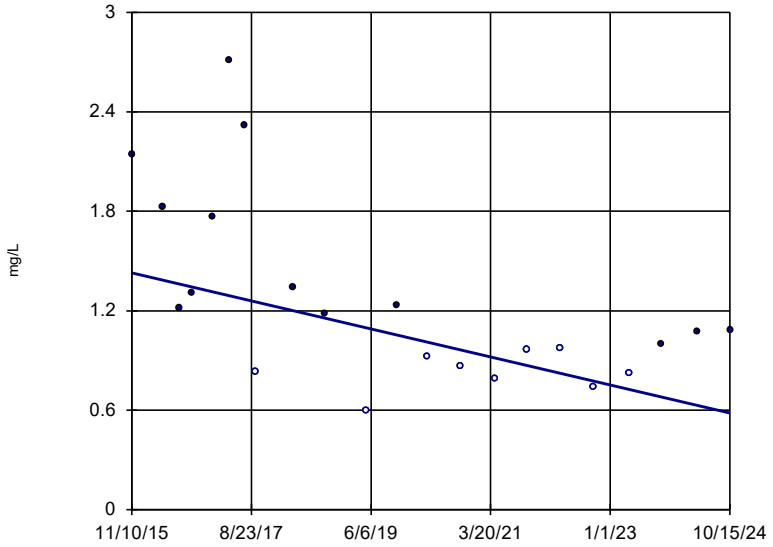
Constituent: Chloride Analysis Run 11/12/2024 11:58 AM View: 2024-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.23 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-115 (bg)



n = 22

Slope = -0.09468 units per year.

Mann-Kendall statistic = -89
critical = -84

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

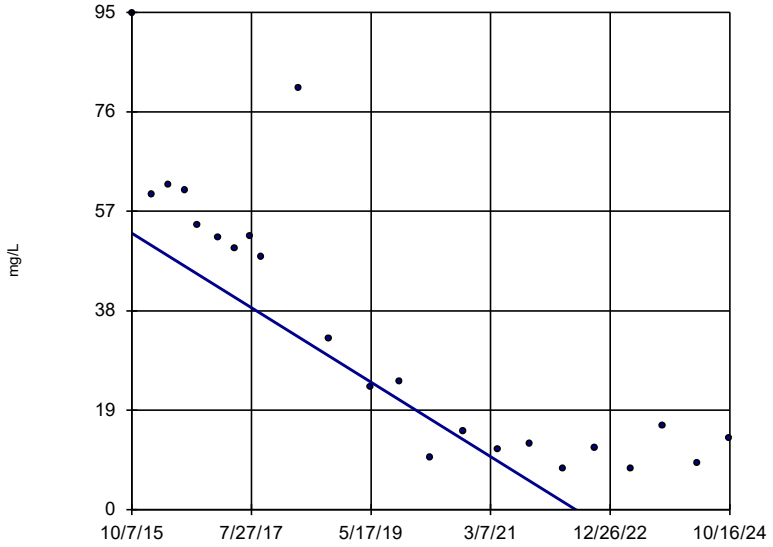
Constituent: Chloride Analysis Run 11/12/2024 11:58 AM View: 2024-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-103



n = 23

Slope = -7.885 units per year.

Mann-Kendall statistic = -181
critical = -89

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

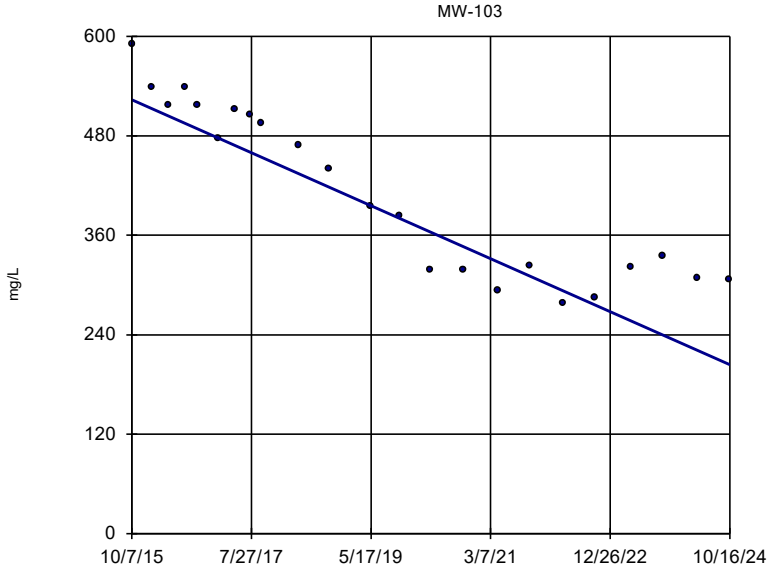
Constituent: Sulfate Analysis Run 11/12/2024 11:58 AM View: 2024-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Sen's Slope Estimator

MW-103



n = 23

Slope = -35.42 units per year.

Mann-Kendall statistic = -196
critical = -89

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Dissolved Solids Analysis Run 11/12/2024 11:58 AM View: 2024-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

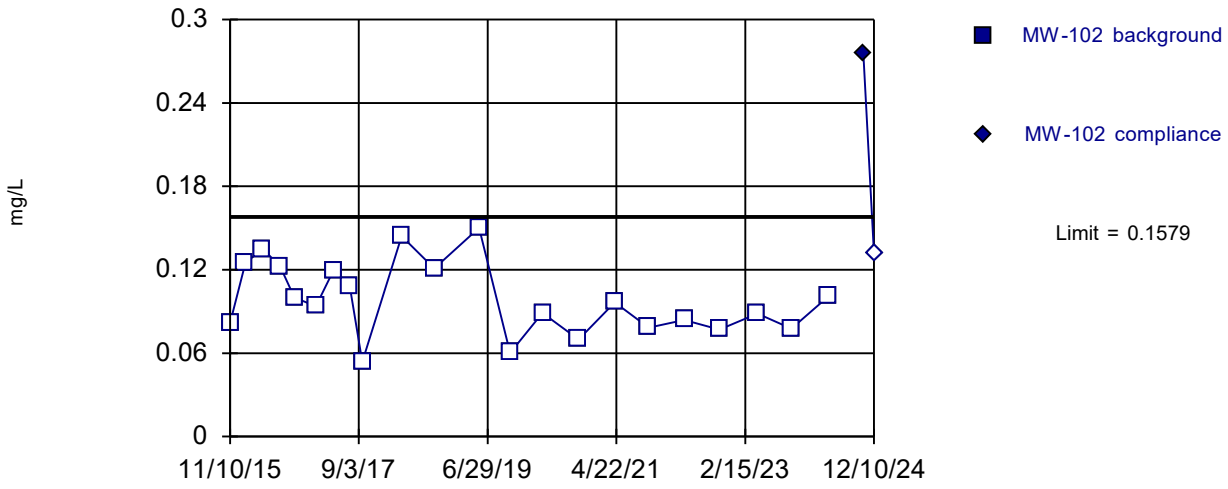
PREDICTION LIMITS
SECOND HALF 2024 VERIFICATION SAMPLING EVENT

Sanitas™ v.10.0.24 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.09891, Std. Dev.=0.02645, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9701, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Boron Analysis Run 1/14/2025 1:19 PM View: 2024-2H PL

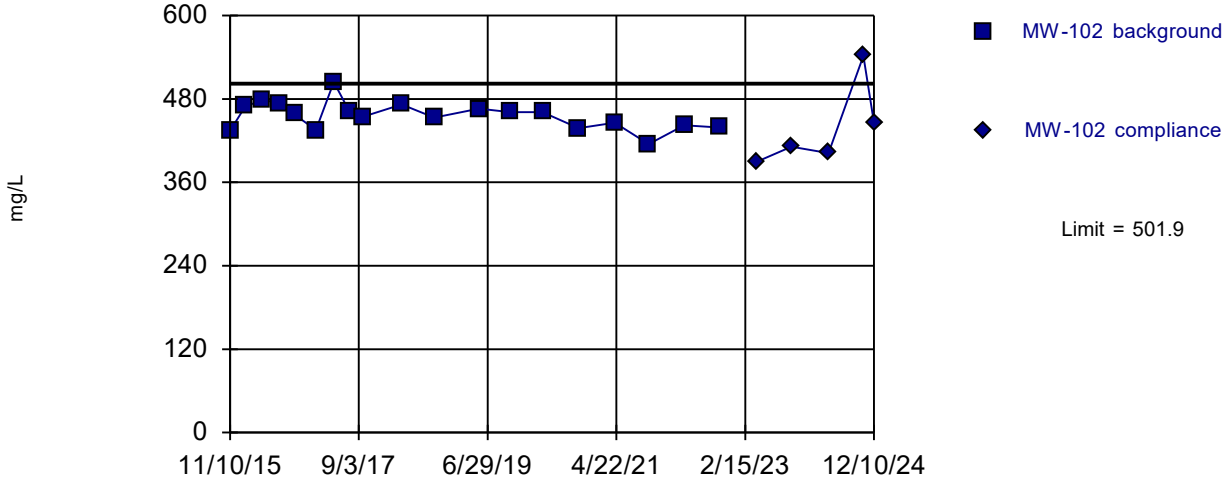
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.24 Software licensed to Olsson. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=455.8, Std. Dev.=20.1, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.976, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

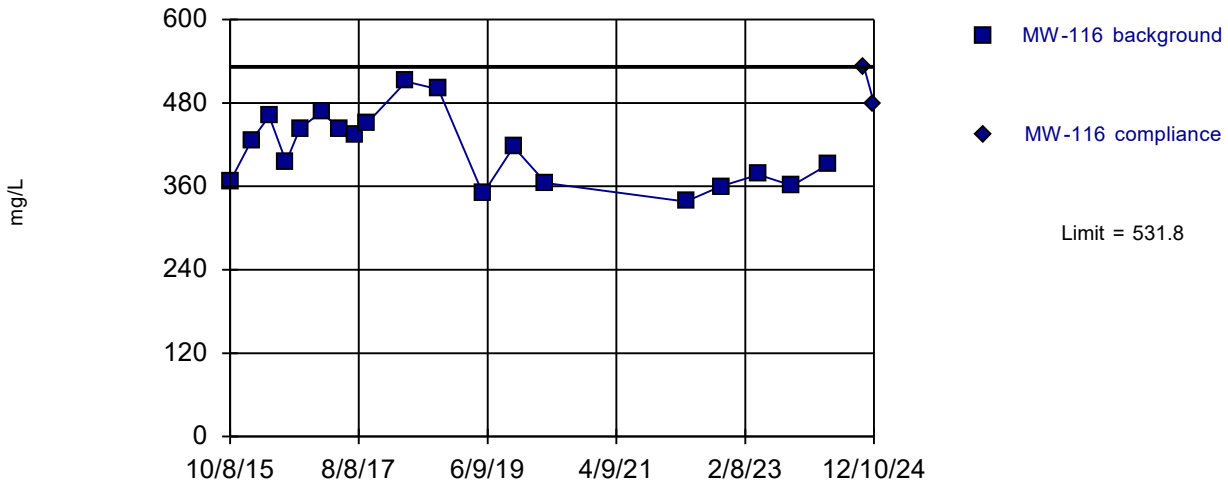
Constituent: Dissolved Solids Analysis Run 1/14/2025 1:20 PM View: 2024-2H PL

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=413.6, Std. Dev.=51.65, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9491, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 1/14/2025 1:20 PM View: 2024-2H PL

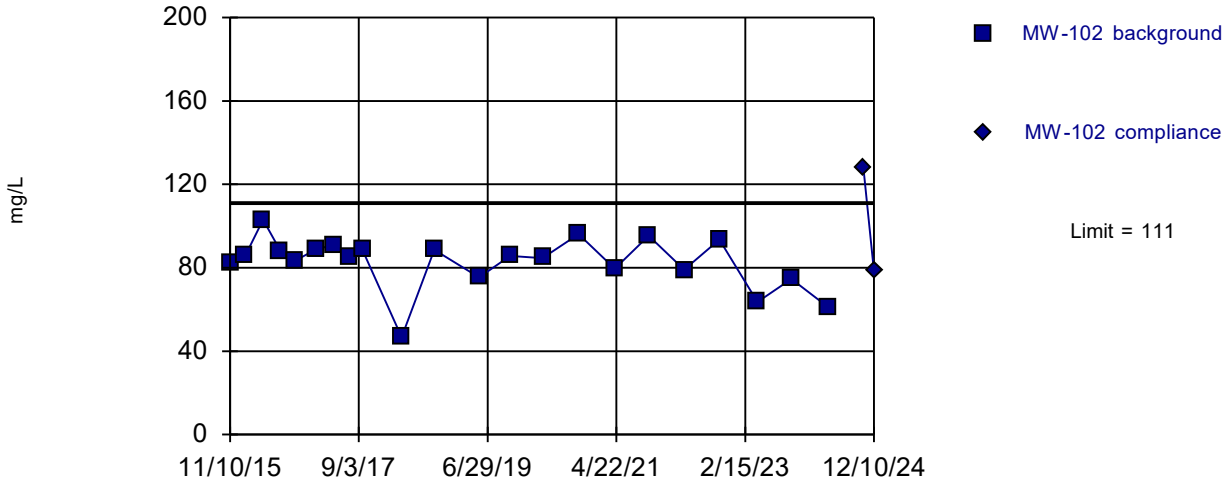
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=82.71, Std. Dev.=12.69, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9027, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Sulfate Analysis Run 1/14/2025 1:20 PM View: 2024-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

APPENDIX H
ALTERNATE SOURCE DEMONSTRATIONS

MEMO

To:	Plum Point Services Company, LLC Attn: Mr. Matt Gray 2732 South County Road 623 Osceola, AR 72370
From:	Melissa Vaught, PE Andrew Pruitt, PG
RE:	Alternate Source Demonstration for Statistically Significant Increases, First Half of 2024 Monitoring Period, Plum Point Energy Station Landfill
Date:	October 15, 2024
Project #:	024-01343 / R14590-3336-001

Olsson FTN has prepared this technical memorandum for the Plum Point Services Company, LLC (PPSC), coal combustion residuals (CCR) landfill, which is regulated by the US 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) Rule No. 22 and permitted by the Arkansas Department of Energy & Environment, Division of Environmental Quality (DEQ), under permit no. 0303-S3N-R2.

Olsson FTN performed groundwater sampling and statistical analysis of the data for the first half of 2024 monitoring period. Based on statistical evaluation of the data, four 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. BACKGROUND

Olsson FTN performed groundwater sampling for the first half 2024 semiannual groundwater monitoring period during April 2024. 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 Associates, Ltd. [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 three previously confirmed SSIs for calcium, sulfate, and total dissolved solids (TDS) at MW-117, and an unverified SSI for sulfate at MW-108. A site map showing the locations of MW-108 and MW-117 relative to the CCR unit (cells 1 and 3) is included as Figure 1 (all figures are included in Attachment 1).

Verification sampling for the unverified SSI for sulfate at MW-108 was performed on June 19, 2024, in accordance with the GWSAP and SAP (FTN 2017b, 2017c). Verification sampling was also performed for the previously confirmed SSIs for calcium, sulfate, and TDS at MW-117 due to past fluctuations above and below their respective prediction limits. Intrawell prediction limit plots showing the results of verification sampling are included in Attachment 2. As shown on the prediction limit plots in Attachment 2 and in Table 1 (Attachment 3), results from verification sampling remained above the prediction limits.

In accordance with §257.94(e)(2), prior ASDs have been prepared for the previously confirmed SSIs at MW-117 for calcium, sulfate, and TDS as summarized in Table 2 (Attachment 3). Each ASD successfully demonstrated that the SSIs were not the result of influence from the CCR unit.

The laboratory reports for the April and June sampling events are included in Attachment 4.

2. DISCUSSION

A review of the monitoring system with respect to onsite background wells, background groundwater quality, published literature, and landfill leachate quality was performed to determine if the confirmed SSIs 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 49 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 695 ft from the CCR unit as of the first half 2024 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, sulfate, and TDS data for compliance well MW-117 and background wells MW-108, MW-113, and MW-115 are plotted on the time-series graphs and box-and-whiskers diagrams included in Attachment 2. As is evident from these graphs and diagrams, concentrations for calcium, sulfate, and TDS at compliance well MW-117 are generally well within the range of values measured at the onsite background wells. This comparison provides supporting evidence that the currently measured values for calcium, sulfate, and TDS at compliance well MW-117, as well as the currently measured values for sulfate at background well MW-108, 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 (Attachment 1). According to this study, wells screened in Holocene alluvium had a maximum measured calcium concentration of 130 mg/L, a maximum sulfate concentration of 120 mg/L, and a maximum TDS concentration of 728 mg/L. As shown in Table 1 (Attachment 3), published levels for the aquifer are well above those measured at MW-117 and at background wells MW-108, MW-113, and MW-115. This comparison provides supporting evidence that the currently measured values for calcium, sulfate, and TDS at compliance well MW-117, as well as the currently measured values for sulfate at background well MW-108, reflect natural fluctuations in groundwater quality.

2.4 Comparison to Landfill Leachate

The major ion composition of leachate and groundwater samples collected during April 2024 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 Rule No. 22 monitoring program, as required by permit no. 0303-S3N-R2, and are publicly available on the DEQ website[1]. 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 distribution in groundwater at MW-117 is similar to the ionic distribution at background wells MW-108, MW-113, and MW-115. In contrast, the 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 background wells MW-108, MW-113, and MW-115 and compliance well MW-117 clustered in the quadrant classified as calcium-bicarbonate-type waters and positioned apart from the leachate data, which is located in the sodium-chloride-type water. If leachate was mixing with groundwater at MW-117, the data for 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 background well MW-108 and compliance well MW-117 are different than landfill leachate, providing a key line of evidence that the confirmed SSIs for calcium, sulfate, and TDS at compliance well MW-117 and for sulfate at background well MW-108 are not due to a release from the CCR unit.

3. CONCLUSIONS

In consideration of the information presented in this memorandum, Olsson FTN concludes that the confirmed SSIs for calcium, sulfate, and TDS at compliance well MW-117 and for sulfate at background well MW-108 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 for calcium, sulfate, and TDS at compliance well MW-117 and for sulfate at background well MW-108 are not due to a release from the CCR unit. Therefore, no further action is required and the landfill will remain in detection monitoring.

[1] https://www.adeq.state.ar.us/sw/permits/facility_data.aspx

If you have questions or comments regarding this memorandum, please do not hesitate to call Andrew Pruitt, PG, at 501.225.7779, or Melissa Vaught, PE, at 479.443.3404.

Attachments

MMV/tas

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.

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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.



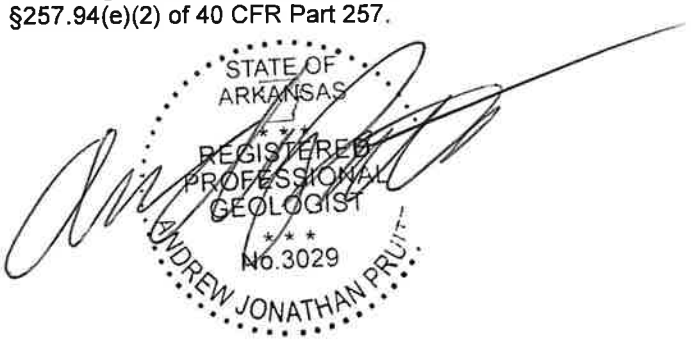
Melissa M. Vaught, Arkansas PE #18259

10/15/2024
Date

3 Innwood Circle / Suite 220 / Little Rock, AR 72211
O 501.225.7779 / olsson.com

PROFESSIONAL GEOLOGIST'S CERTIFICATION

With this certification, I certify that I, as a professional geologist in the state of Arkansas, am a qualified groundwater scientist as defined in §22.1201(f) of Arkansas Pollution Control & Ecology Commission Rule No. 22, that I have reviewed this technical memorandum, 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.



Andrew J. Pruitt, Arkansas PG #3029

10/16/2024
Date

3 Innwood Circle / Suite 220 / Little Rock, AR 72211
O 501.225.7779 / olsson.com

ATTACHMENT 1

Figures

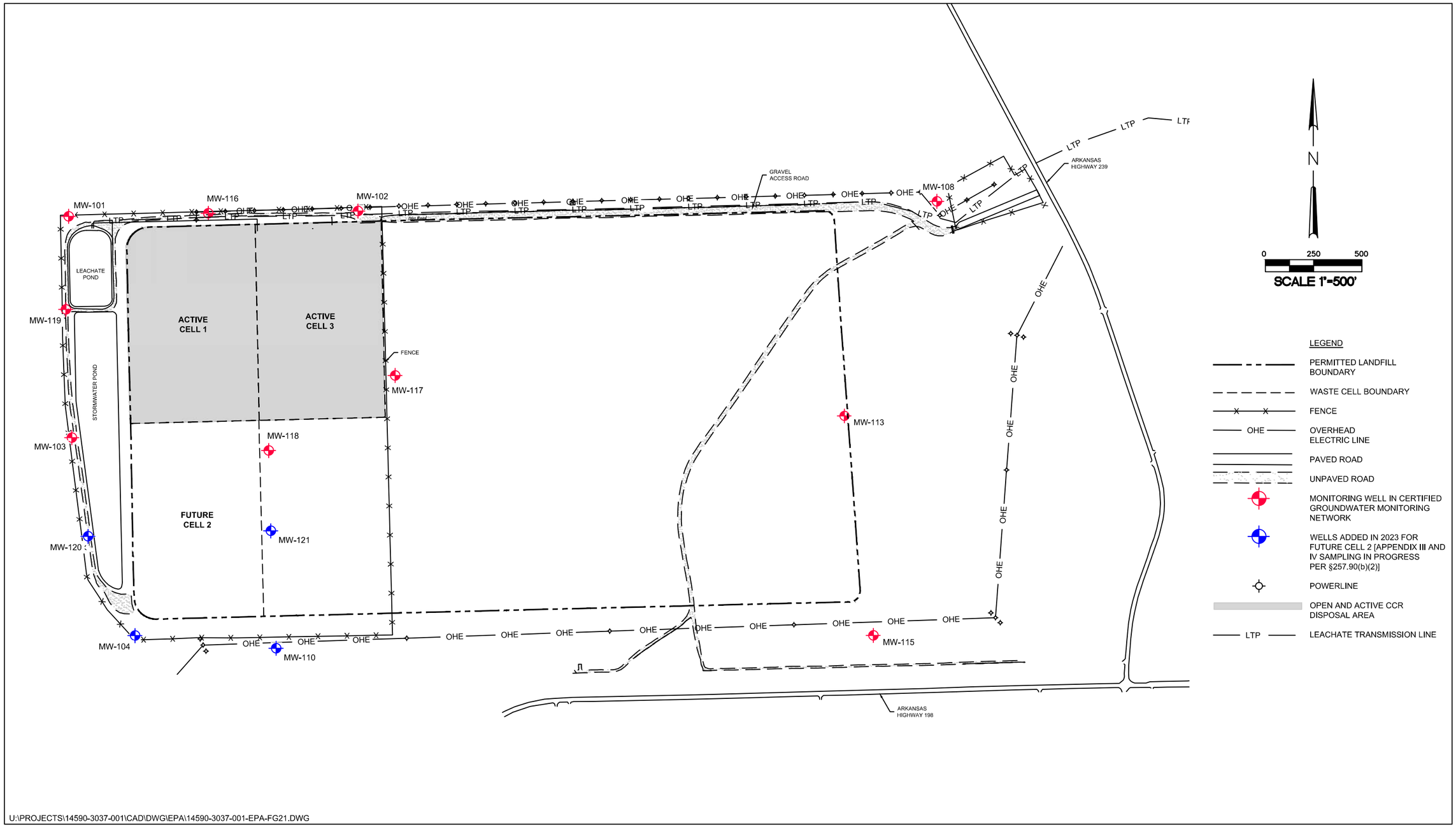


Figure 1. Monitoring well location map.

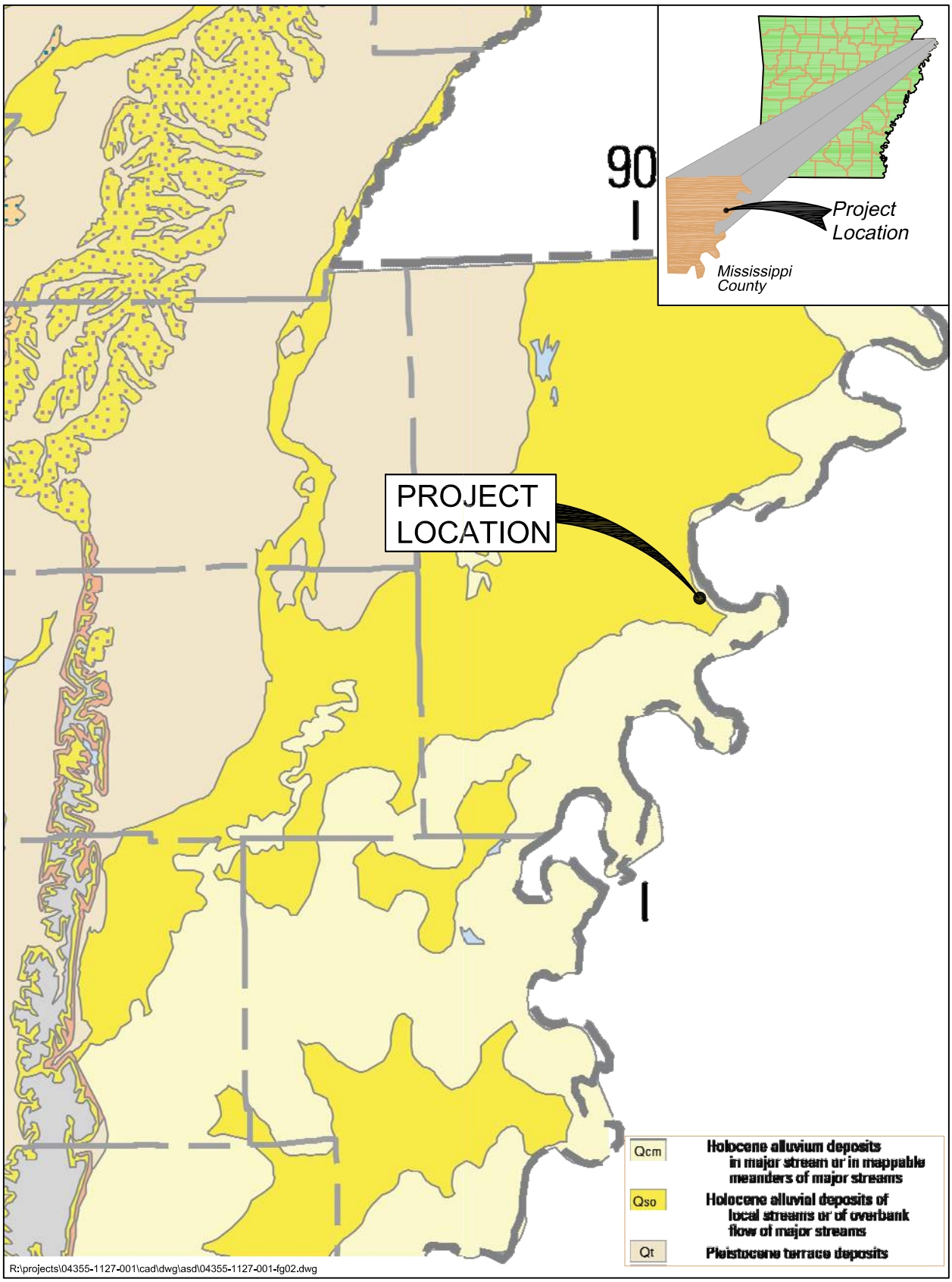


Figure 2. Surface geology of Mississippi County, Arkansas (adapted from Kresse et al. 2014).

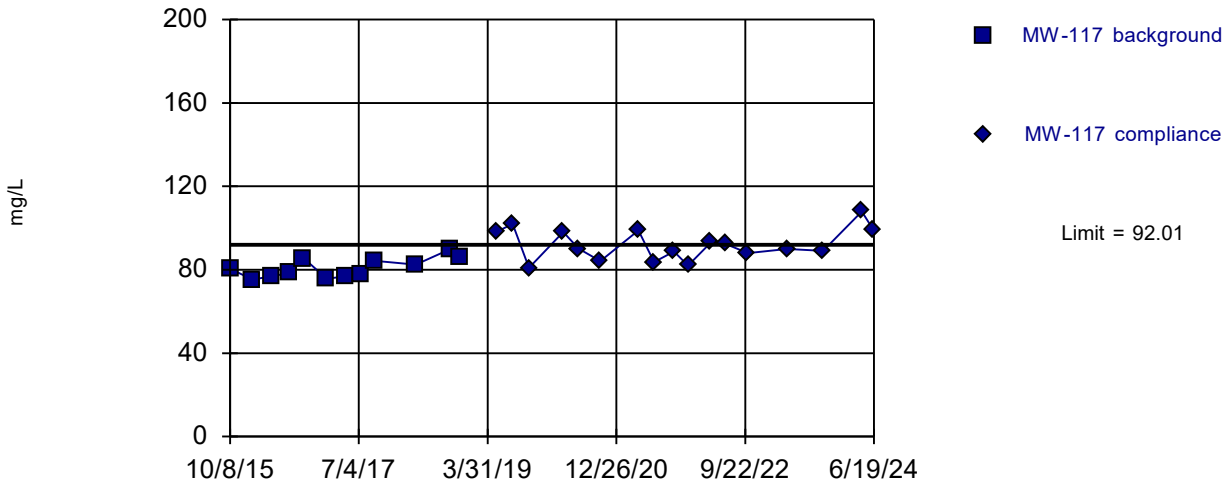
ATTACHMENT 2

Statistical Plots

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=80.69, Std. Dev.=4.731, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9147, 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 9/16/2024 4:36 PM View: 2024-1H ASD

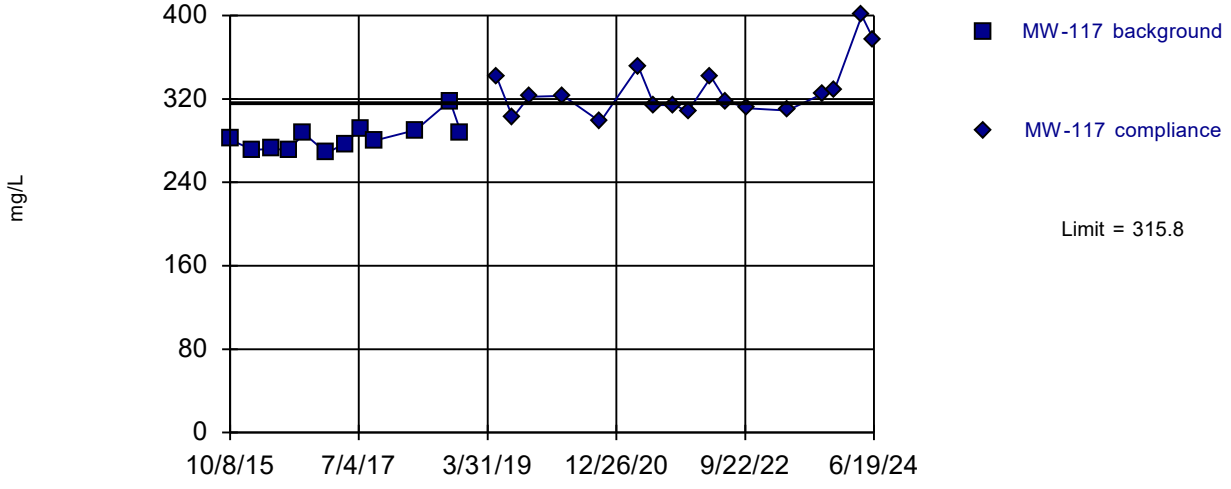
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=282.9, Std. Dev.=13.75, n=12. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.861, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

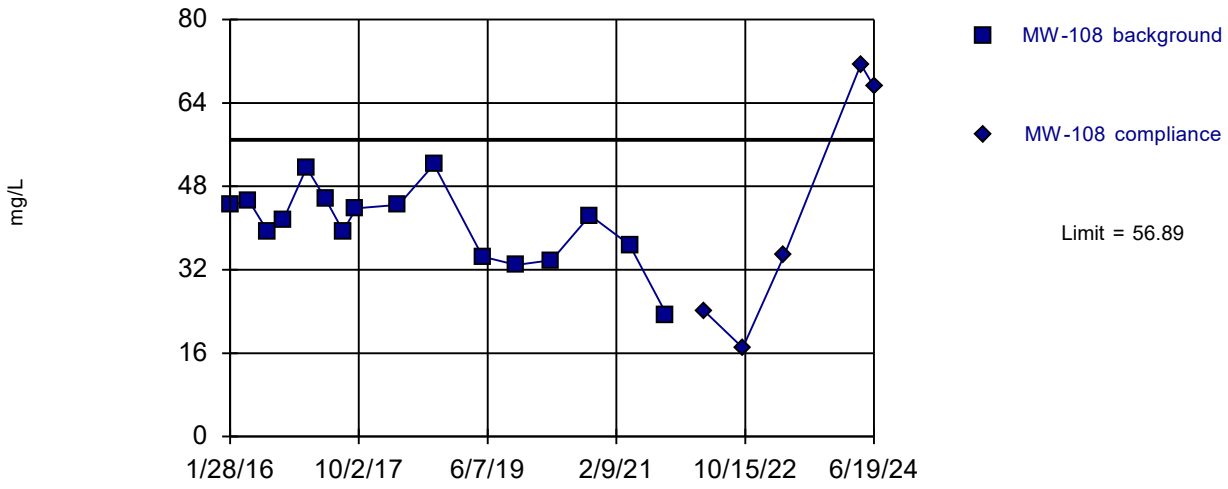
Constituent: Dissolved Solids Analysis Run 9/16/2024 4:36 PM View: 2024-1H ASD

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=40.71, Std. Dev.=7.314, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9559, critical = 0.844. Kappa = 2.212 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

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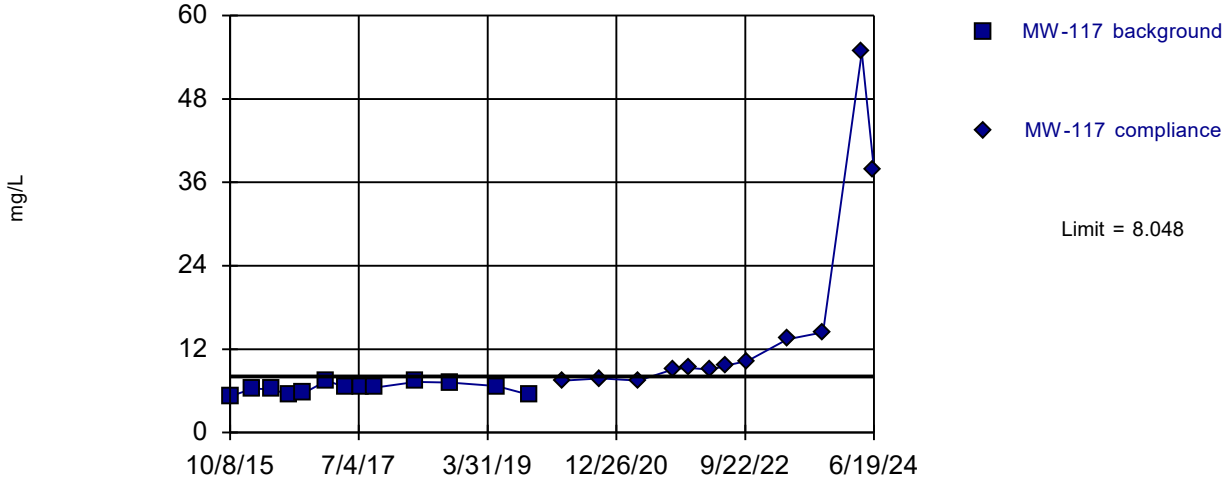
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Exceeds Limit

Prediction Limit

Intrawell Parametric



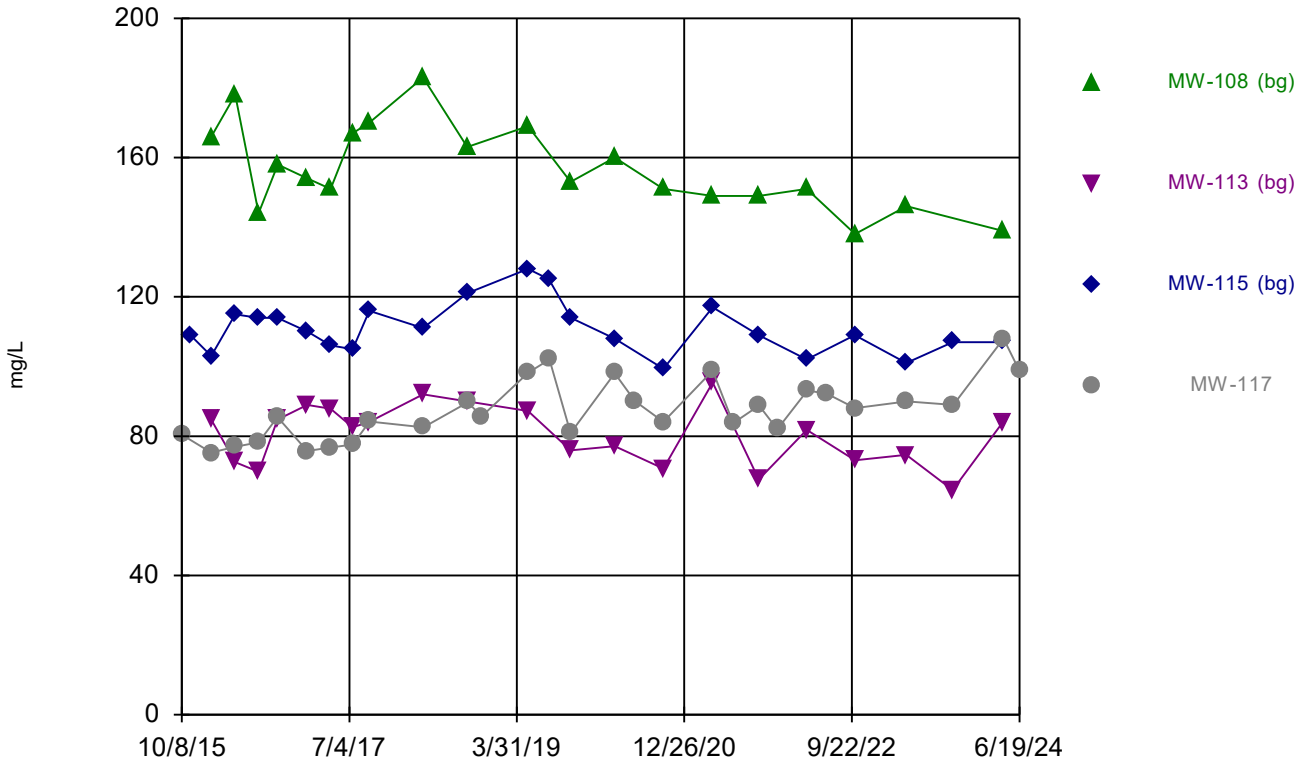
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Constituent: Sulfate Analysis Run 9/16/2024 4:36 PM View: 2024-1H ASD

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Time Series

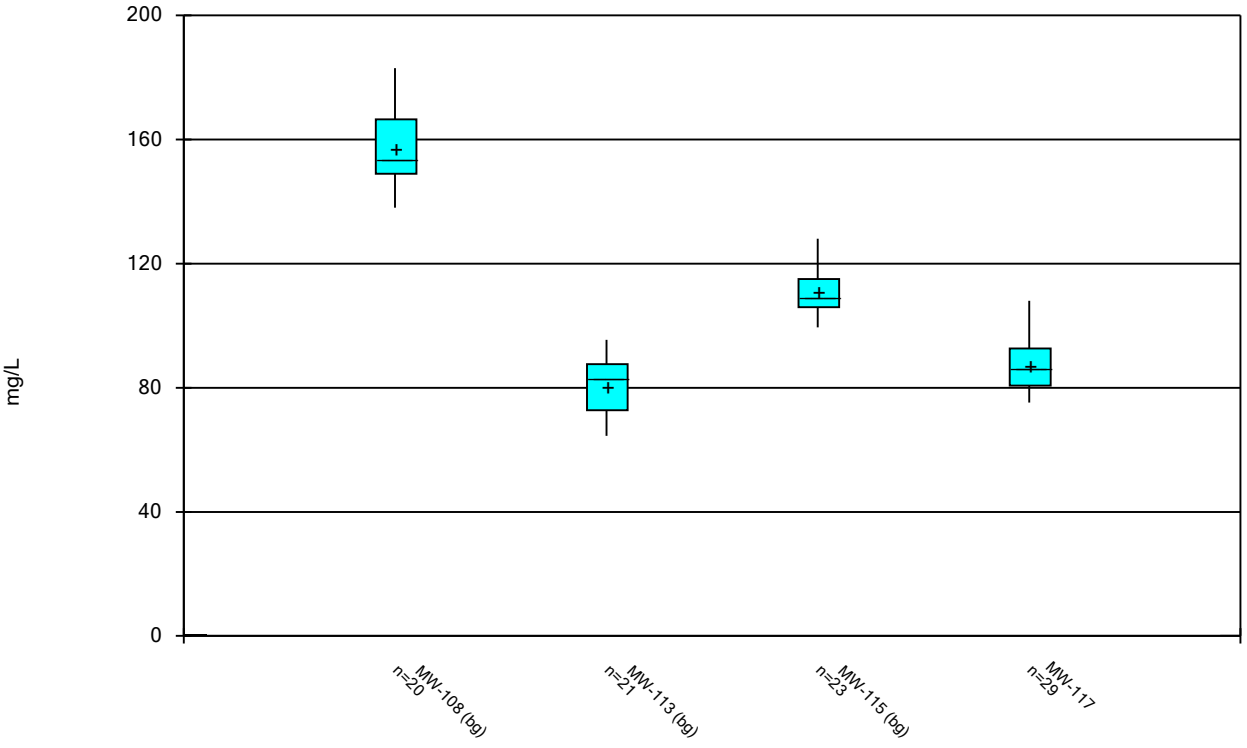


Constituent: Calcium Analysis Run 9/16/2024 5:48 PM View: 2024-1H ASD

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Box & Whiskers Plot

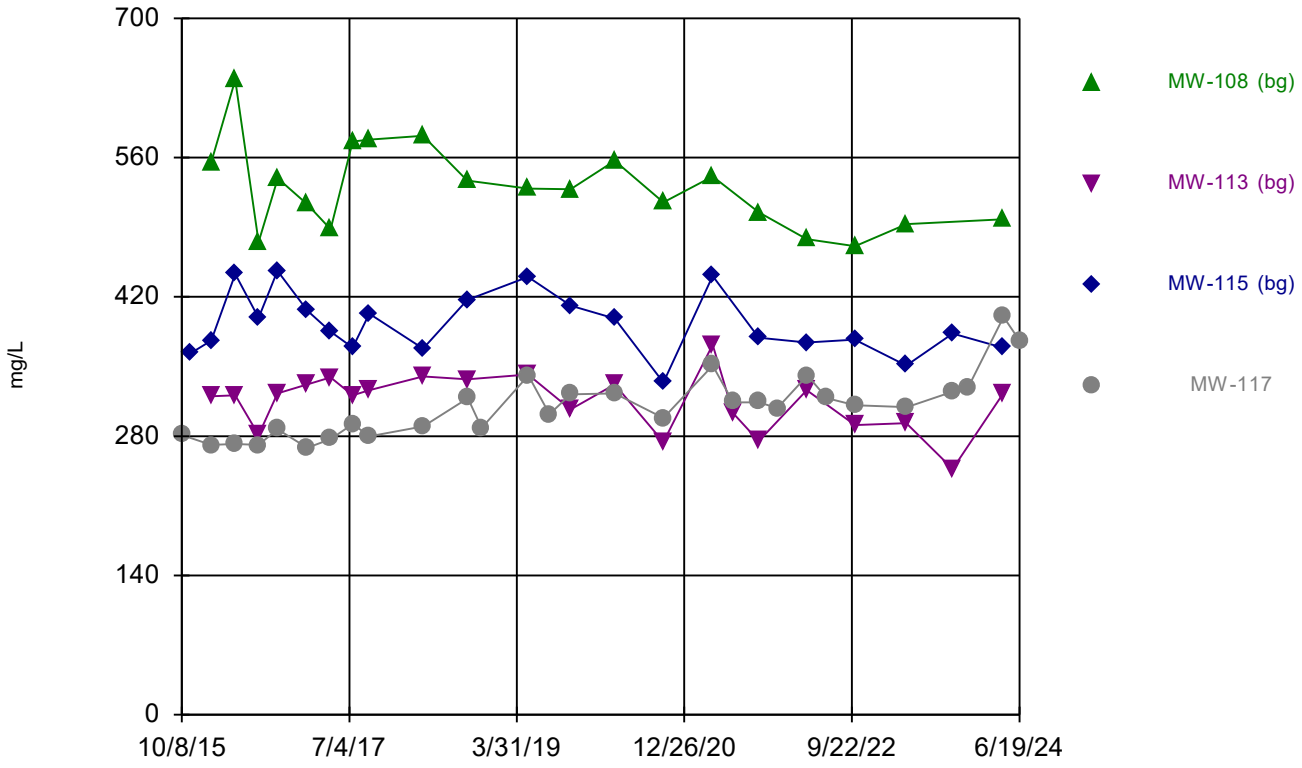


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Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Time Series

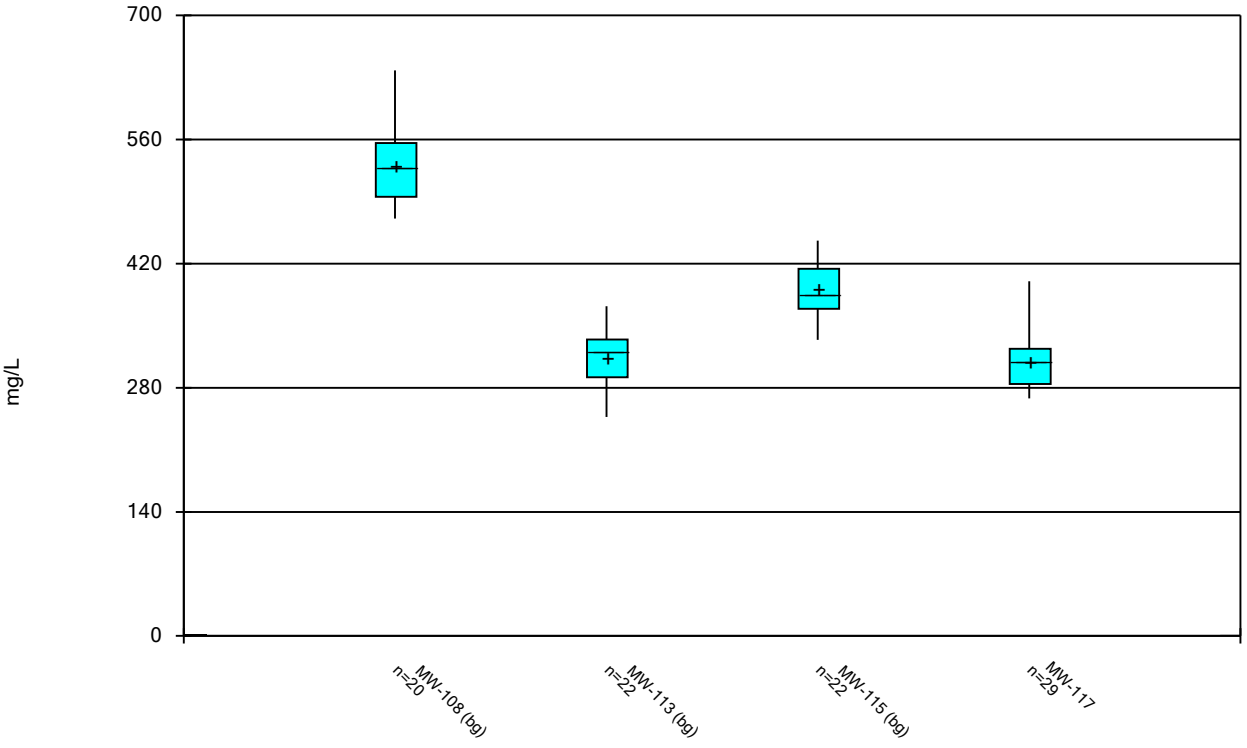


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Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Box & Whiskers Plot

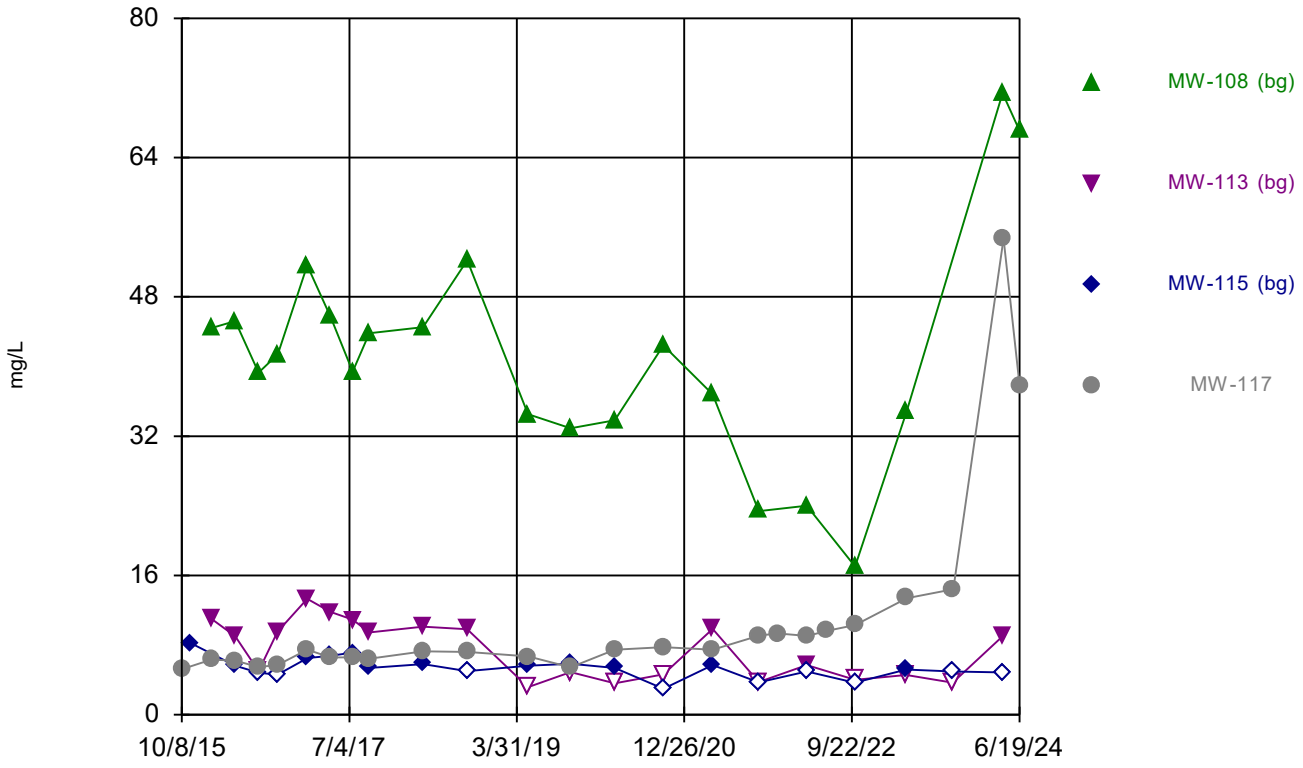


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Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.22 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

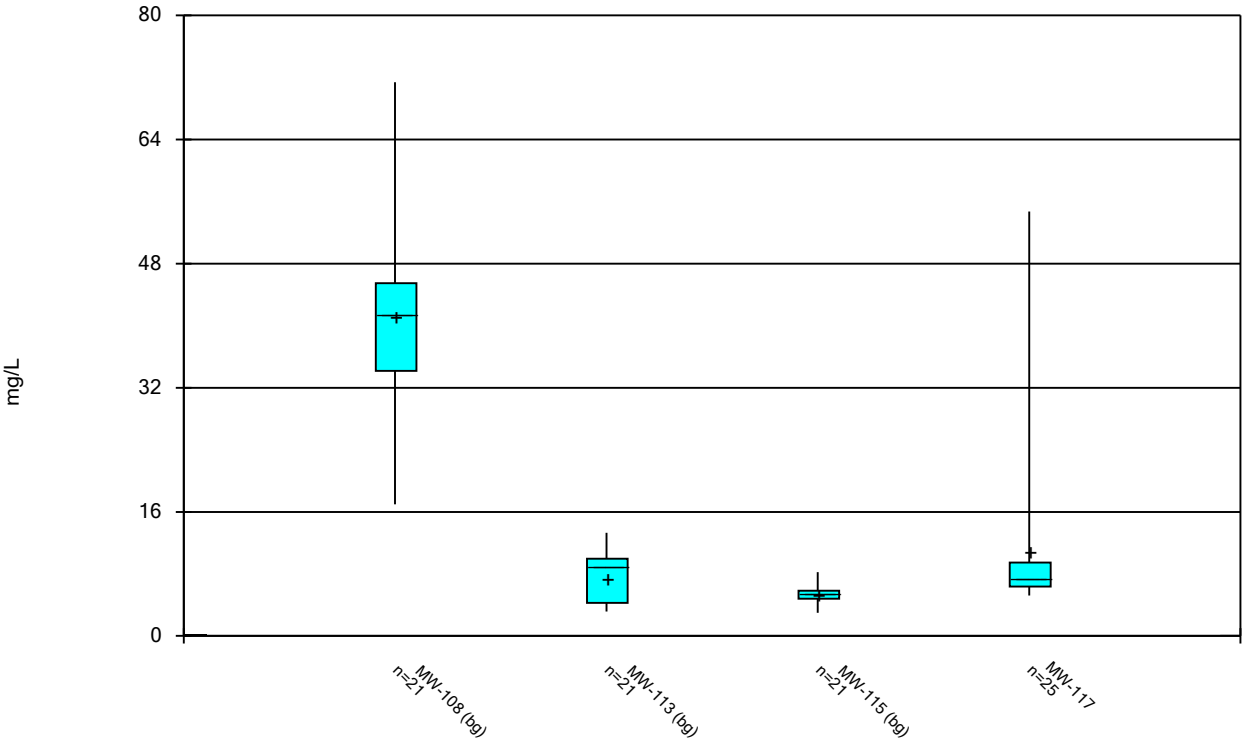


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Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

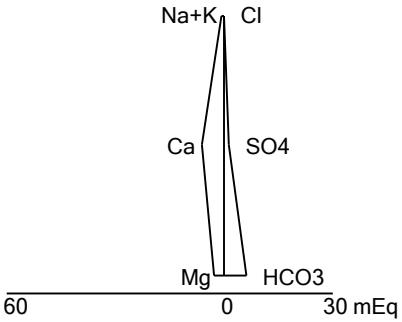
Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Box & Whiskers Plot



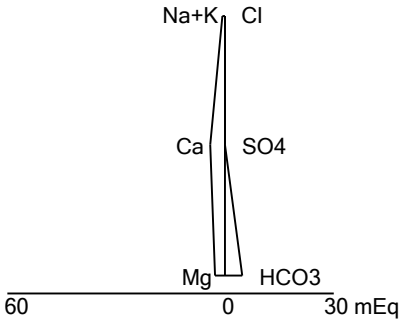
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Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



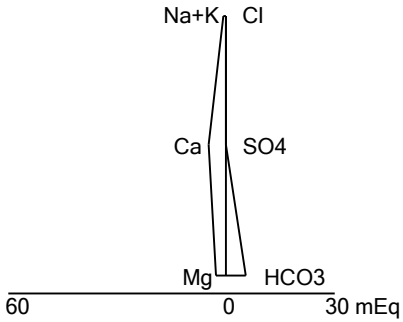
MW-108* 2024-04-17

**Background well*



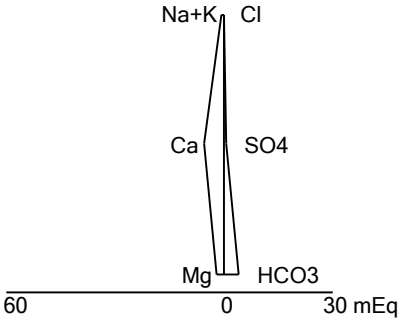
MW-113* 2024-04-17

**Background well*



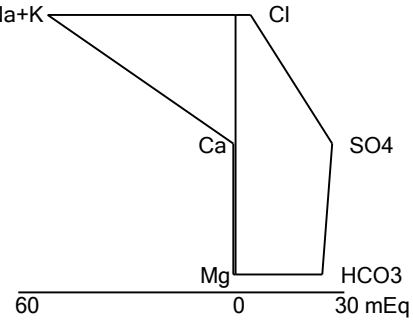
MW-115* 2024-04-17

**Background well*



MW-117 2024-04-19

Compliance well



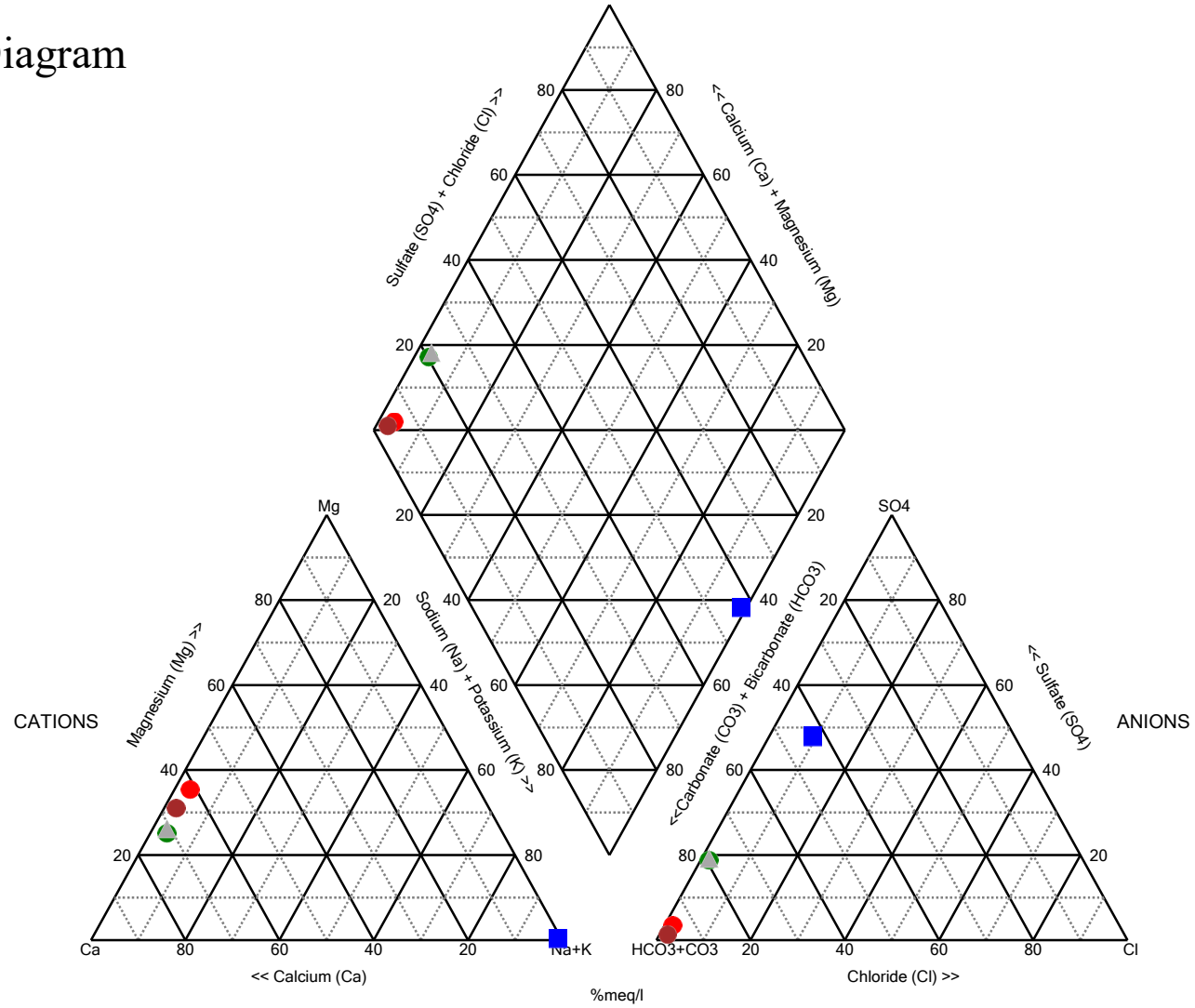
LEACHATE 2024-06-19

Stiff Diagram Analysis Run 9/16/2024 11:46 PM View: 2024-1H ASD

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Database (GWQ parameters)

Sanitas™ v.10.0.22 Software licensed to Olsson. UG

Piper Diagram



LEACHATE 2024-06-19

MW-108* 2024-04-17

MW-113* 2024-04-17

MW-115* 2024-04-17

MW-117 2024-04-19

**Background well*

Analysis Run 9/16/2024 11:46 PM View: 2024-1H ASD

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Database (GWQ parameters)

ATTACHMENT 3

Summary Tables

Table 1. Summary of statistically significant results and maximum background and published levels.

Well ID	Parameter	Prediction Limit (mg/L)	April 2024 Result (mg/L)	June 2024 Verification Result (mg/L)	SSI Confirmed?	Maximum Background Level[a] (mg/L)	Maximum Published Level[b] (mg/L)
MW-117	Calcium	92.01	108	98.7	Yes[c]	183 (MW-108, 4/2018)	130
MW-108 (background well)	Sulfate	56.89	71.4	67.1	Yes	Background well	120
MW-117	Sulfate	8.048	54.7[d]	37.8	Yes[c]	52.2 (MW-108, 9/2018) 71.4 (MW-108, 9/2024)	
MW-117	TDS	315.8	400	376	Yes[c]	638 (MW-108, 4/2016)	728

Notes:

a. Based on historical values at MW-108, MW-113, and MW-115.

b. From Gonthier 2003; value is for the Holocene subunit.

c. Previously confirmed SSI.

d. Statistically high outlier.

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.

Table 2. Summary of ASD submittals for previously confirmed SSIs identified during the first half 2024 monitoring period.

Analyte	Well ID	Monitoring Period	ASD Date	ASD Citation
Calcium	**MW-117**	1H2019	10/24/2019	FTN 2020a
		1H2020	8/3/2020	FTN 2020b
		1H2022	9/27/2022	FTN 2023
Sulfate	**MW-117**	2H2021	4/4/2022	FTN 2023
		1H2022	9/27/2022	FTN 2023
		2H2022	1/25/2023	FTN 2023
		1H2023	10/12/2023	FTN 2024
		2H2023	1/31/2024	FTN 2024
TDS	**MW-117**	1H2019	10/24/2019	FTN 2020a
		2H2019	12/17/2019	FTN 2020a
		1H2020	8/3/2020	FTN 2020b
		1H2021	10/6/2021	FTN 2022
		2H2021	4/4/2022	FTN 2023
		1H2022	9/27/2022	FTN 2023
		2H2023	1/31/2024	FTN 2024

REFERENCES

FTN [FTN Associates, Ltd.]. 2020a. “Appendix H, Alternate Source Demonstrations.” In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2019 Annual Report*. Little Rock, AR: FTN Associates, Ltd. January 28, 2020.

———. 2020b. “Appendix H, Alternate Source Demonstrations.” In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2020 Annual Report*. Little Rock, AR: FTN Associates, Ltd. December 18, 2020.

———. 2022. “Appendix H, Alternate Source Demonstrations.” In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2021 Annual Report*. Little Rock, AR: FTN Associates, Ltd. January 31, 2022.

———. 2023. “Appendix H, Alternate Source Demonstrations.” In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2022 Annual Report*. Little Rock, AR: FTN Associates, Ltd. January 25, 2023.

———. 2024. “Appendix H, Alternate Source Demonstrations.” In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2023 Annual Report*. Little Rock, AR: FTN Associates, Ltd. January 31, 2024.

ATTACHMENT 4

Laboratory Reports

ANALYTICAL REPORT

May 08, 2024

Plum Point Services Co., LLC

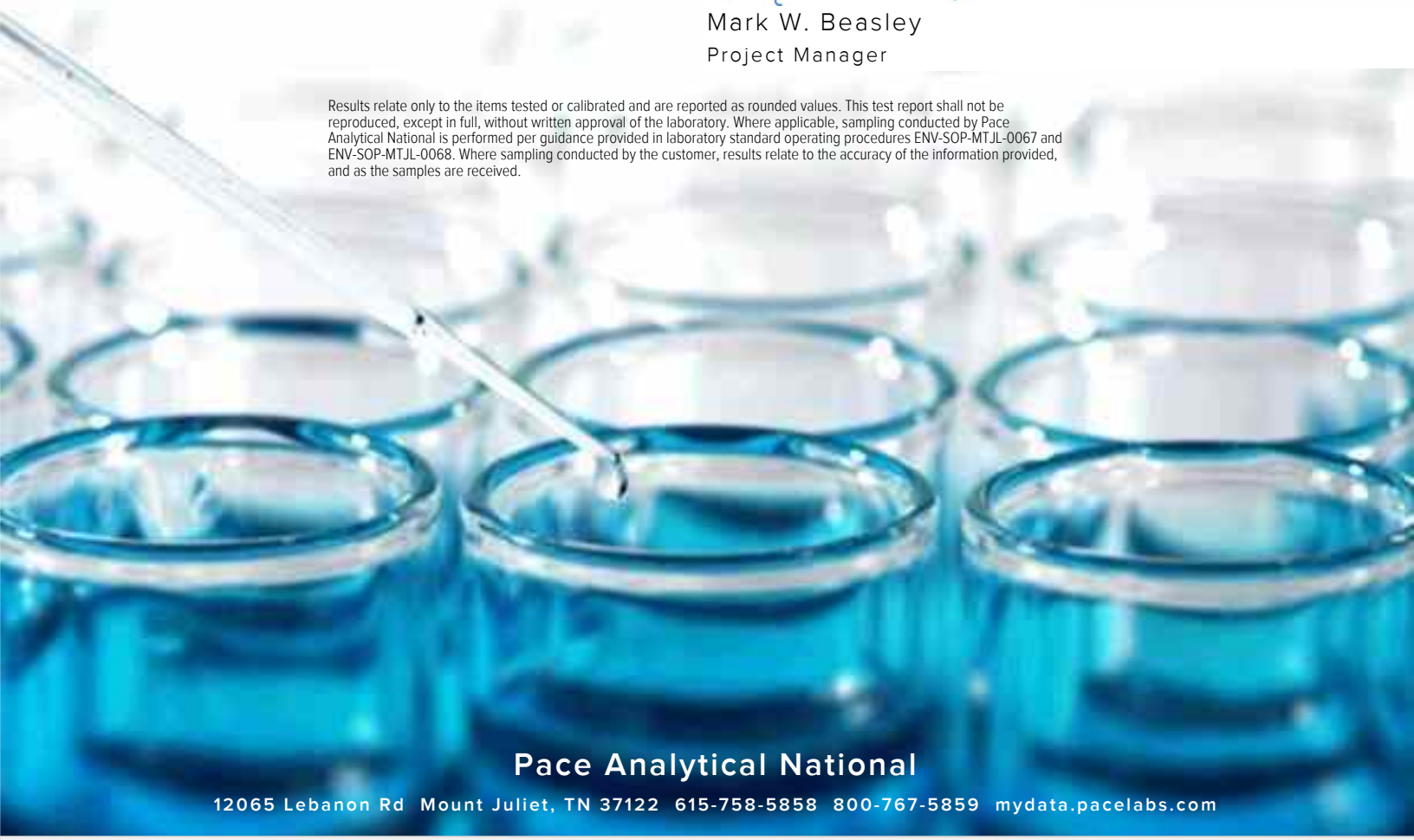
Sample Delivery Group:	L1727902
Samples Received:	04/20/2024
Project Number:	R14590-3336-001
Description:	Plum Point Energy Station

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 mydata.pacelabs.com

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MW-101 L1727902-01 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 10:55 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272216	1	04/23/24 08:52	04/24/24 13:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 15:58	04/29/24 15:58	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:26	JTM	Mt. Juliet, TN

MW-102 L1727902-02 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 13:00 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 16:12	04/29/24 16:12	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:28	JTM	Mt. Juliet, TN

MW-103 L1727902-03 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 08:55 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272216	1	04/23/24 08:52	04/24/24 13:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 16:26	04/29/24 16:26	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:29	JTM	Mt. Juliet, TN

MW-108 L1727902-04 GW

Collected by: Michael Clayton | Collected date/time: 04/17/24 16:25 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272219	1	04/23/24 09:23	04/23/24 16:45	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 16:39	04/29/24 16:39	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:31	JTM	Mt. Juliet, TN

MW-113 L1727902-05 GW

Collected by: Michael Clayton | Collected date/time: 04/17/24 15:10 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
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Wet Chemistry by Method 9056A	WG2275237	1	04/29/24 16:53	04/29/24 16:53	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:32	JTM	Mt. Juliet, TN

MW-115 L1727902-06 GW

Collected by: Michael Clayton | Collected date/time: 04/17/24 14:10 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 01:24	04/29/24 01:24	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:34	JTM	Mt. Juliet, TN

MW-116 L1727902-07 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 12:05 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 02:27	04/29/24 02:27	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:36	JTM	Mt. Juliet, TN

MW-117 L1727902-08 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 14:05 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272219	1	04/23/24 09:23	04/23/24 16:45	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 02:43	04/29/24 02:43	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:37	JTM	Mt. Juliet, TN

MW-118 L1727902-09 GW

Collected by: Michael Clayton | Collected date/time: 04/18/24 14:30 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272216	1	04/23/24 08:52	04/24/24 13:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 02:59	04/29/24 02:59	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 08:39	JTM	Mt. Juliet, TN

MW-119 L1727902-10 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 09:55 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 03:15	04/29/24 03:15	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 09:16	JTM	Mt. Juliet, TN

MW-119 DUP L1727902-11 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 10:00 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 03:31	04/29/24 03:31	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 09:17	JTM	Mt. Juliet, TN

EPA EB-1 L1727902-12 GW

Collected by: Michael Clayton | Collected date/time: 04/19/24 14:35 | Received date/time: 04/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2272212	1	04/23/24 08:38	04/23/24 14:08	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2275239	1	04/29/24 03:47	04/29/24 03:47	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2271879	1	04/24/24 23:40	04/25/24 09:19	JTM	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	368000		10000	1	04/24/2024 13:00	WG2272216

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	4960		379	1000	1	04/29/2024 15:58	WG2275237
Fluoride	191		64.0	150	1	04/29/2024 15:58	WG2275237
Sulfate	12400		594	5000	1	04/29/2024 15:58	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	58.4	J	20.0	200	1	04/25/2024 08:26	WG2271879
Calcium	108000		79.3	1000	1	04/25/2024 08:26	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	402000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	3570		379	1000	1	04/29/2024 16:12	WG2275237
Fluoride	156		64.0	150	1	04/29/2024 16:12	WG2275237
Sulfate	61000		594	5000	1	04/29/2024 16:12	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	101	J	20.0	200	1	04/25/2024 08:28	WG2271879
Calcium	109000		79.3	1000	1	04/25/2024 08:28	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	308000		10000	1	04/24/2024 13:00	WG2272216

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1070		379	1000	1	04/29/2024 16:26	WG2275237
Fluoride	130	J	64.0	150	1	04/29/2024 16:26	WG2275237
Sulfate	8800		594	5000	1	04/29/2024 16:26	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	63.6	J	20.0	200	1	04/25/2024 08:29	WG2271879
Calcium	90800		79.3	1000	1	04/25/2024 08:29	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	498000	B	10000	1	04/23/2024 16:45	WG2272219

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2520		379	1000	1	04/29/2024 16:39	WG2275237
Fluoride	111	J	64.0	150	1	04/29/2024 16:39	WG2275237
Sulfate	71400		594	5000	1	04/29/2024 16:39	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	115	J	20.0	200	1	04/25/2024 08:31	WG2271879
Calcium	139000		79.3	1000	1	04/25/2024 08:31	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	322000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1180		379	1000	1	04/29/2024 16:53	WG2275237
Fluoride	70.4	J P1	64.0	150	1	04/29/2024 16:53	WG2275237
Sulfate	9010		594	5000	1	04/29/2024 16:53	WG2275237

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	72.8	J	20.0	200	1	04/25/2024 08:32	WG2271879
Calcium	83900		79.3	1000	1	04/25/2024 08:32	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	369000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1070		379	1000	1	04/29/2024 01:24	WG2275239
Fluoride	237		64.0	150	1	04/29/2024 01:24	WG2275239
Sulfate	4850	B J	594	5000	1	04/29/2024 01:24	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	50.1	J	20.0	200	1	04/25/2024 08:34	WG2271879
Calcium	107000		79.3	1000	1	04/25/2024 08:34	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	392000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	3540		379	1000	1	04/29/2024 02:27	WG2275239
Fluoride	197		64.0	150	1	04/29/2024 02:27	WG2275239
Sulfate	50400		594	5000	1	04/29/2024 02:27	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	75.7	J	20.0	200	1	04/25/2024 08:36	WG2271879
Calcium	104000		79.3	1000	1	04/25/2024 08:36	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	400000	B	10000	1	04/23/2024 16:45	WG2272219

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1690		379	1000	1	04/29/2024 02:43	WG2275239
Fluoride	151		64.0	150	1	04/29/2024 02:43	WG2275239
Sulfate	54700		594	5000	1	04/29/2024 02:43	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	74.4	J	20.0	200	1	04/25/2024 08:37	WG2271879
Calcium	108000		79.3	1000	1	04/25/2024 08:37	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	258000		10000	1	04/24/2024 13:00	WG2272216

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	843	J	379	1000	1	04/29/2024 02:59	WG2275239
Fluoride	175		64.0	150	1	04/29/2024 02:59	WG2275239
Sulfate	12800		594	5000	1	04/29/2024 02:59	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	63.2	J	20.0	200	1	04/25/2024 08:39	WG2271879
Calcium	71900		79.3	1000	1	04/25/2024 08:39	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	325000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1150		379	1000	1	04/29/2024 03:15	WG2275239
Fluoride	285		64.0	150	1	04/29/2024 03:15	WG2275239
Sulfate	5930	B	594	5000	1	04/29/2024 03:15	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	55.7	J	20.0	200	1	04/25/2024 09:16	WG2271879
Calcium	89500		79.3	1000	1	04/25/2024 09:16	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	329000		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1190		379	1000	1	04/29/2024 03:31	WG2275239
Fluoride	290		64.0	150	1	04/29/2024 03:31	WG2275239
Sulfate	5650	B	594	5000	1	04/29/2024 03:31	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	56.5	J	20.0	200	1	04/25/2024 09:17	WG2271879
Calcium	90100		79.3	1000	1	04/25/2024 09:17	WG2271879

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	04/23/2024 14:08	WG2272212

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	623	J	379	1000	1	04/29/2024 03:47	WG2275239
Fluoride	U		64.0	150	1	04/29/2024 03:47	WG2275239
Sulfate	680	B J	594	5000	1	04/29/2024 03:47	WG2275239

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	1600		20.0	200	1	04/25/2024 09:19	WG2271879
Calcium	U		79.3	1000	1	04/25/2024 09:19	WG2271879

Method Blank (MB)

(MB) R4063114-1 04/23/24 14:08

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

L1727804-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727804-01 04/23/24 14:08 • (DUP) R4063114-3 04/23/24 14:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1810000	1890000	1	4.33		10

L1727902-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-02 04/23/24 14:08 • (DUP) R4063114-4 04/23/24 14:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	402000	409000	1	1.73		10

Laboratory Control Sample (LCS)

(LCS) R4063114-2 04/23/24 14:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8690000	98.8	85.0-115	

Method Blank (MB)

(MB) R4063084-1 04/24/24 13:00

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

L1727780-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727780-01 04/24/24 13:00 • (DUP) R4063084-3 04/24/24 13:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1100000	1160000	1	5.65		10

L1727780-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1727780-03 04/24/24 13:00 • (DUP) R4063084-4 04/24/24 13:00

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1140000	1210000	1	6.31		10

Laboratory Control Sample (LCS)

(LCS) R4063084-2 04/24/24 13:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8860000	101	85.0-115	

Method Blank (MB)

(MB) R4062505-1 04/23/24 16:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dissolved Solids	125000		10000	10000

L1727902-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-04 04/23/24 16:45 • (DUP) R4062505-3 04/23/24 16:45

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	498000	501000	1	0.601		10

L1727902-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-08 04/23/24 16:45 • (DUP) R4062505-4 04/23/24 16:45

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	400000	401000	1	0.250		10

Laboratory Control Sample (LCS)

(LCS) R4062505-2 04/23/24 16:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8730000	99.2	85.0-115	

Method Blank (MB)

(MB) R4066544-1 04/29/24 09:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	U		594	5000

L1727615-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1727615-01 04/29/24 12:05 • (DUP) R4066544-3 04/29/24 12:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	178000	182000	1	2.40		15
Fluoride	354	453	1	24.3	P1	15
Sulfate	4720	1930	1	84.0	J P1	15

L1727902-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-05 04/29/24 16:53 • (DUP) R4066544-6 04/29/24 17:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1180	1040	1	12.7		15
Fluoride	70.4	133	1	61.8	J P1	15
Sulfate	9010	8610	1	4.47		15

Laboratory Control Sample (LCS)

(LCS) R4066544-2 04/29/24 09:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	39500	98.7	80.0-120	
Fluoride	8000	8220	103	80.0-120	
Sulfate	40000	39300	98.2	80.0-120	

L1727615-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727615-01 04/29/24 12:05 • (MS) R4066544-4 04/29/24 13:00 • (MSD) R4066544-5 04/29/24 13:14

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	40000	178000	187000	189000	22.3	27.5	1	80.0-120	V	V	1.11	15
Fluoride	8000	354	6710	7130	79.4	84.8	1	80.0-120	J6		6.20	15
Sulfate	40000	4720	37500	36500	81.8	79.5	1	80.0-120		J6	2.48	15

Sample Narrative:

MS: spike failed due to sample matrix

MSD: spike failed due to sample matrix

L1727902-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1727902-05 04/29/24 16:53 • (MS) R4066544-7 04/29/24 17:21

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1180	40600	98.6	1	80.0-120	
Fluoride	8000	70.4	8190	102	1	80.0-120	
Sulfate	40000	9010	47700	96.9	1	80.0-120	

Method Blank (MB)

(MB) R4066993-1 04/28/24 13:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		379	1000
Fluoride	U		64.0	150
Sulfate	632	J	594	5000

L1727902-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1727902-06 04/29/24 01:24 • (DUP) R4066993-3 04/29/24 01:39

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1070	1040	1	2.90		15
Fluoride	237	235	1	1.10		15
Sulfate	4850	4750	1	1.97	J	15

L1727904-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1727904-13 04/29/24 08:17 • (DUP) R4066993-6 04/29/24 08:33

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1180	1180	1	0.330		15
Fluoride	312	303	1	3.09		15
Sulfate	5800	5790	1	0.104		15

Laboratory Control Sample (LCS)

(LCS) R4066993-2 04/28/24 13:26

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	38000	95.0	80.0-120	
Fluoride	8000	7940	99.3	80.0-120	
Sulfate	40000	37500	93.8	80.0-120	

L1727902-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727902-06 04/29/24 01:24 • (MS) R4066993-4 04/29/24 01:55 • (MSD) R4066993-5 04/29/24 02:11

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	40000	1070	40800	40500	99.4	98.5	1	80.0-120			0.876	15
Fluoride	8000	237	8510	8470	103	103	1	80.0-120			0.419	15
Sulfate	40000	4850	43900	43400	97.5	96.4	1	80.0-120			1.05	15

L1727904-13 Original Sample (OS) • Matrix Spike (MS)

(OS) L1727904-13 04/29/24 08:17 • (MS) R4066993-7 04/29/24 08:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1180	39500	95.8	1	80.0-120	
Fluoride	8000	312	8250	99.2	1	80.0-120	
Sulfate	40000	5800	43500	94.2	1	80.0-120	

Method Blank (MB)

(MB) R4062125-1 04/25/24 08:00

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

Laboratory Control Sample (LCS)

(LCS) R4062125-2 04/25/24 08:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	962	96.2	80.0-120	
Calcium	10000	10100	101	80.0-120	

L1727704-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1727704-03 04/25/24 08:03 • (MS) R4062125-4 04/25/24 08:07 • (MSD) R4062125-5 04/25/24 08:08

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 %
Boron	1000	112	1060	1090	94.9	97.5	1	75.0-125			2.40	20
Calcium	10000	131000	138000	139000	74.5	80.4	1	75.0-125	V		0.424	20

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
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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

Report to: **Dana Derrington**

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Site/Facility ID #

P.O. # **2024-00048**

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

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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

SDG # L1722902

J123

Acctnum: **NAESOAR**
Template: **T175308**
Prelogin: **P1067931**
PM: **134 - Mark W. Beasley**
PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3							Remarks	Sample # (lab only)
MW-101	Grab	GW		4/19/24	1055	3	X	X	X								-01
MW-102		GW		4/19/24	1300	3	X	X	X								-02
MW-103		GW		4/19/24	855	3	X	X	X								-03
MW-108		GW		4/17/24	1625	3	X	X	X								-04
MW-113		GW		4/17/24	1510	3	X	X	X								-05
MW-115		GW		4/17/24	1410	3	X	X	X								-06
MW-116		GW		4/19/24	1205	3	X	X	X								-07
MW-117		GW		4/19/24	1405	3	X	X	X								-08
MW-118		GW		4/18/24	1430	3	X	X	X								-09
MW-119		GW		4/19/24	955	3	X	X	X								-10

* 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: 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)	Date:	Time:	Received by: (Signature)
Michael Clayton	4/19/24	1800	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Caleb Tapp

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received: 36

Date: 4/20/24 Time: 09:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Address:
Plum Point Energy Services Co., LLC

2739 SCR 623
Osceola, AR 72370

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

Report to:
Dana Derrington

Email To: **dld@ftn-assoc.com;hlf@ftn-assoc.com;mcc@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 #
R14590-3336-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Clayton

Site/Facility ID #

P.O. #
2024-00048

Collected by (signature):
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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	Pres Chk	Remarks	Sample # (lab only)
MW-119 DUP	Grab	GW		4/19/24	0000	3	X	X	X			71
EPA EB-1	↓	GW		4/19/24	1435	3	X	X	X			72
		GW					X	X	X			
		GW					X	X	X			
		GW					X	X	X			

Chain of Custody Page 2 of 2

Pace
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MT JULIET, TN

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SDG # L1727915

Table #

Acctnum: **NAESOAR**
Template: **T175308**
Prelogin: **P1067931**
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: 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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Michael Clayton	4/19/24	1800		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 36
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/20/24 Time: 09:00
			Caleb Tyer	Hold: Condition: NCF / OK

L1727902

Tracking Numbers	Temperature
7315 3189 4897	TLAG 2-0 + 0.1 = 2.1
7315 3189 5457	TLAG 1.0 + 0.1 = 1.1
7155 0310 7689	TLAG 3.5 + 0.1 = 3.6
7155 0310 9628	TLAG 1.8 + 0.1 = 1.9
7315 3189 5448	TLAG 0.3 + 0.1 = 0.4
7315 3189 4809	0.1 + 0.1 = 0.2

Caleb Tapp
Name

4/20/24
Date

ANALYTICAL REPORT

July 12, 2024

Plum Point Services Co., LLC

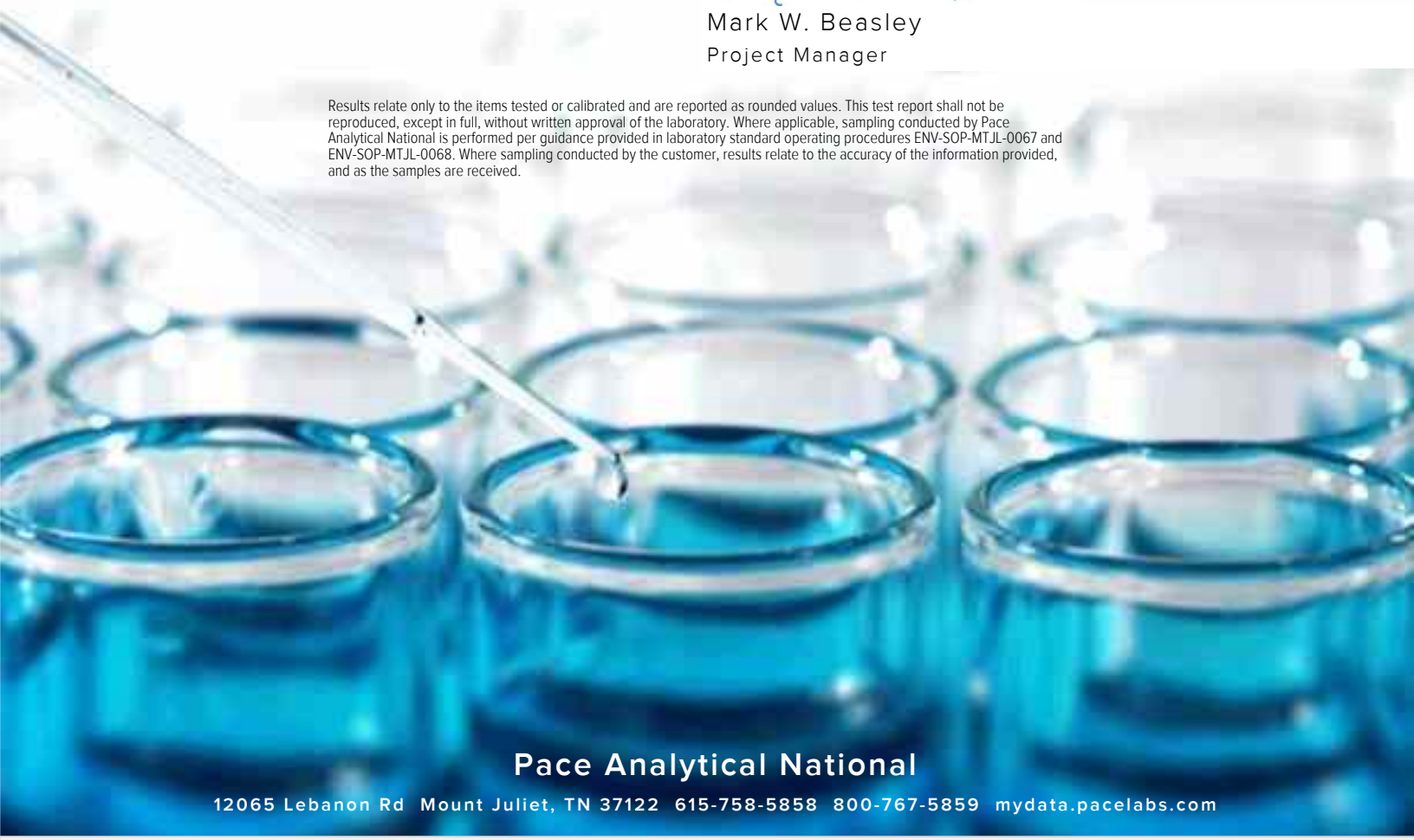
Sample Delivery Group:	L1748973
Samples Received:	06/20/2024
Project Number:	R14590-3336-001
Description:	PPES DEQ Program

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-117 L1748973-01 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 12:20 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2311369	1	06/25/24 09:14	06/25/24 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2320364	1	07/11/24 21:10	07/11/24 21:10	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2312627	1	07/03/24 14:01	07/03/24 17:45	ZSA	Mt. Juliet, TN

MW-117 DUP L1748973-02 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 12:25 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2311369	1	06/25/24 09:14	06/25/24 14:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2320364	1	07/11/24 22:02	07/11/24 22:02	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2312627	1	07/03/24 14:01	07/03/24 17:47	ZSA	Mt. Juliet, TN

EPA EB-2 L1748973-03 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 13:50 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2311370	1	06/25/24 08:34	06/25/24 11:37	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2320364	1	07/11/24 22:14	07/11/24 22:14	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2312627	1	07/03/24 14:01	07/03/24 17:48	ZSA	Mt. Juliet, TN

MW-108 L1748973-04 GW

Collected by: Michael Clayton | Collected date/time: 06/19/24 13:20 | Received date/time: 06/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2320364	1	07/11/24 22:27	07/11/24 22:27	DLH	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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	376000		10000	1	06/25/2024 14:31	WG2311369

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	37800		594	5000	1	07/11/2024 21:10	WG2320364

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	98700		79.3	1000	1	07/03/2024 17:45	WG2312627

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	371000		10000	1	06/25/2024 14:31	WG2311369

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	38000		594	5000	1	07/11/2024 22:02	WG2320364

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Calcium	98800		79.3	1000	1	07/03/2024 17:47	WG2312627

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	06/25/2024 11:37	WG2311370

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	U		594	5000	1	07/11/2024 22:14	WG2320364

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Calcium	U		79.3	1000	1	07/03/2024 17:48	WG2312627

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	67100		594	5000	1	07/11/2024 22:27	WG2320364

Method Blank (MB)

(MB) R4087436-1 06/25/24 14:31

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

L1749443-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1749443-07 06/25/24 14:31 • (DUP) R4087436-3 06/25/24 14:31

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	360000	366000	1	1.65		10

L1749443-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1749443-08 06/25/24 14:31 • (DUP) R4087436-4 06/25/24 14:31

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	485000	487000	1	0.412		10

Laboratory Control Sample (LCS)

(LCS) R4087436-2 06/25/24 14:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8050000	91.5	85.0-115	

Method Blank (MB)

(MB) R4087363-1 06/25/24 11:37

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

L1748994-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1748994-01 06/25/24 11:37 • (DUP) R4087363-3 06/25/24 11:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	904000	910000	1	0.662		10

L1749443-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1749443-02 06/25/24 11:37 • (DUP) R4087363-4 06/25/24 11:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	211000	208000	1	1.43		10

Laboratory Control Sample (LCS)

(LCS) R4087363-2 06/25/24 11:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8650000	98.3	85.0-115	

Method Blank (MB)

(MB) R4093019-1 07/11/24 20:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	U		594	5000

L1748973-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1748973-01 07/11/24 21:10 • (DUP) R4093019-3 07/11/24 21:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	37800	37800	1	0.139		15

L1749495-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1749495-06 07/12/24 02:31 • (DUP) R4093019-6 07/12/24 02:43

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	7580	7570	1	0.100		15

Laboratory Control Sample (LCS)

(LCS) R4093019-2 07/11/24 20:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	39600	99.0	80.0-120	

L1748973-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748973-01 07/11/24 21:10 • (MS) R4093019-4 07/11/24 21:36 • (MSD) R4093019-5 07/11/24 21:49

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 %
Sulfate	40000	37800	71300	71400	83.9	84.1	1	80.0-120			0.142	15

L1749495-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1749495-06 07/12/24 02:31 • (MS) R4093019-7 07/12/24 02:56

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	7580	46500	97.2	1	80.0-120	

Method Blank (MB)

(MB) R4089974-1 07/03/24 17:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Calcium	U		79.3	1000

Laboratory Control Sample (LCS)

(LCS) R4089974-2 07/03/24 17:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10000	10300	103	80.0-120	

L1748926-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1748926-01 07/03/24 17:23 • (MS) R4089974-4 07/03/24 17:26 • (MSD) R4089974-5 07/03/24 17:28

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	508000	512000	506000	41.5	0.000	1	75.0-125	V	V	1.14	20

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.

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: **Dana Derrington**

Email To: **dderrington@olsson.com;hferguson@olsson.co**

Project Description: **PPES DEQ Program**

City/State Collected: OSCEOLA AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature): Michael Clayton

Immediately Packed on Ice N ___ Y V

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Pres Chk: L2

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CAICP 250mlHDPE-HNO3	SULFATE 125mlHDPE-NoPres	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-117	Grab	GW		6/19/24	1220	3	X	X	X		-01
MW-117 DUP		GW		6/19/24	1225	3	X	X	X		-02
EPA EB-2		GW		6/19/24	1250	3	X	X	X		-03
MW-108		GW		6/19/24	1320	1		X			-04
		GW				3	X	X	X		

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L1748973

D094

Acctnum: **NAESOAR**
Template: **T254081**
Prelogin: **P1080314**
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 # 7464 0843 4642

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Michael Clayton	6/19/24	1700		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.9+0.3=2.2 °C Bottles Received: 10
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Chandler Stevenson	Date: 6-20-24 Time: 9:30

PH-10BDH4321
TRC-3223A228

Hold:

Condition: NCF / OK

MEMO

To:	Plum Point Services Company, LLC Attn: Mr. Matt Gray 2732 South County Road 623 Osceola, AR 72370
From:	Melissa Vaught, PE Andrew Pruitt, PG
RE:	Alternate Source Demonstration for Statistically Significant Increases, Second Half of 2024 Monitoring Period, Plum Point Energy Station Landfill
Date:	January 24, 2025
Project #:	024-01343 / R14590-3336-001

Olsson has prepared this technical memorandum for the Plum Point Services Company, LLC (PPSC), coal combustion residuals (CCR) landfill, which is regulated by the US 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) Rule No. 22 and permitted by the Arkansas Department of Energy & Environment, Division of Environmental Quality (DEQ), under permit no. 0303-S3N-R2.

Olsson performed groundwater sampling and statistical analysis of the data for the second half of 2024 monitoring period. 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. BACKGROUND

Olsson performed groundwater sampling for the second half 2024 semiannual groundwater monitoring period during October 2024. 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 Associates, Ltd. [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 for sulfate and total dissolved solids (TDS) at MW-117, and four unverified SSIs for boron, sulfate and TDS at MW-102 and TDS at MW-116. A site map showing the locations of MW-102, MW-116 and MW-117 relative to the CCR unit (cells 1 through 3) is included as Figure 1 (all figures are included in Attachment 1).

Verification sampling for the four unverified SSIs for boron, sulfate and TDS at MW-102 and TDS at MW-116 was performed on December 10, 2024, in accordance with the GWSAP and SAP (FTN 2017b, 2017c). Intrawell prediction limit plots showing the results of verification sampling are included in Attachment 2. As shown on the prediction limit plots in Attachment 2 and in Table 1 (Attachment 3), results from verification sampling were below the prediction limits for the unverified SSIs.

In accordance with §257.94(e)(2), prior ASDs have been prepared for the previously confirmed SSIs at MW-117 for sulfate and TDS as summarized in Table 2 (Attachment 3). Each ASD successfully demonstrated that the SSIs were not the result of influence from the CCR unit.

The laboratory reports for the October and December sampling events are included in Attachment 4.

2. DISCUSSION

A review of the monitoring system with respect to onsite background wells, background groundwater quality, published literature, and landfill leachate quality was performed to determine if the confirmed SSIs 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 49 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 724 ft from the CCR unit as of the second half 2024 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 sulfate and TDS data for compliance well MW-117 and background wells MW-108, MW-113, and MW-115 are plotted on the time-series graphs and box-and-whiskers diagrams included in Attachment 2. As is evident from these graphs and diagrams, concentrations for sulfate and TDS at compliance well MW-117 are generally well within the range of values measured at the onsite background wells. This comparison provides supporting evidence that the currently measured values for sulfate and TDS at compliance well 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 (Attachment 1). According to this study, wells screened in Holocene alluvium had a maximum measured sulfate concentration of 120 mg/L, and a maximum TDS concentration of 728 mg/L. As shown in Table 1 (Attachment 3), published levels for the aquifer are well above those measured at MW-117 and at background wells MW-108, MW-113, and MW-115. This comparison provides supporting evidence that the currently measured values for sulfate and TDS at compliance well 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 October and December 2024 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 Rule No. 22 monitoring program, as required by permit no. 0303-S3N-R2, and are publicly available on the DEQ website[1]. 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 distribution in groundwater at MW-117 is similar to the ionic distribution at background wells MW-108, MW-113, and MW-115. In contrast, the 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 background wells MW-108, MW-113, and MW-115 and compliance well MW-117 clustered in the quadrant classified as calcium-bicarbonate-type waters and positioned apart from the leachate data, which is located in the sodium-chloride-type water. If leachate was mixing with groundwater at MW-117, the data for 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 compliance well MW-117 are different than landfill leachate, providing a key line of evidence that the confirmed SSIs for sulfate and TDS at compliance well MW-117 are not due to a release from the CCR unit.

3. CONCLUSIONS

In consideration of the information presented in this memorandum, Olsson concludes that the confirmed SSIs for sulfate and TDS at compliance well 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 for sulfate and TDS at compliance well 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 Andrew Pruitt, PG, at 501.225.7779, or Melissa Vaught, PE, at 479.443.3404.

[1] https://www.adeq.state.ar.us/sw/permits/facility_data.aspx

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.

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* [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.

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.



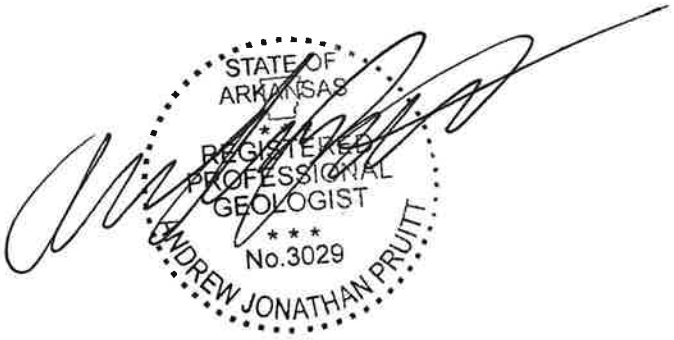
Melissa M. Vaught, Arkansas PE #18259
Arkansas Certificate of Authorization No: 1010

Date 1/24/2025

3 Innwood Circle / Suite 220 / Little Rock, AR 72211
O 501.225.7779 / olsson.com

PROFESSIONAL GEOLOGIST'S CERTIFICATION

With this certification, I certify that I, as a professional geologist in the state of Arkansas, am a qualified groundwater scientist as defined in §22.1201(f) of Arkansas Pollution Control & Ecology Commission Rule No. 22, that I have reviewed this technical memorandum, 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.

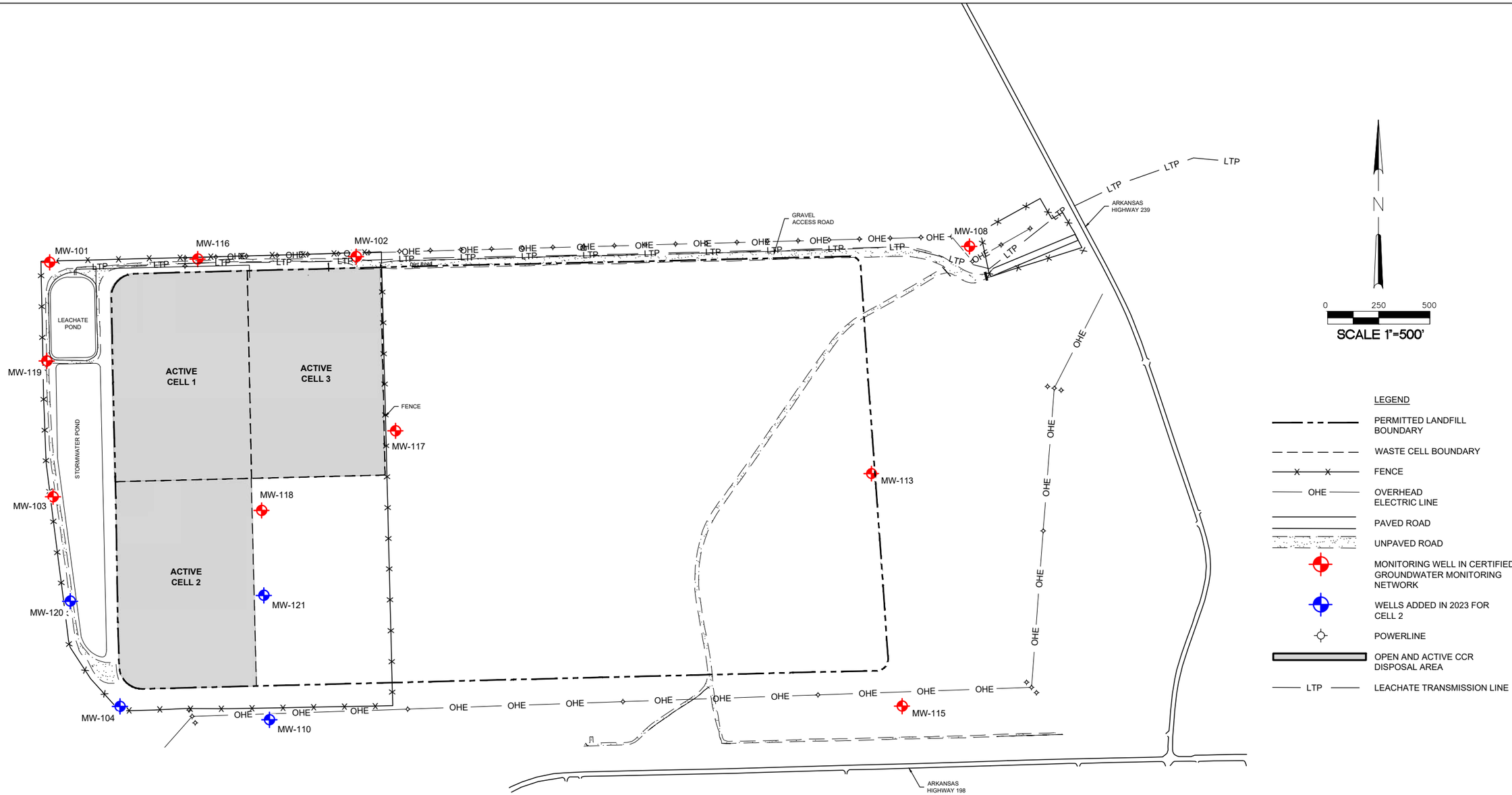


Andrew J. Pruitt, Arkansas PG #3029

1/24/2025
Date

3 Innwood Circle / Suite 220 / Little Rock, AR 72211
O 501.225.7779 / olsson.com

ATTACHMENT 1
FIGURES



R:\projects\14590-3336-001\cad\dwg\EPA\2H2024 ASD\14590-3336-001-EPA-2h2024 ASD-FG01.dwg
DATE: Jan 14, 2025 2:43pm USER: jtorres

PROJECT NO:	024-01343
DRAWN BY:	JT
DATE:	11.15.2024

Figure 1. Monitoring well location map.

olsson
3 Innwood Circle
Suite 220
Little Rock, AR 72211
olsson.com
TEL 501.225.7779
Olsson - Engineering
Arkansas COA #1010

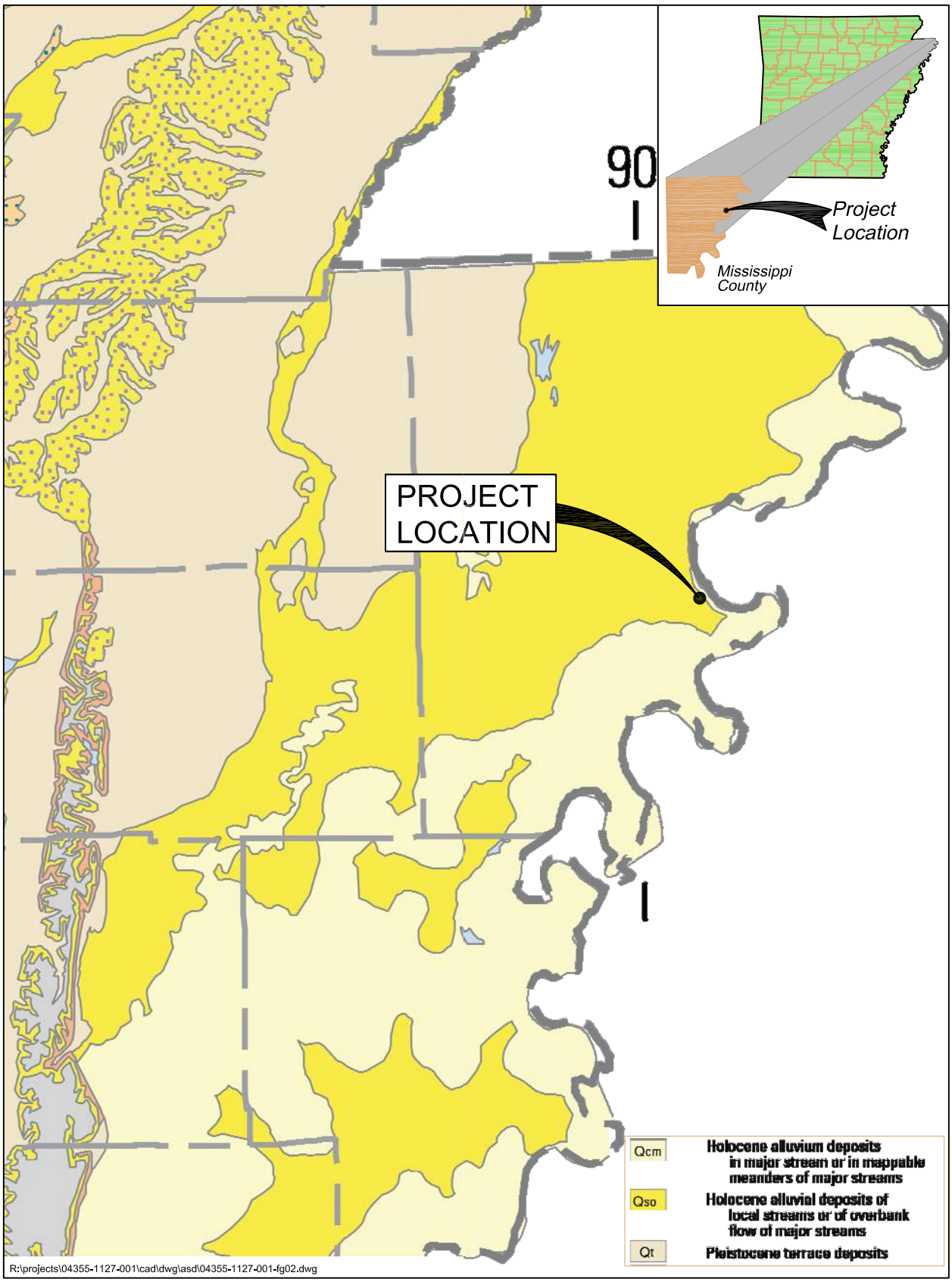


Figure 2. Surface geology of Mississippi County, Arkansas (adapted from Kresse et al. 2014).

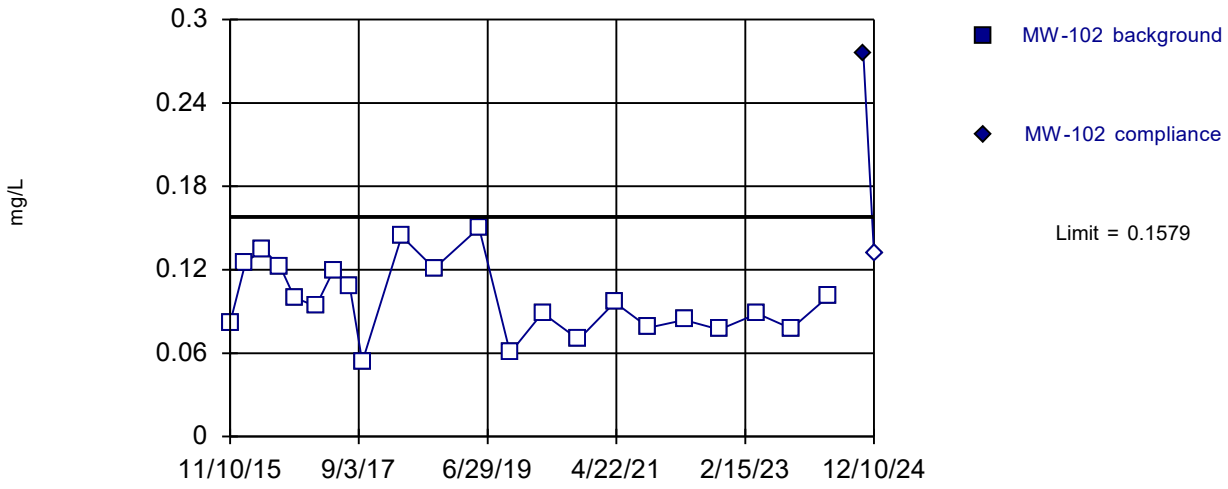
ATTACHMENT 2
STATISTICAL PLOTS

Sanitas™ v.10.0.24 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.09891, Std. Dev.=0.02645, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9701, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Boron Analysis Run 1/14/2025 1:19 PM View: 2024-2H PL

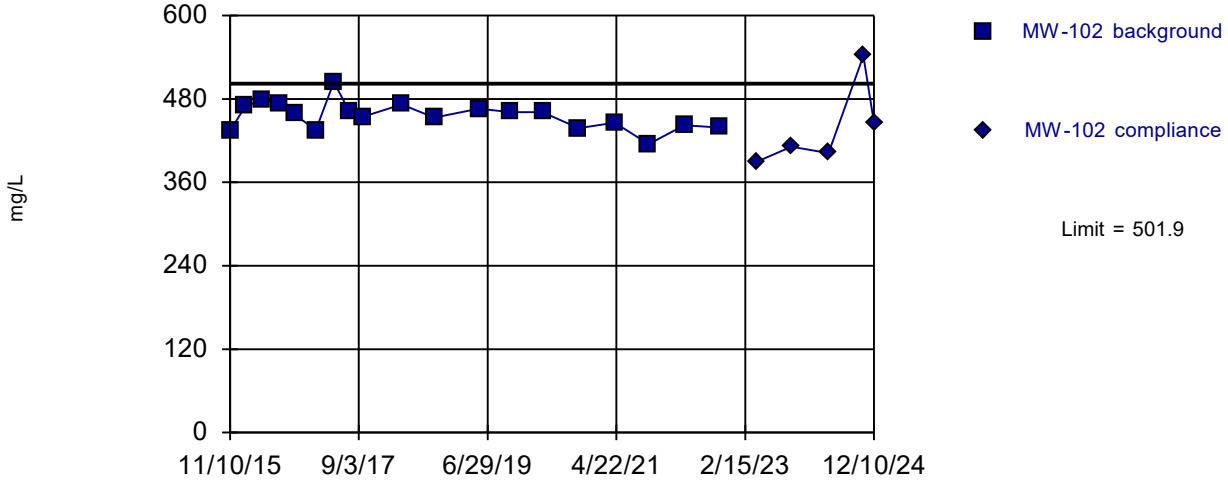
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.24 Software licensed to Olsson. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=455.8, Std. Dev.=20.1, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.976, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

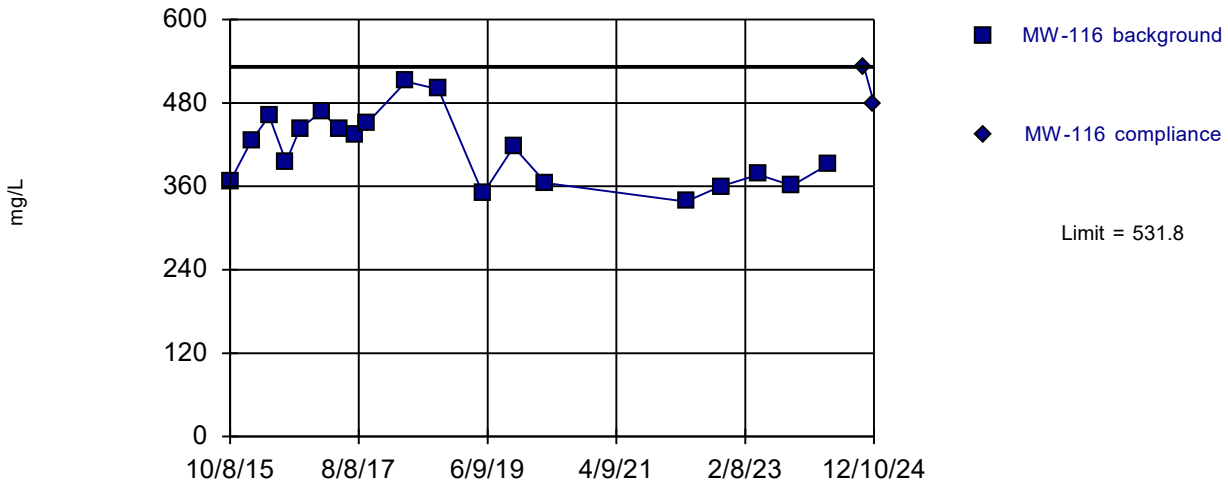
Constituent: Dissolved Solids Analysis Run 1/14/2025 1:20 PM View: 2024-2H PL

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=413.6, Std. Dev.=51.65, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9491, critical = 0.863. Kappa = 2.289 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Dissolved Solids Analysis Run 1/14/2025 1:20 PM View: 2024-2H PL

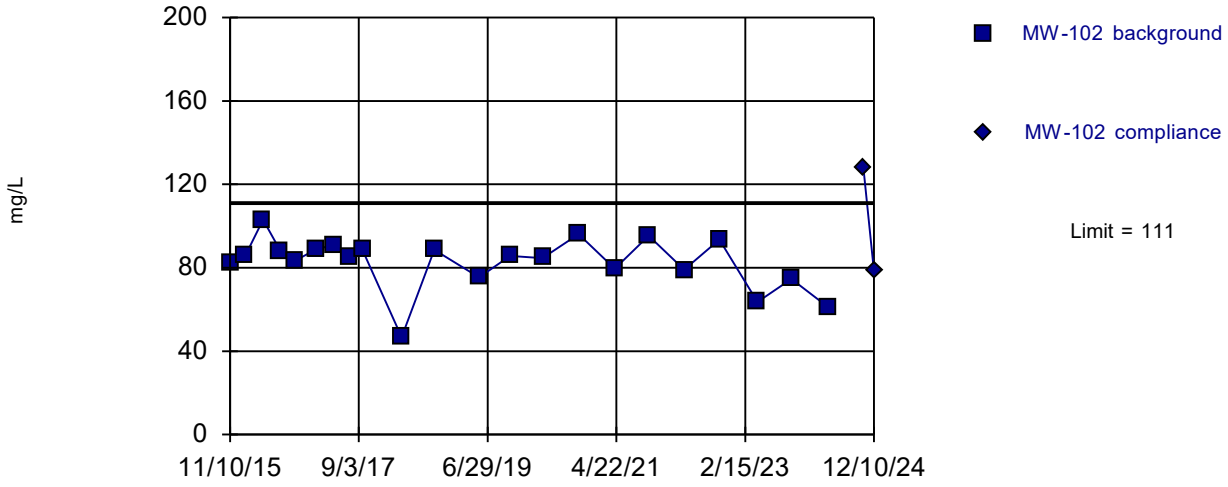
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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Within Limit

Prediction Limit

Intrawell Parametric



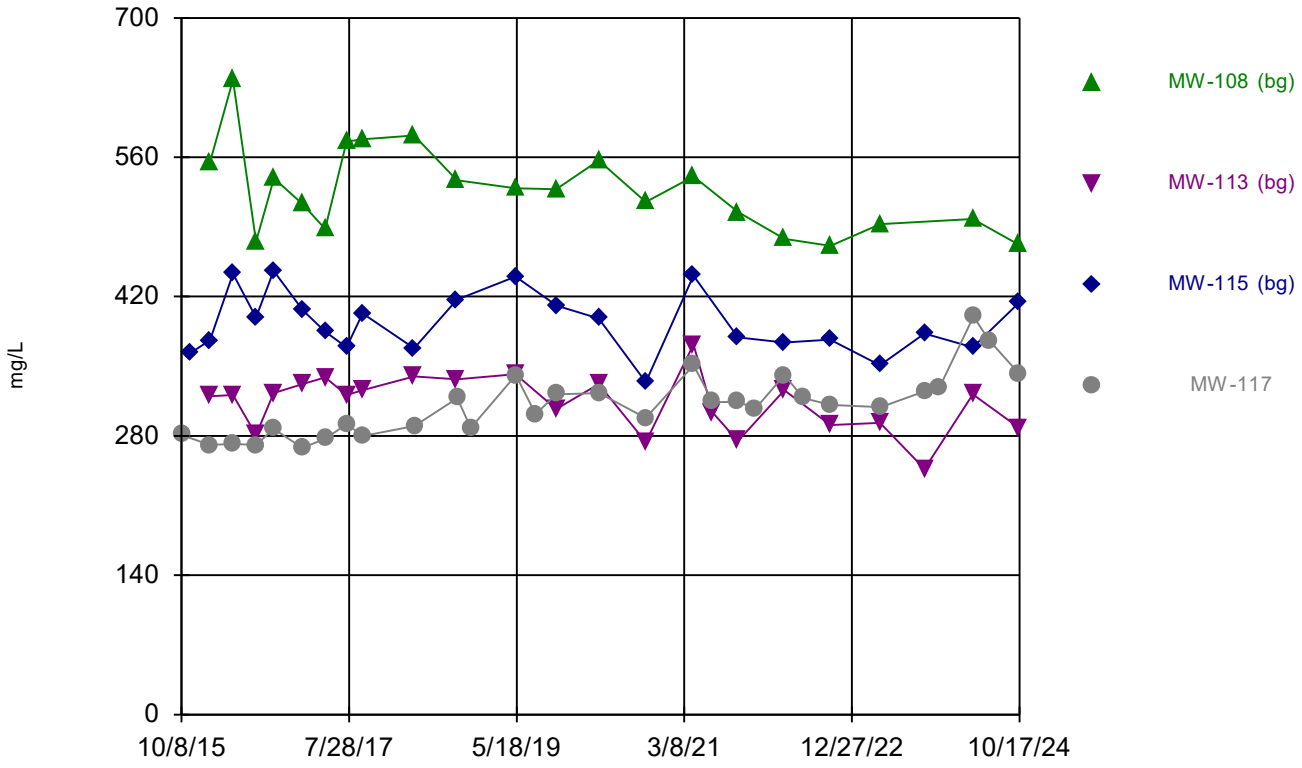
Background Data Summary: Mean=82.71, Std. Dev.=12.69, n=22. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9027, critical = 0.878. Kappa = 2.229 (c=6, w=11, 1 of 2, event alpha = 0.05132). Report alpha = 0.0007979.

Constituent: Sulfate Analysis Run 1/14/2025 1:20 PM View: 2024-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.24 Software licensed to Olsson. UG

Time Series

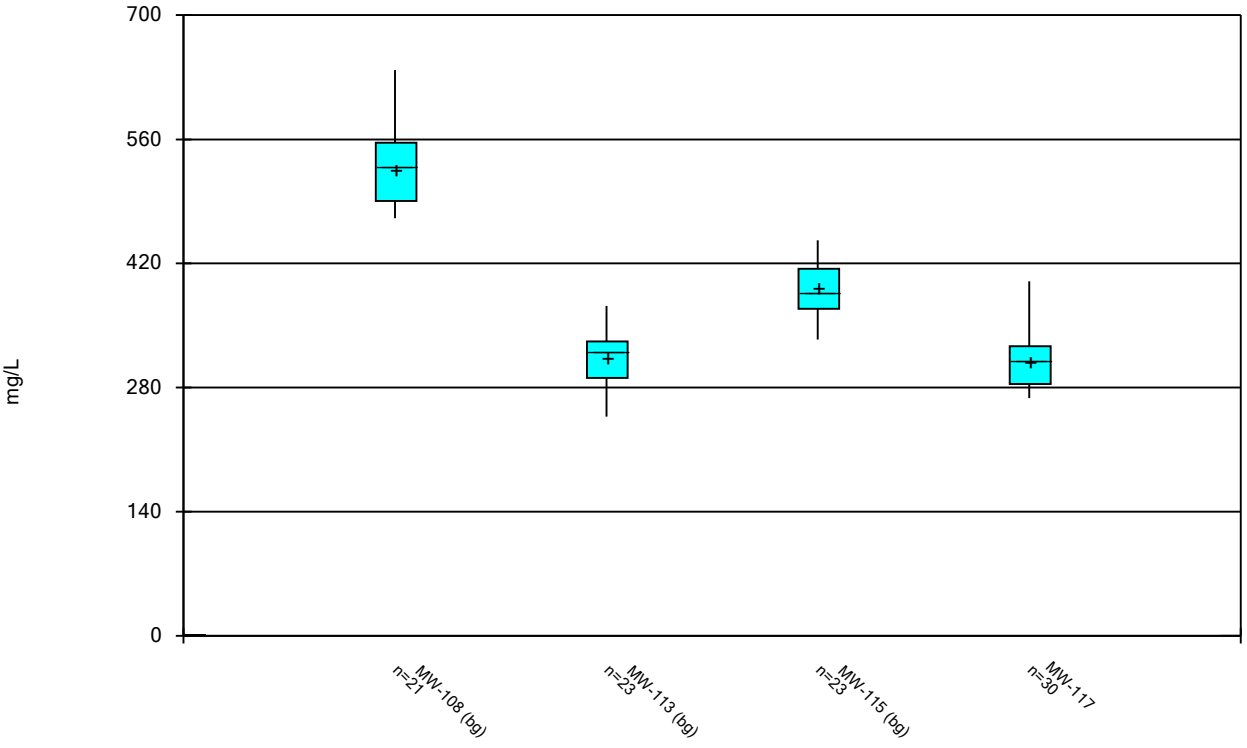


Constituent: Dissolved Solids Analysis Run 1/14/2025 1:23 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.24 Software licensed to Olsson. UG

Box & Whiskers Plot

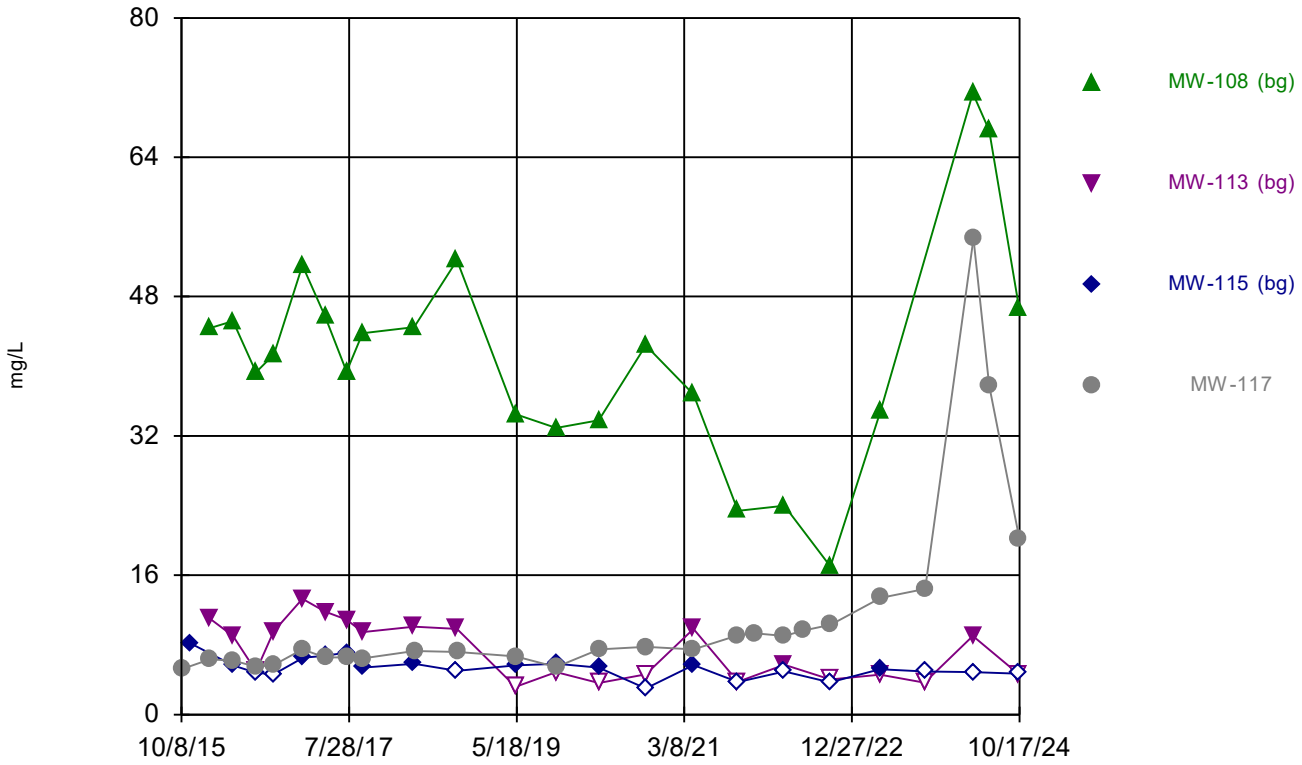


Constituent: Dissolved Solids Analysis Run 1/14/2025 1:25 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.24 Software licensed to Olsson. UG
Hollow symbols indicate censored values.

Time Series

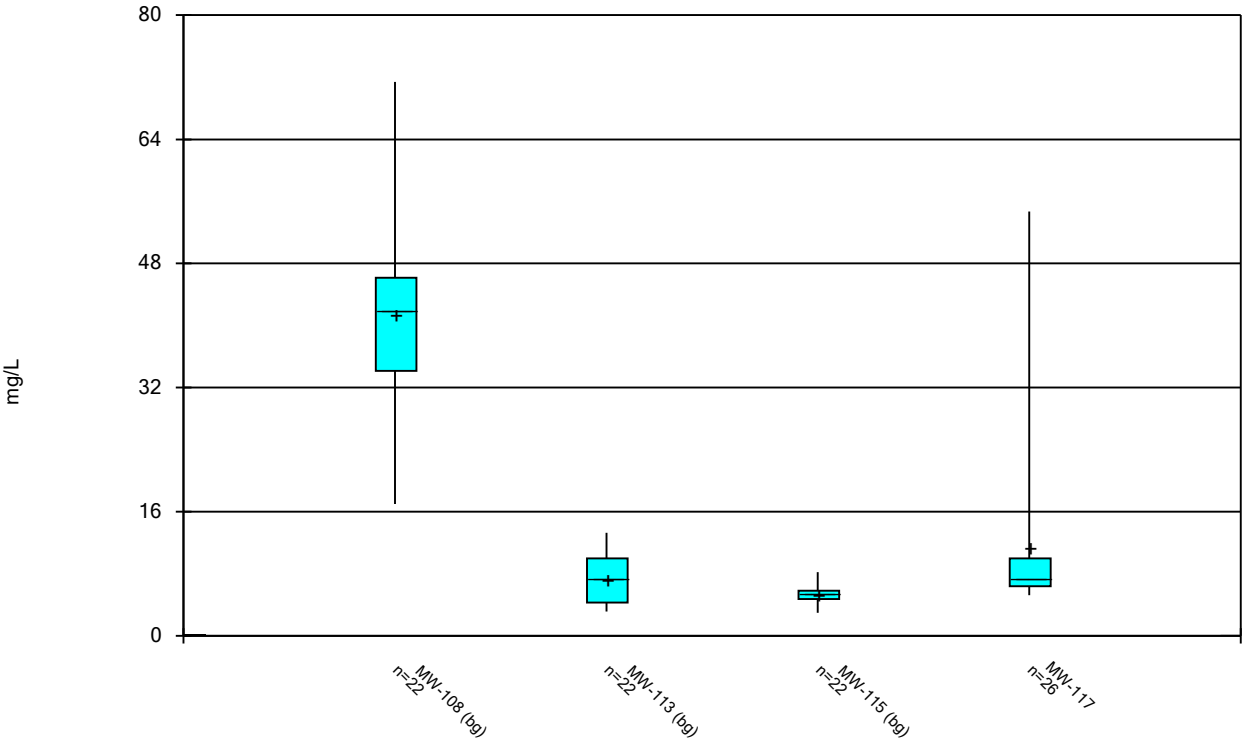


Constituent: Sulfate Analysis Run 1/14/2025 1:23 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sanitas™ v.10.0.24 Software licensed to Olsson. UG

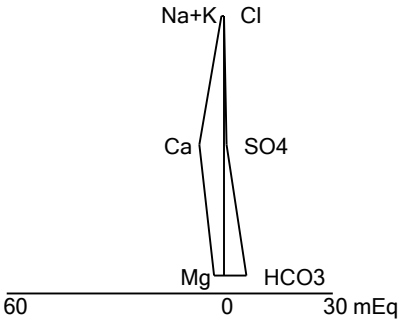
Box & Whiskers Plot



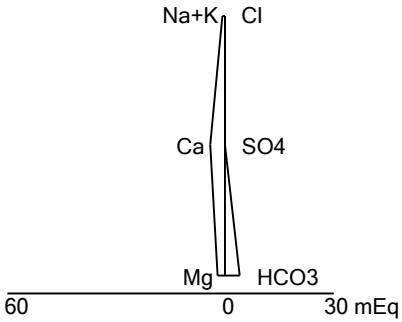
Constituent: Sulfate Analysis Run 1/14/2025 1:25 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

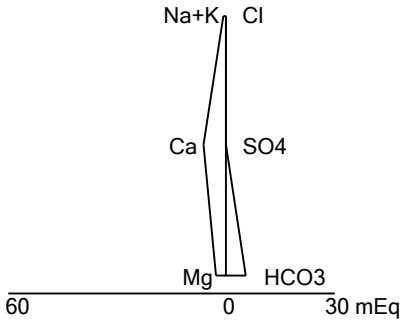
Sanitas™ v.10.0.24 Software licensed to Olsson. UG



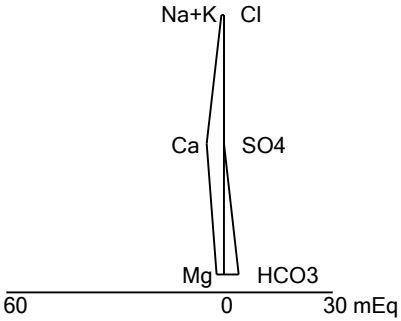
MW-108* 2024-10-15
*background well



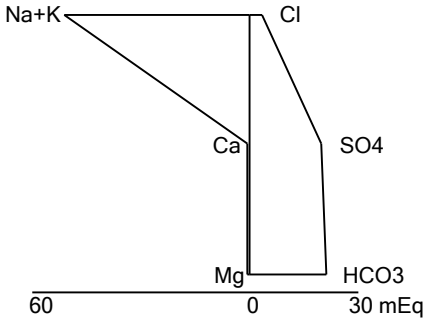
MW-113* 2024-10-15
*background well



MW-115* 2024-10-15
*background well



MW-117 2024-10-17



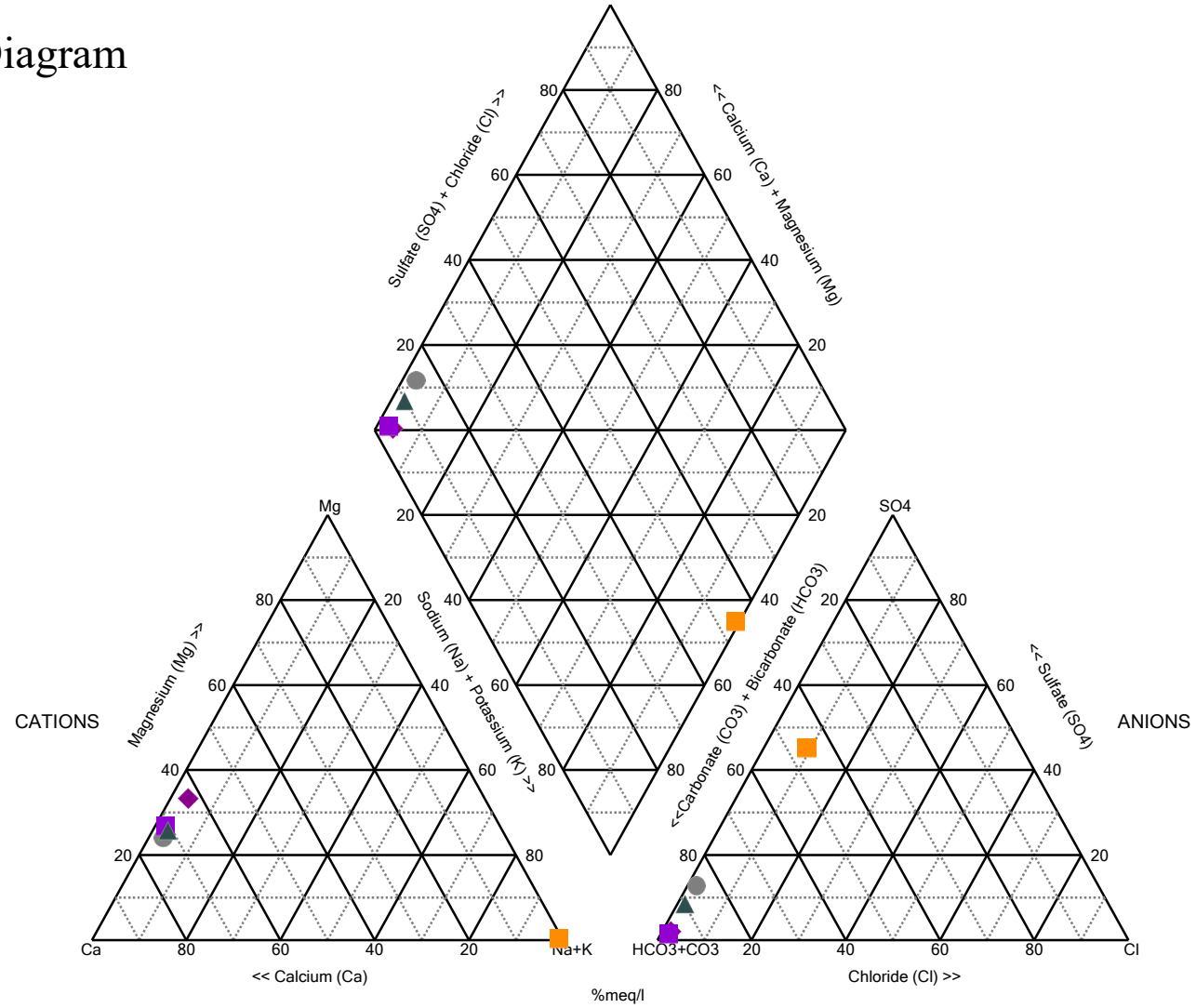
LEACHATE 2024-12-10

Stiff Diagram Analysis Run 1/15/2025 8:49 AM View: 2024-1H ASD

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Database (GWQ parameters)

Sanitas™ v.10.0.24 Software licensed to Olsson. UG

Piper Diagram



LEACHATE 2024-12-10
MW-108* 2024-10-15
MW-113* 2024-10-15
MW-115* 2024-10-15
MW-117 2024-10-17
*background well

Analysis Run 1/15/2025 8:51 AM View: 2024-1H ASD

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)	October 2024 Result (mg/L)	December 2024 Verification Result (mg/L)	SSI Confirmed?	Maximum Background Level[a] (mg/L)	Maximum Published Level[b] (mg/L)
MW-102	Boron	0.1519	0.29[c]	0.132 J	No	Not applicable	Not applicable
MW-102	Sulfate	109.4	128[c]	78.4	No	52.2 (MW-108, 9/2018) 71.4 (MW-108, 9/2024)	120
MW-117	Sulfate	8.182	20.1	Not Applicable[d]	Yes[d]		
MW-102	TDS	501.9	542	446	No	638 (MW-108, 4/2016)	728
MW-116	TDS	531.8	533	480	No		
MW-117	TDS	318.5	342	Not Applicable[d]	Yes[d]		

Notes: J – the reported value is an estimate.

a. Based on historical values at MW-108, MW-113, and MW-115.

b. From Gonthier 2003; value is for the Holocene subunit.

c. Value shown is the result of a laboratory re-run of the sample for verification purposes.

d. Previously confirmed SSI.

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.

Table 2. Summary of ASD submittals for previously confirmed SSIs identified during the second half 2024 monitoring period.

Analyte	Well ID	Monitoring Period	ASD Date	ASD Citation
Sulfate	**MW-117**	2H2021	4/4/2022	FTN 2023
		1H2022	9/27/2022	FTN 2023
		2H2022	1/25/2023	FTN 2023
		1H2023	10/12/2023	FTN 2024
		2H2023	1/31/2024	FTN 2024
		1H2024	10/15/2024	Olsson 2024
TDS	**MW-117**	1H2019	10/24/2019	FTN 2020a
		2H2019	12/17/2019	FTN 2020a
		1H2020	8/3/2020	FTN 2020b
		1H2021	10/6/2021	FTN 2022
		2H2021	4/4/2022	FTN 2023
		1H2022	9/27/2022	FTN 2023
		2H2023	1/31/2024	FTN 2024
		1H2024	10/15/2024	Olsson 2024

REFERENCES

FTN [FTN Associates, Ltd.]. 2020a. "Appendix H, Alternate Source Demonstrations." In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2019 Annual Report*. Little Rock, AR: FTN Associates, Ltd. January 28, 2020.

———. 2020b. "Appendix H, Alternate Source Demonstrations." In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2020 Annual Report*. Little Rock, AR: FTN Associates, Ltd. December 18, 2020.

———. 2022. "Appendix H, Alternate Source Demonstrations." In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2021 Annual Report*. Little Rock, AR: FTN Associates, Ltd. January 31, 2022.

———. 2023. "Appendix H, Alternate Source Demonstrations." In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2022 Annual Report*. Little Rock, AR: FTN Associates, Ltd. January 25, 2023.

———. 2024a. "Appendix H, Alternate Source Demonstrations." In *Plum Point Energy Station, Groundwater Monitoring and Corrective Action, 2023 Annual Report*. Little Rock, AR: FTN Associates, Ltd. January 31, 2024.

Olsson. 2024. *"Alternate Source Demonstration for Statistically Significant Increases, First Half of 2024 Monitoring Period, Plum Point Energy Station Landfill.* Little Rock, AR: Olsson. October 15, 2024.

ATTACHMENT 4
LABORATORY REPORTS

ANALYTICAL REPORT

November 04, 2024

Plum Point Services Co., LLC

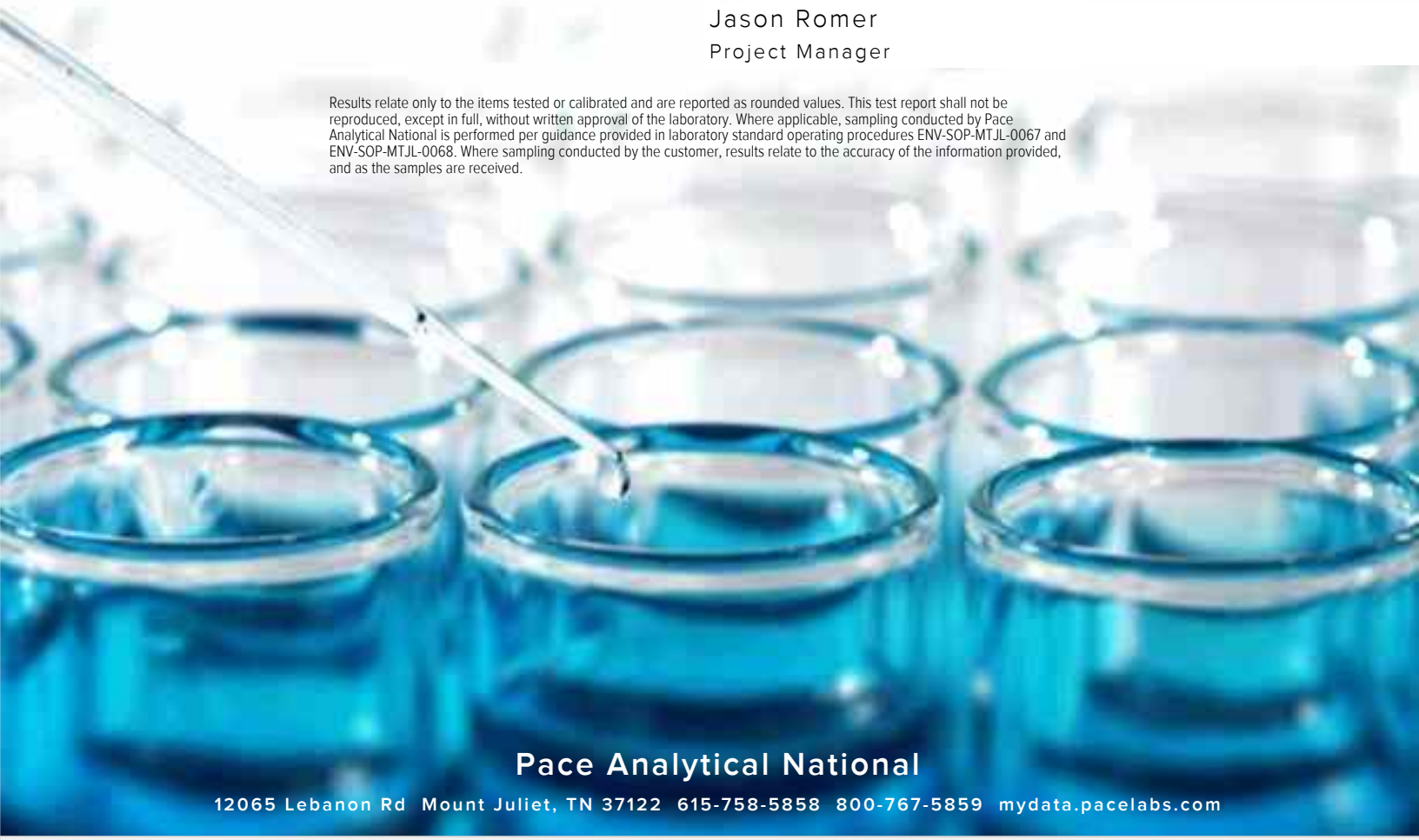
Sample Delivery Group:	L1790581
Samples Received:	10/18/2024
Project Number:	R14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:

Jason Romer
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 mydata.pacelabs.com

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MW-101 L1790581-01 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 13:40 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385399	1	10/23/24 02:20	10/23/24 02:20	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:47	MAP	Mt. Juliet, TN

MW-102 L1790581-02 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 14:45 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385399	1	10/23/24 03:12	10/23/24 03:12	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:48	MAP	Mt. Juliet, TN

MW-103 L1790581-03 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 11:15 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 20:09	10/20/24 20:09	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 15:29	10/25/24 15:29	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:50	MAP	Mt. Juliet, TN

MW-104 L1790581-04 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 16:20 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 20:26	10/20/24 20:26	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 15:46	10/25/24 15:46	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:55	MAP	Mt. Juliet, TN

MW-108 L1790581-05 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 12:05 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 20:44	10/20/24 20:44	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 16:04	10/25/24 16:04	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:57	MAP	Mt. Juliet, TN

MW-110 L1790581-06 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 14:35 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 21:01	10/20/24 21:01	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 16:21	10/25/24 16:21	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 17:58	MAP	Mt. Juliet, TN

MW-113 L1790581-07 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 10:55 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 21:18	10/20/24 21:18	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 16:39	10/25/24 16:39	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 18:00	MAP	Mt. Juliet, TN

MW-115 L1790581-08 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 10:00 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 21:36	10/20/24 21:36	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 16:56	10/25/24 16:56	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387901	1	10/31/24 13:13	10/31/24 18:02	MAP	Mt. Juliet, TN

MW-116 L1790581-09 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 15:55 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 21:53	10/20/24 21:53	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:08	JTM	Mt. Juliet, TN

MW-117 L1790581-10 GW

Collected by: Michael Clayton | Collected date/time: 10/17/24 12:30 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2387845	1	10/23/24 12:36	10/23/24 18:21	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 22:11	10/20/24 22:11	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 17:13	10/25/24 17:13	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:19	JTM	Mt. Juliet, TN

MW-118 L1790581-11 GW

Collected by: Michael Clayton | Collected date/time: 10/17/24 11:25 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 22:28	10/20/24 22:28	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 18:06	10/25/24 18:06	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:21	JTM	Mt. Juliet, TN

MW-119 L1790581-12 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 12:20 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 22:46	10/20/24 22:46	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 18:23	10/25/24 18:23	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:24	JTM	Mt. Juliet, TN

MW-120 L1790581-13 GW

Collected by: Michael Clayton | Collected date/time: 10/16/24 10:20 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 23:38	10/20/24 23:38	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 18:40	10/25/24 18:40	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:27	JTM	Mt. Juliet, TN

MW-121 L1790581-14 GW

Collected by: Michael Clayton | Collected date/time: 10/17/24 10:30 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/20/24 23:55	10/20/24 23:55	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 18:58	10/25/24 18:58	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:35	JTM	Mt. Juliet, TN

MW-108 DUP L1790581-15 GW

Collected by: Michael Clayton | Collected date/time: 10/15/24 12:10 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/21/24 00:13	10/21/24 00:13	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2388621	1	10/25/24 19:15	10/25/24 19:15	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:38	JTM	Mt. Juliet, TN

EPA EB-1 L1790581-16 GW

Collected by: Michael Clayton | Collected date/time: 10/17/24 12:50 | Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2385269	1	10/19/24 11:05	10/19/24 16:59	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2385400	1	10/21/24 00:30	10/21/24 00:30	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2387904	1	10/31/24 23:21	11/01/24 13:41	JTM	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.



Jason Romer
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	357000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2170		547	1000	1	10/23/2024 02:20	WG2385399
Fluoride	292		76.1	150	1	10/23/2024 02:20	WG2385399
Sulfate	3810	J	637	5000	1	10/23/2024 02:20	WG2385399

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	55.3	J	20.0	200	1	10/31/2024 17:47	WG2387901
Calcium	103000		79.3	1000	1	10/31/2024 17:47	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	542000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	3570		547	1000	1	10/23/2024 03:12	WG2385399
Fluoride	243		76.1	150	1	10/23/2024 03:12	WG2385399
Sulfate	128000		637	5000	1	10/23/2024 03:12	WG2385399

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	275		20.0	200	1	10/31/2024 17:48	WG2387901
Calcium	138000		79.3	1000	1	10/31/2024 17:48	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	306000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	894	J	547	1000	1	10/20/2024 20:09	WG2385400
Fluoride	242	B P1	76.1	150	1	10/25/2024 15:29	WG2388621
Sulfate	13600		637	5000	1	10/20/2024 20:09	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	64.4	J	20.0	200	1	10/31/2024 17:50	WG2387901
Calcium	84200		79.3	1000	1	10/31/2024 17:50	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	315000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	906	J	547	1000	1	10/20/2024 20:26	WG2385400
Fluoride	334	B	76.1	150	1	10/25/2024 15:46	WG2388621
Sulfate	3820	J	637	5000	1	10/20/2024 20:26	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	54.8	J	20.0	200	1	10/31/2024 17:55	WG2387901
Calcium	87000		79.3	1000	1	10/31/2024 17:55	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	472000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1700		547	1000	1	10/20/2024 20:44	WG2385400
Fluoride	235	B	76.1	150	1	10/25/2024 16:04	WG2388621
Sulfate	46600		637	5000	1	10/20/2024 20:44	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	98.5	J	20.0	200	1	10/31/2024 17:57	WG2387901
Calcium	134000		79.3	1000	1	10/31/2024 17:57	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	340000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	950	J	547	1000	1	10/20/2024 21:01	WG2385400
Fluoride	256	B	76.1	150	1	10/25/2024 16:21	WG2388621
Sulfate	6050		637	5000	1	10/20/2024 21:01	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	62.6	J	20.0	200	1	10/31/2024 17:58	WG2387901
Calcium	89600		79.3	1000	1	10/31/2024 17:58	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	288000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	953	J	547	1000	1	10/20/2024 21:18	WG2385400
Fluoride	147	B J	76.1	150	1	10/25/2024 16:39	WG2388621
Sulfate	4560	J	637	5000	1	10/20/2024 21:18	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	76.9	J	20.0	200	1	10/31/2024 18:00	WG2387901
Calcium	70200		79.3	1000	1	10/31/2024 18:00	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	414000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1080		547	1000	1	10/20/2024 21:36	WG2385400
Fluoride	275	B	76.1	150	1	10/25/2024 16:56	WG2388621
Sulfate	4680	J	637	5000	1	10/20/2024 21:36	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	53.0	J	20.0	200	1	10/31/2024 18:02	WG2387901
Calcium	115000		79.3	1000	1	10/31/2024 18:02	WG2387901

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	533000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	2150		547	1000	1	10/20/2024 21:53	WG2385400
Fluoride	U		76.1	150	1	10/20/2024 21:53	WG2385400
Sulfate	42500		637	5000	1	10/20/2024 21:53	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	96.3	J	20.0	200	1	11/01/2024 13:08	WG2387904
Calcium	136000		79.3	1000	1	11/01/2024 13:08	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	342000		10000	1	10/23/2024 18:21	WG2387845

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1060		547	1000	1	10/20/2024 22:11	WG2385400
Fluoride	174	B	76.1	150	1	10/25/2024 17:13	WG2388621
Sulfate	20100		637	5000	1	10/20/2024 22:11	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	78.0	J	20.0	200	1	11/01/2024 13:19	WG2387904
Calcium	92600		79.3	1000	1	11/01/2024 13:19	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	308000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1070		547	1000	1	10/20/2024 22:28	WG2385400
Fluoride	222	B	76.1	150	1	10/25/2024 18:06	WG2388621
Sulfate	13800		637	5000	1	10/20/2024 22:28	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	73.3	J	20.0	200	1	11/01/2024 13:21	WG2387904
Calcium	81100		79.3	1000	1	11/01/2024 13:21	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	410000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1070		547	1000	1	10/20/2024 22:46	WG2385400
Fluoride	341	B	76.1	150	1	10/25/2024 18:23	WG2388621
Sulfate	22600		637	5000	1	10/20/2024 22:46	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	69.9	J	20.0	200	1	11/01/2024 13:24	WG2387904
Calcium	111000		79.3	1000	1	11/01/2024 13:24	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	244000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	983	J	547	1000	1	10/20/2024 23:38	WG2385400
Fluoride	273	B	76.1	150	1	10/25/2024 18:40	WG2388621
Sulfate	8020		637	5000	1	10/20/2024 23:38	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	60.5	J	20.0	200	1	11/01/2024 13:27	WG2387904
Calcium	61300		79.3	1000	1	11/01/2024 13:27	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	181000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1020		547	1000	1	10/20/2024 23:55	WG2385400
Fluoride	184	B	76.1	150	1	10/25/2024 18:58	WG2388621
Sulfate	10300		637	5000	1	10/20/2024 23:55	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	62.8	J	20.0	200	1	11/01/2024 13:35	WG2387904
Calcium	41200		79.3	1000	1	11/01/2024 13:35	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	468000		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1740		547	1000	1	10/21/2024 00:13	WG2385400
Fluoride	187	B	76.1	150	1	10/25/2024 19:15	WG2388621
Sulfate	49100		637	5000	1	10/21/2024 00:13	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	103	J	20.0	200	1	11/01/2024 13:38	WG2387904
Calcium	133000		79.3	1000	1	11/01/2024 13:38	WG2387904

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	10/19/2024 16:59	WG2385269

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	U		547	1000	1	10/21/2024 00:30	WG2385400
Fluoride	90.5	J	76.1	150	1	10/21/2024 00:30	WG2385400
Sulfate	U		637	5000	1	10/21/2024 00:30	WG2385400

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	43.1	J	20.0	200	1	11/01/2024 13:41	WG2387904
Calcium	U		79.3	1000	1	11/01/2024 13:41	WG2387904

Method Blank (MB)

(MB) R4136131-1 10/19/24 16:59

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

L1790326-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1790326-06 10/19/24 16:59 • (DUP) R4136131-3 10/19/24 16:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	438000	428000	1	2.31		10

L1790519-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1790519-05 10/19/24 16:59 • (DUP) R4136131-4 10/19/24 16:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	811000	799000	1	1.49		10

Laboratory Control Sample (LCS)

(LCS) R4136131-2 10/19/24 16:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8490000	96.5	85.0-115	

Method Blank (MB)

(MB) R4137749-1 10/23/24 18:21

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

L1791488-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1791488-01 10/23/24 18:21 • (DUP) R4137749-3 10/23/24 18:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1240000	1250000	1	0.806		10

L1791657-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1791657-01 10/23/24 18:21 • (DUP) R4137749-4 10/23/24 18:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	394000	420000	1	6.39		10

Laboratory Control Sample (LCS)

(LCS) R4137749-2 10/23/24 18:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8320000	94.5	85.0-115	

Method Blank (MB)

(MB) R4136979-1 10/22/24 18:12

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Fluoride	U		76.1	150
Sulfate	U		637	5000

L1790559-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1790559-09 10/22/24 18:47 • (DUP) R4136979-3 10/22/24 19:05

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5800	6340	1	9.05		15
Fluoride	175	176	1	0.569		15
Sulfate	108000	112000	1	2.92		15

L1790559-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1790559-10 10/22/24 19:57 • (DUP) R4136979-6 10/22/24 20:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1070	965	1	10.3		15
Fluoride	121	98.3	1	20.6	J3	15
Sulfate	19400	19000	1	2.15		15

Laboratory Control Sample (LCS)

(LCS) R4136979-2 10/22/24 18:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	37800	94.5	80.0-120	
Fluoride	8000	7730	96.6	80.0-120	
Sulfate	40000	38600	96.6	80.0-120	

L1790559-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790559-09 10/22/24 18:47 • (MS) R4136979-4 10/22/24 19:22 • (MSD) R4136979-5 10/22/24 19:40

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	40000	5800	42500	43600	91.9	94.5	1	80.0-120			2.41	15
Fluoride	8000	175	7840	8210	95.8	100	1	80.0-120			4.67	15
Sulfate	40000	108000	125000	128000	41.3	50.4	1	80.0-120	J6	J6	2.86	15

L1790559-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790559-10 10/22/24 19:57 • (MS) R4136979-7 10/22/24 20:32

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	1070	39500	96.0	1	80.0-120	
Fluoride	8000	121	7950	97.9	1	80.0-120	
Sulfate	40000	19400	55000	89.1	1	80.0-120	

Method Blank (MB)

(MB) R4136946-1 10/20/24 19:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Chloride	U		547	1000
Fluoride	150		76.1	150
Sulfate	U		637	5000

L1790581-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1790581-03 10/20/24 20:09 • (DUP) R4136946-3 10/21/24 03:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	894	829	1	7.58		15
Fluoride	191	172	1	10.8		15
Sulfate	13600	13700	1	0.785		15

L1790581-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1790581-04 10/20/24 20:26 • (DUP) R4136946-6 10/21/24 04:51

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	906	884	1	2.48		15
Fluoride	262	280	1	6.60		15
Sulfate	3820	3850	1	0.641		15

Laboratory Control Sample (LCS)

(LCS) R4136946-2 10/20/24 19:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40000	36600	91.4	80.0-120	
Fluoride	8000	7470	93.4	80.0-120	
Sulfate	40000	37300	93.2	80.0-120	

L1790581-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790581-03 10/20/24 20:09 • (MS) R4136946-4 10/21/24 04:16 • (MSD) R4136946-5 10/21/24 04:34

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	40000	894	36900	36900	90.0	90.1	1	80.0-120			0.117	15
Fluoride	8000	191	7530	7650	91.7	93.2	1	80.0-120			1.51	15
Sulfate	40000	13600	48200	47700	86.7	85.3	1	80.0-120			1.17	15

L1790581-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790581-04 10/20/24 20:26 • (MS) R4136946-7 10/21/24 05:08

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	906	38100	93.0	1	80.0-120	
Fluoride	8000	262	7820	94.5	1	80.0-120	
Sulfate	40000	3820	41200	93.5	1	80.0-120	

Method Blank (MB)

(MB) R4138274-1 10/25/24 14:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Fluoride	115	J	76.1	150

L1790581-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1790581-03 10/25/24 15:29 • (DUP) R4138274-3 10/25/24 22:27

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	242	296	1	20.0	P1	15

L1790581-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1790581-04 10/25/24 15:46 • (DUP) R4138274-6 10/25/24 23:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	334	345	1	3.36		15

Laboratory Control Sample (LCS)

(LCS) R4138274-2 10/25/24 15:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	8000	8150	102	80.0-120	

L1790581-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790581-03 10/25/24 15:29 • (MS) R4138274-4 10/25/24 22:44 • (MSD) R4138274-5 10/25/24 23:02

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 %
Fluoride	8000	242	8120	8410	98.4	102	1	80.0-120			3.54	15

L1790581-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1790581-04 10/25/24 15:46 • (MS) R4138274-7 10/25/24 23:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Fluoride	8000	334	8450	101	1	80.0-120	

Method Blank (MB)

(MB) R4140516-1 10/31/24 17:14

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

Laboratory Control Sample (LCS)

(LCS) R4140516-2 10/31/24 17:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	981	98.1	80.0-120	
Calcium	10000	10100	101	80.0-120	

L1790559-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790559-06 10/31/24 17:18 • (MS) R4140516-4 10/31/24 17:21 • (MSD) R4140516-5 10/31/24 17:23

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 %
Boron	1000	102	1070	1080	97.0	97.7	1	75.0-125			0.662	20
Calcium	10000	136000	143000	142000	69.1	62.5	1	75.0-125	V	V	0.465	20

Method Blank (MB)

(MB) R4140880-1 11/01/24 13:03

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) R4140880-2 11/01/24 13:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	991	99.1	80.0-120	
Calcium	10000	10100	101	80.0-120	

L1790581-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1790581-09 11/01/24 13:08 • (MS) R4140880-4 11/01/24 13:13 • (MSD) R4140880-5 11/01/24 13:16

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	96.3	1080	1090	98.3	99.1	1	75.0-125			0.740	20
Calcium	10000	136000	143000	143000	76.8	76.4	1	75.0-125			0.0273	20

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
B	The same analyte is found in the associated blank.
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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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	LAO000356
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/Addr

Plum Point Services Co., LLC

2739 SCR 623
Osceola, AR 72370

Billing Information:

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

Report to: **Heather Ferguson**

Email To: **hferguson@olsson.com;mvaught@olsson.com;**

Project Description: **Plum Point Energy Station**

City/State Collected: **Osceola AR**

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): **Michael Clayton**

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature): **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

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	Remarks	Sample # (lab only)
MW-101	Grab	GW		10/16/24	1340	3	X	X	X		-01
MW-102		GW		10/16/24	1445	3	X	X	X		-02
MW-103		GW		10/16/24	1115	3	X	X	X		-03
MW-104		GW		10/15/24	1620	3	X	X	X		-04
MW-108		GW		10/15/24	1205	3	X	X	X		-05
MW-110		GW		10/15/24	1435	3	X	X	X		-06
MW-113		GW		10/15/24	1055	3	X	X	X		-07
MW-115		GW		10/15/24	1000	3	X	X	X		-08
MW-116		GW		10/16/24	1555	3	X	X	X		-09
MW-117		GW		10/17/24	1230	3	X	X	X		-10

* 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 # 4041 0437 7578

Relinquished by : (Signature) — Date: 10/17/24 — Time: 1630

Relinquished by : (Signature) — Date: — Time:

Relinquished by : (Signature) — Date: — Time:

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR
TLAG

Temp: °C Bottles Received:
0.8 +0.3 = 1.1 45

Date: 10/18/24 Time: 0900

If preservation required by Login: Date/Time

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

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # L790581
1073

Acctnum: **NAESOAR**
Template: **T175308**
Prelogin: **P1107084**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEX Ground**

Company Name/Addre

Plum Point Services Co., LLC

2739 SCR 623
Osceola, AR 72370

Billing Information:

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

Report to: **Heather Ferguson**

Email To: hferguson@olsson.com;mvaught@olsson.com;

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Site/Facility ID #

P.O. # **2024-00048**

Collected by (signature):

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	Pres Chk	<2	Remarks	Sample # (lab only)
MW-118	Grab	GW		10/17/24	1125	3	X	X	X				-11
MW-119		GW		10/16/24	1220	3	X	X	X				-12
MW-120		GW		10/16/24	1020	3	X	X	X				-13
MW-121		GW		10/17/24	1030	3	X	X	X				-14
MW-108 DUP		GW		10/16/24	1210	3	X	X	X				-15
IPA EB-1		GW		10/17/24	1250	3	X	X	X				-16
		GW				3	X	X	X				
		GW				3	X	X	X				
		GW				3	X	X	X				

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # U790581

Table #

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P1107084**

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 # 4104 0487 7578

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

	Date:	Time:		
Relinquished by : (Signature)	10/17/24	1630	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10-18-24 Time: 0900

TLAY

0.3+0.3=1.1

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

November 18, 2024

Plum Point Services Co., LLC

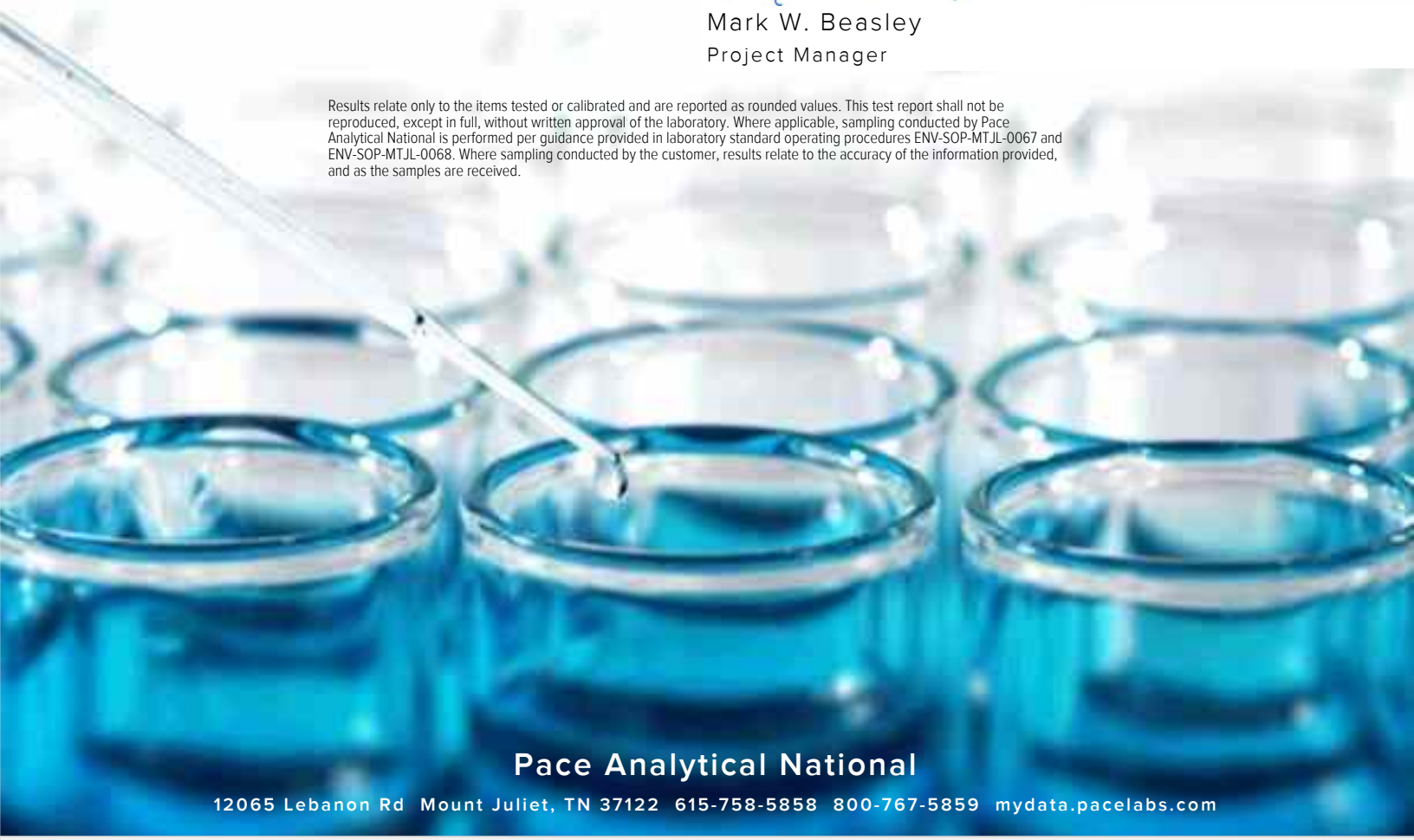
Sample Delivery Group:	L1798992
Samples Received:	10/18/2024
Project Number:	R14590-3336-001
Description:	Plum Point Energy Station

Report To: Heather Ferguson
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 mydata.pacelabs.com

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SAMPLE SUMMARY

MW-102 L1798992-01 GW

Collected by: Michael Clayton
Collected date/time: 10/16/24 14:45
Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2402567	1	11/16/24 16:15	11/16/24 16:15	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2402567	5	11/16/24 16:28	11/16/24 16:28	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2401694	1	11/15/24 08:01	11/15/24 12:25	JTM	Mt. Juliet, TN

MW-115 L1798992-02 GW

Collected by: Michael Clayton
Collected date/time: 10/15/24 10:00
Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2402567	1	11/16/24 16:42	11/16/24 16:42	ZSA	Mt. Juliet, TN

MW-118 L1798992-03 GW

Collected by: Michael Clayton
Collected date/time: 10/17/24 11:25
Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2402567	1	11/16/24 16:55	11/16/24 16:55	ZSA	Mt. Juliet, TN

MW-119 L1798992-04 GW

Collected by: Michael Clayton
Collected date/time: 10/16/24 12:20
Received date/time: 10/18/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2402567	1	11/16/24 17:09	11/16/24 17:09	ZSA	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

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	167		76.1	150	1	11/16/2024 16:15	WG2402567
Sulfate	128000		3180	25000	5	11/16/2024 16:28	WG2402567

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	290		20.0	200	1	11/15/2024 12:25	WG2401694

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	186		76.1	150	1	11/16/2024 16:42	WG2402567

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	155		76.1	150	1	11/16/2024 16:55	WG2402567

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Fluoride	226		76.1	150	1	11/16/2024 17:09	WG2402567

Method Blank (MB)

(MB) R4146999-1 11/16/24 12:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Fluoride	U		76.1	150
Sulfate	U		637	5000

Laboratory Control Sample (LCS)

(LCS) R4146999-2 11/16/24 13:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	8000	7990	99.9	80.0-120	
Sulfate	40000	39200	98.1	80.0-120	

Method Blank (MB)

(MB) R4146582-1 11/15/24 12:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		20.0	200

Laboratory Control Sample (LCS)

(LCS) R4146582-2 11/15/24 12:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	1050	105	80.0-120	

L1798992-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1798992-01 11/15/24 12:25 • (MS) R4146582-4 11/15/24 12:28 • (MSD) R4146582-5 11/15/24 12:30

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 %
Boron	1000	290	1290	1270	100	98.0	1	75.0-125			1.85	20

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.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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	LAO000356
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/Addr: **Plum Point Services Co., LLC**

2739 SCR 623
Osceola, AR 72370

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

Report to: **Heather Ferguson**

Email To: hferguson@olsson.com;mvaught@olsson.com;

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature): Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. # **2024-00048**

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

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # ~~L1790581~~ 1073 L1798992 11/13/24

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P1107084**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3	Pres Chk	Remarks	Sample # (lab only)
MW-101	Grab	GW		10/16/24	1340	3	X	X	X			~~-01~~
MW-102		GW		10/16/24	1445	3	X	X	X			~~-02~~ -01
MW-103		GW		10/16/24	1115	3	X	X	X			~~-03~~
MW-104		GW		10/15/24	1620	3	X	X	X			~~-04~~
MW-108		GW		10/15/24	1205	3	X	X	X			~~-05~~
MW-110		GW		10/15/24	1435	3	X	X	X			~~-06~~
MW-113		GW		10/15/24	1055	3	X	X	X			-07
MW-115		GW		10/15/24	1000	3	X	X	X			~~-08~~ -02
MW-116		GW		10/16/24	1555	3	X	X	X			~~-09~~
MW-117		GW		10/17/24	1230	3	X	X	X			~~-10~~

* 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 # 4041 0487 7578

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)	Date:	Time:	Received by: (Signature)
Michael Clayton	10/17/24	1630	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Oz

Trip Blank Received: Yes / (No) HCL / MeoH TBR
TLAG

Temp: 0.8 °C Bottles Received: 45

Date: 10/18/24 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Addr

Plum Point Services Co., LLC

2739 SCR 623
Osceola, AR 72370

Billing Information:

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

Pres Chk

Report to: **Heather Ferguson**

Email To: hferguson@olsson.com;mvaught@olsson.com;

Project Description: **Plum Point Energy Station**

City/State Collected: Osceola AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature): Michael Clayton

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No of Cntrs	Cl, F, SO4 125mlHDPE-NoPres	TDS 250mlHDPE-NoPres	Total B, Ca 250mlHDPE-HNO3 <2	Remarks	Sample # (lab only)
MW-118	Grab	GW		10/17/24	1125	3	X	X	X		-03
MW-119		GW		10/16/24	1320	3	X	X	X		-04
MW-120		GW		10/16/24	1020	3	X	X	X		
MW-121		GW		10/17/24	1030	3	X	X	X		
MW-108 DUP		GW		10/16/24	1210	3	X	X	X		
PA EB-1		GW		10/17/24	1250	3	X	X	X		
		GW				3	X	X	X		
		GW				3	X	X	X		
		GW				3	X	X	X		

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # ~~L1798581~~

Table # L1798792

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P1107084**

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 # 4104 0487 7570

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)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Michael Clayton	10/17/24	1630		TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				0.0+0.3=1.1
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				10-18-24 0900

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Relog the following as EX due 11/15:

L1790581-02 BICP, FLUORIDE, SULFATE

L1790581-08 FLUORIDE

L1790581-11 FLUORIDE

L1790581-12 FLUORIDE

From: Melissa Vaught <mvaught@olsson.com>

Sent: Wednesday, November 13, 2024 10:05 AM

To: Mark Beasley <Mark.Beasley@pacelabs.com>

Cc: Heather Ferguson <hferguson@olsson.com>

Subject: RE: Pace Analytical National Level II Report for R14590-3336-001 Plum Point Energy Station L1790581

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know
the content is safe.

Mark – Good morning. Please double-check the calculations for the following well/parameter pairs and if confirmed, rerun the samples if they are within hold.

I think we are close to the hold time for the fluoride and sulfate samples. If the fluoride reruns need to be expediated to meet the hold time, that is fine. The sulfate rerun
(MW-102) will need to be resampled anyways, so that rerun is less important.

MW-102: boron, fluoride, sulfate

MW-115: fluoride

MW-118: fluoride

MW-119: fluoride

Questions, please let me know.

Thank you,

Melissa Vaught, P.E.

***Olsson** *Project Engineer / Environmental

C 210.219.2335

View Legal Disclaimer

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the intended recipient, please contact the sender immediately and delete any copies.

P Please consider the environment before printing this email

Time estimate: oh **Time spent:** oh

ANALYTICAL REPORT

December 20, 2024

Plum Point Services Co., LLC

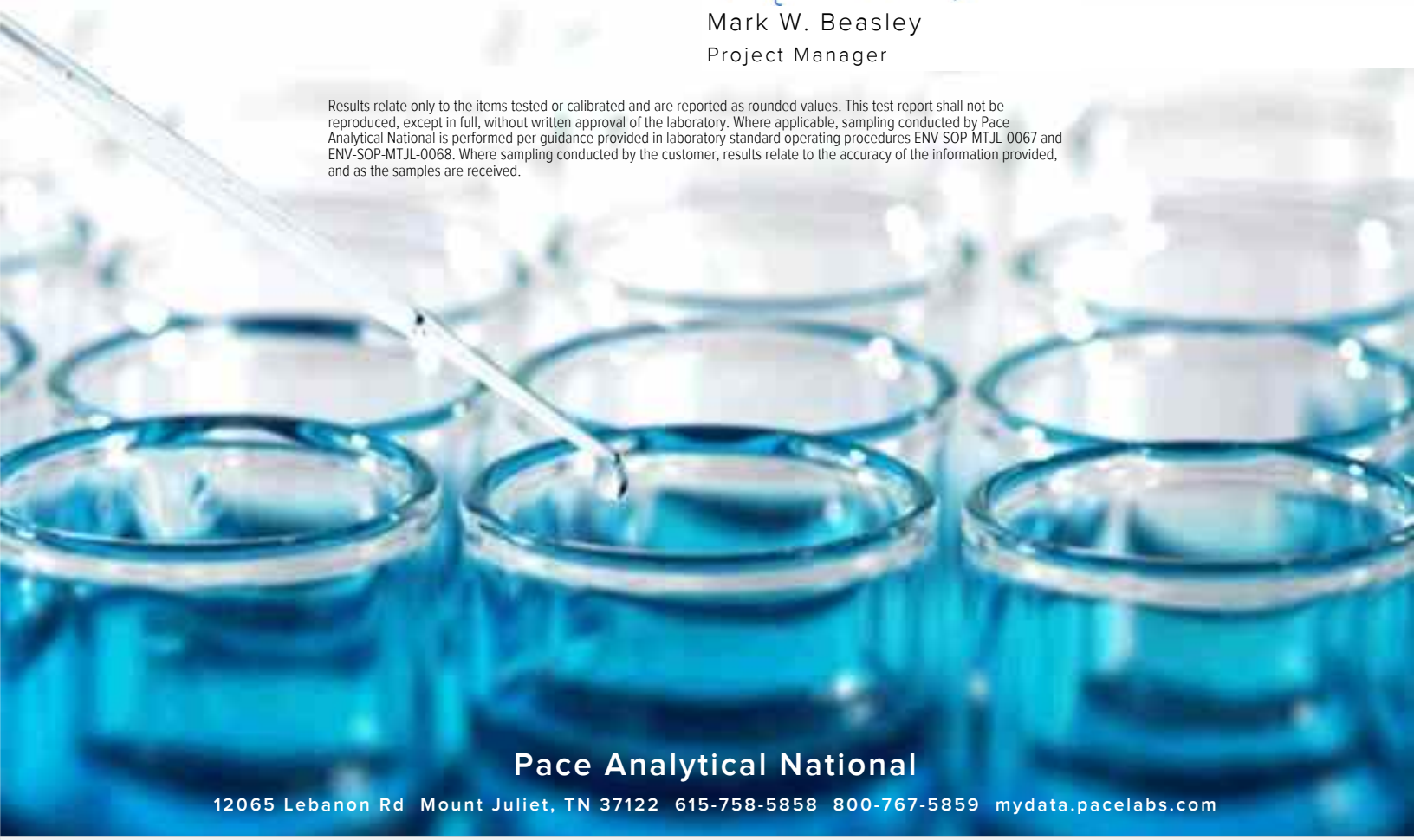
Sample Delivery Group:	L1808844
Samples Received:	12/12/2024
Project Number:	R14590-3336-001
Description:	

Report To: Heather Ferguson
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 mydata.pacelabs.com

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MW-102 L1808844-01 GW

Collected by: Michael Clayton | Collected date/time: 12/10/24 15:45 | Received date/time: 12/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2418226	1	12/16/24 09:44	12/16/24 10:35	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2418334	10	12/17/24 15:28	12/17/24 15:28	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2420723	1	12/18/24 12:18	12/18/24 20:32	MAP	Mt. Juliet, TN

MW-102 DUP L1808844-02 GW

Collected by: Michael Clayton | Collected date/time: 12/10/24 15:45 | Received date/time: 12/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2418226	1	12/16/24 09:44	12/16/24 10:35	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2418334	10	12/17/24 15:45	12/17/24 15:45	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2420723	1	12/18/24 12:18	12/18/24 20:34	MAP	Mt. Juliet, TN

EPA EB-2 L1808844-03 GW

Collected by: Michael Clayton | Collected date/time: 12/10/24 15:45 | Received date/time: 12/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2418226	1	12/16/24 09:44	12/16/24 10:35	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2418334	1	12/17/24 16:03	12/17/24 16:03	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2420723	1	12/18/24 12:18	12/18/24 20:39	MAP	Mt. Juliet, TN

MW-116 L1808844-04 GW

Collected by: Michael Clayton | Collected date/time: 12/10/24 14:25 | Received date/time: 12/12/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2418794	1	12/14/24 09:18	12/15/24 08:19	DLS	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

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	12/16/2024 10:35	WG2418226

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	78400		6370	50000	10	12/17/2024 15:28	WG2418334

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	132	J	23.2	200	1	12/18/2024 20:32	WG2420723

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	441000		10000	1	12/16/2024 10:35	WG2418226

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfate	79000		6370	50000	10	12/17/2024 15:45	WG2418334

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	132	J	23.2	200	1	12/18/2024 20:34	WG2420723

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND	P1	10000	1	12/16/2024 10:35	WG2418226

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Sulfate	U		637	5000	1	12/17/2024 16:03	WG2418334

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	U		23.2	200	1	12/18/2024 20:39	WG2420723

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	480000		10000	1	12/15/2024 08:19	WG2418794

Method Blank (MB)

(MB) R4160153-1 12/16/24 10:35

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

L1808796-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1808796-03 12/16/24 10:35 • (DUP) R4160153-3 12/16/24 10:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	605000	650000	1	7.17		10

L1808844-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1808844-03 12/16/24 10:35 • (DUP) R4160153-4 12/16/24 10:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Dissolved Solids	ND	ND	1	200	P1	10

Laboratory Control Sample (LCS)

(LCS) R4160153-2 12/16/24 10:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Dissolved Solids	8800000	8860000	101	85.0-115	

Method Blank (MB)

(MB) R4158806-1 12/15/24 08:19

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

L1808449-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1808449-01 12/15/24 08:19 • (DUP) R4158806-3 12/15/24 08:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	11700000	11500000	1	1.72		10

L1809252-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1809252-02 12/15/24 08:19 • (DUP) R4158806-4 12/15/24 08:19

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	283000	277000	1	2.14		10

Laboratory Control Sample (LCS)

(LCS) R4158806-2 12/15/24 08:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8850000	101	85.0-115	

QUALITY CONTROL SUMMARY

L1808844-01,02,03

Method Blank (MB)

(MB) R4159252-1 12/17/24 10:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Sulfate	U		637	5000

L1808803-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1808803-01 12/17/24 15:11 • (DUP) R4159252-3 12/17/24 20:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	9370	9420	1	0.571		15

L1808964-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1808964-02 12/17/24 16:55 • (DUP) R4159252-5 12/17/24 20:41

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	1960	1910	1	2.25	J	15

Laboratory Control Sample (LCS)

(LCS) R4159252-2 12/17/24 10:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	38000	95.0	80.0-120	

L1808803-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1808803-01 12/17/24 15:11 • (MS) R4159252-4 12/17/24 20:24

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	9370	47300	94.8	1	80.0-120	

L1808964-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1808964-02 12/17/24 16:55 • (MS) R4159252-6 12/17/24 20:59 • (MSD) R4159252-7 12/17/24 21:16

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 %
Sulfate	40000	1960	41300	41100	98.3	97.7	1	80.0-120			0.558	15

Method Blank (MB)

(MB) R4159517-6 12/18/24 19:59

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Boron	U		23.3	200

Laboratory Control Sample (LCS)

(LCS) R4159517-7 12/18/24 20:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1000	969	96.9	80.0-120	

L1808796-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1808796-04 12/18/24 20:02 • (MS) R4159517-9 12/18/24 20:06 • (MSD) R4159517-10 12/18/24 20:07

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 %
Boron	1000	131	1090	1110	96.4	98.4	1	75.0-125			1.75	20

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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

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/: **Plum Point Services Co., LLC**

2739 SCR 623
Osceola, AR 72370

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

Report to: **Heather Ferguson**

Email To: **hferguson@olsson.com;mvaught@olsson.com;**

Project Description:

City/State Collected: Osceola, AR

Please Circle: PT MT CT ET

Phone: **501-920-9642**

Client Project # **R14590-3336-001**

Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): Michael Clayton

Collected by (signature): Michael Clayton

Immediately Packed on Ice N ___ Y ___

Site/Facility ID #

P.O. # **2024-00048**

Quote #

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

Date Results Needed

Analysis / Container / Preservative

Pres Chk

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Boron 6010 250mlHDPE-HNO3	SULFATE 125mlHDPE-NoPres	TDS 1L-HDPE NoPres	Remarks	Sample # (lab only)
MW-102	Grab	GW		12/10/24	1545	3	X	X	X		-01
MW-102 DUP	↓	GW		↓	1550	3	X	X	X		-02
MW-116	↓	GW		↓	1425	XO			X		
EPA EB-2		GW			1630	3	X	X	X		-03
		GW				3	X	X	X		
		GW				1			X		

12/12/24

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

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

SDG # 180884
J212

Acctnum: **NAESOAR**
Template: **T264685**
Prelogin: **P1118238**
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 # 428709346630

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)	Date:	Time:	Received by: (Signature)
Michael Clayton	12/11/24	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 0.4+0=0.4 °C Bottles Received: 9

Date: 12/12/24 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK