



**PLUM POINT ENERGY STATION**

**GROUNDWATER MONITORING AND CORRECTIVE ACTION**  
**2023 ANNUAL REPORT**

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

**JANUARY 31, 2024**

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PLUM POINT ENERGY STATION  
GROUNDWATER MONITORING AND CORRECTIVE ACTION  
2023 ANNUAL REPORT

Prepared for

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## EXECUTIVE SUMMARY

Plum Point Services Company, LLC (PPSC), operates a landfill for the disposal of coal combustion residuals (CCRs) at the Plum Point Energy Station located near Osceola, Arkansas. The landfill is regulated by the Environmental Protection Agency (EPA) Coal Combustion Residuals rule, promulgated at Title 40 of the Code of Federal Regulations (40 CFR), Part 257, and published on April 17, 2015. Landfills regulated by this rule are required to implement and maintain a groundwater monitoring program to determine if the CCR landfill is impacting groundwater quality at the facility's compliance boundary. For this purpose, semiannual groundwater detection monitoring is required. This report presents results from semiannual detection monitoring events performed during 2023 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). 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).

FTN was contracted to sample groundwater and statistically evaluate the data from the semiannual monitoring events performed during 2023. Results from these events are summarized as follows:

1. Detection monitoring was performed during April and October 2023 for the first and second half of 2023 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 2023 monitoring events. The April 2023 and October 2023 potentiometric surface maps show groundwater flow generally to the southwest and to the east-northeast, respectively, across the active landfill cells.
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 RDL for the period of record at all wells.
5. Statistical evaluation of the first half of 2023 data set identified a confirmed statistically significant increase (SSI) for sulfate at MW-117. PPSC completed a successful alternate source demonstration (ASD) in response to the SSI in accordance with §257.94(e)(2). The ASD was certified by an Arkansas-registered professional engineer on October 12, 2023, 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 2023 in accordance with §257.94.
6. Statistical evaluation of the second half of 2023 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 on January 31, 2024, 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 2024 in accordance with §257.94.

**TABLE OF CONTENTS**

EXECUTIVE SUMMARY ..... i

1.0 BACKGROUND ..... 1-1

    1.1 Sampling Area ..... 1-1

    1.2 Operational History..... 1-4

    1.3 Regional Hydrogeology ..... 1-4

    1.4 Site Hydrogeology ..... 1-5

    1.5 General Groundwater Quality..... 1-8

2.0 MONITORING NETWORK AND SCHEDULE ..... 2-1

    2.1 Monitoring Well Network..... 2-1

    2.2 Groundwater Monitoring System Improvements During 2023 ..... 2-3

    2.3 Sampling Schedule..... 2-3

    2.4 Monitoring Well Operation and Maintenance ..... 2-5

    2.5 Sampling Methodology..... 2-5

    2.6 Laboratory Analyses ..... 2-6

3.0 DATA PRESENTATION..... 3-1

    3.1 Water Level Data ..... 3-1

        3.1.1 Water Level Measurements and Hydrograph ..... 3-1

        3.1.2 Direction of Groundwater Flow ..... 3-2

        3.1.3 Rate of Groundwater Flow..... 3-2

    3.2 Field-Measured Water Quality Data..... 3-3

    3.3 Laboratory Analytical Data..... 3-5

    3.4 Quality Assurance and Quality Control ..... 3-6

        3.4.1 Review of Laboratory Quality Control Samples ..... 3-6

        3.4.2 Review of Field Quality Control Samples ..... 3-7

4.0 STATISTICAL EVALUATION ..... 4-1

    4.1 Statistical Program Design..... 4-1

        4.1.1 Statistical Approach ..... 4-1

        4.1.2 Site-Wide False Positive Rate..... 4-2

        4.1.3 Statistical Power..... 4-3

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## TABLE OF CONTENTS (CONTINUED)

4.2	Exploratory Data Analysis .....	4-4
4.2.1	Time-Series Plots and Box-and-Whiskers Diagrams .....	4-4
4.2.2	Identification of Outliers.....	4-4
4.3	Statistical Evaluation Results.....	4-5
4.3.1	Intrawell Prediction Limit Analysis, First Half of 2023 .....	4-5
4.3.2	Mann-Kendall/Theil-Sen Trend Line Test, First Half of 2023 .....	4-6
4.3.3	Intrawell Prediction Limit Analysis, Second Half of 2023.....	4-6
4.3.4	Mann-Kendall Test/Theil-Sen Trend Line, Second Half of 2023 .....	4-7
5.0	CONCLUSIONS.....	5-1
6.0	REFERENCES .....	6-1

## LIST OF APPENDICES

APPENDIX A:	Field Sampling Forms
APPENDIX B:	Laboratory Reports
APPENDIX C:	Water Elevation Data and Hydrographs
APPENDIX D:	Groundwater Quality Historical Database
APPENDIX E:	Background Data Sets Used for Statistics
APPENDIX F:	Exploratory Data Analysis Plots
APPENDIX G:	Statistical Evaluation Results
APPENDIX H:	Alternate Source Demonstrations

**LIST OF TABLES**

Table 2.1 Summary of well construction details..... 2-1

Table 2.2 2023 sampling schedule for detection monitoring..... 2-4

Table 2.3 Appendix III parameters ..... 2-6

Table 2.4 Appendix IV parameters ..... 2-6

Table 3.1 Water level data ..... 3-2

Table 3.2 Field-measured water quality data ..... 3-4

Table 3.3 Summary of appendix III results, first half of 2023..... 3-5

Table 3.4 Summary of appendix III results, second half of 2023 ..... 3-6

Table 4.1 Values used to determine test alpha and power curve ..... 4-2

Table 4.2 Summary of statistically significant results, intrawell prediction  
limit analysis, first half of 2023 ..... 4-5

Table 4.3 Summary of statistically significant results, intrawell prediction  
limit analysis, second half of 2023 ..... 4-6

**LIST OF FIGURES**

Figure 1.1 Location map, Plum Point Energy Station..... 1-2

Figure 1.2 Vicinity map, Plum Point Energy Station..... 1-3

Figure 1.3 Landfill layout map, Plum Point Energy Station landfill ..... 1-6

Figure 1.4 Physiographic location, Plum Point Energy Station ..... 1-7

Figure 2.1 Monitoring well locations, Plum Point Energy Station ..... 2-2

Figure 3.1 Potentiometric surface, April 17, 2023 ..... 3-8

Figure 3.2 Potentiometric surface, October 9, 2023..... 3-9

Figure 4.1 ERPC versus landfill power curve for detection monitoring..... 4-3

## 1.0 BACKGROUND

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

FTN Associates, Ltd. (FTN), was contracted to sample groundwater and statistically evaluate the data from the semiannual monitoring events performed during 2023. This report presents the results of groundwater sampling and the associated statistical evaluations, and is intended to satisfy the reporting requirements of §257.90(e)(1) through (5). The following sections provide a brief description of the sampling area, operational history of the plant and landfill, regional and site-specific hydrogeological setting, and general regional and site groundwater quality.

### 1.1 Sampling Area

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



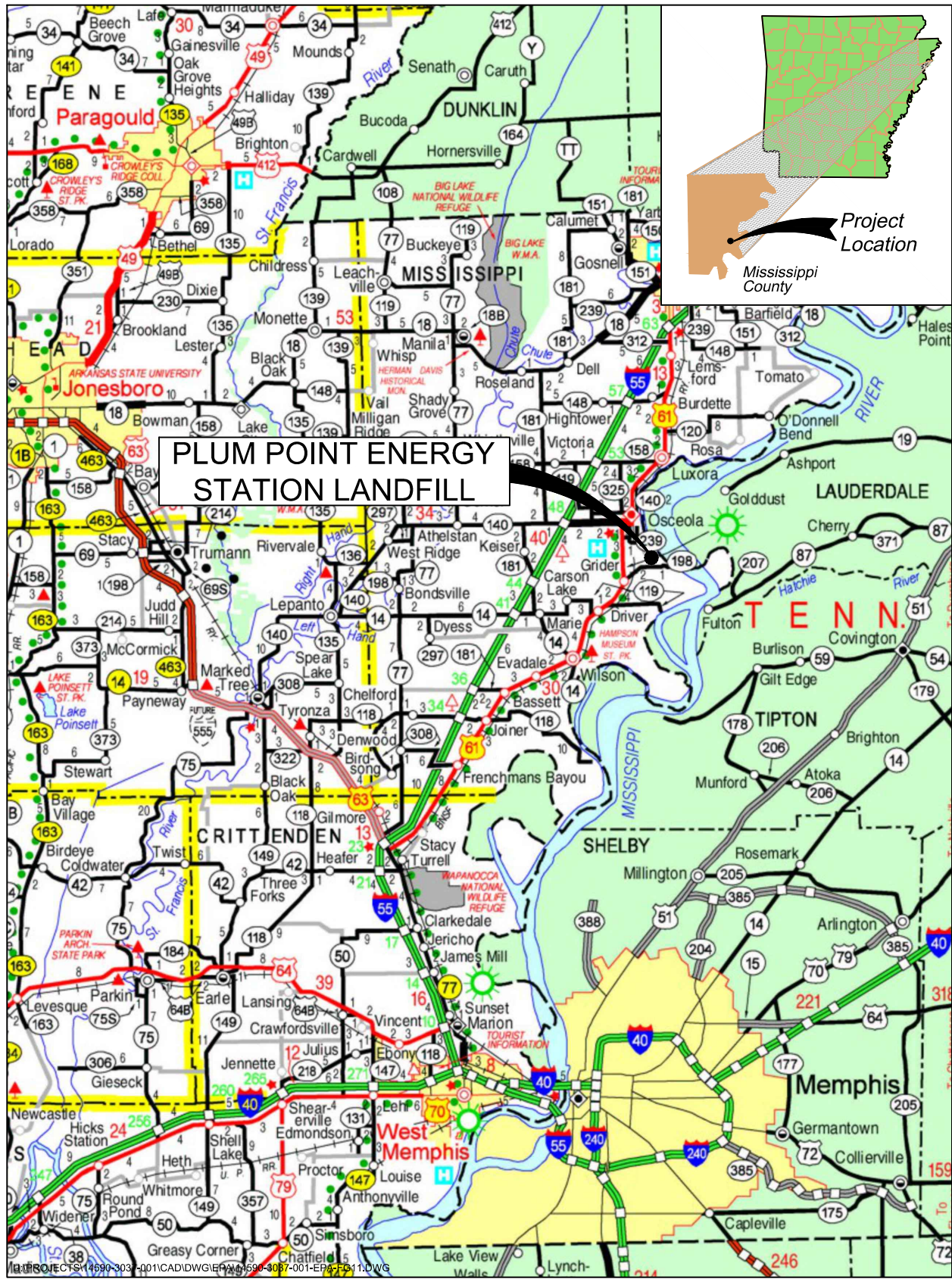


Figure 1.1. Location map, Plum Point Energy Station.

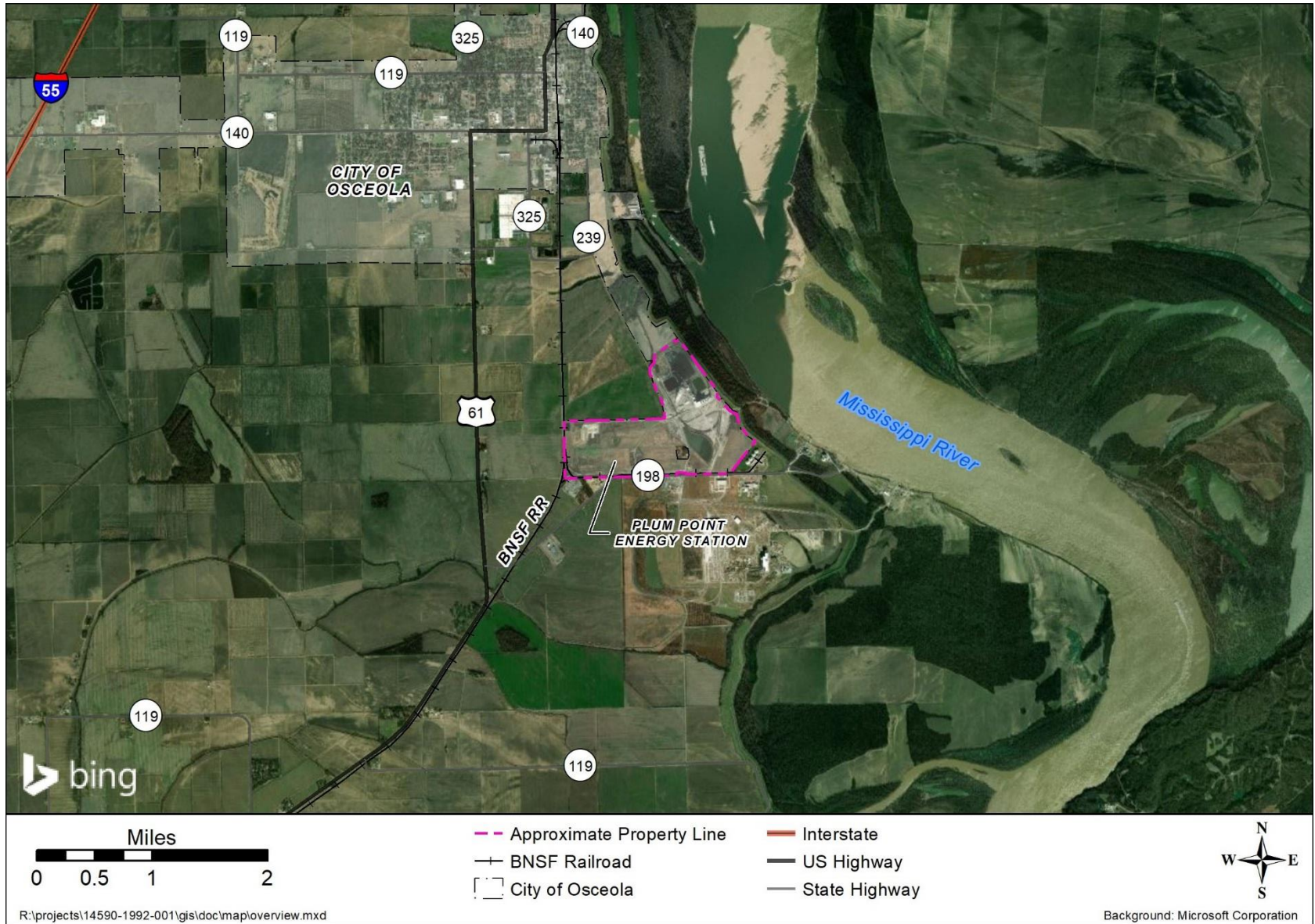


Figure 1.2. Vicinity map, Plum Point Energy Station.

## **1.2 Operational History**

The plant has been in operation since 2010 and generates electricity through the combustion of coal. Approximately 500,000 tons of CCR material is produced and deposited in the landfill each year. The landfill is permitted by the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), under permit no. 0303-S3N-R1 and became active during March 2010. The landfill currently has two active disposal cells, cells 1 and 3, which are shown on Figure 1.3. The combined area of the two active CCR disposal cells is approximately 30 acres. PPSC anticipates beginning construction on future cell 2, shown on Figure 1.3, during 2024.

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 in October 2017 (FTN 2017a). Details regarding the certified groundwater monitoring network are provided in Section 2.0 and in the landfill groundwater monitoring network certification report (FTN 2017a).

## **1.3 Regional Hydrogeology**

The landfill is located in the Mississippi Alluvial Plain physiographic region, as shown on Figure 1.4. The region was formed by the deposits of the Mississippi River and its tributaries and is generally flat-lying (Cushing, Boswell, & Hosman 1964). The uppermost aquifer in the region is the Mississippi River Valley alluvial aquifer (hereafter referred to as the alluvial aquifer). The alluvial aquifer is comprised of unconsolidated Quaternary-age alluvial and terrace deposit sands and gravels that generally grade upward to clays and silts, which form a semi-confining to confining layer over much of the aquifer. Regionally, the alluvium reaches depths of 100 ft to 200 ft below ground surface (bgs) (Ryling 1960; Cushing, Boswell, & Hosman 1964). Beneath the alluvial aquifer is 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

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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).

#### **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  $4.8 \times 10^{-6}$  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  $1.09 \times 10^{-2}$  cm/s (GEC 2001). The GHI reported an effective porosity for the aquifer of 27% (GEC 2001), which agrees with published values ranging from 10% to 30% for similar aquifer materials (EPA 1998, Yu et al. 2015).

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

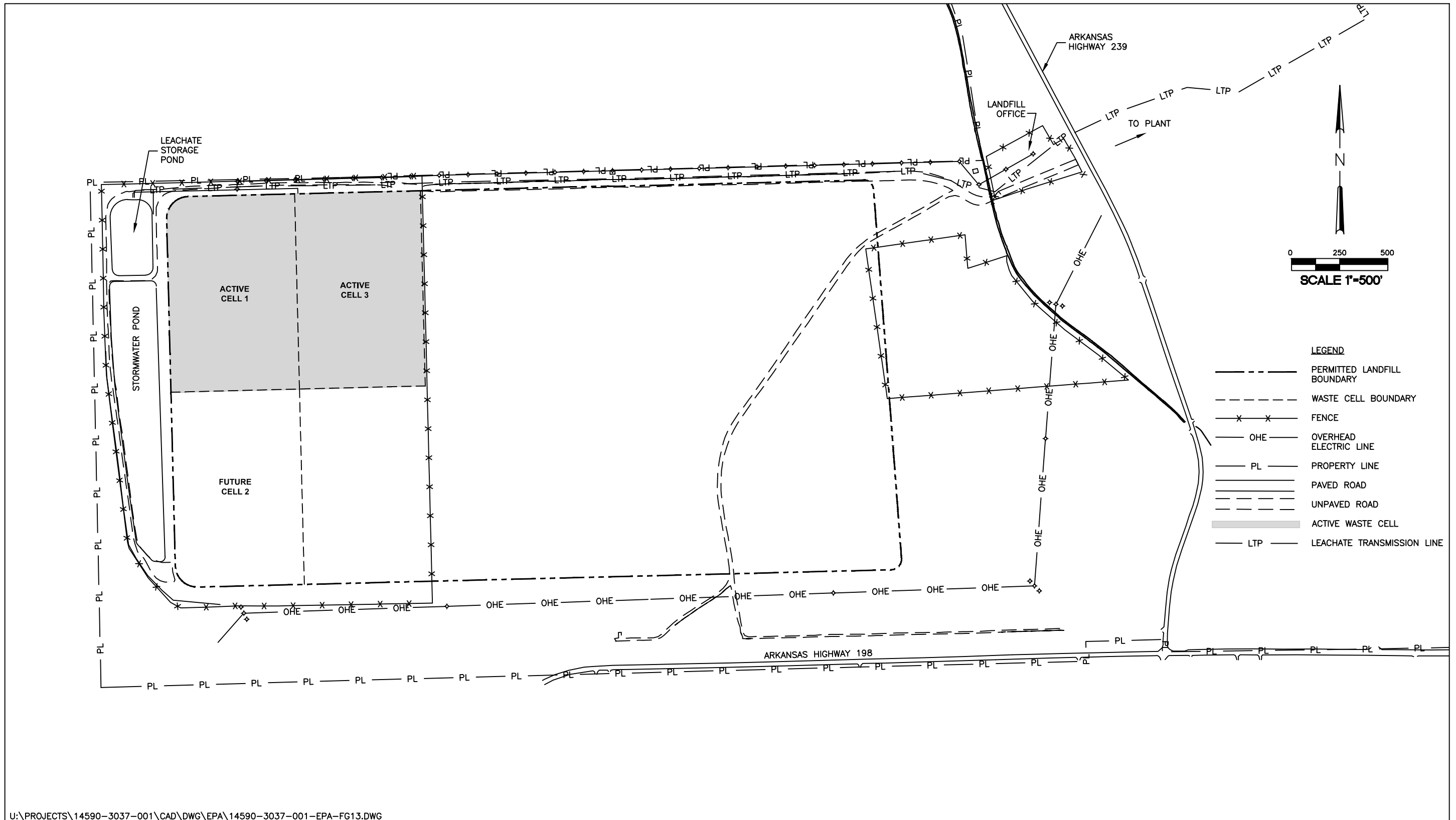


Figure 1.3. Landfill layout map, Plum Point Energy Station landfill.

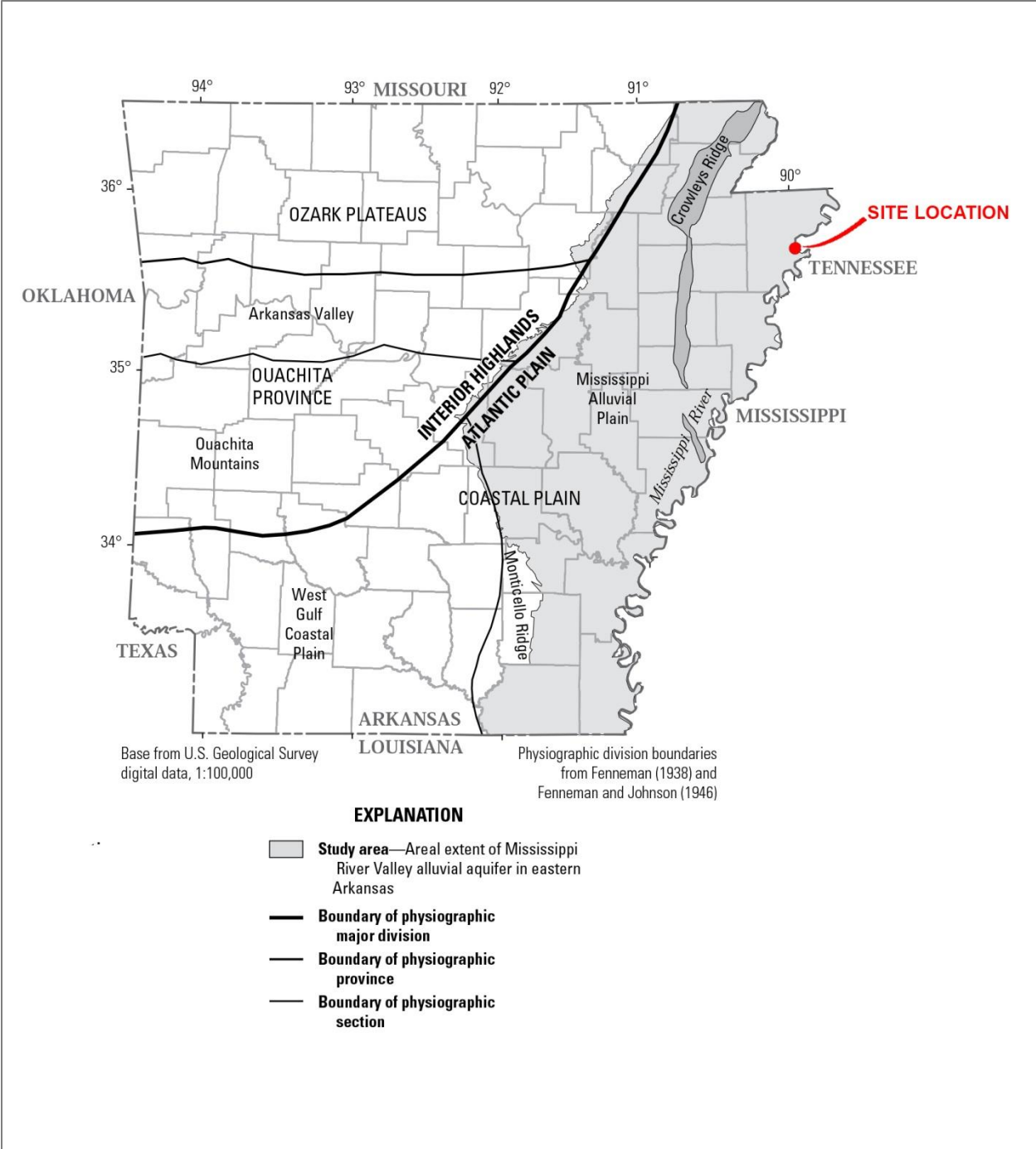


Figure 1.4. Physiographic location, Plum Point Energy Station (adapted from Schrader 2015).

## **1.5 General Groundwater Quality**

Regionally, groundwater in the alluvial aquifer is a calcium-bicarbonate water type with sodium, magnesium, chloride, sulfate, silica, and iron comprising the majority of the remaining dissolved ions (Kresse et al. 2014). Elevated concentrations of trace metals including iron, manganese, and arsenic are ubiquitous in the alluvial aquifer and thought to be elevated due to the presence of carbonaceous material within the aquifer that drives redox-sensitive parameters to dissolve in groundwater (Kresse & Fazio 2003, Gonthier 2003, Kresse & Clark 2008, Welch et al. 2009, Kresse et al. 2014). Concentrations of most parameters vary widely both laterally and vertically in the aquifer (Kresse et al. 2014). Groundwater at the top of the aquifer is generally influenced by the quality of natural recharge (e.g., precipitation and surface waterbodies) and anthropogenic activity. Conversely, groundwater quality at the base of the aquifer is influenced heavily by the underlying confining formation (Kresse et al. 2014).

## 2.0 MONITORING NETWORK AND SCHEDULE

The following sections describe the certified monitoring well network, changes made to the network during 2023, sampling schedule, network maintenance, sampling methodology, and required laboratory analyses.

### 2.1 Monitoring Well Network

The certified groundwater monitoring network for the CCR rule includes the 10 monitoring wells shown on Figure 2.1 (FTN 2017a). Also shown on Figure 2.1 are four additional wells located around future 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 2.1 and is based on available well installation and survey records. Each of wells listed in Table 2.1 is constructed of 2-inch, schedule 40 polyvinyl chloride (PVC) pipe, with 10-ft slotted well screens.

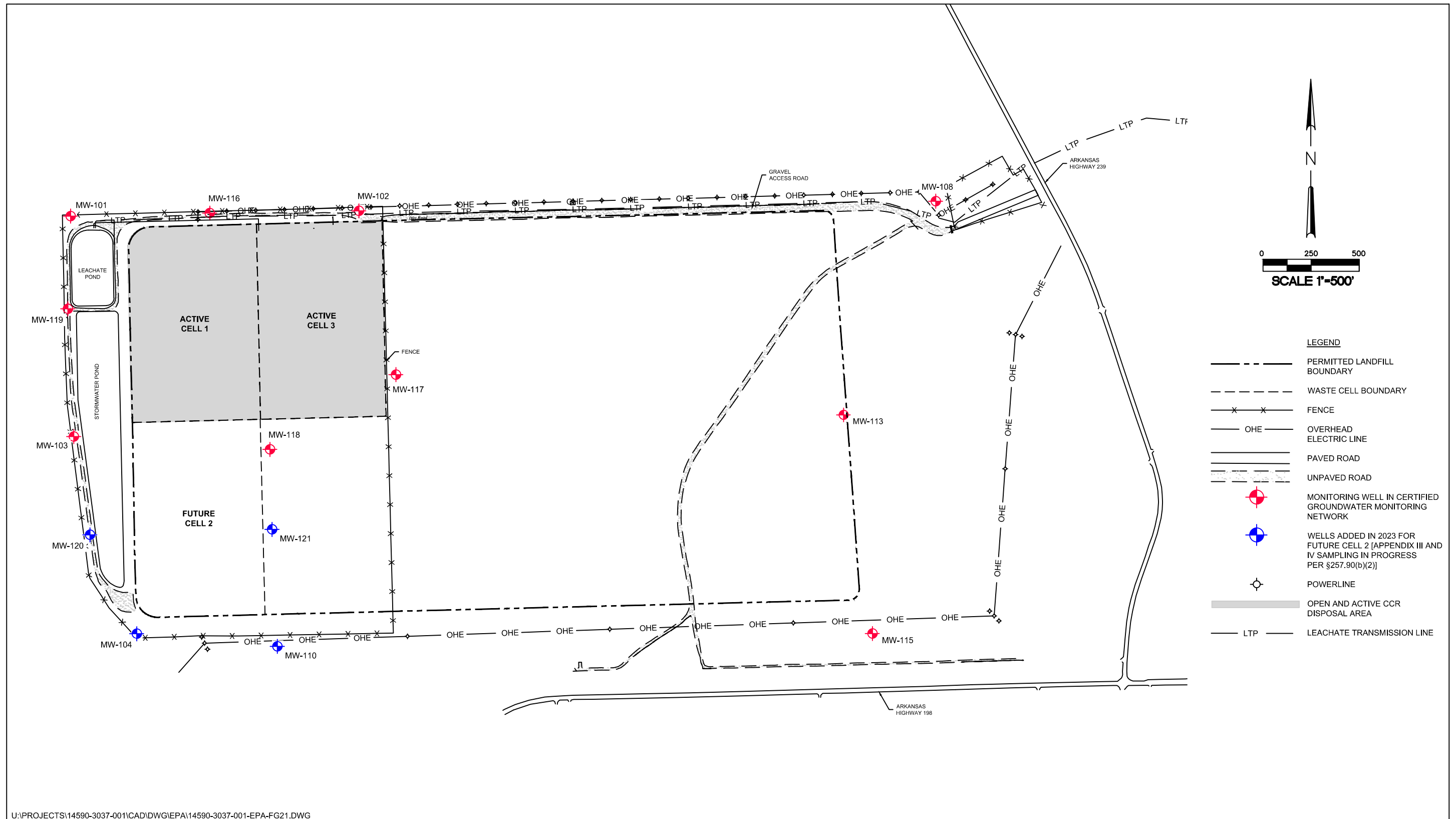
Table 2.1. Summary of well construction details.

Well Number	Well Installation Date	Ground Surface Elevation (ft NAVD88 <sup>[a]</sup> )	Measuring Point Elevation <sup>(b)</sup> (ft NAVD88)	Total Depth (ft below MP)	Screened Interval (ft NAVD88)
<b>Certified Groundwater Monitoring Network</b>					
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
<b>Wells Added for Future Cell 2</b>					
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:

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





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

Each monitoring well shown on Figure 2.1 and listed in Table 2.1 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 and 3. As allowed by §257.91(a)(1), the groundwater program utilizes wells for background water quality that are not hydraulically upgradient of the CCR management area. Monitoring wells MW-108, MW-113, and MW-115 (Figure 2.1) are used for this purpose because they are positioned outside the potential zone of impact from cells 1 and 3. The rationale for this is based on the age of the landfill, the estimated maximum rate of groundwater flow, and the distance of MW-108, MW-113, and MW-115 from the CCR management area (FTN 2017a).

## **2.2 Groundwater Monitoring System Improvements During 2023**

The 10 monitoring wells in the certified groundwater monitoring system were installed prior to 2023. None of the existing wells were altered or abandoned during 2023.

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 future cell 2 during 2024. These wells are currently being sampled for background as required by §257.90(b)(2). The groundwater monitoring system certification will be updated following completion of the background sampling events and review of the background data during 2024.

## **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) is performed monthly at MW-104, MW-110, MW-120, and MW-121. Table 2.2 summarizes the sampling events performed during 2023.

Table 2.2. 2023 sampling schedule.

Well ID	First Half 2023 Detection Monitoring	Background Sampling <sup>(a)</sup>	Background Sampling <sup>(a)</sup>	Background Sampling <sup>(a)</sup>	Second Half 2023 Detection Monitoring / Background Sampling <sup>(a)</sup>	Background Sampling <sup>(a)</sup>	Second Half 2023 Verification Sampling / Background Sampling <sup>(a)</sup>
	April 14-17	July 6	August 8	September 7	October 10-12	November 6	December 6
MW-101	X	---	---	---	X	---	---
MW-102	X	---	---	---	X	---	---
MW-103	X	---	---	---	X	---	---
MW-104	--- <sup>(b)</sup>	--- <sup>(b)</sup>	X	X	X	X	X
MW-108	X	---	---	---	NS <sup>(c)</sup>	NS <sup>(c,d)</sup>	---
MW-110	--- <sup>(b)</sup>	--- <sup>(b)</sup>	X	X	X	X	X
MW-113	X	---	---	---	X	---	---
MW-115	X	---	---	---	X	---	---
MW-116	X	---	---	---	X	---	---
MW-117	X	---	---	---	X	---	X
MW-118	X	---	---	---	X	---	---
MW-119	X	---	---	---	X	---	---
MW-120	--- <sup>(b)</sup>	X	X	X	NS <sup>(c)</sup>	NS <sup>(c)</sup>	NS <sup>(c)</sup>
MW-121	--- <sup>(b)</sup>	X	X	X	X	X	X

Notes:

- a. Monthly background sampling of appendix III and appendix IV parameters per §257.90(b)(2).
- b. Well had not been added to the EPA program at the time of this sampling event.
- c. NS=not sampled due to low water levels in the aquifer.
- d. A second attempt to sample well MW-108 for the second half 2023 detection monitoring period was scheduled to coincide with the background sampling event in November; however, as noted above, the well could not be sampled due to continued low water levels in the aquifer.

Due to low water levels in the underlying aquifer, there was an insufficient volume of water to collect a detection monitoring sample at MW-108 during October 2023. A second attempt to sample MW-108 was made in November, but the water level in the aquifer remained too low to yield a sufficient quantity of water for analysis. Similarly, no samples were collected from MW-120 during the October, November, and December 2023 background sampling events due to the low water levels in the aquifer.

Detection monitoring events for the 2024 monitoring periods are tentatively scheduled for April and October 2024, and monthly background sampling events are scheduled to continue at the new wells during 2024 until each well has the minimum 8 to 10 values necessary for a background data set in accordance with the landfill's GWSAP.

#### **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 2023 monitoring events was performed in accordance with the landfill's GWSAP and EPA guidelines (Puls & Barcelona 1996). Groundwater was sampled with a Geopump Peristaltic Series II Pump and linear low-density polyethylene tubing. Field parameters were measured during purging and sampling using a Hach 2100P portable turbidity meter and a handheld YSI MPS 556 multiparameter instrument fitted with a flow-through cell. Field sampling forms for the 2023 monitoring events are provided in Appendix A.

## 2.6 Laboratory Analyses

Samples collected for each detection monitoring event are required to be analyzed for the 40 CFR Part 257 appendix III list of parameters provided in Table 2.3. Groundwater samples collected for background sampling are required to be analyzed for both appendix III and appendix IV, listed in Table 2.4, of 40 CFR Part 257. Pace Analytical National (Pace), of Mt. Juliet, Tennessee, provided laboratory services for each sampling event performed during 2023. Samples were analyzed in accordance with EPA’s *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846) (EPA 1986b), or equivalent, and guidelines established by EPA. Laboratory reports from Pace are included in Appendix B.

Table 2.3. Appendix III parameters.

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

Table 2.4. Appendix IV parameters.

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

## **3.0 DATA PRESENTATION**

This section presents the data collected during the 2023 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 2023 at the new wells near future cell 2 are not presented in this section other than the water level data collected during the second half of 2023. Available field and laboratory data for these wells are included in the appendices. A discussion of data collected from these new wells will be included in the 2024 annual report following review and completion of the background sampling events.

### **3.1 Water Level Data**

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

#### **3.1.1 Water Level Measurements and Hydrograph**

Static water levels were measured in all 10 monitoring wells prior to conducting any sampling activities for the April and October detection monitoring events. Water levels were measured using a Geotech water level meter on April 17, 2023, and on October 9, 2023, for the first and second half 2023 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 3.1.

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  $\pm 28$  ft over the period of record for the CCR rule program.

Table 3.1. Water level data.

Well ID	MP Elevation (ft NAVD88)	April 17, 2023		October 9, 2023	
		Depth to Water (ft below MP)	Water Elevation (ft NAVD88)	Depth to Water (ft below MP)	Water Elevation (ft NAVD88)
<b>Certified Groundwater Monitoring Network</b>					
MW-101	242.75	18.04	224.71	22.90	219.85
MW-102	243.99	18.52	225.47	26.52	217.47
MW-103	243.25	18.83	224.42	24.19	219.06
MW-108	245.11	18.87	226.24	31.44	213.67
MW-113	244.63	18.64	225.99	28.47	216.16
MW-115	243.55	18.21	225.34	27.82	215.73
MW-116	243.97	18.98	224.99	25.87	218.10
MW-117	242.53	17.38	225.15	24.85	217.68
MW-118	241.23	16.50	224.73	22.74	218.49
MW-119	246.53	21.87	224.66	26.71	219.82
<b>Wells Added for Future Cell 2</b>					
MW-104	240.81	---*	---*	21.74	219.07
MW-110	240.22	---*	---*	21.56	218.66
MW-120	250.30	---*	---*	31.15	219.15
MW-121	240.80	---*	---*	22.19	218.61

\*Monitoring wells MW-104, MW-110, MW-120, and MW-121 were added after the April 2023 event.

### 3.1.2 Direction of Groundwater Flow

Depth-to-water measurements were converted to feet NAVD88 and used to construct the potentiometric surface maps shown on Figures 3.1 and 3.2 (figures are included at the end of Section 3.0). As shown on Figure 3.1, the direction of groundwater flow across the active landfill area during the April 2023 monitoring event was to the southwest. As shown on Figure 3.2, groundwater flow beneath the active landfill area was generally to the east-northeast during the October 2023 monitoring event.

### 3.1.3 Rate of Groundwater Flow

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

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

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

The hydraulic conductivity (K) and the effective porosity ( $n_e$ ) of the alluvial aquifer are  $1.09 \times 10^{-2}$  cm/sec and 27%, respectively, based on previous reports (GEC 2001). The hydraulic gradient (dh/dl) is calculated using water level elevations that most closely represent the flow line from upgradient to downgradient across cells 1 and 3. The hydraulic gradient was estimated to be  $5.6 \times 10^{-4}$  ft/ft during April 2023 and  $1.2 \times 10^{-3}$  ft/ft during October 2023 using the potentiometric surface maps shown on Figures 3.1 and 3.2, respectively. Based on these values,  $V_x$  was calculated to be approximately 23 ft/year during April 2023 and 48 ft/year during October 2023. The estimated flow rate for October 2023 is above historically reported values, which typically range from approximately 10 to 40 ft/year. The elevated  $V_x$  value is likely related to the historically low water levels in the adjacent Mississippi River. Data reported by the US Army Corps of Engineers show record low river gauge levels at Osceola, Arkansas, during October 2023 (<https://rivergages.mvr.usace.army.mil>).

### **3.2 Field-Measured Water Quality Data**

Groundwater sampling records for the 2023 monitoring events are included in Appendix A. Field-measured water quality parameters from the 2023 detection monitoring events are summarized in Table 3.2. A review of the field quality control samples is provided in Section 3.4.



Table 3.2. Field-measured water quality data.

Well	Date	Conductivity ( $\mu$ mhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
<b>First Half 2023 Monitoring Event, April 2023</b>					
MW-101	4/19/2023	584	6.9	17.7	2.7
MW-102	4/19/2023	562	6.7	18.5	3.7
MW-103	4/18/2023	482	6.7	18.7	4.5
MW-108	4/18/2023	728	6.8	20.2	4.7
MW-113	4/17/2023	516	6.8	17.1	1.8
MW-115	4/17/2023	622	6.8	17.6	3.0
MW-116	4/19/2023	554	6.8	18.7	2.7
MW-117	4/19/2023	492	6.5	17.8	1.0
MW-118	4/18/2023	404	6.5	17.7	1.3
MW-119	4/18/2023	536	6.9	19.3	2.3
<b>Second Half 2023 Monitoring Event, October 2023</b>					
MW-101	10/11/2023	522	6.8	19.2	1.1
MW-102	10/12/2023	529	6.6	21.1	7.0
MW-103	10/11/2023	454	6.5	19.6	4.6
MW-108	—*	NM*	NM*	NM*	NM*
MW-113	10/10/2023	379	6.8	19.5	2.3
MW-115	10/10/2023	544	6.9	19.0	1.3
MW-116	10/11/2023	476	6.5	19.1	1.6
MW-117	10/12/2023	461	6.4	19.1	1.2
MW-118	10/11/2023	460	6.3	19.2	1.1
MW-119	10/11/2023	616	6.8	20.7	1.5
<b>Second Half 2023 Verification Sampling Event, December 2023</b>					
MW-117	12/6/2023	455	6.7	18.1	0.5

\*There was an insufficient volume of water in the well to collect field measurements or groundwater samples.

### 3.3 Laboratory Analytical Data

Laboratory reports for sampling performed during the 2023 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 3.3 and 3.4 for the first and second half of 2023 monitoring periods, respectively. EPA-promulgated maximum contaminant levels (MCLs) are shown for comparison purposes. Of the appendix III parameters listed in Tables 3.3 and 3.4, fluoride is the only parameter with an established MCL. As shown in Tables 3.3 and 3.4, none of the measured levels for fluoride were above the MCL of 4 mg/L. Data from these monitoring events are compiled in the landfill's historical groundwater database, included as Appendix D.

Table 3.3. Summary of appendix III results, first half of 2023.

Well ID	Date Collected	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	pH (su)
<b>First Half 2023 Detection Monitoring, April 2023</b>								
MW-101	4/19/2023	0.0606 J	108	3.15	0.243	7.48	376	6.9
MW-102	4/19/2023	0.0884 J	101	2.75	0.158	63.5	390	6.7
MW-103	4/18/2023	0.0622 J	84.8	1.00	0.157	7.82	322	6.7
MW-108	4/18/2023	0.128 J	146	1.23	0.161	34.8	493	6.8
MW-113	4/17/2023	0.0840 J	74.6	0.995 J	0.0907 J	4.57 J	293	6.8
MW-115	4/17/2023	0.0416 J	101	0.819 J	0.205	5.19	351	6.8
MW-116	4/19/2023	0.0814 J	97.1	5.41	0.156	50.6	377	6.8
MW-117	4/19/2023	0.0745 J	90.0	0.808 J	0.108 J	13.4	309	6.5
MW-118	4/18/2023	0.0664 J	71.8	0.663 J	0.147 J	17.0	268	6.5
MW-119	4/18/2023	0.0642 J	95.8	1.26	0.228	18.9	350	6.9
<b>Quality Control Samples</b>								
MW-116 DUP*	4/19/2023	0.0819 J	96.5	5.34	0.154	50.2	369	---
EPA EB*	4/19/2023	<0.200	0.910 J	<1.00	<0.150	<5.00	<14.3	---
<b>EPA MCL</b>		---	---	---	<b>4</b>	---	---	---

Notes:

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

\*Duplicate sample and field equipment rinsate blank collected during the April sampling event.

Table 3.4. Summary of appendix III results, second half of 2023.

Well ID	Date Collected	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	pH (su)
<b>Second Half 2023 Detection Monitoring, October 2023</b>								
MW-101	10/11/2023	0.0530 J	101	8.76	0.283	6.92	376 B	1.1
MW-102	10/12/2023	0.0777 J	106	2.68	0.168	74.6	411 B	7.0
MW-103	10/11/2023	0.0743 J	88.0	1.08	0.201	15.9	335 B	4.6
MW-108	— <sup>(a)</sup>	NM <sup>(a)</sup>	NM <sup>(a)</sup>	NM <sup>(a)</sup>	NM <sup>(a)</sup>	NM <sup>(a)</sup>	NM <sup>(a)</sup>	NM <sup>(a)</sup>
MW-113	10/10/2023	0.0782 J	64.5	0.751 J	0.0982 J	3.64 J	247 B	2.3
MW-115	10/10/2023	0.0443 J	107	1.00	0.207	4.96 J	383 B	1.3
MW-116	10/11/2023	0.0763 J	91.4	5.71	0.201	50.4	361 B	1.6
MW-117	10/12/2023	0.0736 J	89.0	1.33	0.121 J	14.4	325 B	1.2
MW-118	10/11/2023	0.0585 J	86.4	1.14	0.154	20.7	335 B	1.1
MW-119	10/11/2023	0.0616 J	119	2.13	0.237	46.5	451 B	1.5
<b>Second Half 2023 Verification Sampling, December 2023</b>								
MW-117	12/6/2023	—	—	—	—	—	328	6.7
<b>Quality Control Samples</b>								
MW-117 DUP <sup>(b)</sup>	10/12/2023	0.0685 J	88.5	1.33	0.124 J	14.4	334	—
EPA EB-1 <sup>(b)</sup>	10/12/2023	<0.200	<1.00	<1.00	<0.150	<5.00	12.0	—
MW-117 DUP <sup>(b)</sup>	12/6/2023	—	—	—	—	—	319	—
EPA EB-2 <sup>(b)</sup>	12/6/2023	—	—	—	—	—	<10.0	—
<b>EPA MCL</b>		---	---	---	<b>4</b>	---	---	---

Notes:

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

- There was an insufficient volume of water in the well to collect field measurements or a groundwater sample.
- Duplicate sample and field equipment rinsate blank collected during the October sampling event.
- 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  $\leq 20\%$ , 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 2023 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 TDS during the second half 2023 sampling event, indicating field decontamination methods were effective. TDS results detected above the RDL during the second half 2023 monitoring event were flagged with a “B” in the historical database.

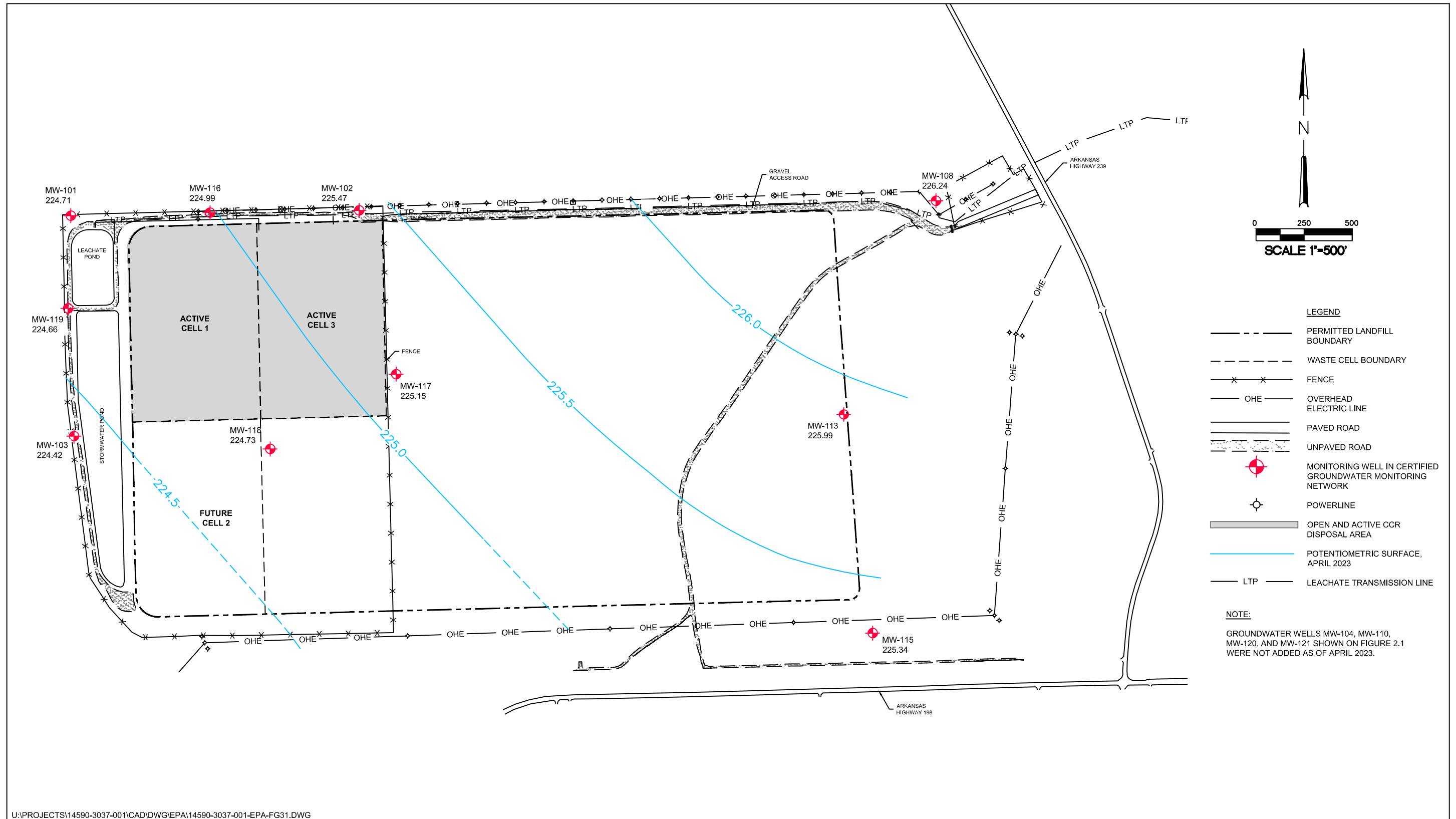
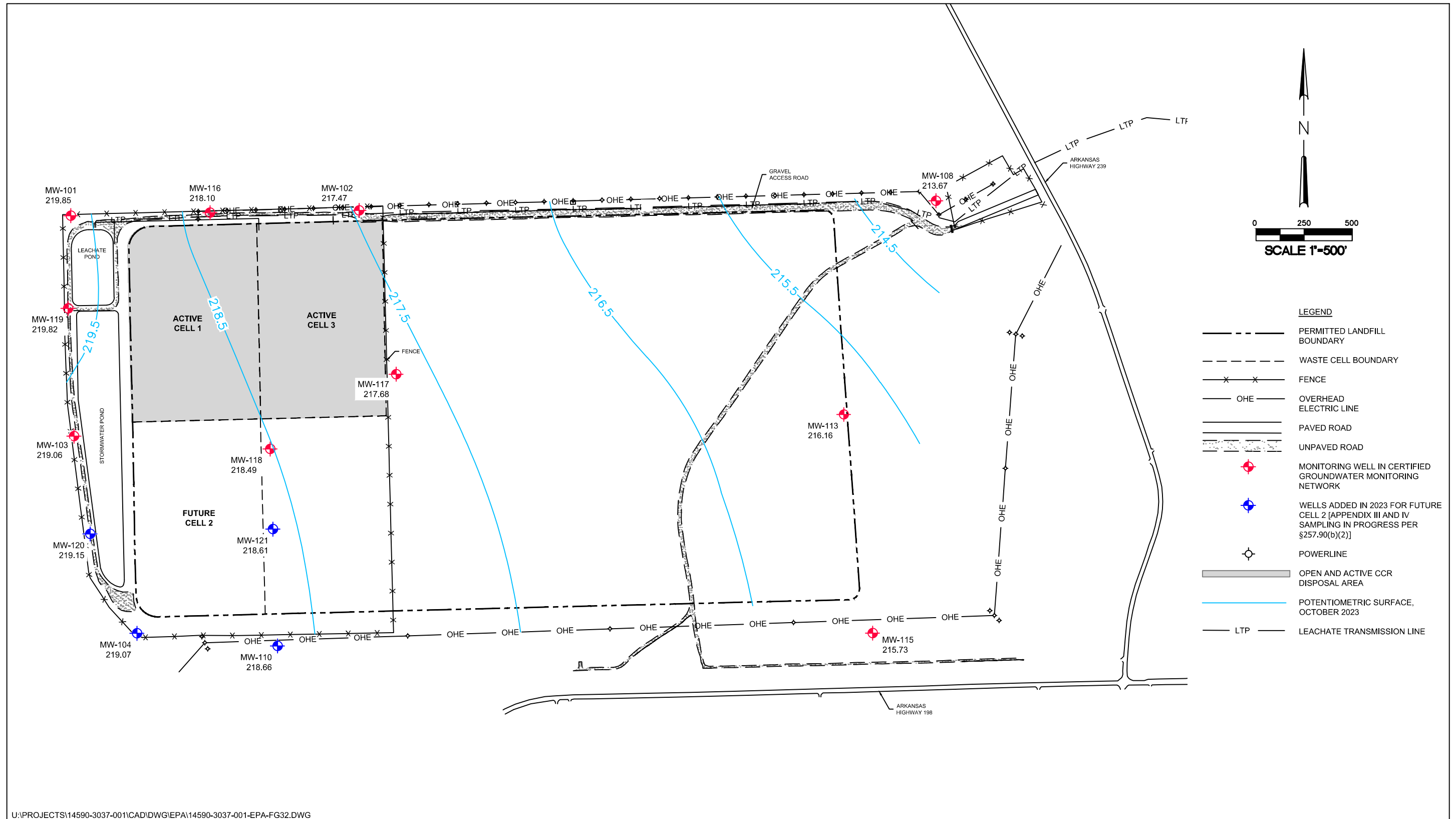


Figure 3.1. Potentiometric surface, April 17, 2023.



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Figure 3.2. Potentiometric surface, October 9, 2023.

## 4.0 STATISTICAL EVALUATION

This section describes the statistical approach and evaluation of the detection monitoring data collected during 2023. Groundwater quality data were evaluated using the statistical software *Sanitas version 9.6*. Statistical analyses of the data were performed in accordance with the landfill's SAP. The four wells added during 2023 for future cell 2 are being sampled for the initial 8 to 10 background events and do not have sufficient data for statistical analysis as of the date of this report. Detection monitoring for these wells is anticipated to begin during 2024.

### 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).

Select background data sets were updated, where applicable, prior to the first half of 2023 monitoring period. Results of the evaluation are summarized in Appendix E. The next background evaluation is scheduled to occur prior to the first half of 2024 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 Table 4.1.

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

<b>Certified Well Network</b>	
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



### 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 above background. Any single statistical test should have the ability to detect an SSI or SSD 55% to 60% of the time at three standard deviations ( $3\sigma$ ) above background and 80% to 85% of the time at  $4\sigma$  above background. Input values for the detection monitoring program’s power curve are listed in Table 4.1 and discussed below.

Figure 4.1 depicts the power curve for the well network plotted against the ERPC. This curve shows that any single test is expected to detect SSIs or SSDs approximately 75% of the time at levels  $3\sigma$  above background and 96% of the time at levels  $4\sigma$  above background. Given this comparison, the statistical power of the landfill’s detection monitoring program exceeds EPA recommendations.

Sanitas™ v.9.6.37 Sanitas software licensed to FTN Associates. UG

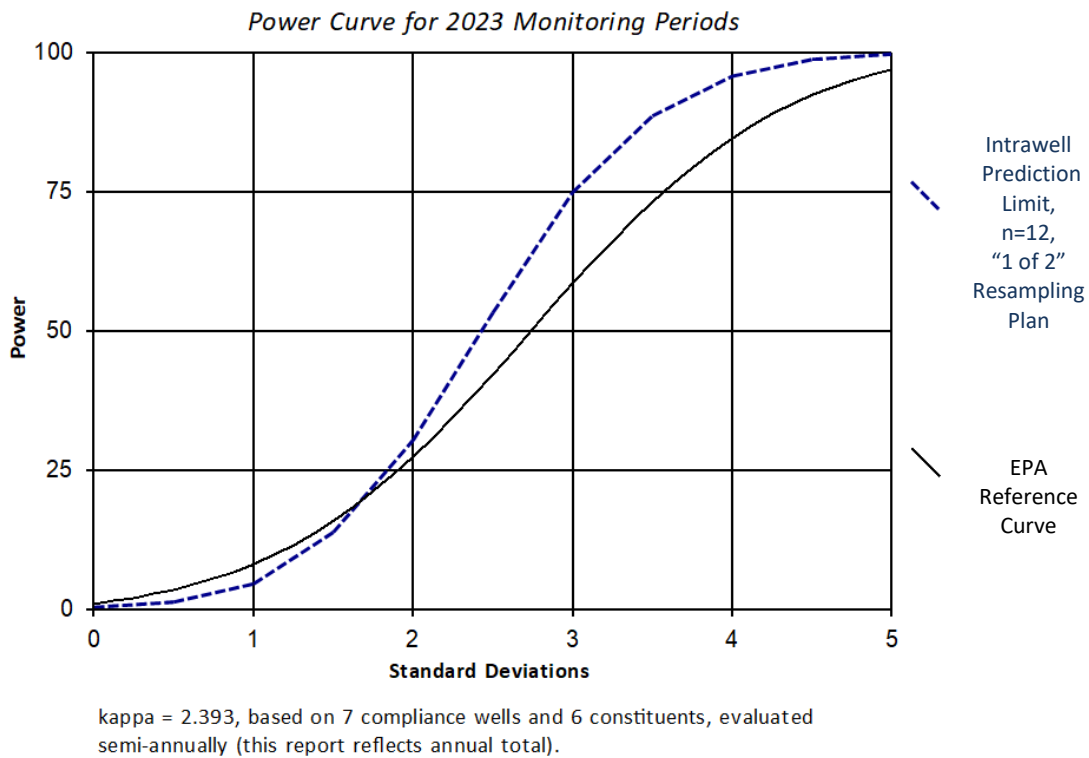


Figure 4.1. ERPC versus landfill power curve for detection monitoring.

## **4.2 Exploratory Data Analysis**

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

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

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

- Calcium, chloride, fluoride, sulfate, and TDS values are variable across the network.
- Measured pH and boron are generally similar across the well network, with measured levels of boron being below the laboratory RDL for the period of record at all wells.

### **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 2023 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 four outliers in the April 2023 data set: calcium, sulfate, and TDS at MW-102 and sulfate at MW-119 were statistically low compared to their respective period-of-record data sets. No statistically significant outliers were identified in the October 2023 data set.

### 4.3 Statistical Evaluation Results

Groundwater quality data from the 2023 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 2023

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 2023 monitoring period are summarized in Table 4.2 and graphical plots of the evaluation are included in Appendix G.

As shown in Table 4.2, a previously confirmed SSI was identified for sulfate at MW-117. Measurements for all other well-parameter pairs were below calculated intrawell prediction limits.

Table 4.2. Summary of statistically significant results, intrawell prediction limit analysis, first half of 2023.

Parameter	Well	Prediction Limit (mg/L)	April 2023 Result (mg/L)	SSI Confirmed?
Sulfate	MW-117	8.048	13.4	Yes*

\*Previously confirmed.

In response to the confirmed SSI for sulfate at MW-117 identified during the first half of 2023 detection monitoring period, PPSC completed a successful alternate source demonstration (ASD) in accordance with §257.94(e)(2). The ASD was certified by an Arkansas-registered professional engineer on October 12, 2023, 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 2023**

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 2023**

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 2023 monitoring period are summarized in Table 4.3 and graphical plots of the evaluation are included in Appendix G.

As shown in Table 4.3, a previously confirmed SSI for sulfate at MW-117 was identified along with an unverified SSI for TDS at MW-117. 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 2023 for the unverified SSI at compliance well MW-117. As shown in Table 4.3, verification sampling results confirmed the SSI for TDS at MW-117.

Table 4.3. Summary of statistically significant results, intrawell prediction limit analysis, second half of 2023.

Parameter	Well	Prediction Limit (mg/L)	October 2023 Result (mg/L)	December 2023 Verification Result (mg/L)	SSI Confirmed?
Sulfate	MW-117	8.048	14.4	NA*	Yes*
TDS	MW-117	315.8	325	328	Yes

Note:  
\*SSI was previously confirmed; verification sampling was not performed.

In response to the confirmed SSIs for sulfate and TDS at MW-117 identified during the second half of 2023 monitoring period, PPSC completed a successful ASD in accordance with §257.94(e)(2). The ASD was certified by an Arkansas-registered professional engineer on January 31, 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 will continue with detection monitoring in accordance with §257.94.

#### **4.3.4 Mann-Kendall Test/Theil-Sen Trend Line, Second Half of 2023**

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.

## 5.0 CONCLUSIONS

The following recommendations and conclusions are based on a review of data for the landfill from the 2023 monitoring period:

1. The direction of groundwater flow at the landfill is seasonally variable. Groundwater flow was to the southwest across the active landfill during the April 2023 monitoring event. Groundwater flow beneath the active landfill area was generally to the east-northeast during the October 2023 monitoring event.
2. Of the parameters evaluated, only fluoride has an EPA-promulgated MCL. None of the reported values in groundwater were measured above the MCL for fluoride.
3. Time-series plots and box-and-whiskers diagrams show variability across the well network for calcium, chloride, fluoride, sulfate, and TDS. Values for boron and pH are relatively similar across all wells, with measured levels of boron being below the laboratory RDL for the period of record at all wells.
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 exceeds EPA recommendations.
5. Statistical evaluation of the first half of 2023 data set identified a confirmed SSI for sulfate at MW-117. A successful ASD was completed for the SSIs on October 12, 2023, and the ASD is included with this report in accordance with §257.94(e)(2). The facility continued with detection monitoring during the second half of 2023 in accordance with §257.94.
6. Statistical evaluation of the second half of 2023 data set identified confirmed SSIs for sulfate and TDS at MW-117. A successful ASD was completed for the SSIs on January 31, 2024, and the ASD is included with this report in accordance with §257.94(e)(2). The facility will continue with detection monitoring during the first half of 2024 in accordance with §257.94.

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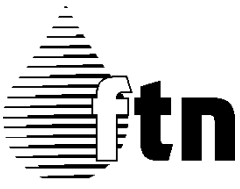
# **APPENDIX A**

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## **Field Sampling Forms**

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**First Half 2023 Detection Monitoring Sampling Event  
April 2023**



### Groundwater Level Data Sheet

<b>Project Name:</b> Plum Point Energy Station 2023 Groundwater Services	<b>Project Number:</b> R14590-3037-001 EPA Program	<b>Investigator:</b> Michael Clayton FTN Associates, Ltd.	<b>Page 1 of 1</b>
<b>Weather Conditions:</b> Sunny, 62°F, W @ 13 mph	<b>Measuring Device:</b> GeoTech 200'		

Well ID	Date	Time	Depth to Water (feet below TOC)	Damages/Repairs		
MW-101	4/17/2023	1247	18.04	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-102	4/17/2023	1259	18.52	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-103	4/17/2023	1235	18.83	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input checked="" type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-108	4/17/2023	1138	18.87	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-113	4/17/2023	1133	18.64	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-115	4/17/2023	1125	18.21	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-116	4/17/2023	1254	18.98	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-117	4/17/2023	1316	17.38	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input checked="" type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input checked="" type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-118	4/17/2023	1227	16.50	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-119	4/17/2023	1242	21.87	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record

# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-101	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/19/2023	Sampler Organization: FTN Associates, Ltd.

### Site Description

Weather: partly cloudy	Air Temp. (°F): 71	Wind: south @ 13 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

### Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/17/2023	4/19/2023	4/19/2023	4/19/2023	4/19/2023	
Time	24-hour	1247	1030	1052	1102	1112	
Depth to Water	feet	18.04	18.07	18.07	18.07	18.07	
Product/Thickness	LNAPL/DNAPL feet						

### Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1035	1040	1045	1050	1055	1100							Remarks
Purge vol.	gallons													
Purge rate	mL/min	290	290	290	290	290	290							
pH	su	7.1	7.0	6.9	6.9	6.9	6.9							
Temp.	°C	18.3	17.8	17.8	17.7	17.8	17.7							
Conductivity	µS/cm	596	584	582	583	584	584							
DO	mg/L	4.7	2.7	2.2	2.1	2.2	2.1							
ORP	mV	235.2	229.2	230.0	229.1	229.8	229.8							
Turbidity	NTU	4.3	2.5	2.2	2.0	3.2	2.7							
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-101	4/19/2023	1110	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-102	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/19/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 77	Wind: south @ 14 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/17/2023	4/19/2023	4/19/2023	4/19/2023	4/19/2023	
Time	24-hour	1259	1215	1237	1247	1258	
Depth to Water	feet	18.52	18.63	18.63	18.63	18.63	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible					Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC						
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1220	1225	1230	1235	1240	1245							Remarks
Purge vol.	gallons													
Purge rate	mL/min	300	300	300	300	300	300							
pH	su	6.9	6.7	6.7	6.7	6.7	6.7							
Temp.	°C	19.7	18.5	18.5	18.5	18.5	18.5							
Conductivity	µS/cm	570	561	561	561	561	562							
DO	mg/L	3.5	1.2	1.0	0.9	0.8	0.7							
ORP	mV	232.9	234.9	231.5	228.9	227.5	226.7							
Turbidity	NTU	2.5	2.6	4.8	4.5	3.5	3.7							
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-102	4/19/2023	1255	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-103	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/18/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 83	Wind: south-southwest @ 14 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%; vertical-align: top;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/17/2023	4/18/2023	4/18/2023	4/18/2023	4/18/2023	
Time	24-hour	1235	1540	1603	1613	1628	
Depth to Water	feet	18.83	18.77	18.77	18.77	18.77	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:				Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC						
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1545	1550	1555	1600	1605	1610							Remarks
Purge vol.	gallons													
Purge rate	mL/min	280	280	280	280	280	280							
pH	su	6.8	6.7	6.7	6.7	6.7	6.7							
Temp.	°C	19.9	19.1	19.1	19.0	18.9	18.7							
Conductivity	µS/cm	482	483	482	482	483	482							
DO	mg/L	3.6	1.4	1.0	0.8	0.7	0.5							
ORP	mV	282.7	282.7	278.8	273.5	270.7	264.8							
Turbidity	NTU	15.2	14.5	13.3	10.2	7.2	4.5							
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-103	4/18/2023	1620	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-108	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/18/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 70	Wind: southwest @ 11 mph
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter: inches 2 Total depth from TOC: feet TOC below/above ground: feet
Damages/repairs needed:		

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/17/2023	4/18/2023	4/18/2023	4/18/2023	4/18/2023	
Time	24-hour	1138	1030	1052	1102	1123	
Depth to Water	feet	18.87	19.15	19.21	19.21	19.21	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1035	1040	1045	1050	1055	1100							Remarks
Purge vol.	gallons													
Purge rate	mL/min	110	110	110	110	110	110							
pH	su	6.9	6.9	6.9	6.9	6.9	6.8							
Temp.	°C	20.2	20.1	19.9	20.0	20.3	20.2							
Conductivity	µS/cm	721	723	726	725	726	728							
DO	mg/L	4.1	2.3	2.2	2.2	1.9	1.7							
ORP	mV	184.0	188.9	185.7	183.4	182.1	182.2							
Turbidity	NTU	3.7	3.9	6.8	6.9	6.3	4.7							
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-108	4/18/2023	1115	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-115	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/17/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 73	Wind: west @ 13 mph			
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					Remarks
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	
Date	mm/dd/yy	4/17/2023	4/17/2023	4/17/2023	4/17/2023	4/17/2023	
Time	24-hour	1125	1515	1537	1548	1557	
Depth to Water	feet	18.28	18.18	18.18	18.18	18.18	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1520	1525	1530	1535	1540	1545							Remarks
Purge vol.	gallons													
Purge rate	mL/min	300	300	300	300	300	300							
pH	su	6.9	6.8	6.8	6.8	6.9	6.8							
Temp.	°C	17.2	17.1	17.1	17.5	17.5	17.6							
Conductivity	µS/cm	624	622	622	623	622	622							
DO	mg/L	1.5	1.2	1.1	1.1	1.1	1.1							
ORP	mV	176	174	173	172	172	169							
Turbidity	NTU	17.9	13.3	13.7	14.2	13.7	3.0							
Color/tint	--	cloudy	cloudy	cloudy	cloudy	cloudy	cloudy							
Odor	--	none	none	none	none	none	none							

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-115	4/17/2023	1557	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-116	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/19/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 76	Wind: south @ 14 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/17/2023	4/19/2023	4/19/2023	4/19/2023	4/19/2023	
Time	24-hour	1254	1120	1137	1152	1207	
Depth to Water	feet	18.98	19.04	19.04	19.04	19.04	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible					Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC						
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1125	1130	1135	1140	1145	1150							Remarks
Purge vol.	gallons													
Purge rate	mL/min	270	270	270	270	270	270							
pH	su	6.9	6.8	6.8	6.8	6.8	6.8							
Temp.	°C	19.0	18.5	18.4	18.5	18.6	18.7							
Conductivity	µS/cm	563	555	555	554	555	554							
DO	mg/L	3.5	2.6	3.2	3.5	2.8	2.8							
ORP	mV	241.4	242.2	241.0	240.1	238.8	238.2							
Turbidity	NTU	1.0	2.9	2.6	2.0	2.3	2.7							
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-116	4/19/2023	1200	3	0	
MW-116 DUP	4/19/2023	1205	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-117	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/19/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 81	Wind: southwest @ 18 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/17/2023	4/19/2023	4/19/2023	4/19/2023	4/19/2023	
Time	24-hour	1316	1320	1347	1356	1409	
Depth to Water	feet	17.38	17.45	17.45	17.45	17.45	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible					Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC					
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408										
Time	24-hour	1325	1330	1335	1340	1345	1350	1355					Remarks
Purge vol.	gallons												
Purge rate	mL/min	260	260	260	260	260	260	260					
pH	su	6.6	6.5	6.5	6.5	6.5	6.5	6.5					
Temp.	°C	18.2	17.9	17.7	17.7	17.6	17.6	17.8					
Conductivity	µS/cm	510	496	494	493	492	492	492					
DO	mg/L	1.3	0.5	0.4	0.4	0.3	0.3	0.3					
ORP	mV	247.7	232.7	194.5	176.6	156.6	151.9	151.0					
Turbidity	NTU	2.3	1.7	1.5	1.6	1.4	1.4	1.0					
Color/tint	--												
Odor	--												

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-117	4/19/2023	1405	3	0	
EPA EB	4/19/2023	1430	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-118	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/18/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 82	Wind: south-southwest @ 14 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/17/2023	4/18/2023	4/18/2023	4/18/2023	4/18/2023	
Time	24-hour	1227	1445	1507	1512	1527	
Depth to Water	feet	16.50	16.48	16.48	16.48	16.48	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1450	1455	1500	1505	1510							Remarks
Purge vol.	gallons												
Purge rate	mL/min	260	260	260	260	260							
pH	su	6.6	6.	6.5	6.5	6.5							
Temp.	°C	18.7	18.0	17.8	17.7	17.7							
Conductivity	µS/cm	415	408	406	405	404							
DO	mg/L	2.6	0.5	0.4	0.3	0.3							
ORP	mV	215.7	213.8	213.7	213.5	213.9							
Turbidity	NTU	3.9	2.6	1.8	1.3	1.3							
Color/tint	--	clear	clear	clear	clear	clear							
Odor	--	none	none	none	none	none							

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-118	4/18/2023	1515	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-119	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 4/18/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 84	Wind: south-southwest @ 13 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	4/17/2023	4/18/2023	4/18/2023	4/18/2023	4/18/2023	
Time	24-hour	1242	1640	1707	1718	1729	
Depth to Water	feet	21.87	21.76	21.76	21.76	21.76	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible						Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC				
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408										
Time	24-hour	1645	1650	1655	1700	1705	1710	1715					Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	280	280	280	280	280	280					
pH	su	7.0	7.0	7.0	7.0	6.9	6.9	6.9					
Temp.	°C	19.7	19.5	19.4	19.4	19.3	19.4	19.3					
Conductivity	µS/cm	549	547	546	540	538	538	536					
DO	mg/L	3.9	3.8	3.6	3.3	2.6	2.3	2.5					
ORP	mV	248.8	246.7	243.8	237.8	232.8	229.3	226.1					
Turbidity	NTU	12.1	5.3	3.8	3.2	1.3	1.6	2.3					
Color/tint	--	clear	clear	clear	clear	clear	clear	clear					
Odor	--	none	none	none	none	none	none	none					

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-119	4/18/2023	1725	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HET
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**Monthly Background Sampling Event  
July 2023**



## Groundwater Level Data Sheet

<b>Project Name:</b> Plum Point Energy Station 2023 Groundwater Services	<b>Project Number:</b> R14590-3037-001 EPA Program	<b>Investigator:</b> Michael Clayton FTN Associates, Ltd.	<b>Page 1 of 1</b>
<b>Weather Conditions:</b> Cloudy, 86°F, NW @ 5 mph	<b>Measuring Device:</b> GeoTech 200'		

Well ID	Date	Time	Depth to Water (feet below TOC)	Damages/Repairs		
MW-101	7/6/2023	1055	20.53	<input type="checkbox"/> Damaged well pad/casing <input checked="" type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-102	7/6/2023	1109	23.08	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-103	7/6/2023	1045	21.55	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input checked="" type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-108	7/6/2023	0950	27.37	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-113	7/6/2023	0945	25.65	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-115	7/6/2023	0940	24.39	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-116	7/6/2023	1102	22.68	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-117	7/6/2023	1116	21.57	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-118	7/6/2023	1033	19.80	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-119	7/6/2023	1049	24.50	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-120	7/6/2023	1039	28.59	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-121	7/6/2023	1123	19.38	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record



# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 7/6/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 90	Wind: northwest at 7 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	7/6/2023	7/6/2023	7/6/2023	7/6/2023	7/6/2023	
Time	24-hour	1039	1506	1522	1536	1612	
Depth to Water	feet	28.59	28.59	28.59	28.63	28.63	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1510	1515	1520	1525	1530	1535							Remarks
Purge vol.	gallons													
Purge rate	mL/min	330	330	330	260	260	260							
pH	su	6.5	6.6	6.6	6.6	6.6	6.6							
Temp.	°C	20.2	20.1	20.1	20.2	20.4	20.5							
Conductivity	µS/cm	476	474	473	473	474	474							
DO	mg/L	4.6	3.8	3.6	3.6	3.6	3.6							
ORP	mV	166	168	166	166	165	165							
Turbidity	NTU	3.9	4.9	5.4	3.9	3.7	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-120	7/6/2023	1550	6	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 7/6/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 90	Wind: north-northwest at 7 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	7/6/2023	7/6/2023	7/6/2023	7/6/2023	7/6/2023	
Time	24-hour	1123	1620	1633	1652	1704	
Depth to Water	feet	19.38	19.38	19.38	19.38	19.38	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1625	1630	1635	1640	1645	1650						Remarks
Purge vol.	gallons												
Purge rate	mL/min	460	460	460	460	460	460						
pH	su	6.4	6.4	6.4	6.4	6.5	6.4						
Temp.	°C	20.2	20.1	19.9	19.9	19.9	19.9						
Conductivity	µS/cm	299	299	296	296	295	294						
DO	mg/L	7.3	6.3	7.0	6.9	6.1	6.1						
ORP	mV	194	194	189	188	186	185						
Turbidity	NTU	2.1	1.3	2.0	1.7	1.6	1.9						
Color/tint	--	clear	clear	clear	clear	clear	clear						
Odor	--	none	none	none	none	none	none						

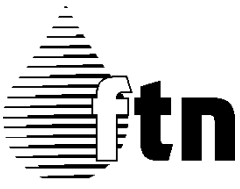
## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-121	7/6/2023	1700	6	0	
MW-121 DUP	7/6/2023	1705	6	0	
EPA EB-2	7/6/2023	1720	6	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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**Monthly Background Sampling Event  
August 2023**



## Groundwater Level Data Sheet

<b>Project Name:</b> Plum Point Energy Station 2023 Groundwater Services	<b>Project Number:</b> R14590-3037-001 EPA Program	<b>Investigator:</b> Michael Clayton FTN Associates, Ltd.	<b>Page 1 of 1</b>
<b>Weather Conditions:</b> Cloudy, 72°F, SSW @ 3 mph	<b>Measuring Device:</b> GeoTech 200'		

Well ID	Date	Time	Depth to Water (feet below TOC)	Damages/Repairs		
MW-101	8/8/2023	1041	19.06	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-102	8/8/2023	1053	23.40	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-103	8/8/2023	1012	20.88	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-104	8/8/2023	0950	18.18	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-108	8/8/2023	0906	27.24	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-110	8/8/2023	0938	18.39	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-113	8/8/2023	0857	25.87	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-115	8/8/2023	0848	24.17	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-116	8/8/2023	1047	22.88	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-117	8/8/2023	1102	21.79	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-118	8/8/2023	0957	19.75	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-119	8/8/2023	1022	22.83	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-120	8/8/2023	1004	28.07	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-121	8/8/2023	1108	19.12	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record

# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 8/8/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 85	Wind: south-southwest at 9 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	8/8/2023	8/8/2023	8/8/2023	8/8/2023	8/8/2023	
Time	24-hour	0950	1530	1543	1617	1640	
Depth to Water	feet	18.18	18.20	18.20	18.20	18.20	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC						
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1535	1540	1545	1550	1555	1600	1605	1610	1615			Remarks
Purge vol.	gallons	260	260	260	340	340	340	340	340	340			
Purge rate	mL/min												
pH	su	6.7	6.2	6.6	6.7	6.6	6.5	6.6	6.6	6.7			
Temp.	°C	18.5	18.1	18.1	17.9	17.8	17.7	17.7	17.8	18.0			
Conductivity	µS/cm	443	441	447	451	453	454	456	461	461			
DO	mg/L	1.9	1.1	0.9	0.9	0.8	0.7	0.6	0.6	0.6			
ORP	mV	165	184	102	102	103	102	97	82	78			
Turbidity	NTU	68.3	31.3	34.3	29.1	50.1	29.3	121	22.1	8.2			
Color/tint	--	cloud	cloud	cloud	cloud	cloud	cloud	cloud	cloud	cloud			
Odor	--	none	none	none	none	none	none	none	none	none			

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	8/8/2023	1620	5	0	
MW-104 DUP	8/8/2023	1625	5	0	
EPA-EB	8/8/2023	1650	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 8/8/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: cloudy	Air Temp. (°F): 77	Wind: south-southwest at 7 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	8/8/2023	8/8/2023	8/8/2023	8/8/2023	8/8/2023	
Time	24-hour	0938	1235	1253	1302	1317	
Depth to Water	feet	18.39	18.42	18.40	18.40	18.40	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1240	1245	1250	1255	1300							Remarks
Purge vol.	gallons												
Purge rate	mL/min	220	220	220	220	220							
pH	su	6.5	6.4	6.8	6.8	6.8							
Temp.	°C	19.1	18.8	19.0	19.0	19.0							
Conductivity	µS/cm	540	533	534	534	533							
DO	mg/L	0.7	0.4	0.4	0.2	0.2							
ORP	mV	102.7	114.9	51.9	49.3	49.5							
Turbidity	NTU	85.5	29.9	21.0	18.0	9.5							
Color/tint	--	cloud	cloud	cloud	cloud	cloud							
Odor	--	none	none	none	none	none							

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	8/8/2023	1305	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 8/8/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 82	Wind: south-southwest @ 7 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	8/8/2023	8/8/2023	8/8/2023	8/8/2023	8/8/2023	
Time	24-hour	1108	1420	1437	1458	1518	
Depth to Water	feet	28.07	28.07	28.07	28.07	28.07	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible						Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC				
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1425	1430	1435	1440	1445	1450	1455					Remarks
Purge vol.	gallons												
Purge rate	mL/min	400	400	400	400	400	400	400					
pH	su	6.3	6.1	6.3	6.3	6.3	6.4	6.4					
Temp.	°C	19.7	19.6	19.5	19.4	19.4	19.3	19.4					
Conductivity	µS/cm	436	432	432	431	432	431	430					
DO	mg/L	4.7	4.0	4.0	4.1	3.8	3.7	3.4					
ORP	mV	228	223	209	200	195	191	187					
Turbidity	NTU	2.0	1.7	1.8	1.4	1.5	1.3	1.3					
Color/tint	--	clear	clear	clear	clear	clear	clear	clear					
Odor	--	none	none	none	none	none	none	none					

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-120	8/8/2023	1500	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 8/8/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 77	Wind: south-southwest at 7 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	8/8/2023	8/8/2023	8/8/2023	8/8/2023	8/8/2023	
Time	24-hour	1108	1321	1338	1347	1416	
Depth to Water	feet	19.12	19.13	19.13	19.13	19.13	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1325	1330	1335	1340	1345							Remarks
Purge vol.	gallons												
Purge rate	mL/min	400	400	400	400	400							
pH	su	6.0	6.1	6.2	6.2	6.2							
Temp.	°C	20.0	20.1	20.1	20.1	20.2							
Conductivity	µS/cm	247	244	241	240	240							
DO	mg/L	5.3	5.1	4.9	4.9	4.8							
ORP	mV	156	151	148	147	147							
Turbidity	NTU	2.5	1.9	1.7	1.7	1.7							
Color/tint	--	clear	clear	clear	clear	clear							
Odor	--	none	none	none	none	none							

## Sample Data

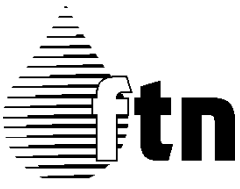
Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-121	8/8/2023	1350	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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**Monthly Background Sampling Event  
September 2023**



### Groundwater Level Data Sheet

<b>Project Name:</b> Plum Point Energy Station 2023 Groundwater Services	<b>Project Number:</b> R14590-3037-001 EPA Program	<b>Investigator:</b> Michael Clayton FTN Associates, Ltd.	<b>Page 1 of 1</b>
<b>Weather Conditions:</b> Partly cloudy, 86°F, SSW @ 10 mph	<b>Measuring Device:</b> GeoTech 200'		

Well ID	Date	Time	Depth to Water (feet below TOC)	Damages/Repairs		
MW-101	9/6/2023	1230	21.11	<input type="checkbox"/> Damaged well pad/casing <input checked="" type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-102	9/6/2023	1244	23.86	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-103	9/6/2023	1215	22.10	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-104	9/6/2023	1155	19.58	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-108	9/6/2023	1113	27.85	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-110	9/6/2023	1144	19.33	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-113	9/6/2023	1107	26.11	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-115	9/6/2023	1100	24.69	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-116	9/6/2023	1237	23.50	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-117	9/6/2023	1253	22.28	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-118	9/6/2023	1202	20.45	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-119	9/6/2023	1223	25.01	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-120	9/6/2023	1208	28.08	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-121	9/6/2023	1301	19.53	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record

# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 9/7/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 77	Wind: north-northeast at 7 mph
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter: inches 2    Well locked? Total depth from TOC: feet <input checked="" type="checkbox"/> Yes TOC below/above ground: feet <input type="checkbox"/> No
Damages/repairs needed:		

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	9/6/2023	9/7/2023	9/7/2023	9/7/2023	9/7/2023	
Time	24-hour	1155	1125	1153	1212	1231	
Depth to Water	feet	19.58	19.63	19.78	19.79	19.79	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1130	1135	1140	1145	1150	1155	1200	1205	1210			Remarks
Purge vol.	gallons												
Purge rate	mL/min	290	290	210	210	210	210	160	160	160			
pH	su	6.3	6.1	6.5	6.7	6.8	6.7	6.8	6.8	6.8			
Temp.	°C	18.4	18.1	18.8	19.0	19.1	18.9	19.4	19.4	19.5			
Conductivity	µS/cm	452	451	459	461	461	463	464	465	466			
DO	mg/L	0.5	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3			
ORP	mV	101	79.0	53.0	43.0	37.0	37.0	32.0	31.0	29.0			
Turbidity	NTU	34.0	16.4	12.1	13.6	13.2	12.8	9.5	7.1	6.2			
Color/tint	--	clear*	clear*	clear*	clear	clear	clear	clear	clear	clear			*with particulate
Odor	--	none	none	none	none	none	none	none	none	none			

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	9/7/2023	1215	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 9/7/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 74	Wind: north @ 11 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	9/6/2023	9/7/2023	9/7/2023	9/7/2023	9/7/2023	
Time	24-hour	1144	0940	0958	1024	1113	
Depth to Water	feet	19.33	19.38	19.43	19.43	19.43	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	0950	0955	1000	1005	1010	1015	1020					Remarks
Purge vol.	gallons												
Purge rate	mL/min	320	240	240	240	240	240	240					
pH	su	7.1	5.9	6.4	6.6	6.7	6.9	6.8					
Temp.	°C	19.2	18.7	19.12	19.5	19.5	19.4	19.5					
Conductivity	µS/cm	490	489	490	490	490	490	490					
DO	mg/L	3.2	0.6	0.5	0.5	0.5	0.6	0.6					
ORP	mV	16.1	68.3	30.6	26.9	27.4	33.8	32.2					
Turbidity	NTU	31.2	40.0	29.9	20.2	13.5	9.8	8.8					
Color/tint	--	clear*	clear*	clear*	clear*	clear*	clear*	clear*					*with particulate
Odor	--	none	none	none	none	none	none	none					

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	9/7/2023	1025	5	0	
MW-110 DUP	9/7/2023	1030	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 9/7/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 80	Wind: north @ 5 mph			
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					Remarks
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	
Date	mm/dd/yy	9/6/2023	9/7/2023	9/7/2023	9/7/2023	9/7/2023	
Time	24-hour	1208	1250	1317	1332	1357	
Depth to Water	feet	28.08	29.14	29.14	29.14	29.14	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters:			Pump description:						Bailer description:					
<input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			<input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible						<input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC					
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1255	1300	1305	1310	1315	1320	1325	1330					Remarks
Purge vol.	gallons													
Purge rate	mL/min	140	140	140	140	140	140	140	140					
pH	su	6.7	6.3	6.2	6.4	6.5	6.4	6.5	6.5					
Temp.	°C	23.1	21.1	21.1	21.0	21.0	21.0	20.8	20.7					
Conductivity	µS/cm	396	394	390	391	390	390	390	390					
DO	mg/L	4.0	3.6	3.2	3.1	3.1	3.0	3.1	3.1					
ORP	mV	85.0	116	124	116	118	120	122	123					
Turbidity	NTU	21.6	9.1	3.1	1.9	2.5	2.2	2.6	1.9					
Color/tint	--	clear	clear	clear	clear	clear	clear	clear	clear					
Odor	--	none	none	none	none	none	none	none	none					

## Sample Data

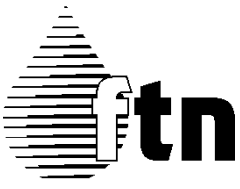
Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-120	9/7/2023	1335	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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**Second Half 2023 Detection Monitoring & Monthly Background  
Sampling Event  
October 2023**



### Groundwater Level Data Sheet

<b>Project Name:</b> Plum Point Energy Station 2023 Groundwater Services	<b>Project Number:</b> R14590-3037-001 EPA Program	<b>Investigator:</b> Michael Clayton FTN Associates, Ltd.	<b>Page 1 of 1</b>
<b>Weather Conditions:</b> Clear, 68°F, WSW @ 9 mph	<b>Measuring Device:</b> GeoTech 200'		

Well ID	Date	Time	Depth to Water (feet below TOC)	Damages/Repairs		
MW-101	10/9/2023	1223	22.90	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-102	10/9/2023	1238	26.52	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-103	10/9/2023	1208	24.19	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-104	10/9/2023	1144	21.74	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-108	10/9/2023	1114	31.44	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-110	10/9/2023	1136	21.56	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-113	10/9/2023	1105	28.47	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-115	10/9/2023	1057	27.82	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-116	10/9/2023	1230	25.87	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-117	10/9/2023	1257	24.85	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-118	10/9/2023	1150	22.74	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-119	10/9/2023	1217	26.71	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-120	10/9/2023	1157	31.15	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-121	10/9/2023	1304	22.19	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record



# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-101	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/11/2023	Sampler Organization: FTN Associates, Ltd.

### Site Description

Weather: cloudy	Air Temp. (°F): 79	Wind: south at 9 mph			
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Total depth from TOC	feet		
		TOC below/above ground	feet		
Damages/repairs needed:					

### Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	
Time	24-hour	1223	1530	1553	1602	1619	
Depth to Water	feet	22.90	23.00	23.00	23.00	23.00	
Product/Thickness	LNAPL/DNAPL feet						

### Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1535	1540	1545	1550	1555	1600							Remarks
Purge vol.	gallons													
Purge rate	mL/min	290	290	290	290	290	290							
pH	su	7.0	6.6	6.6	6.7	6.8	6.8							
Temp.	°C	19.3	19.3	19.3	19.2	19.2	19.2							
Conductivity	µS/cm	533	529	526	525	524	522							
DO	mg/L	2.5	1.7	1.3	1.3	1.3	1.3							
ORP	mV	104	130	126	123	121	120							
Turbidity	NTU	3.1	1.8	1.6	1.4	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-101	10/11/2023	1610	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-102	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/12/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 71	Wind: southeast at 12 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	
Time	24-hour	1238	1020	1047	1058	1123	
Depth to Water	feet	26.52	26.75	26.75	26.75	26.75	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1030	1035	1040	1045	1050	1055							Remarks
Purge vol.	gallons													
Purge rate	mL/min	120	90	90	90	90	90							
pH	su	6.7	6.5	6.5	6.6	6.6	6.6							
Temp.	°C	21.1	21.0	21.1	21.1	21.1	21.1							
Conductivity	µS/cm	518	519	520	527	528	529							
DO	mg/L	1.4	1.1	1.1	0.9	0.7	0.7							
ORP	mV	126	148	151	138	143	138							
Turbidity	NTU	12.9	14.9	14.6	10.3	8.7	7.0							
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-102	10/12/2023	1105	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-103	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/11/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: cloudy	Air Temp. (°F): 78	Wind: south at 5 mph	
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter    inches    2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Total depth from TOC    feet	
		TOC below/above ground    feet	
Damages/repairs needed:			

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	
Time	24-hour	1208	1335	1357	1407	1422	
Depth to Water	feet	24.19	24.28	24.44	24.44	24.44	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1340	1345	1350	1355	1400	1405							Remarks
Purge vol.	gallons													
Purge rate	mL/min	290	290	290	290	290	290							
pH	su	6.7	6.5	6.5	6.5	6.5	6.5							
Temp.	°C	19.7	19.5	19.7	19.7	19.6	19.6							
Conductivity	µS/cm	459	458	456	456	455	454							
DO	mg/L	1.4	1.1	0.7	0.7	0.6	0.5							
ORP	mV	105.6	120	125	122	119	119							
Turbidity	NTU	21.5	14.2	9.1	9.1	5.3	4.6							
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-103	10/11/2023	1415	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/11/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: cloudy	Air Temp. (°F): 59	Wind: south at 5 mph				
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		Total depth from TOC		feet		
		TOC below/above ground		feet		
Damages/repairs needed:						

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					Remarks
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	
Date	mm/dd/yy	10/9/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	
Time	24-hour	1144	0920	0953	1013	1100	
Depth to Water	feet	21.74	21.87	21.87	21.87	21.87	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:				Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC					
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	0930	0935	0940	0945	0950	0955	1000	1005	1010			Remarks
Purge vol.	gallons												
Purge rate	mL/min	240	240	240	240	240	240	240	240	240			
pH	su	5.8	5.8	6.2	6.4	6.5	6.6	6.6	6.6	6.6			
Temp.	°C	18.0	17.9	17.8	17.8	17.7	17.7	17.7	17.7	17.7			
Conductivity	µS/cm	513	497	486	486	485	485	485	486	486			
DO	mg/L	1.1	0.8	0.4	0.3	0.3	0.3	0.3	0.3	0.3			
ORP	mV	86.0	72.0	32.0	6.9	5.0	-2.6	5.2	6.0	8.0			
Turbidity	NTU	85.0	36.5	22.8	21.1	33.5	9.0	7.3	5.7	4.8			
Color/tint	--	O*	O*	O*	O*	O*	O*	O*	O*	O*			*orange
Odor	--	none	none	none	none	none	none	none	none	none			

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	10/11/2023	1020	5	0	
MW-104 DUP	10/11/2023	1025	5	0	
EPA EB-BG	10/11/2023	1200	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-108	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/10/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: cloudy	Air Temp. (°F): 59	Wind: south at 5 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/10/2023				
Time	24-hour	1114	1105				
Depth to Water	feet	31.44	31.52				
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

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

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
					*water level too low to collect a sample; depth to water was 31.52 ft and total well depth is 32.4 ft.

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-113	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/10/2023	Sampler Organization: FTN Associates, Ltd.

### Site Description

Weather: clear	Air Temp. (°F): 63	Wind: east-northeast at 5 mph				
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		Total depth from TOC		feet		
		TOC below/above ground		feet		
Damages/repairs needed:						

### Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					Remarks
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	
Date	mm/dd/yy	10/9/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	
Time	24-hour	1105	0955	1017	1026	1045	
Depth to Water	feet	29.47	29.54	29.55	29.55	29.55	
Product/Thickness	LNAPL/DNAPL feet						

### Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1000	1005	1010	1015	1020	1025							Remarks
Purge vol.	gallons													
Purge rate	mL/min	120	120	120	120	120	120							
pH	su	7.0	6.7	6.7	6.8	6.8	6.8							
Temp.	°C	20.0	19.4	19.5	19.5	19.4	19.5							
Conductivity	µS/cm	384	381	379	379	380	379							
DO	mg/L	6.4	5.9	5.6	5.7	5.4	5.5							
ORP	mV	118	137	138	135	136	136							
Turbidity	NTU	2.7	1.5	1.3	1.5	2.0	2.3							
Color/tint	--	clear	clear	clear	clear	clear	clear							
Odor	--	none	none	none	none	none	none							

### Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-113	10/10/2023	1035	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-115	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/10/2023	Sampler Organization: FTN Associates, Ltd.

### Site Description

Weather: clear	Air Temp. (°F): 56	Wind: east-northeast at 5 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

### Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	
Time	24-hour	1057	0850	0912	0928	0941	
Depth to Water	feet	27.82	27.98	27.98	27.98	27.98	
Product/Thickness	LNAPL/DNAPL feet						

### Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	0900	0905	0910	0915	0920	0925							Remarks
Purge vol.	gallons													
Purge rate	mL/min	170	170	150	150	150	150							
pH	su	6.2	6.8	6.9	6.9	7.0	6.9							
Temp.	°C	18.8	18.6	18.9	18.9	18.9	19.0							
Conductivity	µS/cm	549	545	543	545	544	544							
DO	mg/L	5.6	4.5	4.4	4.4	4.3	4.3							
ORP	mV	182	196	183	183	177	177							
Turbidity	NTU	2.6	1.7	1.5	1.4	1.3	1.3							
Color/tint	--	clear	clear	clear	clear	clear	clear							
Odor	--	none	none	none	none	none	none							

### Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-115	10/10/2023	0935	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-116	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/11/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: cloudy	Air Temp. (°F): 79	Wind: south at 9 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	
Time	24-hour	1230	1625	1348	1657	1720	
Depth to Water	feet	25.87	25.96	25.96	25.96	25.96	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1630	1635	1640	1645	1650	1655							Remarks
Purge vol.	gallons													
Purge rate	mL/min	220	220	220	220	220	220							
pH	su	6.4	6.7	6.4	6.4	6.5	6.5							
Temp.	°C	20.6	19.3	19.2	19.2	19.1	19.1							
Conductivity	µS/cm	468	468	471	473	475	476							
DO	mg/L	3.7	3.8	3.3	3.5	3.4	3.4							
ORP	mV	111	111	129	125	121	120							
Turbidity	NTU	2.2	2.1	2.0	1.8	1.6	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-116	10/11/2023	1710	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-117	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/12/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 72	Wind: southeast at 12 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023	
Time	24-hour	1257	1135	1152	1202	1225	
Depth to Water	feet	24.85	24.98	24.98	24.98	24.98	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1140	1145	1150	1155	1200							Remarks
Purge vol.	gallons												
Purge rate	mL/min	290	290	290	290	290							
pH	su	6.6	6.2	6.4	6.4	6.4							
Temp.	°C	19.3	19.1	19.1	19.1	19.1							
Conductivity	µS/cm	462	462	462	462	461							
DO	mg/L	6.6	6.1	6.0	6.0	6.0							
ORP	mV	87.4	131	126	127	128							
Turbidity	NTU	3.2	1.6	1.5	1.4	1.2							
Color/tint	--	clear	clear	clear	clear	clear							
Odor	--	none	none	none	none	none							

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-117	10/12/2023	1210	3	0	
MW-117 DUP	10/12/2023	1215	3	0	
EPA EB-1	10/12/2023	1245	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-118	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/11/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: cloudy	Air Temp. (°F): 75	Wind: south at 6 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	
Time	24-hour	1150	1220	1243	1302	1317	
Depth to Water	feet	22.74	22.88	22.88	22.88	22.88	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1230	1235	1240	1245	1250	1255	1300						Remarks
Purge vol.	gallons													
Purge rate	mL/min	260	260	260	260	260	260	260						
pH	su	6.2	6.0	6.1	6.2	6.3	6.3	6.3						
Temp.	°C	19.0	18.9	18.8	19.2	19.2	19.1	19.2						
Conductivity	µS/cm	476	474	470	470	467	462	460						
DO	mg/L	5.5	5.2	5.0	5.0	4.9	4.9	4.8						
ORP	mV	123	128	121	110	110	111	113						
Turbidity	NTU	3.6	1.7	1.3	1.4	1.3	1.2	1.1						
Color/tint	--	clear	clear	clear	clear	clear	clear	clear						
Odor	--	none	none	none	none	none	none	none						

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-118	10/11/2023	1310	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-119	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/11/2023	Sampler Organization: FTN Associates, Ltd.

### Site Description

Weather: cloudy	Air Temp. (°F): 78	Wind: south at 8 mph				
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		Total depth from TOC		feet		
		TOC below/above ground		feet		
Damages/repairs needed:						

### Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					Remarks
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	
Date	mm/dd/yy	10/9/2023	10/11/2023	10/11/2023	10/11/2023	10/11/2023	
Time	24-hour	1217	1430	1450	1502	1520	
Depth to Water	feet	26.71	26.82	26.82	26.82	26.82	
Product/Thickness	LNAPL/DNAPL feet						

### Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible					Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC						
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1435	1440	1445	1450	1455	1500							Remarks
Purge vol.	gallons													
Purge rate	mL/min	300	300	300	300	300	300							
pH	su	7.2	6.8	6.6	6.7	6.8	6.8							
Temp.	°C	20.6	20.2	20.2	20.5	20.6	20.7							
Conductivity	µS/cm	653	656	649	633	624	616							
DO	mg/L	4.9	2.9	2.4	2.2	2.0	1.8							
ORP	mV	90.0	103	118	115	111	110							
Turbidity	NTU	6.5	4.2	3.2	1.9	1.6	1.5							
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-119	10/11/2023	1510	3	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/11/2023	Sampler Organization: FTN Associates, Ltd.

### Site Description

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

### Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/11/2023				
Time	24-hour	1157	1115				
Depth to Water	feet	31.15	31.28				
Product/Thickness	LNAPL/DNAPL feet						

### Field Data

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

### Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-120	---	---	---	---	*water level too low to collect sample

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 10/10/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 78	Wind: northwest at 4 mph
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter: inches 2    Well locked? Total depth from TOC: feet <input checked="" type="checkbox"/> Yes TOC below/above ground: feet <input type="checkbox"/> No
Damages/repairs needed:		

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	10/9/2023	10/10/2023	10/10/2023	10/10/2023	10/10/2023	
Time	24-hour	1304	1430	1447	1512	1542	
Depth to Water	feet	22.19	22.26	22.28	22.28	22.28	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1435	1440	1445	1450	1455	1500	1505	1510				Remarks
Purge vol.	gallons												
Purge rate	mL/min	280	280	280	280	280	280	280	280				
pH	su	6.6	6.2	6.1	6.2	3.6	6.4	6.4	6.4				
Temp.	°C	21.4	20.9	20.9	21.2	21.3	21.3	21.5	21.4				
Conductivity	µS/cm	266	266	263	260	260	259	258	258				
DO	mg/L	5.5	5.0	4.7	4.6	4.6	4.5	4.4	4.4				
ORP	mV	78.2	107	123	119	118	118	118	118				
Turbidity	NTU	2.2	1.4	1.8	1.4	1.7	1.2	3.1	1.4				
Color/tint	--	clear	clear	clear	clear	clear	clear	clear	clear				
Odor	--	none	none	none	none	none	none	none	none				

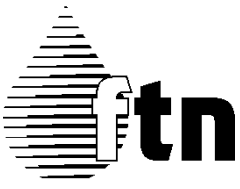
## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-121	10/10/2023	1520	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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**Monthly Background Sampling Event  
November 2023**



## Groundwater Level Data Sheet

<b>Project Name:</b> Plum Point Energy Station 2023 Groundwater Services	<b>Project Number:</b> R14590-3037-001 EPA Program	<b>Investigator:</b> Michael Clayton FTN Associates, Ltd.	<b>Page 1 of 1</b>
<b>Weather Conditions:</b>	<b>Measuring Device:</b> GeoTech 200'		

Well ID	Date	Time	Depth to Water (feet below TOC)	Damages/Repairs		
MW-101	11/6/2023	1230	24.42	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-102	11/6/2023	1242	28.21	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-103	11/6/2023	1216	25.72	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input checked="" type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-104	11/6/2023	1200	23.24	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-108	11/6/2023	1123	31.78	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-110	11/6/2023	1153	23.09	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-113	11/6/2023	1116	31.19	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-115	11/6/2023	1110	29.42	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-116	11/6/2023	1235	27.50	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-117	11/6/2023	1300	26.60	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-118	11/6/2023	1205	24.42	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-119	11/6/2023	1221	28.12	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-120	11/6/2023	1208	32.66	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-121	11/6/2023	1307	23.81	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record



# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 11/7/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 76	Wind: south-southwest at 12 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	11/6/2023	11/7/2023	11/7/2023	11/7/2023	11/7/2023	
Time	24-hour	1200	1245	1306	1318	1356	
Depth to Water	feet	23.24	23.31	23.55	23.55	23.55	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1250	1255	1300	1305	1310	1315						Remarks
Purge vol.	gallons												
Purge rate	mL/min	210	210	210	210	210	210						
pH	su	7.1	6.6	6.7	6.8	6.8	6.9						
Temp.	°C	18.9	18.6	18.6	18.5	18.5	18.5						
Conductivity	µS/cm	507	507	5.9	510	509	510						
DO	mg/L	2.9	0.8	0.7	0.6	0.6	0.5						
ORP	mV	-27	-2.3	-1.8	-1.3	2.6	-0.8						
Turbidity	NTU	76.6	48.1	34.9	16.1	10.9	5.2						
Color/tint	--	clear*	clear*	clear†	clear†	clear†	clear						*with orange
Odor	--	none	none	none	none	none	none						†with particulate

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	11/7/2023	1320	5	0	
MW-104 DUP	11/7/2023	1325	5	0	
EPA EB-BG	11/7/2023	1410	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-108	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 11/6/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

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

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	11/6/2023					
Time	24-hour	1123					
Depth to Water	feet	31.78					
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible			Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC		
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408					
Time	24-hour						Remarks
Purge vol.	gallons						
Purge rate	mL/min						
pH	su						
Temp.	°C						
Conductivity	µS/cm						
DO	mg/L						
ORP	mV						
Turbidity	NTU						
Color/tint	--						
Odor	--						

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-108	11/6/2023	---	---	---	water level was too low to collect sample

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 11/7/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 71	Wind: south-southwest at 12 mph
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter: inches 2    Well locked? Total depth from TOC: feet <input checked="" type="checkbox"/> Yes TOC below/above ground: feet <input type="checkbox"/> No
Damages/repairs needed:		

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	11/6/2023	11/7/2023	11/7/2023	11/7/2023	11/7/2023	
Time	24-hour	1153	1015	1042	1057	1124	
Depth to Water	feet	23.09	23.15	23.15	23.15	23.15	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1025	1030	1035	1040	1045	1050	1055						Remarks
Purge vol.	gallons													
Purge rate	mL/min	190	190	190	190	190	190	190						
pH	su	7.1	6.9	6.8	6.8	6.9	7.0	7.0						
Temp.	°C	20.1	19.7	19.7	19.6	19.7	19.5	19.4						
Conductivity	µS/cm	496	494	491	489	488	488	488						
DO	mg/L	3.7	2.1	1.6	1.4	1.0	0.8	0.7						
ORP	mV	143	114	91.0	51.0	35.0	33.0	40.0						
Turbidity	NTU	12.9	4.5	2.6	2.1	2.1	2.1	2.0						
Color/tint	--	clear	clear	clear	clear	clear	clear	clear						
Odor	--	none	none	none	none	none	none	none						

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	11/7/2023	1100	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 11/6/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

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

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	11/6/2023					
Time	24-hour	1208					
Depth to Water	feet	32.66					
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible			Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC		
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408					
Time	24-hour						Remarks
Purge vol.	gallons						
Purge rate	mL/min						
pH	su						
Temp.	°C						
Conductivity	µS/cm						
DO	mg/L						
ORP	mV						
Turbidity	NTU						
Color/tint	--						
Odor	--						

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-120	11/6/2023	---	---	---	water level was too low to collect sample

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 11/7/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 74	Wind: south-southwest at 16 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	11/6/2023	11/7/2023	11/7/2023	11/7/2023	11/7/2023	
Time	24-hour	1307	1135	1153	1212	1236	
Depth to Water	feet	23.81	23.86	23.86	23.86	23.86	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC						
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408										
Time	24-hour	1140	1145	1150	1155	1200	1205	1210					Remarks
Purge vol.	gallons												
Purge rate	mL/min	200	200	200	200	200	200	200					
pH	su	6.4	6.1	6.0	6.1	6.2	6.2	6.2					
Temp.	°C	22.0	21.7	21.5	21.6	21.6	21.5	21.5					
Conductivity	µS/cm	291	289	285	281	279	278	279					
DO	mg/L	6.5	6.0	5.8	5.7	5.5	5.5	6.3					
ORP	mV	111	133	134	133	131	132	135					
Turbidity	NTU	1.2	2.5	1.0	0.7	1.0	0.6	0.6					
Color/tint	--	clear	clear	clear	clear	clear	clear	clear					
Odor	--	none	none	none	none	none	none	none					

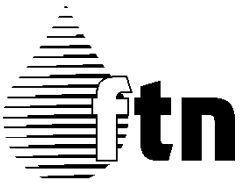
## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-121	11/7/2023	1215	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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**Second Half 2023 Verification & Monthly Background Sampling Event  
December 2023**



### Groundwater Level Data Sheet

<b>Project Name:</b> Plum Point Energy Station 2023 Groundwater Services	<b>Project Number:</b> R14590-3037-001 EPA Program	<b>Investigator:</b> Michael Clayton FTN Associates, Ltd.	<b>Page 1 of 1</b>
<b>Weather Conditions:</b> Clear, 47°F, WSW @ 10 mph	<b>Measuring Device:</b> GeoTech 200'		

Well ID	Date	Time	Depth to Water (feet below TOC)	Damages/Repairs		
MW-101	12/5/2023	1119	25.61	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-102	12/5/2023	1131	29.14	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-103	12/5/2023	1105	26.74	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-104	12/5/2023	1034	24.31	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-108	12/5/2023	0952	31.86	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-110	12/5/2023	1022	24.13	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-113	12/5/2023	0942	31.75	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-115	12/5/2023	0936	30.11	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-116	12/5/2023	1125	28.50	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-117	12/5/2023	1140	27.56	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-118	12/5/2023	1056	25.45	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-119	12/5/2023	1112	29.35	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-120	12/5/2023	1040	33.71	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
MW-121	12/5/2023	1050	24.84	<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record
				<input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment	<input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation	<input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record

# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-104	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 12/5/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 62	Wind: southwest at 15 mph
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter: inches 2 Total depth from TOC: feet TOC below/above ground: feet
Damages/repairs needed:		

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	12/5/2023	12/5/2023	12/5/2023	12/5/2023	12/5/2023	
Time	24-hour	1034	1300	1347	1358	1424	
Depth to Water	feet	24.31	24.32	24.50	24.50	24.50	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1310	1315	1320	1325	1330	1335	1340	1345	1350	1355		Remarks
Purge vol.	gallons												
Purge rate	mL/min	170	170	170	170	170	170	170	170	170	170		
pH	su	6.9	6.3	6.3	6.4	6.5	6.7	6.7	6.8	6.8	6.8		
Temp.	°C	18.4	17.9	17.8	17.7	17.5	17.5	17.5	17.6	17.7	17.7		
Conductivity	µS/cm	799	698	609	587	581	581	581	581	581	581		
DO	mg/L	4.5	1.5	0.9	0.7	0.4	0.3	0.3	0.3	0.4	0.3		
ORP	mV	51.5	92.9	88.4	58.5	2.1	-0.2	-9.0	-15.2	-17.7	-19.0		
Turbidity	NTU	124	98.9	77.7	70.3	53.9	33.5	21.0	14.7	10.0	9.0		
Color/tint	--	OP*	OP*	OP*	OP*	OP*	OP*	OP*	clear	clear	clear		*orange particulate
Odor	--	none	none	none	none	none	none	none	none	none	none		

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-104	12/5/2023	1400	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-110	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 12/5/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: clear	Air Temp. (°F): 62	Wind: southwest at 17 mph										
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table>	Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total depth from TOC	feet		TOC below/above ground	feet	
Well diameter	inches	2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
Total depth from TOC	feet											
TOC below/above ground	feet											
Damages/repairs needed:												

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	12/5/2023	12/5/2023	12/5/2023	12/5/2023	12/5/2023	
Time	24-hour	1022	1440	1513	1519	1540	
Depth to Water	feet	24.13	24.14	24.14	24.14	24.14	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:			Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet		Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons		= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1445	1450	1455	1500	1505	1510	1515						Remarks
Purge vol.	gallons													
Purge rate	mL/min	210	210	210	210	210	210	210						
pH	su	7.3	6.9	6.8	6.8	7.0	7.1	9.1						
Temp.	°C	18.3	17.9	17.8	17.7	17.8	17.8	17.8						
Conductivity	µS/cm	560	559	558	556	557	557	557						
DO	mg/L	3.3	0.8	0.5	0.4	0.3	0.4	0.4						
ORP	mV	49.1	63.6	60.8	61.3	60.1	61.3	62.1						
Turbidity	NTU	145	94.7	51.0	31.2	18.9	10.5	8.0						
Color/tint	--	cloud	OP*	OP*	OP*	clear	clear	clear						*orange particulate
Odor	--	none	none	none	none	none	none	none						

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-110	12/5/2023	1520	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-117	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 12/6/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 49	Wind: north at 7 mph	
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter    inches    2	Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Total depth from TOC    feet	
		TOC below/above ground    feet	
Damages/repairs needed:			

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	12/5/2023	12/6/2023	12/6/2023	12/6/2023	12/6/2023	
Time	24-hour	1140	1320	1343	1352	1419	
Depth to Water	feet	27.56	27.59	27.59	27.59	27.59	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC								
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No												
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408												
Time	24-hour	1325	1330	1335	1340	1345	1350							Remarks
Purge vol.	gallons													
Purge rate	mL/min	200	200	200	200	200	200							
pH	su	6.7	6.7	6.7	6.7	6.7	6.7							
Temp.	°C	17.9	18.0	18.0	18.1	18.0	18.1							
Conductivity	µS/cm	452	453	453	454	455	455							
DO	mg/L	7.3	6.2	6.0	6.1	6.1	6.1							
ORP	mV	110.9	114.3	112.8	112.8	112.3	113.0							
Turbidity	NTU	2.5	1.1	0.6	0.6	0.6	0.5							
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-117	12/6/2023	1355	1	0	
MW-117 DUP	12/6/2023	1400	1	0	
EPA EB-2	12/6/2023	1425	1	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-120	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 12/5/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

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

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	12/5/2023					
Time	24-hour	1040					
Depth to Water	feet	33.71					
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible			Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC		
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408					
Time	24-hour						Remarks
Purge vol.	gallons						
Purge rate	mL/min						
pH	su						
Temp.	°C						
Conductivity	µS/cm						
DO	mg/L						
ORP	mV						
Turbidity	NTU						
Color/tint	--						
Odor	--						

## Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-120	12/5/2023	---	---	---	water level was too low to collect sample

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# Groundwater Sampling Record

Facility: Plum Point Energy Station	Site ID: MW-121	Sampler: Michael Clayton
Project Number: R14590-3037-001 (EPA)	Date: 12/6/2023	Sampler Organization: FTN Associates, Ltd.

## Site Description

Weather: partly cloudy	Air Temp. (°F): 45	Wind: north-northeast at 5 mph
Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other:	Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other:	Well diameter: inches 2    Well locked? Total depth from TOC: feet <input checked="" type="checkbox"/> Yes TOC below/above ground: feet <input type="checkbox"/> No
Damages/repairs needed:		

## Water Level Data

Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other:		Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input checked="" type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input type="checkbox"/> Solinst 101 <input type="checkbox"/> Other:					
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Date	mm/dd/yy	12/5/2023	12/6/2023	12/6/2023	12/6/2023	12/6/2023	
Time	24-hour	1050	1030	1108	1126	1149	
Depth to Water	feet	24.84	24.88	24.88	24.88	24.88	
Product/Thickness	LNAPL/DNAPL feet						

## Field Data

Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other:		Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [ <input type="checkbox"/> dedicated / <input type="checkbox"/> portable ] <input type="checkbox"/> Submersible				Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC							
Purge depth	feet	Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Casing vol.	gallons	= [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] <sup>2</sup> × 0.0408											
Time	24-hour	1045	1050	1055	1100	1105	1110	1115	1120	1125			Remarks
Purge vol.	gallons												
Purge rate	mL/min	290	290	290	290	290	290	290	290	290			
pH	su	6.1	6.0	6.2	6.2	6.2	6.3	6.3	6.4	6.4			
Temp.	°C	19.3	19.3	19.3	19.2	18.8	19.0	19.2	19.3	19.1			
Conductivity	µS/cm	291	286	283	277	277	273	271	269	268			
DO	mg/L	4.6	4.3	4.0	3.7	3.6	3.5	3.4	3.4	3.3			
ORP	mV	171.4	169.5	160.5	158.6	164.4	156.3	153.6	152.0	153.0			
Turbidity	NTU	7.6	4.0	2.8	2.3	1.0	1.2	0.8	1.0	0.9			
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-121	12/6/2023	1130	5	0	
MW-121 DUP	12/6/2023	1135	5	0	
EPA EB-BG	12/6/2023	1200	5	0	

Sampler's Name (print): Michael Clayton	Sampler Signature: transcribed by HLF
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# **APPENDIX B**

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**Laboratory Reports**

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**First Half 2023 Detection Monitoring Sampling Event  
April 2023**

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

## Plum Point Services Co., LLC

Sample Delivery Group: L1607560  
Samples Received: 04/20/2023  
Project Number: R14590-3037-001  
Description: Plum Point Energy Station

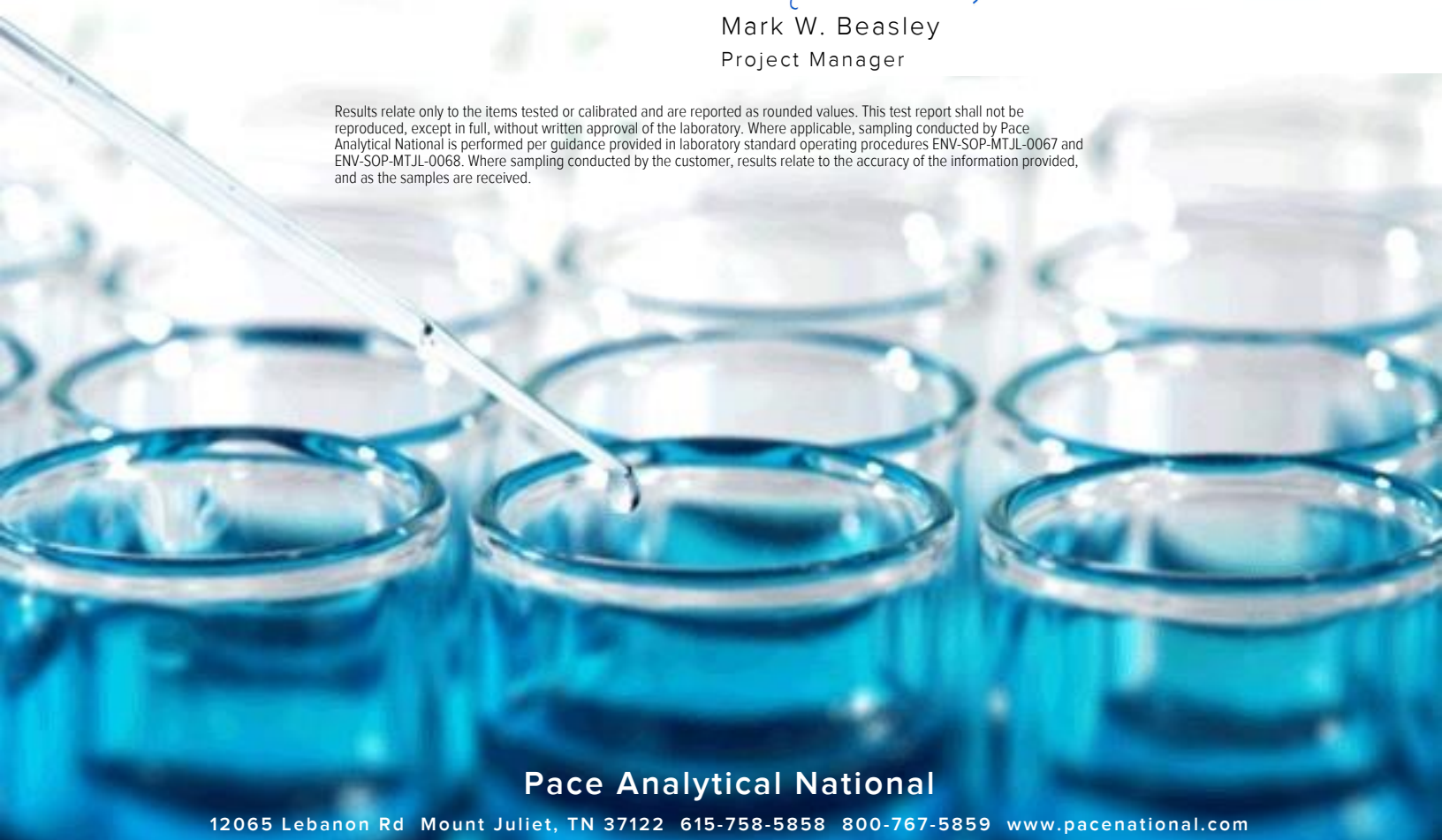
Report To: Dana Derrington  
2739 SCR 623  
Osceola, AR 72370

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](http://www.pacenational.com)

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>5</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>6</b>	<b>5</b> Sr
MW-101 L1607560-01	6	
MW-102 L1607560-02	7	
MW-103 L1607560-03	8	
MW-108 L1607560-04	9	
MW-113 L1607560-05	10	<b>6</b> Qc
MW-115 L1607560-06	11	
MW-116 L1607560-07	12	<b>7</b> Gl
MW-117 L1607560-08	13	<b>8</b> Al
MW-118 L1607560-09	14	
MW-119 L1607560-10	15	
MW-116 DUP L1607560-11	16	<b>9</b> Sc
EPA EB L1607560-12	17	
<b>Qc: Quality Control Summary</b>	<b>18</b>	
Gravimetric Analysis by Method 2540 C-2011	18	
Wet Chemistry by Method 9056A	21	
Metals (ICP) by Method 6010B	27	
<b>Gl: Glossary of Terms</b>	<b>28</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>29</b>	
<b>Sc: Sample Chain of Custody</b>	<b>30</b>	

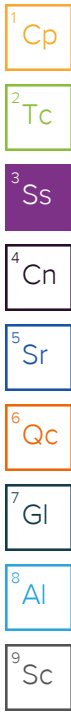


# SAMPLE SUMMARY

## MW-101 L1607560-01 GW

Collected by Michael Clayton    Collected date/time 04/19/23 11:10    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 21:58	04/26/23 21:58	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 09:55	ABL	Mt. Juliet, TN



## MW-102 L1607560-02 GW

Collected by Michael Clayton    Collected date/time 04/19/23 12:55    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 23:17	04/26/23 23:17	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 09:58	ABL	Mt. Juliet, TN

## MW-103 L1607560-03 GW

Collected by Michael Clayton    Collected date/time 04/18/23 16:20    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047253	1	04/23/23 16:09	04/23/23 16:51	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 23:32	04/26/23 23:32	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:01	ABL	Mt. Juliet, TN

## MW-108 L1607560-04 GW

Collected by Michael Clayton    Collected date/time 04/18/23 11:15    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047253	1	04/23/23 16:09	04/23/23 16:51	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 23:46	04/26/23 23:46	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:03	ABL	Mt. Juliet, TN

## MW-113 L1607560-05 GW

Collected by Michael Clayton    Collected date/time 04/17/23 16:45    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047244	1	04/23/23 15:59	04/24/23 10:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 23:59	04/26/23 23:59	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:11	ABL	Mt. Juliet, TN

## MW-115 L1607560-06 GW

Collected by Michael Clayton    Collected date/time 04/17/23 15:55    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047253	1	04/23/23 16:09	04/23/23 16:51	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049412	1	04/27/23 08:14	04/27/23 08:14	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:14	ABL	Mt. Juliet, TN

# SAMPLE SUMMARY

## MW-116 L1607560-07 GW

Collected by Michael Clayton    Collected date/time 04/19/23 12:00    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 00:32	04/27/23 00:32	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:17	ABL	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## MW-117 L1607560-08 GW

Collected by Michael Clayton    Collected date/time 04/19/23 14:05    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 00:45	04/27/23 00:45	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:19	ABL	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

## MW-118 L1607560-09 GW

Collected by Michael Clayton    Collected date/time 04/18/23 15:15    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047244	1	04/23/23 15:59	04/24/23 10:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 01:00	04/27/23 01:00	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:22	ABL	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

## MW-119 L1607560-10 GW

Collected by Michael Clayton    Collected date/time 04/18/23 17:25    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047244	1	04/23/23 15:59	04/24/23 10:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 01:13	04/27/23 01:13	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:25	ABL	Mt. Juliet, TN

## MW-116 DUP L1607560-11 GW

Collected by Michael Clayton    Collected date/time 04/19/23 12:05    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 01:54	04/27/23 01:54	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:27	ABL	Mt. Juliet, TN

## EPA EB L1607560-12 GW

Collected by Michael Clayton    Collected date/time 04/19/23 14:30    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049837	1	04/27/23 21:52	04/27/23 21:52	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:30	ABL	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	3150		379	1000	1	04/26/2023 21:58	<a href="#">WG2049427</a>
Fluoride	243		64.0	150	1	04/26/2023 21:58	<a href="#">WG2049427</a>
Sulfate	7480		594	5000	1	04/26/2023 21:58	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	60.6	J	20.0	200	1	04/26/2023 09:55	<a href="#">WG2046390</a>
Calcium	108000		79.3	1000	1	04/26/2023 09:55	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	390000		10000	1	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	2750		379	1000	1	04/26/2023 23:17	<a href="#">WG2049427</a>
Fluoride	158		64.0	150	1	04/26/2023 23:17	<a href="#">WG2049427</a>
Sulfate	63500		594	5000	1	04/26/2023 23:17	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	88.4	J	20.0	200	1	04/26/2023 09:58	<a href="#">WG2046390</a>
Calcium	101000		79.3	1000	1	04/26/2023 09:58	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	322000		10000	1	04/23/2023 16:51	<a href="#">WG2047253</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1000		379	1000	1	04/26/2023 23:32	<a href="#">WG2049427</a>
Fluoride	157		64.0	150	1	04/26/2023 23:32	<a href="#">WG2049427</a>
Sulfate	7820		594	5000	1	04/26/2023 23:32	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	62.2	J	20.0	200	1	04/26/2023 10:01	<a href="#">WG2046390</a>
Calcium	84800		79.3	1000	1	04/26/2023 10:01	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	493000		10000	1	04/23/2023 16:51	<a href="#">WG2047253</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1230		379	1000	1	04/26/2023 23:46	<a href="#">WG2049427</a>
Fluoride	161		64.0	150	1	04/26/2023 23:46	<a href="#">WG2049427</a>
Sulfate	34800		594	5000	1	04/26/2023 23:46	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	128	J	20.0	200	1	04/26/2023 10:03	<a href="#">WG2046390</a>
Calcium	146000		79.3	1000	1	04/26/2023 10:03	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	293000		10000	1	04/24/2023 10:10	<a href="#">WG2047244</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	995	J	379	1000	1	04/26/2023 23:59	<a href="#">WG2049427</a>
Fluoride	90.7	J	64.0	150	1	04/26/2023 23:59	<a href="#">WG2049427</a>
Sulfate	4570	J	594	5000	1	04/26/2023 23:59	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	84.0	J	20.0	200	1	04/26/2023 10:11	<a href="#">WG2046390</a>
Calcium	74600		79.3	1000	1	04/26/2023 10:11	<a href="#">WG2046390</a>

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



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	351000		10000	1	04/23/2023 16:51	<a href="#">WG2047253</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	819	J	379	1000	1	04/27/2023 08:14	<a href="#">WG2049412</a>
Fluoride	205		64.0	150	1	04/27/2023 08:14	<a href="#">WG2049412</a>
Sulfate	5190		594	5000	1	04/27/2023 08:14	<a href="#">WG2049412</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	41.6	J	20.0	200	1	04/26/2023 10:14	<a href="#">WG2046390</a>
Calcium	101000		79.3	1000	1	04/26/2023 10:14	<a href="#">WG2046390</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	377000		10000	1	04/26/2023 15:48	<a href="#">WG2048217</a>

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

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	5410		379	1000	1	04/27/2023 00:32	<a href="#">WG2049427</a>
Fluoride	156		64.0	150	1	04/27/2023 00:32	<a href="#">WG2049427</a>
Sulfate	50600		594	5000	1	04/27/2023 00:32	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	81.4	J	20.0	200	1	04/26/2023 10:17	<a href="#">WG2046390</a>
Calcium	97100		79.3	1000	1	04/26/2023 10:17	<a href="#">WG2046390</a>

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	309000		10000	1	04/26/2023 15:48	<a href="#">WG2048217</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	808	J	379	1000	1	04/27/2023 00:45	<a href="#">WG2049427</a>
Fluoride	108	J	64.0	150	1	04/27/2023 00:45	<a href="#">WG2049427</a>
Sulfate	13400		594	5000	1	04/27/2023 00:45	<a href="#">WG2049427</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	74.5	J	20.0	200	1	04/26/2023 10:19	<a href="#">WG2046390</a>
Calcium	90000		79.3	1000	1	04/26/2023 10:19	<a href="#">WG2046390</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	268000		10000	1	04/24/2023 10:10	<a href="#">WG2047244</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	663	J	379	1000	1	04/27/2023 01:00	<a href="#">WG2049427</a>
Fluoride	147	J	64.0	150	1	04/27/2023 01:00	<a href="#">WG2049427</a>
Sulfate	17000		594	5000	1	04/27/2023 01:00	<a href="#">WG2049427</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	66.4	J	20.0	200	1	04/26/2023 10:22	<a href="#">WG2046390</a>
Calcium	71800		79.3	1000	1	04/26/2023 10:22	<a href="#">WG2046390</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	350000		10000	1	04/24/2023 10:10	<a href="#">WG2047244</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1260		379	1000	1	04/27/2023 01:13	<a href="#">WG2049427</a>
Fluoride	228		64.0	150	1	04/27/2023 01:13	<a href="#">WG2049427</a>
Sulfate	18900		594	5000	1	04/27/2023 01:13	<a href="#">WG2049427</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	64.2	J	20.0	200	1	04/26/2023 10:25	<a href="#">WG2046390</a>
Calcium	95800		79.3	1000	1	04/26/2023 10:25	<a href="#">WG2046390</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	369000		10000	1	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	5340		379	1000	1	04/27/2023 01:54	<a href="#">WG2049427</a>
Fluoride	154		64.0	150	1	04/27/2023 01:54	<a href="#">WG2049427</a>
Sulfate	50200		594	5000	1	04/27/2023 01:54	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	81.9	J	20.0	200	1	04/26/2023 10:27	<a href="#">WG2046390</a>
Calcium	96500		79.3	1000	1	04/26/2023 10:27	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	ND		14300	1	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	U		379	1000	1	04/27/2023 21:52	<a href="#">WG2049837</a>
Fluoride	U		64.0	150	1	04/27/2023 21:52	<a href="#">WG2049837</a>
Sulfate	U		594	5000	1	04/27/2023 21:52	<a href="#">WG2049837</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	U		20.0	200	1	04/26/2023 10:30	<a href="#">WG2046390</a>
Calcium	910	J	79.3	1000	1	04/26/2023 10:30	<a href="#">WG2046390</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3917134-1 04/24/23 10:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	↓	10000	10000

1 Cp

2 Tc

3 Ss

L1606688-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1606688-01 04/24/23 10:10 • (DUP) R3917134-3 04/24/23 10:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1130000	1210000	1	6.85	J3	5

4 Cn

5 Sr

6 Qc

L1608341-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1608341-12 04/24/23 10:10 • (DUP) R3917134-4 04/24/23 10:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	657000	691000	1	4.95		5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3917134-2 04/24/23 10:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8440000	95.9	77.3-123	



Method Blank (MB)

(MB) R3917318-1 04/23/23 16:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	↓	10000	10000

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1606688-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1606688-03 04/23/23 16:51 • (DUP) R3917318-3 04/23/23 16:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	652000	669000	1	2.62		5

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

L1608341-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1608341-03 04/23/23 16:51 • (DUP) R3917318-4 04/23/23 16:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	914000	850000	1	7.26	↓	5

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3917318-2 04/23/23 16:51

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8470000	96.3	77.3-123	

Method Blank (MB)

(MB) R3918652-1 04/26/23 15:48

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

1 Cp

2 Tc

3 Ss

L1606528-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1606528-15 04/26/23 15:48 • (DUP) R3918652-3 04/26/23 15:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	488000	499000	1	2.23		5

4 Cn

5 Sr

6 Qc

L1607441-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1607441-10 04/26/23 15:48 • (DUP) R3918652-4 04/26/23 15:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	836000	816000	1	2.42		5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3918652-2 04/26/23 15:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	9030000	103	77.3-123	

Method Blank (MB)

(MB) R3918217-1 04/26/23 23:24

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1609198-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1609198-08 04/27/23 01:06 • (DUP) R3918217-3 04/27/23 01:19

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

L1609464-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1609464-04 04/27/23 07:11 • (DUP) R3918217-6 04/27/23 07:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	21500	21400	1	0.467		15
Fluoride	196	201	1	2.67		15
Sulfate	32700	32800	1	0.365		15

Laboratory Control Sample (LCS)

(LCS) R3918217-2 04/26/23 23:38

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	40100	100	80.0-120	
Fluoride	8000	8330	104	80.0-120	
Sulfate	40000	40300	101	80.0-120	

L1609198-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1609198-08 04/27/23 01:06 • (MS) R3918217-4 04/27/23 01:33 • (MSD) R3918217-5 04/27/23 01:47

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	U	50500	50700	101	101	1	80.0-120			0.456	15
Fluoride	5000	U	5200	5230	104	105	1	80.0-120			0.508	15
Sulfate	50000	U	50100	50400	100	101	1	80.0-120			0.616	15

L1609464-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1609464-04 04/27/23 07:11 • (MS) R3918217-7 04/27/23 07:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	21500	70400	97.9	1	80.0-120	
Fluoride	5000	196	5370	103	1	80.0-120	
Sulfate	50000	32700	81800	98.1	1	80.0-120	

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

Method Blank (MB)

(MB) R3918382-1 04/26/23 20:23

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

L1607560-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1607560-01 04/26/23 21:58 • (DUP) R3918382-3 04/26/23 22:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	3150	3100	1	1.48		15
Fluoride	243	246	1	1.11		15
Sulfate	7480	7400	1	0.993		15

L1607593-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1607593-03 04/27/23 02:35 • (DUP) R3918382-6 04/27/23 02:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	24800	24500	1	1.09		15
Fluoride	196	195	1	0.307		15
Sulfate	413000	414000	1	0.447	E	15

Laboratory Control Sample (LCS)

(LCS) R3918382-2 04/26/23 20:36

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	39400	98.5	80.0-120	
Fluoride	8000	8350	104	80.0-120	
Sulfate	40000	38100	95.3	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1607560-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607560-01 04/26/23 21:58 • (MS) R3918382-4 04/26/23 22:25 • (MSD) R3918382-5 04/26/23 23:04

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	3150	52800	53500	99.2	101	1	80.0-120			1.31	15
Fluoride	5000	243	5330	5410	102	103	1	80.0-120			1.39	15
Sulfate	50000	7480	55600	56400	96.3	97.9	1	80.0-120			1.40	15

L1607593-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1607593-03 04/27/23 02:35 • (MS) R3918382-7 04/27/23 03:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	24800	73600	97.6	1	80.0-120	
Fluoride	5000	196	5140	98.8	1	80.0-120	
Sulfate	50000	413000	464000	103	1	80.0-120	E

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3918526-1 04/27/23 15:10

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

L1607533-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1607533-04 04/27/23 16:38 • (DUP) R3918526-3 04/27/23 16:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	1910000	1930000	10	0.896		15
Fluoride	8340	8500	10	1.97		15
Sulfate	1450000	1460000	10	0.891		15

L1607533-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1607533-09 04/27/23 22:59 • (DUP) R3918526-6 04/27/23 23:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	7290000	7320000	10	0.405	MF	15
Fluoride	666	643	10	3.48	U	15
Sulfate	1340000	1340000	10	0.436		15

Laboratory Control Sample (LCS)

(LCS) R3918526-2 04/27/23 15:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	40400	101	80.0-120	
Fluoride	8000	8310	104	80.0-120	
Sulfate	40000	40400	101	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1607533-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607533-04 04/27/23 16:38 • (MS) R3918526-4 04/27/23 17:05 • (MSD) R3918526-5 04/27/23 17:19

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 %
Chloride	50000	1910000	1870000	1870000	0.000	0.000	10	80.0-120	<u>V</u>	<u>V</u>	0.227	15
Fluoride	5000	8340	12900	13100	91.8	95.1	10	80.0-120			1.26	15
Sulfate	50000	1450000	1430000	1430000	0.000	0.000	10	80.0-120	<u>V</u>	<u>V</u>	0.239	15

L1607533-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607533-09 04/27/23 22:59 • (MS) R3918526-7 04/27/23 23:53 • (MSD) R3918526-8 04/28/23 00:06

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 %
Chloride	50000	7290000	6920000	6910000	0.000	0.000	10	80.0-120	<u>E V</u>	<u>E V</u>	0.123	15
Fluoride	5000	666	5000	4990	86.7	86.5	10	80.0-120			0.248	15
Sulfate	50000	1340000	1300000	1300000	0.000	0.000	10	80.0-120	<u>V</u>	<u>V</u>	0.00525	15

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3917571-1 04/26/23 09:40

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

Laboratory Control Sample (LCS)

(LCS) R3917571-2 04/26/23 09:42

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	1000	100	80.0-120	
Calcium	10000	10200	102	80.0-120	

L1607673-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607673-01 04/26/23 09:45 • (MS) R3917571-4 04/26/23 09:50 • (MSD) R3917571-5 04/26/23 09:52

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	230	1220	1210	98.7	97.7	1	75.0-125			0.881	20
Calcium	10000	62800	71900	71700	90.6	89.0	1	75.0-125			0.221	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

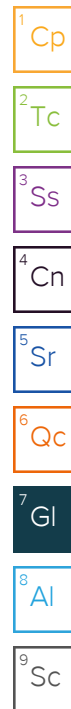
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

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



# ACCREDITATIONS & LOCATIONS

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Company Name/Address:

**Plum Point Services Co., LLC**

2739 SCR 623  
Osceola, AR 72370

Billing Information:

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

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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 **C** ET

Phone: **501-920-9642**

Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):  
*Michael Clayton*

**Rush?** (Lab MUST Be Notified)

Quote #

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

Date Results Needed

Immediately  
Packed on Ice N \_\_\_ Y

No.  
of  
Cnts

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	CI, F, SO4 125m HDPE-NoPres	TDS 250m HDPE-NoPres	Total B, Ca 250m HDPE-HNO3	Analysis / Container / Preservative	Chain of Custody
MW-101		GW		4/19/23	1116	3	X	X	X		
MW-102		GW		4/19/23	1255	3	X	X	X		
MW-103		GW		4/18/23	1620	3	X	X	X		
MW-108		GW		4/18/23	1115	3	X	X	X		
MW-113		GW		4/17/23	1645	3	X	X	X		
MW-115		GW		4/17/23	1555	3	X	X	X		1555
MW-116		GW		4/19/23	1200	3	X	X	X		
MW-117		GW		4/19/23	1405	3	X	X	X		
MW-118		GW		4/18/23	1515	3	X	X	X		
MW-119		GW		4/18/23	1725	3	X	X	X		

SDC # **1607560**  
**C098**

Acctnum: **NAESOAR**  
Template: **T175308**  
Prelogin: **P992285**  
PM: **134 - Mark W. Beasley**  
PB: **BF 4/12/23**  
Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

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

Remarks:

pH \_\_\_ Temp \_\_\_

Flow \_\_\_ Other \_\_\_

**Sample Receipt Checklist**  
COC Seal Present/Intact:  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

Samples returned via:  
\_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier  
Tracking #

Relinquished by: (Signature) <i>Michael Clayton</i>	Date: 4/19/23	Time: 1730	Received by: (Signature)	Trip Blank Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> HCL/MeOH TBR	Temp <b>10.5</b> °C	Bottles Received: <b>36</b>	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 4-20-23	Time: 800	Hold:	Condition: NCF / <input checked="" type="checkbox"/> OK

Company Name/Address:  
**Plum Point Services Co., LLC**

2739 SCR 623  
Osceola, AR 72370

Billing Information:

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

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Report to:  
**Dana Derrington**

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

Project Description:  
**Plum Point Energy Station**

City/State  
Collected: **Osceola AR**

Please Circle:  
PT MT **ET**

Phone: **501-920-9642**

Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):  
*[Signature]*

**Rush?** (Lab MUST Be Notified)

Quote #

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

Date Results Needed

Immediately  
Packed on Ice N \_\_\_ Y

No.  
of  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	CI, F, S	04	125mlHDPE-NoPres	TDS	250mlHDPE-NoPres	Total B, Ca	250mlHDPE-HNO3						
MW-116 DUP	Grab	GW		4/19/23	1205	3	X	X	X										
EPA EB	↓	GW		4/19/23	1430	3	X	X	X										
		GW				3	X	X	X										
		GW				3	X	X	X										



**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 # **1607960**

Table #

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P992285**

PM: **134 - Mark W. Beasley**

PB: **BF 4/12/23**

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

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

Remarks:  
pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

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

Samples returned via: \_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_\_\_ Tracking # \_\_\_\_\_

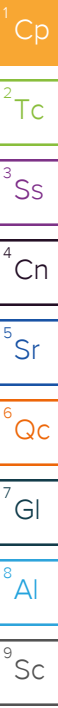
Relinquished by: (Signature) *[Signature]* Date: **4/19/23** Time: **1730** Received by: (Signature) Trip Blank Received: Yes/No **No**  
HCL/MeOH  
TBR

Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: **NSL** °C Bottles Received: **36**

Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) Date: **4-20-23** Time: **800** Hold: Condition: **NCF / OK**

---

**Monthly Background Sampling Event  
July 2023**



## Plum Point Services Co., LLC

Sample Delivery Group: L1633456  
Samples Received: 07/08/2023  
Project Number: R14590-3037-001  
Description: PPES DEQ Program

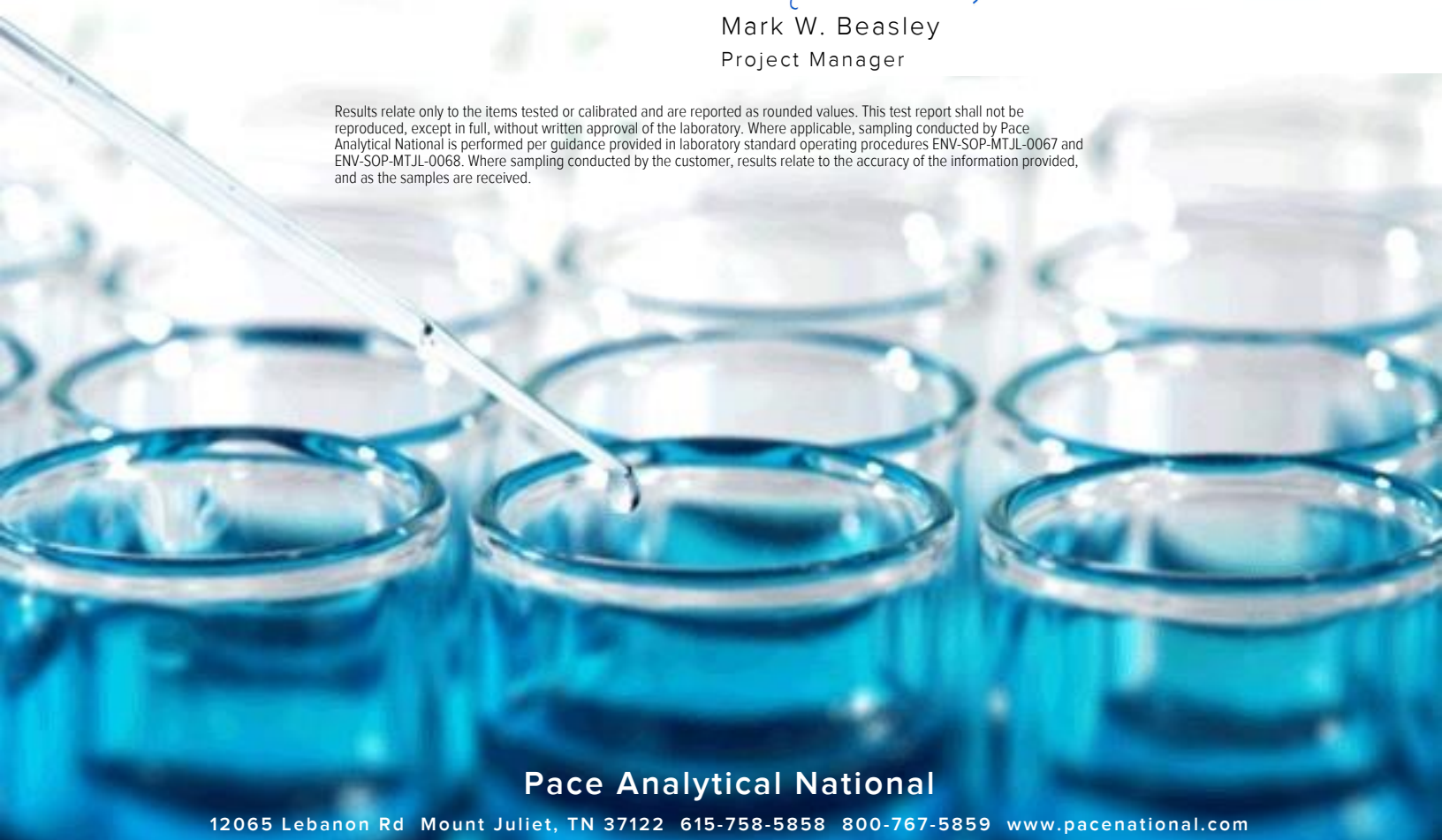
Report To: Dana Derrington  
2739 SCR 623  
Osceola, AR 72370

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](http://www.pacenational.com)

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b>2</b> Tc
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	<b>3</b> Ss
<b>MW-120 L1633456-01</b>	<b>5</b>	
<b>MW-121 L1633456-02</b>	<b>6</b>	<b>4</b> Cn
<b>MW-121 DUP L1633456-03</b>	<b>7</b>	<b>5</b> Sr
<b>EPA EB-2 L1633456-04</b>	<b>8</b>	
<b>Qc: Quality Control Summary</b>	<b>9</b>	<b>6</b> Qc
<b>Gravimetric Analysis by Method 2540 C-2011</b>	<b>9</b>	
<b>Wet Chemistry by Method 9040C</b>	<b>10</b>	<b>7</b> Gl
<b>Wet Chemistry by Method 9056A</b>	<b>11</b>	<b>8</b> Al
<b>Mercury by Method 7470A</b>	<b>13</b>	
<b>Metals (ICP) by Method 6010B</b>	<b>14</b>	
<b>Metals (ICPMS) by Method 6020</b>	<b>15</b>	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>17</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>18</b>	
<b>Sc: Sample Chain of Custody</b>	<b>19</b>	



# SAMPLE SUMMARY

## MW-120 L1633456-01 GW

Collected by M.C      Collected date/time 07/06/23 15:50      Received date/time 07/08/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2094125	1	07/13/23 14:37	07/13/23 16:08	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2093235	1	07/12/23 10:30	07/12/23 10:30	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2096271	1	07/18/23 16:59	07/18/23 16:59	KMC	Mt. Juliet, TN
Mercury by Method 7470A	WG2092315	1	07/12/23 08:06	07/12/23 19:54	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2092135	1	07/11/23 11:33	07/14/23 22:20	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2091636	1	07/10/23 11:18	07/13/23 15:11	LD	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## MW-121 L1633456-02 GW

Collected by M.C      Collected date/time 07/06/23 17:00      Received date/time 07/08/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2094125	1	07/13/23 14:37	07/13/23 16:08	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2093235	1	07/12/23 10:30	07/12/23 10:30	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2096271	1	07/18/23 17:39	07/18/23 17:39	KMC	Mt. Juliet, TN
Mercury by Method 7470A	WG2092315	1	07/12/23 08:05	07/12/23 19:56	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2092135	1	07/11/23 11:33	07/14/23 22:22	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2091636	1	07/10/23 11:18	07/13/23 15:14	LD	Mt. Juliet, TN

## MW-121 DUP L1633456-03 GW

Collected by M.C      Collected date/time 07/06/23 17:05      Received date/time 07/08/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2094125	1	07/13/23 14:37	07/13/23 16:08	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2093235	1	07/12/23 10:30	07/12/23 10:30	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2096271	1	07/18/23 17:49	07/18/23 17:49	KMC	Mt. Juliet, TN
Mercury by Method 7470A	WG2092315	1	07/12/23 08:05	07/12/23 19:58	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2092135	1	07/11/23 11:33	07/14/23 22:25	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2091636	1	07/10/23 11:18	07/13/23 15:18	LD	Mt. Juliet, TN

## EPA EB-2 L1633456-04 GW

Collected by M.C      Collected date/time 07/06/23 17:20      Received date/time 07/08/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2094125	1	07/13/23 14:37	07/13/23 16:08	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2093235	1	07/12/23 10:30	07/12/23 10:30	SJA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2096271	1	07/18/23 17:59	07/18/23 17:59	KMC	Mt. Juliet, TN
Mercury by Method 7470A	WG2092315	1	07/12/23 08:05	07/12/23 20:00	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2092135	1	07/11/23 11:33	07/14/23 22:28	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2091636	1	07/10/23 11:18	07/13/23 15:28	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

## Sample Delivery Group (SDG) Narrative

---

Sample quantity was not sufficient to complete analysis per recommended method guidelines for the following samples.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
<a href="#">L1633456-01</a>	<a href="#">MW-120</a>	2540 C-2011

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

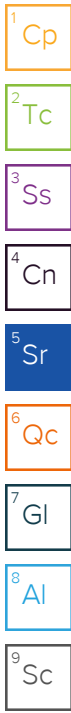
7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Dissolved Solids	286000		11100	1	07/13/2023 16:08	<a href="#">WG2094125</a>



Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
pH	6.93	<u>T8</u>	1	07/12/2023 10:30	<a href="#">WG2093235</a>

Sample Narrative:

L1633456-01 WG2093235: 6.93 at 18.7C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	1220		379	1000	1	07/18/2023 16:59	<a href="#">WG2096271</a>
Fluoride	120	<u>J</u>	64.0	150	1	07/18/2023 16:59	<a href="#">WG2096271</a>
Sulfate	6110		594	5000	1	07/18/2023 16:59	<a href="#">WG2096271</a>

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Mercury	U		0.100	0.200	1	07/12/2023 19:54	<a href="#">WG2092315</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Boron	56.3	<u>J</u>	20.0	200	1	07/14/2023 22:20	<a href="#">WG2092135</a>
Calcium	65700		79.3	1000	1	07/14/2023 22:20	<a href="#">WG2092135</a>

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Antimony	U		1.03	4.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Arsenic	0.593	<u>B J</u>	0.180	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Barium	144		0.381	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Beryllium	U		0.190	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Cadmium	U		0.150	1.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Chromium	U		1.24	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Cobalt	0.153	<u>B J</u>	0.0596	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Lead	U		0.849	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Molybdenum	0.942	<u>J</u>	0.348	5.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Selenium	15.1		0.300	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Thallium	U		0.121	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>
Lithium	8.88		0.695	2.00	1	07/13/2023 15:11	<a href="#">WG2091636</a>

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Dissolved Solids	174000		10000	1	07/13/2023 16:08	<a href="#">WG2094125</a>

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
pH	6.74	<u>T8</u>	1	07/12/2023 10:30	<a href="#">WG2093235</a>

Sample Narrative:

L1633456-02 WG2093235: 6.74 at 18C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	966	<u>J</u>	379	1000	1	07/18/2023 17:39	<a href="#">WG2096271</a>
Fluoride	91.5	<u>J</u>	64.0	150	1	07/18/2023 17:39	<a href="#">WG2096271</a>
Sulfate	6930		594	5000	1	07/18/2023 17:39	<a href="#">WG2096271</a>

Mercury by Method 7470A

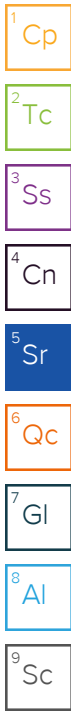
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Mercury	U		0.100	0.200	1	07/12/2023 19:56	<a href="#">WG2092315</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Boron	50.1	<u>J</u>	20.0	200	1	07/14/2023 22:22	<a href="#">WG2092135</a>
Calcium	38700		79.3	1000	1	07/14/2023 22:22	<a href="#">WG2092135</a>

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Antimony	U		1.03	4.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Arsenic	0.927	<u>B J</u>	0.180	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Barium	104		0.381	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Beryllium	U		0.190	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Cadmium	U		0.150	1.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Chromium	U		1.24	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Cobalt	0.0671	<u>B J</u>	0.0596	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Lead	U		0.849	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Molybdenum	U		0.348	5.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Selenium	4.03		0.300	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Thallium	U		0.121	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>
Lithium	3.28		0.695	2.00	1	07/13/2023 15:14	<a href="#">WG2091636</a>



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Dissolved Solids	173000		10000	1	07/13/2023 16:08	<a href="#">WG2094125</a>

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
pH	6.75	<u>T8</u>	1	07/12/2023 10:30	<a href="#">WG2093235</a>

Sample Narrative:

L1633456-03 WG2093235: 6.75 at 18.4C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	945	<u>J</u>	379	1000	1	07/18/2023 17:49	<a href="#">WG2096271</a>
Fluoride	87.0	<u>J</u>	64.0	150	1	07/18/2023 17:49	<a href="#">WG2096271</a>
Sulfate	6890		594	5000	1	07/18/2023 17:49	<a href="#">WG2096271</a>

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Mercury	U		0.100	0.200	1	07/12/2023 19:58	<a href="#">WG2092315</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Boron	48.1	<u>J</u>	20.0	200	1	07/14/2023 22:25	<a href="#">WG2092135</a>
Calcium	38600		79.3	1000	1	07/14/2023 22:25	<a href="#">WG2092135</a>

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Antimony	U		1.03	4.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Arsenic	0.839	<u>B J</u>	0.180	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Barium	105		0.381	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Beryllium	U		0.190	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Cadmium	U		0.150	1.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Chromium	U		1.24	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Cobalt	0.0640	<u>B J</u>	0.0596	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Lead	U		0.849	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Molybdenum	U		0.348	5.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Selenium	3.83		0.300	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Thallium	U		0.121	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>
Lithium	3.12		0.695	2.00	1	07/13/2023 15:18	<a href="#">WG2091636</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Dissolved Solids	ug/l		ug/l		date / time	
	ND		10000	1	07/13/2023 16:08	<a href="#">WG2094125</a>

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
pH	su			date / time	
	6.64	<u>T8</u>	1	07/12/2023 10:30	<a href="#">WG2093235</a>

Sample Narrative:

L1633456-04 WG2093235: 6.64 at 19C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	ug/l		ug/l	ug/l		date / time	
	U		379	1000	1	07/18/2023 17:59	<a href="#">WG2096271</a>
Fluoride	U		64.0	150	1	07/18/2023 17:59	<a href="#">WG2096271</a>
Sulfate	748	<u>J</u>	594	5000	1	07/18/2023 17:59	<a href="#">WG2096271</a>

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Mercury	ug/l		ug/l	ug/l		date / time	
	U		0.100	0.200	1	07/12/2023 20:00	<a href="#">WG2092315</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Boron	ug/l		ug/l	ug/l		date / time	
	U		20.0	200	1	07/14/2023 22:28	<a href="#">WG2092135</a>
Calcium	U		79.3	1000	1	07/14/2023 22:28	<a href="#">WG2092135</a>

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Antimony	ug/l		ug/l	ug/l		date / time	
	U		1.03	4.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Arsenic	U		0.180	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Barium	U		0.381	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Beryllium	U		0.190	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Cadmium	U		0.150	1.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Chromium	U		1.24	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Cobalt	U		0.0596	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Lead	U		0.849	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Molybdenum	U		0.348	5.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Selenium	U		0.300	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Thallium	U		0.121	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>
Lithium	U		0.695	2.00	1	07/13/2023 15:28	<a href="#">WG2091636</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3949273-1 07/13/23 16:08

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

1 Cp

2 Tc

3 Ss

L1634046-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1634046-05 07/13/23 16:08 • (DUP) R3949273-4 07/13/23 16:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2250000	2560000	1	12.9	J3	5

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3949273-2 07/13/23 16:08

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	7660000	87.0	77.3-123	

6 Qc

7 Gl

8 Al

9 Sc

L1633456-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1633456-01 07/12/23 10:30 • (DUP) R3947580-2 07/12/23 10:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.93	6.94	1	0.144		1

Sample Narrative:

OS: 6.93 at 18.7C  
 DUP: 6.94 at 18.4C

L1634121-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1634121-01 07/12/23 10:30 • (DUP) R3947580-3 07/12/23 10:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.36	8.35	1	0.120		1

Sample Narrative:

OS: 8.36 at 21C  
 DUP: 8.35 at 20.8C

Laboratory Control Sample (LCS)

(LCS) R3947580-1 07/12/23 10:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.02 at 20.8C





Method Blank (MB)

(MB) R3950466-1 07/18/23 16:10

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

L1633456-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1633456-01 07/18/23 16:59 • (DUP) R3950466-5 07/18/23 17:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	1220	1200	1	2.20		15
Fluoride	120	124	1	2.79	J	15
Sulfate	6110	6140	1	0.542		15

L1633503-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1633503-14 07/18/23 23:42 • (DUP) R3950466-6 07/19/23 00:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	351000	327000	10	7.00		15
Fluoride	U	U	10	0.000		15
Sulfate	1680000	1570000	10	6.85		15

Laboratory Control Sample (LCS)

(LCS) R3950466-2 07/18/23 16:49

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	39700	99.4	80.0-120	
Fluoride	8000	8230	103	80.0-120	
Sulfate	40000	40700	102	80.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1633456-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633456-01 07/18/23 16:59 • (MS) R3950466-3 07/18/23 17:09 • (MSD) R3950466-4 07/18/23 17:19

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 %
Chloride	50000	1220	51300	51200	100	100	1	80.0-120			0.0908	15
Fluoride	5000	120	5200	5230	102	102	1	80.0-120			0.512	15
Sulfate	50000	6110	54100	54000	96.0	95.8	1	80.0-120			0.210	15

L1633503-14 Original Sample (OS) • Matrix Spike (MS)

(OS) L1633503-14 07/18/23 23:42 • (MS) R3950466-8 07/19/23 00:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	351000	353000	3.13	10	80.0-120	∇
Fluoride	5000	U	5650	113	10	80.0-120	
Sulfate	50000	1680000	1490000	0.000	10	80.0-120	∇

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

Method Blank (MB)

(MB) R3947991-1 07/12/23 19:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.100	0.200

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Laboratory Control Sample (LCS)

(LCS) R3947991-2 07/12/23 19:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	3.00	3.16	105	80.0-120	

<sup>4</sup>Cn

<sup>5</sup>Sr

L1633331-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633331-01 07/12/23 19:42 • (MS) R3947991-3 07/12/23 19:44 • (MSD) R3947991-4 07/12/23 19:46

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	3.00	4.03	7.26	7.42	108	113	1	75.0-125			2.12	20

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3949053-1 07/14/23 21:36

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) R3949053-2 07/14/23 21:38

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	982	98.2	80.0-120	
Calcium	10000	9670	96.7	80.0-120	

L1633443-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633443-01 07/14/23 21:41 • (MS) R3949053-4 07/14/23 21:47 • (MSD) R3949053-5 07/14/23 21:49

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	2820	3740	3750	92.2	93.9	1	75.0-125			0.449	20
Calcium	10000	138000	146000	148000	81.6	101	1	75.0-125			1.30	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3948369-1 07/13/23 13:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Antimony	U		1.03	4.00
Arsenic	0.199	⌋	0.180	2.00
Barium	0.434	⌋	0.381	2.00
Beryllium	0.193	⌋	0.190	2.00
Cadmium	0.179	⌋	0.150	1.00
Chromium	U		1.24	2.00
Cobalt	0.183	⌋	0.0596	2.00
Lead	U		0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	0.298	⌋	0.121	2.00
Lithium	U		0.695	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3948369-2 07/13/23 13:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Antimony	50.0	47.0	93.9	80.0-120	
Arsenic	50.0	48.7	97.5	80.0-120	
Barium	50.0	44.2	88.5	80.0-120	
Beryllium	50.0	47.4	94.8	80.0-120	
Cadmium	50.0	52.5	105	80.0-120	
Chromium	50.0	49.5	99.0	80.0-120	
Cobalt	50.0	50.8	102	80.0-120	
Lead	50.0	50.3	101	80.0-120	
Molybdenum	50.0	49.1	98.3	80.0-120	
Selenium	50.0	51.8	104	80.0-120	
Thallium	50.0	52.9	106	80.0-120	
Lithium	50.0	41.4	82.8	80.0-120	

L1633331-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633331-02 07/13/23 13:17 • (MS) R3948369-5 07/13/23 13:27 • (MSD) R3948369-6 07/13/23 13:31

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	%	%		%			%	%
Antimony	50.0	U	53.7	52.6	107	105	20	75.0-125			2.03	20
Arsenic	50.0	U	48.1	52.6	96.3	105	20	75.0-125			8.86	20
Barium	50.0	2120	2110	2250	0.000	257	20	75.0-125	⌋	⌋	6.40	20

L1633331-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633331-02 07/13/23 13:17 • (MS) R3948369-5 07/13/23 13:27 • (MSD) R3948369-6 07/13/23 13:31

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	46.4	47.6	92.8	95.2	20	75.0-125			2.54	20
Cadmium	50.0	U	46.1	50.9	92.1	102	20	75.0-125			10.0	20
Chromium	50.0	U	47.3	49.0	94.6	98.0	20	75.0-125			3.58	20
Cobalt	50.0	U	44.6	47.5	89.2	95.0	20	75.0-125			6.32	20
Lead	50.0	U	41.7	44.8	83.4	89.6	20	75.0-125			7.17	20
Molybdenum	50.0	U	51.3	54.7	103	109	20	75.0-125			6.32	20
Selenium	50.0	6.63	55.8	58.1	98.4	103	20	75.0-125			4.01	20
Thallium	50.0	U	44.9	48.2	89.8	96.5	20	75.0-125			7.14	20
Lithium	50.0		450	489	202	281	20	75.0-125	<u>V</u>	<u>V</u>	8.44	20

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

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

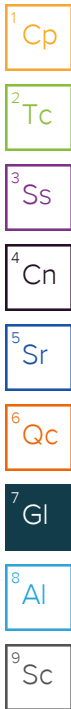
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
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.
T8	Sample(s) received past/too close to holding time expiration.
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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

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

Report to:  
**Dana Derrington**

Email To: [dld@ftn-assoc.com](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto:mcc@ftn-assoc.com)

Project Description:  
**PPES DEQ Program**

City/State  
 Collected: **OSCEOLA AR**

Please Circle:  
 PT MT **C** ET

Phone: **501-920-9642**

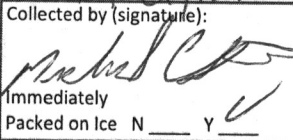
Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
**Michael Clayton**

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):  


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

Quote #  
 Date Results Needed

Immediately Packed on Ice N  Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CI, F, SO4 125mLHDPE-NoPres	Metals 250mLHDPE-HNO3	PH 125mLHDPE-NoPres	RA-226/228COMB 1L-HDPE-Add-HNO3	TDS 1L-HDPE NoPres
MW-120	Grab	GW		7/6/23	1550	6	X	X	X	X	X
MW-121	↓	GW		↓	1700	6	X	X	X	X	X
MW-121 DUP	↓	GW		↓	1705	6	X	X	X	X	X
EPA EB-2	↓	GW		↓	1720	6	X	X	X	X	X
		GW									
		GW									
		GW									

Analysis / Container / Preservative	Pres Chk
CI, F, SO4 125mLHDPE-NoPres	2
Metals 250mLHDPE-HNO3	2
PH 125mLHDPE-NoPres	
RA-226/228COMB 1L-HDPE-Add-HNO3	
TDS 1L-HDPE NoPres	

Chain of Custody Page **2** of **7**

**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 # **11633456**  
**C170**

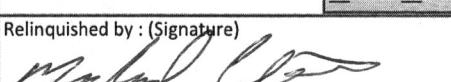
Acctnum: **NAESOAR**  
 Template: **T232952**  
 Prelogin: **P1009090**  
 PM: **134 - Mark W. Beasley**  
 PB: **BF 6/27/23**  
 Shipped Via: **FedEX Ground**

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

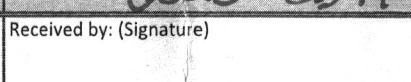
Remarks: **Metals=ASG,BICP,BAG,BEG,CAG,CDG,COG,CRG,HG,LIG,MOG,PBG,SBG,SEG,TLG**

**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

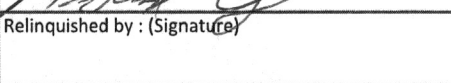
Samples returned via:  UPS  FedEx  Courier \_\_\_\_\_  
 Tracking # **6525 5571 3231**

Relinquished by: (Signature)  


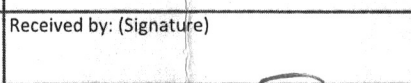
Date: **7/7/23** Time: **1500**

Received by: (Signature)  


Trip Blank Received: Yes / No  
 HCL / MeOH  
 TBR

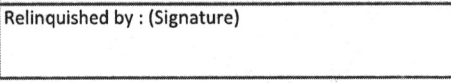
Relinquished by: (Signature)  


Date: \_\_\_\_\_ Time: \_\_\_\_\_

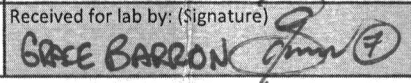
Received by: (Signature)  


Temp: **68.6** °C  
**2.8+0=2.8** Bottles Received: **24**

PH-10BDH-4321 TRC 2/14/11  
 CR6-20221V Date/Time

Relinquished by: (Signature)  


Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature)  


Date: **7.8.23** Time: **0905**

Hold: \_\_\_\_\_ Condition: **NCF / OK**

## Plum Point Services Co., LLC

Sample Delivery Group: L1633460  
Samples Received: 07/08/2023  
Project Number: R14590-3037-001  
Description: PPES DEQ Program

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

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	1	<sup>1</sup> Cp
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	<sup>2</sup> Tc
<b>Cn: Case Narrative</b>	4	
<b>Sr: Sample Results</b>	5	<sup>3</sup> Ss
MW-120 L1633460-01	5	
MW-121 L1633460-02	6	<sup>4</sup> Cn
MW-121 DUP L1633460-03	7	<sup>5</sup> Sr
EPA EB-2 L1633460-04	8	
<b>Qc: Quality Control Summary</b>	9	<sup>6</sup> Qc
Radiochemistry by Method 904/9320	9	
Radiochemistry by Method SM7500Ra B M	10	<sup>7</sup> Gl
<b>Gl: Glossary of Terms</b>	12	<sup>8</sup> Al
<b>Al: Accreditations &amp; Locations</b>	13	
<b>Sc: Sample Chain of Custody</b>	14	<sup>9</sup> Sc

# SAMPLE SUMMARY

## MW-120 L1633460-01 Non-Potable Water

Collected by Michael Clayton    Collected date/time 07/06/23 15:50    Received date/time 07/08/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2092165	1	07/10/23 09:24	07/17/23 20:40	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2098585	1	07/20/23 17:53	07/24/23 12:06	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2098585	1	07/20/23 17:53	07/24/23 12:06	RGT	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

## MW-121 L1633460-02 Non-Potable Water

Collected by Michael Clayton    Collected date/time 07/06/23 17:00    Received date/time 07/08/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2092165	1	07/10/23 09:24	07/17/23 20:40	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2098585	1	07/20/23 17:53	07/24/23 12:06	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2098585	1	07/20/23 17:53	07/24/23 12:06	RGT	Mt. Juliet, TN

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

## MW-121 DUP L1633460-03 Non-Potable Water

Collected by Michael Clayton    Collected date/time 07/06/23 17:05    Received date/time 07/08/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2092165	1	07/10/23 09:24	07/17/23 20:40	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2098585	1	07/20/23 17:53	07/24/23 12:06	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2098585	1	07/20/23 17:53	07/24/23 12:06	RGT	Mt. Juliet, TN

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

## EPA EB-2 L1633460-04 Non-Potable Water

Collected by Michael Clayton    Collected date/time 07/06/23 17:20    Received date/time 07/08/23 09:05

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2092165	1	07/10/23 09:24	07/17/23 20:40	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2099485	1	07/24/23 16:02	07/27/23 10:07	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2099485	1	07/24/23 16:02	07/27/23 10:07	RGT	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.914	<u>U</u>	0.259	0.509	07/17/2023 20:40	<a href="#">WG2092165</a>
(T) Barium	94.4			30.0-143	07/17/2023 20:40	<a href="#">WG2092165</a>
(T) Yttrium	97.6			30.0-136	07/17/2023 20:40	<a href="#">WG2092165</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.319	<u>J</u>	0.419	0.666	07/24/2023 12:06	<a href="#">WG2098585</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.319	<u>J</u>	0.329	0.430	07/24/2023 12:06	<a href="#">WG2098585</a>
(T) Barium-133	64.4			30.0-143	07/24/2023 12:06	<a href="#">WG2098585</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.459	J	0.261	0.472	07/17/2023 20:40	<a href="#">WG2092165</a>
(T) Barium	84.3			30.0-143	07/17/2023 20:40	<a href="#">WG2092165</a>
(T) Yttrium	100			30.0-136	07/17/2023 20:40	<a href="#">WG2092165</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.512	J	0.395	0.729	07/24/2023 12:06	<a href="#">WG2098585</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0532	U	0.297	0.555	07/24/2023 12:06	<a href="#">WG2098585</a>
(T) Barium-133	55.9			30.0-143	07/24/2023 12:06	<a href="#">WG2098585</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.235	J	0.220	0.406	07/17/2023 20:40	<a href="#">WG2092165</a>
(T) Barium	88.0			30.0-143	07/17/2023 20:40	<a href="#">WG2092165</a>
(T) Yttrium	99.3			30.0-136	07/17/2023 20:40	<a href="#">WG2092165</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.250	U	0.416	0.789	07/24/2023 12:06	<a href="#">WG2098585</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0150	U	0.353	0.676	07/24/2023 12:06	<a href="#">WG2098585</a>
(T) Barium-133	43.5			30.0-143	07/24/2023 12:06	<a href="#">WG2098585</a>

6 Qc

7 Gl

8 Al

9 Sc



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.317	J	0.228	0.417	07/17/2023 20:40	<a href="#">WG2092165</a>
(T) Barium	92.5			30.0-143	07/17/2023 20:40	<a href="#">WG2092165</a>
(T) Yttrium	95.2			30.0-136	07/17/2023 20:40	<a href="#">WG2092165</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.317	U	0.332	0.709	07/27/2023 10:07	<a href="#">WG2099485</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.0825	U	0.241	0.574	07/27/2023 10:07	<a href="#">WG2099485</a>
(T) Barium-133	48.5			30.0-143	07/27/2023 10:07	<a href="#">WG2099485</a>

Method Blank (MB)

(MB) R3950398-1 07/17/23 20:40

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-228	-0.136	<u>U</u>	0.175	0.331
(T) Barium	94.3		94.3	
(T) Yttrium	93.2		93.2	

L1627030-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1627030-01 07/17/23 20:40 • (DUP) R3950398-5 07/17/23 20:40

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-228	0.717	0.248	0.00424	0.748	0.451	0.00424	1	4.25	0.0604	<u>J</u>	20	3
(T) Barium	87.9			90.7	90.7							
(T) Yttrium	117			99.0	99.0							

Laboratory Control Sample (LCS)

(LCS) R3950398-2 07/17/23 20:40

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	5.31	106	80.0-120	
(T) Barium			98.8		
(T) Yttrium			105		

L1627024-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1627024-10 07/17/23 20:40 • (MS) R3950398-3 07/17/23 20:40 • (MSD) R3950398-4 07/17/23 20:40

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	1.84	9.80	10.0	79.6	81.8	1	70.0-130			2.22		20
(T) Barium		85.8			96.3	93.1							
(T) Yttrium		99.7			108	99.6							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3957766-1 07/24/23 12:06

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.00209	<u>U</u>	0.0492	0.0942
(T) Barium-133	83.5		83.5	

L1633317-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1633317-04 07/24/23 12:06 • (DUP) R3957766-5 07/24/23 12:06

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.340	0.299	0.364	0.645	0.411	0.364	1	61.9	0.599		20	3
(T) Barium-133	81.3			75.4	75.4							

Laboratory Control Sample (LCS)

(LCS) R3957766-2 07/24/23 12:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.39	87.5	80.0-120	
(T) Barium-133			81.6		

L1636633-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1636633-01 07/24/23 12:06 • (MS) R3957766-3 07/24/23 12:06 • (MSD) R3957766-4 07/24/23 12:06

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-226	20.0	0.470	19.1	16.6	93.0	80.8	1	75.0-125			13.7		20
(T) Barium-133		72.0			66.0	78.9							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3955523-1 07/27/23 10:07

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.00286	<u>U</u>	0.0676	0.129
(T) Barium-133	60.8		60.8	

L1637654-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1637654-01 07/27/23 10:07 • (DUP) R3955523-5 07/27/23 10:07

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.380	0.291	0.337	0.0586	0.342	0.337	1	147	0.717	<u>U</u>	20	3
(T) Barium-133	87.2			61.5	61.5							

Laboratory Control Sample (LCS)

(LCS) R3955523-2 07/27/23 10:07

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.50	89.8	80.0-120	
(T) Barium-133			54.1		

L1634409-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1634409-01 07/27/23 10:07 • (MS) R3955523-3 07/27/23 10:07 • (MSD) R3955523-4 07/27/23 10:07

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	0.332	18.8	18.4	92.4	90.3	1	75.0-125			2.26		20
(T) Barium-133		84.8			74.2	71.9							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

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

### Abbreviations and Definitions

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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

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

Report to:  
**Dana Derrington**

Email To: [dld@ftn-assoc.com](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto:mcc@ftn-assoc.com)

Project Description:  
**PPES DEQ Program**

City/State  
 Collected: **OSCEOLA AR**

Please Circle:  
 PT MT **ET**

Phone: **501-920-9642**

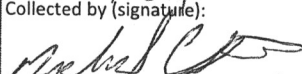
Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
**Michael Clayton**

Site/Facility ID #

P.O. #  
**2023-00048**

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
MW-120	Grab	GW		7/6/23	1550	6
MW-121		GW			1700	6
MW-121 DUP		GW			1705	6
EPA EB-2		GW			1720	6
		GW				
		GW				
		GW				

Analysis / Container / Preservative	Pres Chk
CI, F, SO4 125mlHDPE-NoPres	L2
Metals 250mlHDPE-HNO3	L2
PH 125mlHDPE-NoPres	
RA-226/228COMB 1L-HDPE-Add-HNO3	
TDS 1L-HDPE NoPres	

Chain of Custody Page 1 of 1



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/hubs/pas-standard-terms.pdf>

SDG # **L1633460**  
**C170**

Acctnum: **NAESOAR**  
 Template: **T232952**  
 Prelogin: **P1009090**  
 PM: 134 - Mark W. Beasley  
 PB: **BF 6/27/23**

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

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

Remarks: **Metals=ASG,BICP,BAG,BEG,CAG,CDG,COG,CRG,HG,LIG,MOG,PBG,SBG,SEG,TLG**

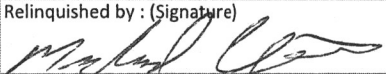
pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

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

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **6525 5671 3231**

Relinquished by: (Signature)  


Date: **7/7/23**  
 Time: **1500**

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

Temp: **28.0** °C  
 Bottles Received: **24**

If PH-10BDH-4321 TRC 2144111  
 CR6-20221V

Relinquished by: (Signature)

Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Received for lab by: (Signature)  
**GRACE BARRON**

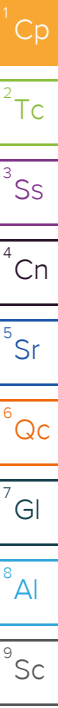
Date: **7.8.23** Time: **0905**

Hold: \_\_\_\_\_ Condition: **NCF / OK**

---

**Monthly Background Sampling Event  
August 2023**





## Plum Point Services Co., LLC

Sample Delivery Group: L1644498  
Samples Received: 08/10/2023  
Project Number: 14590-1469-001  
Description: Plum Point Energy Station

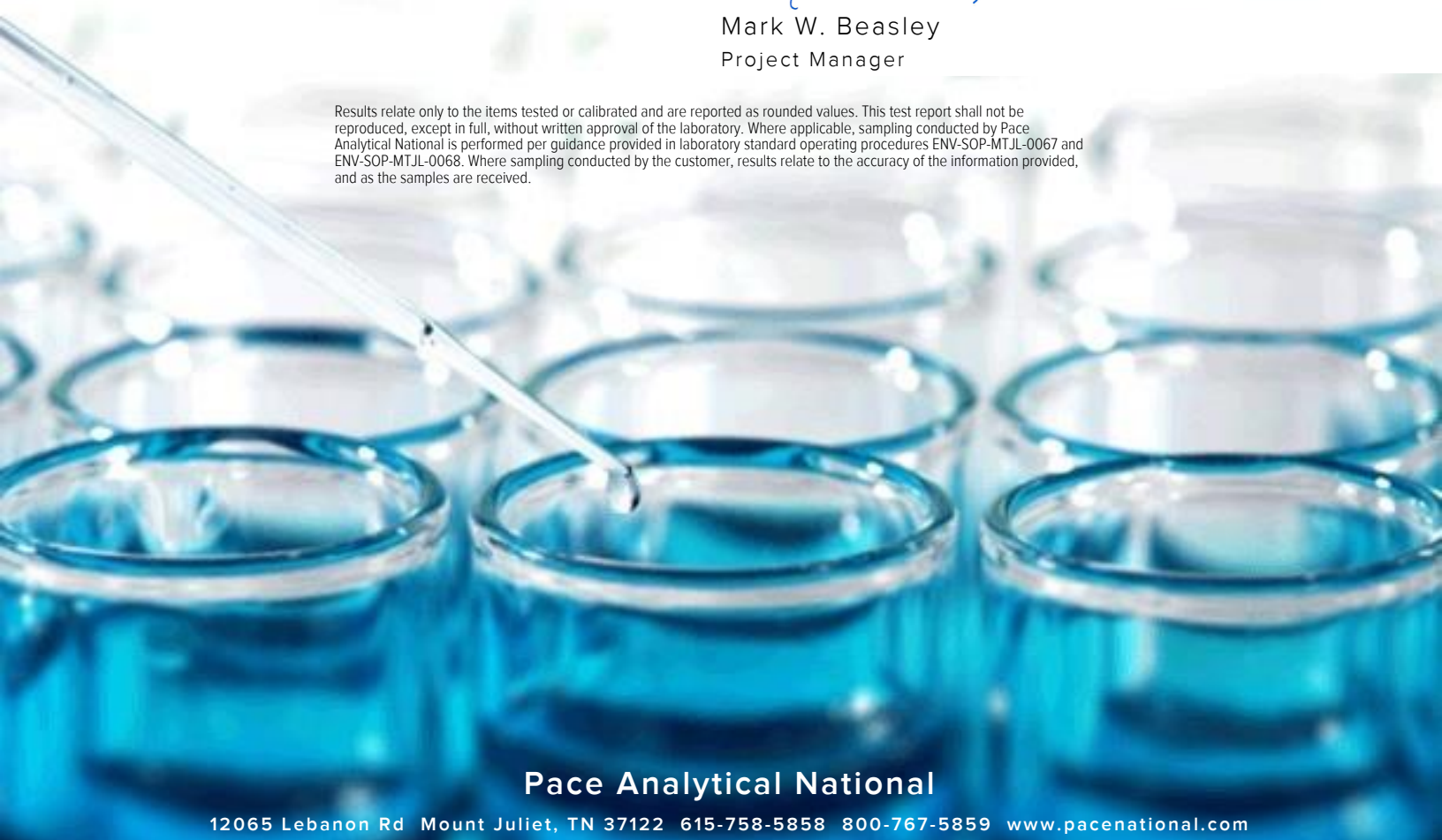
Report To: Dana Derrington  
2739 SCR 623  
Osceola, AR 72370

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](http://www.pacenational.com)

# TABLE OF CONTENTS

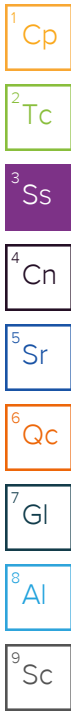
<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b>2</b> Tc
<b>Cn: Case Narrative</b>	<b>5</b>	
<b>Sr: Sample Results</b>	<b>6</b>	<b>3</b> Ss
MW-104 L1644498-01	<b>6</b>	
MW-110 L1644498-02	<b>7</b>	<b>4</b> Cn
MW-120 L1644498-03	<b>8</b>	<b>5</b> Sr
MW-121 L1644498-04	<b>9</b>	
MW-104 DUP L1644498-05	<b>10</b>	<b>6</b> Qc
EPA EB L1644498-06	<b>11</b>	
<b>Qc: Quality Control Summary</b>	<b>12</b>	<b>7</b> Gl
Gravimetric Analysis by Method 2540 C-2011	<b>12</b>	
Wet Chemistry by Method 9056A	<b>14</b>	<b>8</b> Al
Mercury by Method 7470A	<b>16</b>	
Metals (ICP) by Method 6010B	<b>17</b>	
Metals (ICPMS) by Method 6020	<b>18</b>	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>20</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>21</b>	
<b>Sc: Sample Chain of Custody</b>	<b>22</b>	

# SAMPLE SUMMARY

## MW-104 L1644498-01 GW

Collected by Michael Clayton    Collected date/time 08/08/23 16:20    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2113156	1	08/14/23 08:54	08/14/23 14:49	TQP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2111664	1	08/11/23 12:06	08/11/23 12:06	MDM	Mt. Juliet, TN
Mercury by Method 7470A	WG2112360	1	08/17/23 07:49	08/17/23 21:02	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2111930	1	08/13/23 10:23	08/20/23 00:33	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2111941	1	08/17/23 08:29	08/17/23 18:06	LD	Mt. Juliet, TN



## MW-110 L1644498-02 GW

Collected by Michael Clayton    Collected date/time 08/08/23 13:05    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2113156	1	08/14/23 08:54	08/14/23 14:49	TQP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2111664	1	08/11/23 12:19	08/11/23 12:19	MDM	Mt. Juliet, TN
Mercury by Method 7470A	WG2112360	1	08/17/23 07:49	08/17/23 21:04	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2111930	1	08/13/23 10:23	08/20/23 00:36	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2111941	1	08/17/23 08:29	08/17/23 18:09	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2111941	5	08/17/23 08:29	08/17/23 18:37	LD	Mt. Juliet, TN

## MW-120 L1644498-03 GW

Collected by Michael Clayton    Collected date/time 08/08/23 15:00    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2113156	1	08/14/23 08:54	08/14/23 14:49	TQP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2111664	1	08/11/23 13:04	08/11/23 13:04	MDM	Mt. Juliet, TN
Mercury by Method 7470A	WG2112360	1	08/17/23 07:49	08/17/23 21:06	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2111930	1	08/13/23 10:23	08/20/23 00:39	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2111941	1	08/17/23 08:29	08/17/23 18:13	LD	Mt. Juliet, TN

## MW-121 L1644498-04 GW

Collected by Michael Clayton    Collected date/time 08/08/23 13:50    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2113725	1	08/14/23 15:26	08/14/23 16:34	TQP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2111664	1	08/11/23 13:17	08/11/23 13:17	MDM	Mt. Juliet, TN
Mercury by Method 7470A	WG2112360	1	08/17/23 07:49	08/17/23 21:08	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2111930	1	08/13/23 10:23	08/20/23 00:42	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2111941	1	08/17/23 08:29	08/17/23 18:16	LD	Mt. Juliet, TN

## MW-104 DUP L1644498-05 GW

Collected by Michael Clayton    Collected date/time 08/08/23 16:25    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2113156	1	08/14/23 08:54	08/14/23 14:49	TQP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2111664	1	08/11/23 13:30	08/11/23 13:30	MDM	Mt. Juliet, TN
Mercury by Method 7470A	WG2112360	1	08/17/23 07:49	08/17/23 21:10	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2111930	1	08/13/23 10:23	08/20/23 00:45	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2111941	1	08/17/23 08:29	08/17/23 18:19	LD	Mt. Juliet, TN

# SAMPLE SUMMARY

EPA EB L1644498-06 GW

Collected by: Michael Clayton  
 Collected date/time: 08/08/23 16:50  
 Received date/time: 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2113725	1	08/14/23 15:26	08/14/23 16:34	TQP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2111664	1	08/11/23 13:43	08/11/23 13:43	MDM	Mt. Juliet, TN
Mercury by Method 7470A	WG2112360	1	08/17/23 07:49	08/17/23 21:47	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2111930	1	08/13/23 10:23	08/20/23 00:48	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2111941	1	08/17/23 08:29	08/17/23 18:22	LD	Mt. Juliet, TN

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

# 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	296000		10000	1	08/14/2023 14:49	<a href="#">WG2113156</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	857	J	379	1000	1	08/11/2023 12:06	<a href="#">WG2111664</a>
Fluoride	257		64.0	150	1	08/11/2023 12:06	<a href="#">WG2111664</a>
Sulfate	3420	J	594	5000	1	08/11/2023 12:06	<a href="#">WG2111664</a>

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	08/17/2023 21:02	<a href="#">WG2112360</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	56.8	J	20.0	200	1	08/20/2023 00:33	<a href="#">WG2111930</a>
Calcium	76100		79.3	1000	1	08/20/2023 00:33	<a href="#">WG2111930</a>

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	08/17/2023 18:06	<a href="#">WG2111941</a>
Arsenic	2.04		0.180	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Barium	159		0.381	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Beryllium	U		0.190	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Cadmium	U		0.150	1.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Chromium	U		1.24	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Cobalt	U		0.0596	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Lead	U		0.849	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Molybdenum	0.768	J	0.348	5.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Selenium	6.36		0.300	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Thallium	U		0.121	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>
Lithium	8.78		0.695	2.00	1	08/17/2023 18:06	<a href="#">WG2111941</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	325000		10000	1	08/14/2023 14:49	<a href="#">WG2113156</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	862	J	379	1000	1	08/11/2023 12:19	<a href="#">WG2111664</a>
Fluoride	176		64.0	150	1	08/11/2023 12:19	<a href="#">WG2111664</a>
Sulfate	4720	J	594	5000	1	08/11/2023 12:19	<a href="#">WG2111664</a>

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	08/17/2023 21:04	<a href="#">WG2112360</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	60.9	J	20.0	200	1	08/20/2023 00:36	<a href="#">WG2111930</a>
Calcium	82800		79.3	1000	1	08/20/2023 00:36	<a href="#">WG2111930</a>

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	08/17/2023 18:09	<a href="#">WG2111941</a>
Arsenic	8.12		0.180	2.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Barium	253		1.90	10.0	5	08/17/2023 18:37	<a href="#">WG2111941</a>
Beryllium	U		0.190	2.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Cadmium	U		0.150	1.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Chromium	U		1.24	2.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Cobalt	0.602	J	0.0596	2.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Lead	U		0.849	2.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Molybdenum	0.934	J	0.348	5.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Selenium	0.421	J	0.300	2.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Thallium	U		0.121	2.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>
Lithium	5.41		0.695	2.00	1	08/17/2023 18:09	<a href="#">WG2111941</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	269000		10000	1	08/14/2023 14:49	<a href="#">WG2113156</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1030		379	1000	1	08/11/2023 13:04	<a href="#">WG2111664</a>
Fluoride	142	J	64.0	150	1	08/11/2023 13:04	<a href="#">WG2111664</a>
Sulfate	8530		594	5000	1	08/11/2023 13:04	<a href="#">WG2111664</a>

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	08/17/2023 21:06	<a href="#">WG2112360</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	51.1	J	20.0	200	1	08/20/2023 00:39	<a href="#">WG2111930</a>
Calcium	68700		79.3	1000	1	08/20/2023 00:39	<a href="#">WG2111930</a>

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	08/17/2023 18:13	<a href="#">WG2111941</a>
Arsenic	0.686	J	0.180	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Barium	154		0.381	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Beryllium	U		0.190	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Cadmium	U		0.150	1.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Chromium	U		1.24	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Cobalt	0.123	J	0.0596	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Lead	U		0.849	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Molybdenum	0.840	J	0.348	5.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Selenium	7.98		0.300	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Thallium	U		0.121	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>
Lithium	8.89		0.695	2.00	1	08/17/2023 18:13	<a href="#">WG2111941</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	155000		10000	1	08/14/2023 16:34	<a href="#">WG2113725</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	842	J	379	1000	1	08/11/2023 13:17	<a href="#">WG2111664</a>
Fluoride	121	J	64.0	150	1	08/11/2023 13:17	<a href="#">WG2111664</a>
Sulfate	7930		594	5000	1	08/11/2023 13:17	<a href="#">WG2111664</a>

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	0.469		0.100	0.200	1	08/17/2023 21:08	<a href="#">WG2112360</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	50.0	J	20.0	200	1	08/20/2023 00:42	<a href="#">WG2111930</a>
Calcium	35700		79.3	1000	1	08/20/2023 00:42	<a href="#">WG2111930</a>

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	08/17/2023 18:16	<a href="#">WG2111941</a>
Arsenic	0.770	J	0.180	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Barium	101		0.381	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Beryllium	U		0.190	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Cadmium	U		0.150	1.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Chromium	U		1.24	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Cobalt	0.128	J	0.0596	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Lead	U		0.849	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Molybdenum	U		0.348	5.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Selenium	4.19		0.300	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Thallium	U		0.121	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>
Lithium	3.03		0.695	2.00	1	08/17/2023 18:16	<a href="#">WG2111941</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	297000		10000	1	08/14/2023 14:49	<a href="#">WG2113156</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	851	J	379	1000	1	08/11/2023 13:30	<a href="#">WG2111664</a>
Fluoride	244		64.0	150	1	08/11/2023 13:30	<a href="#">WG2111664</a>
Sulfate	3360	J	594	5000	1	08/11/2023 13:30	<a href="#">WG2111664</a>

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	0.375		0.100	0.200	1	08/17/2023 21:10	<a href="#">WG2112360</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	54.8	J	20.0	200	1	08/20/2023 00:45	<a href="#">WG2111930</a>
Calcium	76400		79.3	1000	1	08/20/2023 00:45	<a href="#">WG2111930</a>

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	08/17/2023 18:19	<a href="#">WG2111941</a>
Arsenic	2.11		0.180	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Barium	157		0.381	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Beryllium	U		0.190	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Cadmium	U		0.150	1.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Chromium	U		1.24	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Cobalt	U		0.0596	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Lead	U		0.849	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Molybdenum	0.853	J	0.348	5.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Selenium	5.87		0.300	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Thallium	U		0.121	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>
Lithium	8.61		0.695	2.00	1	08/17/2023 18:19	<a href="#">WG2111941</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Dissolved Solids	ND		10000	1	08/14/2023 16:34	<a href="#">WG2113725</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	U		379	1000	1	08/11/2023 13:43	<a href="#">WG2111664</a>
Fluoride	U		64.0	150	1	08/11/2023 13:43	<a href="#">WG2111664</a>
Sulfate	U		594	5000	1	08/11/2023 13:43	<a href="#">WG2111664</a>

## Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Mercury	U		0.100	0.200	1	08/17/2023 21:47	<a href="#">WG2112360</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Boron	U		20.0	200	1	08/20/2023 00:48	<a href="#">WG2111930</a>
Calcium	91.9	J	79.3	1000	1	08/20/2023 00:48	<a href="#">WG2111930</a>

## Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Antimony	U		1.03	4.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Arsenic	U		0.180	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Barium	U		0.381	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Beryllium	U		0.190	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Cadmium	U		0.150	1.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Chromium	U		1.24	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Cobalt	U		0.0596	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Lead	U		0.849	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Molybdenum	U		0.348	5.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Selenium	U		0.300	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Thallium	U		0.121	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>
Lithium	U		0.695	2.00	1	08/17/2023 18:22	<a href="#">WG2111941</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3961716-1 08/14/23 14:49

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1644498-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1644498-01 08/14/23 14:49 • (DUP) R3961716-3 08/14/23 14:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	296000	290000	1	2.05		5

L1644498-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1644498-02 08/14/23 14:49 • (DUP) R3961716-4 08/14/23 14:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	325000	327000	1	0.613		5

Laboratory Control Sample (LCS)

(LCS) R3961716-2 08/14/23 14:49

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8680000	98.6	77.3-123	

Method Blank (MB)

(MB) R3961717-1 08/14/23 16:34

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

1 Cp

2 Tc

3 Ss

L1645047-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1645047-03 08/14/23 16:34 • (DUP) R3961717-3 08/14/23 16:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	131000	144000	1	9.45	J3	5

4 Cn

5 Sr

6 Qc

L1645195-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1645195-04 08/14/23 16:34 • (DUP) R3961717-4 08/14/23 16:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1280000	1330000	1	4.44		5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3961717-2 08/14/23 16:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8560000	97.3	77.3-123	

Method Blank (MB)

(MB) R3959897-1 08/11/23 10:04

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

L1644440-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1644440-01 08/11/23 11:27 • (DUP) R3959897-3 08/11/23 11:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	9600	9650	1	0.492		15
Fluoride	555	549	1	1.09		15
Sulfate	19100	19100	1	0.0477		15

L1644559-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1644559-05 08/11/23 16:17 • (DUP) R3959897-5 08/11/23 16:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	1070000	1070000	20	0.121		15
Fluoride	U	U	20	0.000		15
Sulfate	1430000	1430000	20	0.0471		15

Laboratory Control Sample (LCS)

(LCS) R3959897-2 08/11/23 10:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	40700	102	80.0-120	
Fluoride	8000	8370	105	80.0-120	
Sulfate	40000	39700	99.3	80.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1644440-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1644440-01 08/11/23 11:27 • (MS) R3959897-4 08/11/23 11:53

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	9600	61600	104	1	80.0-120	
Fluoride	5000	555	5950	108	1	80.0-120	
Sulfate	50000	19100	69700	101	1	80.0-120	

L1644559-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1644559-05 08/11/23 16:17 • (MS) R3959897-6 08/11/23 16:43 • (MSD) R3959897-7 08/11/23 16:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	1070000	1070000	1060000	0.000	0.000	20	80.0-120	V	V	0.683	15
Fluoride	5000	U	5020	5110	100	102	20	80.0-120			1.80	15
Sulfate	50000	1430000	1410000	1400000	0.000	0.000	20	80.0-120	V	V	1.26	15

Sample Narrative:

MS: Spike failed due to matrix

MSD: Spike failed due to matrix

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3962365-1 08/17/23 20:44

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

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3962365-2 08/17/23 20:52

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	3.16	105	80.0-120	

4 Cn

5 Sr

L1644466-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1644466-03 08/17/23 20:54 • (MS) R3962365-3 08/17/23 20:56 • (MSD) R3962365-4 08/17/23 20:58

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	3.22	3.27	107	109	1	75.0-125			1.42	20

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3962991-1 08/19/23 23:51

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) R3962991-2 08/19/23 23:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	1000	100	80.0-120	
Calcium	10000	10200	102	80.0-120	

L1644394-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1644394-03 08/19/23 23:57 • (MS) R3962991-4 08/20/23 00:03 • (MSD) R3962991-5 08/20/23 00:05

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	288	1300	1280	101	99.3	1	75.0-125			1.67	20
Calcium	10000	124000	131000	131000	69.1	75.0	1	75.0-125	V		0.451	20

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

Method Blank (MB)

(MB) R3962204-1 08/17/23 16:27

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3962204-2 08/17/23 16:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	51.8	104	80.0-120	
Arsenic	50.0	50.3	101	80.0-120	
Barium	50.0	51.1	102	80.0-120	
Beryllium	50.0	53.3	107	80.0-120	
Cadmium	50.0	54.3	109	80.0-120	
Chromium	50.0	50.5	101	80.0-120	
Cobalt	50.0	50.9	102	80.0-120	
Lead	50.0	52.3	105	80.0-120	
Molybdenum	50.0	51.4	103	80.0-120	
Selenium	50.0	57.1	114	80.0-120	
Thallium	50.0	50.2	100	80.0-120	
Lithium	50.0	55.9	112	80.0-120	

L1644486-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1644486-04 08/17/23 16:33 • (MS) R3962204-4 08/17/23 16:40 • (MSD) R3962204-5 08/17/23 16:43

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	54.6	54.2	109	108	1	75.0-125			0.581	20
Arsenic	50.0	1.03	51.8	51.6	102	101	1	75.0-125			0.438	20
Barium	50.0	113	166	166	105	106	1	75.0-125			0.237	20

L1644486-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1644486-04 08/17/23 16:33 • (MS) R3962204-4 08/17/23 16:40 • (MSD) R3962204-5 08/17/23 16:43

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	54.8	54.5	110	109	1	75.0-125			0.539	20
Cadmium	50.0	U	53.2	53.2	106	106	1	75.0-125			0.0708	20
Chromium	50.0	U	49.6	50.5	99.3	101	1	75.0-125			1.66	20
Cobalt	50.0	0.330	49.3	49.4	97.9	98.1	1	75.0-125			0.240	20
Lead	50.0	U	51.6	52.5	103	105	1	75.0-125			1.66	20
Molybdenum	50.0	2.41	56.5	55.6	108	106	1	75.0-125			1.78	20
Selenium	50.0	3.28	61.3	59.6	116	113	1	75.0-125			2.75	20
Thallium	50.0	0.185	50.1	50.3	99.8	100	1	75.0-125			0.486	20
Lithium	50.0	7.78	63.5	63.0	111	111	1	75.0-125			0.671	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

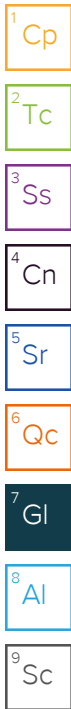
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

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

Pres Chk  
 u u u u

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

Report to:  
**Dana Derrington**

Email To: [dld@ftn-assoc.com](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto:mcc@ftn-assoc.com)

Project Description:  
**Plum Point Energy Station**

City/State Collected: **OSCEOLA AR**

Please Circle:  
 PT MT **ET**

Phone: **501-920-9642**

Client Project #  
**14590-1469-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):  
*Michael Clayton*

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

Quote #

Immediately Packed on Ice N \_\_\_ Y

Date Results Needed  
 No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
MW-104	Grab	GW		8/8/23	1620	5
MW-110		GW			1305	5
MW-120		GW			1500	5
MW-121		GW			1350	5
MW-104 DUP		GW			1625	5
EPA EB		GW			1650	5
		GW				
		GW				
		GW				

	CI, 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
MW-104	X	X	X	X	X	X
MW-110	X	X	X	X	X	X
MW-120	X	X	X	X	X	X
MW-121	X	X	X	X	X	X
MW-104 DUP	X	X	X	X	X	X
EPA EB	X	X	X	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 # **L164498**  
**A135**

Acctnum: **NAESOAR**  
 Template: **T106048**  
 Prelogin: **P1015500**  
 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 \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via: \_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_\_\_ Tracking # \_\_\_\_\_

Sample Receipt Checklist

COC Seal Present/Intact:	NP	<input checked="" type="checkbox"/>	N
COC Signed/Accurate:		<input checked="" type="checkbox"/>	N
Bottles arrive intact:		<input checked="" type="checkbox"/>	N
Correct bottles used:		<input checked="" type="checkbox"/>	N
Sufficient volume sent:		<input checked="" type="checkbox"/>	N
If Applicable			
VOA Zero Headspace:		<input checked="" type="checkbox"/>	N
Preservation Correct/Checked:		<input checked="" type="checkbox"/>	N
RAD Screen <0.5 mR/hr:		<input checked="" type="checkbox"/>	N

Relinquished by: (Signature)  
*Michael Clayton*

Date: **8/9/23**

Time: **1300**

Received by: (Signature)

Trip Blank Received: Yes / **No**  
 HCL / MeOH  
 TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: °C  
**30**  
 Bottles Received:

PH-10BDH4321 TRC-2144141  
 CR6-20221V Date/Time

Relinquished by: (Signature)

Date:

Time:

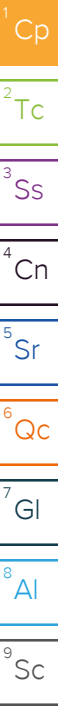
Received for lab by: (Signature)  
*Mark W. Beasley*

Date: **8/10/23** Time: **9:00**

Hold: Condition: **NCF / OK**

UJ4498

<u>Tracking Numbers</u>	<u>Temperature</u>
6643 4296 4431	4.2 ± 0.4 <sup>CB</sup> <sub>18</sub>
6643 4296 4442	0.7 ± 0.7 <sup>CB</sup> <sub>18</sub>



## Plum Point Services Co., LLC

Sample Delivery Group: L1648788  
Samples Received: 08/10/2023  
Project Number: 14590-1469-001  
Description: Plum Point Energy Station

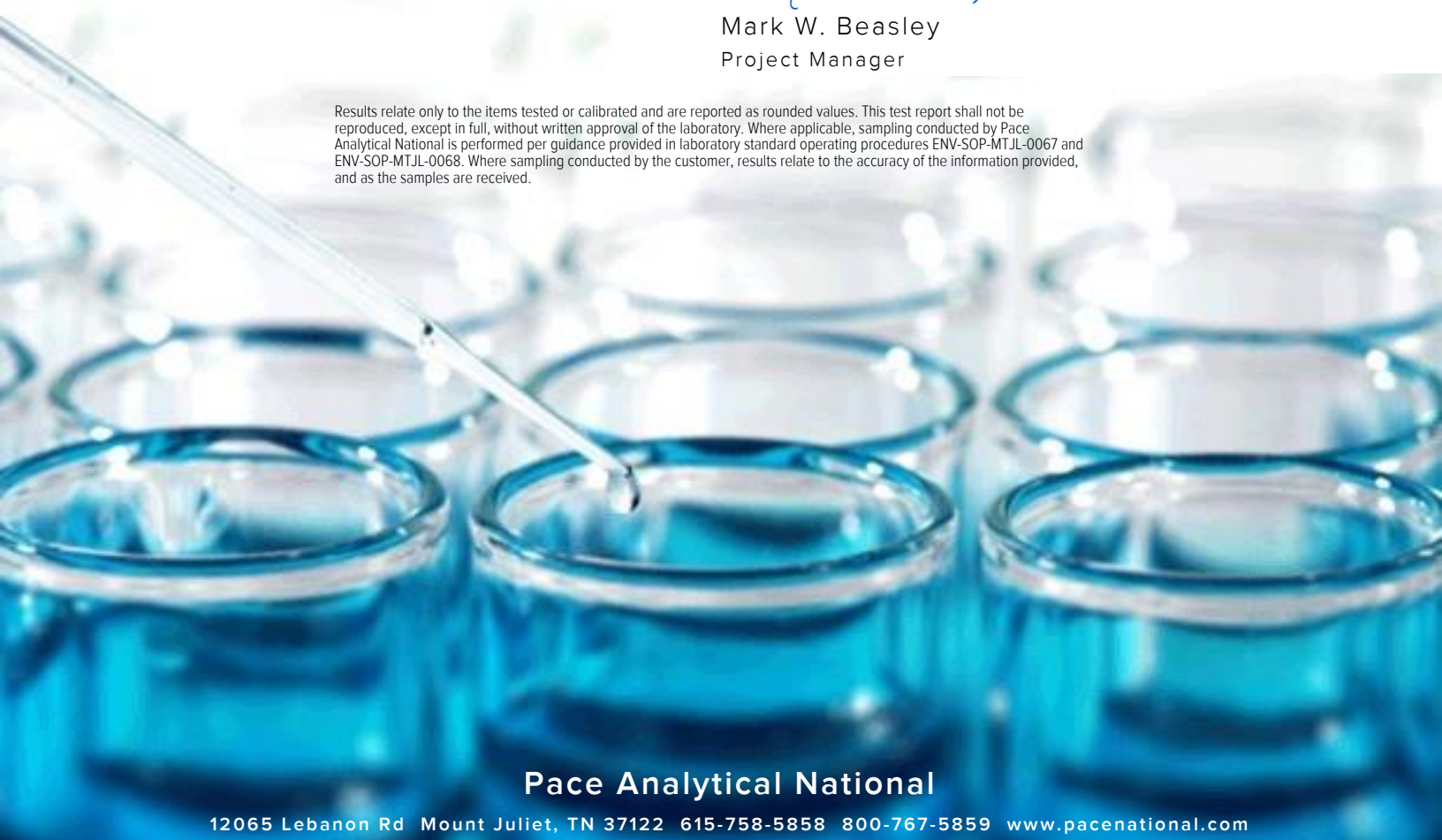
Report To: Dana Derrington  
2739 SCR 623  
Osceola, AR 72370

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](http://www.pacenational.com)



# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>	<b><sup>1</sup>Cp</b>
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b><sup>2</sup>Tc</b>
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	<b><sup>3</sup>Ss</b>
<b>MW-110 L1648788-01</b>	<b>5</b>	
<b>MW-121 L1648788-02</b>	<b>6</b>	<b><sup>4</sup>Cn</b>
<b>Qc: Quality Control Summary</b>	<b>7</b>	<b><sup>5</sup>Sr</b>
<b>Mercury by Method 7470A</b>	<b>7</b>	
<b>Metals (ICPMS) by Method 6020</b>	<b>8</b>	<b><sup>6</sup>Qc</b>
<b>Gl: Glossary of Terms</b>	<b>9</b>	<b><sup>7</sup>Gl</b>
<b>Al: Accreditations &amp; Locations</b>	<b>10</b>	<b><sup>8</sup>Al</b>
<b>Sc: Sample Chain of Custody</b>	<b>11</b>	<b><sup>9</sup>Sc</b>

# SAMPLE SUMMARY

## MW-110 L1648788-01 GW

Collected by: Michael Clayton  
 Collected date/time: 08/08/23 13:05  
 Received date/time: 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2120722	1	08/25/23 15:34	08/28/23 17:48	LD	Mt. Juliet, TN

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

## MW-121 L1648788-02 GW

Collected by: Michael Clayton  
 Collected date/time: 08/08/23 13:50  
 Received date/time: 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG2120740	1	08/29/23 20:25	08/30/23 16:15	LAS	Mt. Juliet, TN

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Arsenic	8.84		0.180	2.00	1	08/28/2023 17:48	<a href="#">WG2120722</a>

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

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	08/30/2023 16:15	<a href="#">WG2120740</a>

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

Method Blank (MB)

(MB) R3967617-1 08/30/23 13:27

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) R3967617-5 08/30/23 15:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	3.00	2.60	86.7	80.0-120	

L1647956-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1647956-01 08/30/23 13:31 • (MS) R3967617-3 08/30/23 13:33 • (MSD) R3967617-4 08/30/23 13:35

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	2.77	1.59	92.3	53.1	1	75.0-125		J3 J6	54.0	20

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

Method Blank (MB)

(MB) R3966399-1 08/28/23 16:27

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		0.180	2.00

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3966399-2 08/28/23 16:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	50.0	51.4	103	80.0-120	

4 Cn

5 Sr

L1648548-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1648548-01 08/28/23 16:34 • (MS) R3966399-4 08/28/23 16:40 • (MSD) R3966399-5 08/28/23 16:44

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 %
Arsenic	50.0	0.307	52.1	50.2	104	99.8	1	75.0-125			3.77	20

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

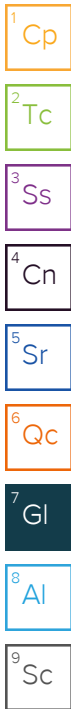
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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RDL	Reported Detection Limit.
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RPD	Relative Percent Difference.
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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
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.





# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

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

**Report to:**  
 Dana Derrington

**Project Description:**  
 Plum Point Energy Station

**City/State Collected:** Osceola AR

**Client Project #:** 14590-1469-001

**Lab Project #:** NAESOAR-PLUMPOINT

**Collected by (print):** Michael Clayton

**Collected by (signature):** [Signature]

**Site/Facility ID #:**

**P.O. #:** 2023-00048

**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:**

**Immediately Packed on Ice:** N  Y

**Analysis / Container / Preservative**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CI, 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
MW-104	Grab	GW		8/8/23	1620	5	X	X	X	X	X	X
MW-110		GW			1305	5	X	X	X	X	X	X
MW-120		GW			1500	5	X	X	X	X	X	X
MW-121		GW			1350	5	X	X	X	X	X	X
MW-104 DUP		GW			1625	5	X	X	X	X	X	X
EPA EB		GW			1650	5	X	X	X	X	X	X
		GW										
		GW										
		GW										

**Remarks:** Metals: AS,BA,BE,B,CA,CD,CO,CR,HG,LI,MO,PB,SB,SE,TL

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

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

**Relinquished by (Signature):** [Signature] **Date:** 8/9/23 **Time:** 1300

**Received by (Signature):** [Signature] **Date:** 8/10/23 **Time:** 9:00

**Temp:** °C **Bottles Received:** 30

**PH-10BDH4321 TRC-2144141 CR6-20221V**

**Condition:** NCF / OK



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-standards-terms.pdf>

SDG # ~~L16V8738~~ N  
 A135  
 L16V8738  
 Acctnum: NAESOAR  
 Template: T106048  
 Prelogin: P1015500  
 PM: 134 - Mark W. Beasley  
 PB:

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04
	-05
	-06

N  
 8/23/23

-01  
 -02

**L1644498 \*NAESOAR\* relog**

R5

Relog the following as R5 due 8/29:

L1644498-02 ASG

L1644498-04 HG

From: Heather Ferguson <hlf@ftn-assoc.com>

Sent: Tuesday, August 22, 2023 3:10 PM

To: Mark Beasley <Mark.Beasley@pacelabs.com>

Cc: Dana Derrington <dld@ftn-assoc.com>

Subject: Re: Pace Analytical National Level II Report for 14590-1469-001 Plum Point Energy Station  
L1644498

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.

Hi Mark,

Can you ask the lab to check the values for the well-parameter pairs below, and if correct, please re-run the samples for verification?

MW-110

ARSENIC

MW-121

MERCURY

Also, could you possibly change the project number on the report to 14590-3037-001? I apologize; I missed that when I reviewed the COCs you sent.

Regards,

Heather

[cid:e077afdc-ea65-428f-916f-fac1e5ffefff]

NOTICE-- The contents of this email and any attachments may contain confidential, privileged, and/or legally protected information and are for the sole use of the addressee(s). Any review or distribution by others is strictly prohibited. If you are not 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

**Members**

**MB** Mark Beasley (responsible)

August 24, 2023

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

**Plum Point Services Co., LLC**

Sample Delivery Group: L1644507  
Samples Received: 08/10/2023  
Project Number: 14590-1469-001  
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](http://www.pacenational.com)

# TABLE OF CONTENTS

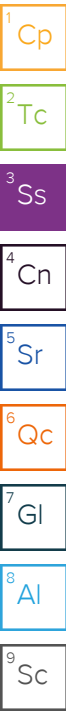
<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b>2</b> Tc
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	<b>3</b> Ss
MW-104 L1644507-01	<b>5</b>	
MW-110 L1644507-02	<b>6</b>	<b>4</b> Cn
MW-120 L1644507-03	<b>7</b>	<b>5</b> Sr
MW-121 L1644507-04	<b>8</b>	
MW-104 DUP L1644507-05	<b>9</b>	<b>6</b> Qc
EPA EB L1644507-06	<b>10</b>	<b>7</b> Gl
<b>Qc: Quality Control Summary</b>	<b>11</b>	
Radiochemistry by Method 904/9320	<b>11</b>	<b>8</b> Al
Radiochemistry by Method SM7500Ra B M	<b>13</b>	
<b>Gl: Glossary of Terms</b>	<b>14</b>	<b>9</b> Sc
<b>Al: Accreditations &amp; Locations</b>	<b>15</b>	
<b>Sc: Sample Chain of Custody</b>	<b>16</b>	

# SAMPLE SUMMARY

## MW-104 L1644507-01 Non-Potable Water

Collected by Michael Clayton    Collected date/time 08/08/23 16:20    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2112435	1	08/11/23 18:02	08/17/23 16:42	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2111538	1	08/11/23 13:22	08/17/23 16:42	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2111538	1	08/11/23 13:22	08/14/23 18:30	RGT	Mt. Juliet, TN



## MW-110 L1644507-02 Non-Potable Water

Collected by Michael Clayton    Collected date/time 08/08/23 13:05    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2115103	1	08/16/23 11:56	08/18/23 16:44	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2111538	1	08/11/23 13:22	08/18/23 16:44	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2111538	1	08/11/23 13:22	08/14/23 18:30	RGT	Mt. Juliet, TN

## MW-120 L1644507-03 Non-Potable Water

Collected by Michael Clayton    Collected date/time 08/08/23 15:00    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2115103	1	08/16/23 11:56	08/18/23 16:44	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2111538	1	08/11/23 13:22	08/18/23 16:44	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2111538	1	08/11/23 13:22	08/14/23 18:30	RGT	Mt. Juliet, TN

## MW-121 L1644507-04 Non-Potable Water

Collected by Michael Clayton    Collected date/time 08/08/23 13:50    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2115103	1	08/16/23 11:56	08/18/23 16:44	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2111538	1	08/11/23 13:22	08/18/23 16:44	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2111538	1	08/11/23 13:22	08/14/23 18:30	RGT	Mt. Juliet, TN

## MW-104 DUP L1644507-05 Non-Potable Water

Collected by Michael Clayton    Collected date/time 08/08/23 16:25    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2115103	1	08/16/23 11:56	08/18/23 16:44	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2111538	1	08/11/23 13:22	08/18/23 16:44	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2111538	1	08/11/23 13:22	08/14/23 18:30	RGT	Mt. Juliet, TN

## EPA EB L1644507-06 Non-Potable Water

Collected by Michael Clayton    Collected date/time 08/08/23 16:50    Received date/time 08/10/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2115103	1	08/16/23 11:56	08/18/23 16:44	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2111538	1	08/11/23 13:22	08/18/23 16:44	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2111538	1	08/11/23 13:22	08/14/23 18:30	RGT	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.213	<u>U</u>	0.385	0.708	08/17/2023 16:42	<a href="#">WG2112435</a>
(T) Barium	131			30.0-143	08/17/2023 16:42	<a href="#">WG2112435</a>
(T) Yttrium	107			30.0-136	08/17/2023 16:42	<a href="#">WG2112435</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.63		0.759	0.862	08/17/2023 16:42	<a href="#">WG2111538</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	1.63		0.654	0.491	08/14/2023 18:30	<a href="#">WG2111538</a>
(T) Barium-133	64.9			30.0-143	08/14/2023 18:30	<a href="#">WG2111538</a>



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.192	J	0.232	0.423	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Barium	107			30.0-143	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Yttrium	101			30.0-136	08/18/2023 16:44	<a href="#">WG2115103</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.451	J	0.396	0.618	08/18/2023 16:44	<a href="#">WG2115138</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.259	J	0.321	0.450	08/14/2023 18:30	<a href="#">WG2115138</a>
(T) Barium-133	69.3			30.0-143	08/14/2023 18:30	<a href="#">WG2115138</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.134	<u>U</u>	0.263	0.479	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Barium	132			30.0-143	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Yttrium	110			30.0-136	08/18/2023 16:44	<a href="#">WG2115103</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.576	<u>J</u>	0.462	0.667	08/18/2023 16:44	<a href="#">WG2115138</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.442	<u>J</u>	0.380	0.464	08/14/2023 18:30	<a href="#">WG2115138</a>
(T) Barium-133	63.8			30.0-143	08/14/2023 18:30	<a href="#">WG2115138</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.483		0.197	0.349	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Barium	127			30.0-143	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Yttrium	99.9			30.0-136	08/18/2023 16:44	<a href="#">WG2115103</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.768		0.295	0.424	08/18/2023 16:44	<a href="#">WG2115138</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.284		0.219	0.240	08/14/2023 18:30	<a href="#">WG2115138</a>
(T) Barium-133	115			30.0-143	08/14/2023 18:30	<a href="#">WG2115138</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.226	J	0.217	0.394	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Barium	108			30.0-143	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Yttrium	111			30.0-136	08/18/2023 16:44	<a href="#">WG2115103</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.285	J	0.325	0.572	08/18/2023 16:44	<a href="#">WG2115138</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0590	U	0.242	0.414	08/14/2023 18:30	<a href="#">WG2115138</a>
(T) Barium-133	88.5			30.0-143	08/14/2023 18:30	<a href="#">WG2115138</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.111	<u>U</u>	0.228	0.426	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Barium	105			30.0-143	08/18/2023 16:44	<a href="#">WG2115103</a>
(T) Yttrium	98.4			30.0-136	08/18/2023 16:44	<a href="#">WG2115103</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.339	<u>J</u>	0.345	0.521	08/18/2023 16:44	<a href="#">WG2115138</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.339		0.259	0.300	08/14/2023 18:30	<a href="#">WG2115138</a>
(T) Barium-133	102			30.0-143	08/14/2023 18:30	<a href="#">WG2115138</a>

Method Blank (MB)

(MB) R3963637-1 08/17/23 16:42

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	-0.0548	<u>U</u>	0.181	0.332
(T) Barium	132		132	
(T) Yttrium	99.9		99.9	

L1643961-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1643961-01 08/17/23 16:42 • (DUP) R3963637-5 08/17/23 16:42

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.552	0.219	0.00380	0.297	0.321	0.00380	1	60.2	0.657	<u>J</u>	20	3
(T) Barium	122			133	133							
(T) Yttrium	99.0			113	113							

Laboratory Control Sample (LCS)

(LCS) R3963637-2 08/17/23 16:42

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.92	98.3	80.0-120	
(T) Barium			141		
(T) Yttrium			95.4		

L1643453-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1643453-06 08/17/23 16:42 • (MS) R3963637-3 08/17/23 16:42 • (MSD) R3963637-4 08/17/23 16:42

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	10.0	0.712	9.07	10.3	83.6	95.5	1	70.0-130			12.3		20
(T) Barium		127			123	130							
(T) Yttrium		101			102	100							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3963833-1 08/18/23 16:44

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-228	-0.0404	<u>U</u>	0.179	0.332
(T) Barium	121		121	
(T) Yttrium	96.8		96.8	

L1644857-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1644857-01 08/18/23 16:44 • (DUP) R3963833-5 08/18/23 16:44

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-228	1.62	0.318	0.532	2.50	0.389	0.532	1	42.9	1.76		20	3
(T) Barium	110			114	114							
(T) Yttrium	99.5			88.9	88.9							

Laboratory Control Sample (LCS)

(LCS) R3963833-2 08/18/23 16:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	4.98	99.7	80.0-120	
(T) Barium			116		
(T) Yttrium			101		

L1646007-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1646007-02 08/18/23 16:44 • (MS) R3963833-3 08/18/23 16:44 • (MSD) R3963833-4 08/18/23 16:44

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	0.956	18.9	18.3	107	104	1	70.0-130			3.12		20
(T) Barium		123			98.3	98.9							
(T) Yttrium		98.3			99.8	118							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3963947-1 08/14/23 18:30

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0124	<u>U</u>	0.0747	0.150
(T) Barium-133	47.1		47.1	

L1644507-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1644507-06 08/14/23 18:30 • (DUP) R3963947-5 08/14/23 18:30

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.339	0.259	0.300	0.101	0.191	0.300	1	200	0.533	<u>U</u>	20	3
(T) Barium-133	102			55.8	55.8							

Laboratory Control Sample (LCS)

(LCS) R3963947-2 08/14/23 18:30

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	5.97	119	80.0-120	
(T) Barium-133			34.1		

L1644507-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1644507-01 08/14/23 18:30 • (MS) R3963947-6 08/21/23 23:31 • (MSD) R3963947-7 08/21/23 23:31

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	1.63	20.6	21.4	94.9	98.7	1	75.0-125			3.67		20
(T) Barium-133		64.9			60.4	32.9							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

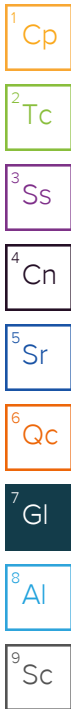
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

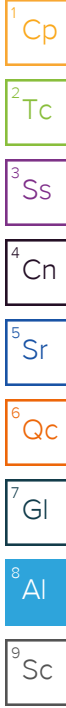
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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



Company Name/Address:

**Plum Point Services Co., LLC**

2739 SCR 623  
Osceola, AR 72370

Billing Information:

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

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody

Page 2 of 2

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 #  
**14590-1469-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):  
*Michael Clayton*

**Rush?** (Lab MUST Be Notified)

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

Date Results Needed

Immediately  
Packed on Ice N  Y

No.  
of  
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 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
MW-104	Grab	GW		8/8/23	1620	5	X	X	X	X	X	X
MW-110	↓	GW		↓	1305	5	X	X	X	X	X	X
MW-120	↓	GW		↓	1500	5	X	X	X	X	X	X
MW-121	↓	GW		↓	1350	5	X	X	X	X	X	X
MW-104 DUP	↓	GW		↓	1625	5	X	X	X	X	X	X
EPA EB	↓	GW		↓	1650	5	X	X	X	X	X	X
		GW										
		GW										
		GW										

**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/hubs/pas-standard-terms.pdf>

SDG # **4644507**  
**A135**

Acctnum: **NAESOAR**  
Template: **T106048**  
Prelogin: **P1015500**  
PM: **134 - Mark W. Beasley**  
PB:

Shipped Via:  
Remarks Sample # (lab only)

\* 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 <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
Correct bottles used:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
If Applicable	
VOA Zero Headspace:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>
RAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/>

Relinquished by: (Signature)  
*Michael Clayton*

Date: **8/9/23** Time: **1300**

Received by: (Signature)

Trip Blank Received: Yes  No   
HCL/MeOH  
TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)

Temp: \_\_\_\_\_ °C Bottles Received: **30**

PH-10BDH4321 TRC-2144141  
CR6-20221V Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for Lab by: (Signature)  
*Miss Henry*

Date: **8/10/23** Time: **9:00**

Hold: \_\_\_\_\_ Condition: **NCF / OK**

W64507

<u>Tracking Numbers</u>	<u>Temperature</u>
6643 4296 4431	4.2 ± 0.4 <sup>CB</sup> <sub>Δ8</sub>
6643 4296 4442	0.7 ± 0.07 <sup>CB</sup> <sub>Δ8</sub>

---

**Monthly Background Sampling Event  
September 2023**

October 02, 2023

Revised Report

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Plum Point Services Co., LLC

Sample Delivery Group: L1654246  
Samples Received: 09/08/2023  
Project Number: R14590-3037-001  
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

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b>2</b> Tc
<b>Cn: Case Narrative</b>	<b>5</b>	
<b>Sr: Sample Results</b>	<b>6</b>	<b>3</b> Ss
MW-104 L1654246-01	<b>6</b>	
MW-110 L1654246-02	<b>7</b>	<b>4</b> Cn
MW-120 L1654246-03	<b>8</b>	<b>5</b> Sr
MW-121 L1654246-04	<b>9</b>	
MW-110 DUP L1654246-05	<b>10</b>	<b>6</b> Qc
EPA EB L1654246-06	<b>11</b>	
<b>Qc: Quality Control Summary</b>	<b>12</b>	<b>7</b> Gl
Gravimetric Analysis by Method 2540 C-2011	<b>12</b>	
Wet Chemistry by Method 9056A	<b>13</b>	<b>8</b> Al
Mercury by Method 7470A	<b>15</b>	
Metals (ICP) by Method 6010B	<b>16</b>	
Metals (ICPMS) by Method 6020	<b>17</b>	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>19</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>20</b>	
<b>Sc: Sample Chain of Custody</b>	<b>21</b>	

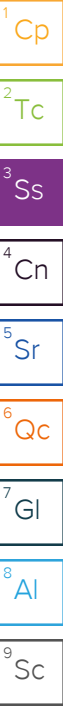
# SAMPLE SUMMARY

## MW-104 L1654246-01 GW

Collected by  
Collected date/time  
Received date/time

09/07/23 12:15    09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2129770	1	09/10/23 19:59	09/11/23 09:37	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2129329	1	09/10/23 06:40	09/10/23 06:40	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2129688	1	09/13/23 17:34	09/14/23 13:20	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2130316	1	09/12/23 23:00	09/13/23 21:41	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2130296	1	09/14/23 10:06	09/14/23 21:48	LD	Mt. Juliet, TN



## MW-110 L1654246-02 GW

Collected by  
Collected date/time  
Received date/time

09/07/23 10:25    09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2129770	1	09/10/23 19:59	09/11/23 09:37	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2129329	1	09/10/23 06:54	09/10/23 06:54	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2129688	1	09/13/23 17:34	09/14/23 13:22	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2130316	1	09/12/23 23:00	09/13/23 21:51	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2130296	1	09/14/23 10:06	09/14/23 21:51	LD	Mt. Juliet, TN

## MW-120 L1654246-03 GW

Collected by  
Collected date/time  
Received date/time

09/07/23 13:35    09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2129770	1	09/10/23 19:59	09/11/23 09:37	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2129329	1	09/10/23 07:07	09/10/23 07:07	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2129688	1	09/13/23 17:34	09/14/23 13:24	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2130316	1	09/12/23 23:00	09/13/23 21:54	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2130296	1	09/14/23 10:06	09/14/23 21:55	LD	Mt. Juliet, TN

## MW-121 L1654246-04 GW

Collected by  
Collected date/time  
Received date/time

09/07/23 15:00    09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2129770	1	09/10/23 19:59	09/11/23 09:37	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2129329	1	09/10/23 07:21	09/10/23 07:21	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2129688	1	09/13/23 17:34	09/14/23 13:27	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2130316	1	09/12/23 23:00	09/13/23 21:57	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2130296	1	09/14/23 10:06	09/14/23 21:58	LD	Mt. Juliet, TN

## MW-110 DUP L1654246-05 GW

Collected by  
Collected date/time  
Received date/time

09/07/23 10:30    09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2129770	1	09/10/23 19:59	09/11/23 09:37	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2129329	1	09/10/23 07:35	09/10/23 07:35	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2129688	1	09/13/23 17:34	09/14/23 13:34	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2130316	1	09/12/23 23:00	09/13/23 22:00	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2130296	1	09/14/23 10:06	09/14/23 22:01	LD	Mt. Juliet, TN



# SAMPLE SUMMARY

EPA EB L1654246-06 GW

Collected by:   
 Collected date/time: 09/07/23 15:40   
 Received date/time: 09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2129770	1	09/10/23 19:59	09/11/23 09:37	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2129329	1	09/10/23 08:43	09/10/23 08:43	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2129688	1	09/13/23 17:34	09/14/23 13:36	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2130316	1	09/12/23 23:00	09/13/23 22:02	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2130296	1	09/14/23 10:06	09/14/23 22:05	LD	Mt. Juliet, TN

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# CASE NARRATIVE

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



Mark W. Beasley  
Project Manager

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

## Report Revision History

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Level II Report - Version 1: 09/22/23 15:40

## Project Narrative

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Corrected project #

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	309000	<u>J3</u>	10000	1	09/11/2023 09:37	<a href="#">WG2129770</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1030		379	1000	1	09/10/2023 06:40	<a href="#">WG2129329</a>
Fluoride	280		64.0	150	1	09/10/2023 06:40	<a href="#">WG2129329</a>
Sulfate	3570	<u>J</u>	594	5000	1	09/10/2023 06:40	<a href="#">WG2129329</a>

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	09/14/2023 13:20	<a href="#">WG2129688</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	54.8	<u>J</u>	20.0	200	1	09/13/2023 21:41	<a href="#">WG2130316</a>
Calcium	85100		79.3	1000	1	09/13/2023 21:41	<a href="#">WG2130316</a>

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	09/14/2023 21:48	<a href="#">WG2130296</a>
Arsenic	2.84		0.180	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Barium	157		0.381	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Beryllium	U		0.190	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Cadmium	U		0.150	1.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Chromium	2.00	<u>J</u>	1.24	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Cobalt	0.112	<u>J</u>	0.0596	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Lead	U		0.849	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Molybdenum	1.83	<u>J</u>	0.348	5.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Selenium	4.16		0.300	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Thallium	U		0.121	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>
Lithium	7.28		0.695	2.00	1	09/14/2023 21:48	<a href="#">WG2130296</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	326000		10000	1	09/11/2023 09:37	<a href="#">WG2129770</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	932	J	379	1000	1	09/10/2023 06:54	<a href="#">WG2129329</a>
Fluoride	198		64.0	150	1	09/10/2023 06:54	<a href="#">WG2129329</a>
Sulfate	4790	J	594	5000	1	09/10/2023 06:54	<a href="#">WG2129329</a>

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	09/14/2023 13:22	<a href="#">WG2129688</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	69.4	J	20.0	200	1	09/13/2023 21:51	<a href="#">WG2130316</a>
Calcium	86800		79.3	1000	1	09/13/2023 21:51	<a href="#">WG2130316</a>

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	09/14/2023 21:51	<a href="#">WG2130296</a>
Arsenic	5.37		0.180	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Barium	256		0.381	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Beryllium	U		0.190	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Cadmium	U		0.150	1.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Chromium	1.97	J	1.24	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Cobalt	0.691	J	0.0596	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Lead	1.28	B J	0.849	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Molybdenum	0.697	J	0.348	5.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Selenium	0.407	J	0.300	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Thallium	U		0.121	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>
Lithium	5.09		0.695	2.00	1	09/14/2023 21:51	<a href="#">WG2130296</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	247000		10000	1	09/11/2023 09:37	<a href="#">WG2129770</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	982	J	379	1000	1	09/10/2023 07:07	<a href="#">WG2129329</a>
Fluoride	204		64.0	150	1	09/10/2023 07:07	<a href="#">WG2129329</a>
Sulfate	6820		594	5000	1	09/10/2023 07:07	<a href="#">WG2129329</a>

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	09/14/2023 13:24	<a href="#">WG2129688</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	51.1	J	20.0	200	1	09/13/2023 21:54	<a href="#">WG2130316</a>
Calcium	70000		79.3	1000	1	09/13/2023 21:54	<a href="#">WG2130316</a>

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	09/14/2023 21:55	<a href="#">WG2130296</a>
Arsenic	0.656	J	0.180	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Barium	142		0.381	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Beryllium	U		0.190	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Cadmium	U		0.150	1.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Chromium	U		1.24	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Cobalt	0.0996	J	0.0596	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Lead	U		0.849	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Molybdenum	0.819	J	0.348	5.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Selenium	5.67		0.300	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Thallium	U		0.121	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>
Lithium	7.84		0.695	2.00	1	09/14/2023 21:55	<a href="#">WG2130296</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	179000		10000	1	09/11/2023 09:37	<a href="#">WG2129770</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1120		379	1000	1	09/10/2023 07:21	<a href="#">WG2129329</a>
Fluoride	108	J	64.0	150	1	09/10/2023 07:21	<a href="#">WG2129329</a>
Sulfate	14600		594	5000	1	09/10/2023 07:21	<a href="#">WG2129329</a>

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	09/14/2023 13:27	<a href="#">WG2129688</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	38.1	J	20.0	200	1	09/13/2023 21:57	<a href="#">WG2130316</a>
Calcium	41300		79.3	1000	1	09/13/2023 21:57	<a href="#">WG2130316</a>

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	09/14/2023 21:58	<a href="#">WG2130296</a>
Arsenic	0.916	J	0.180	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Barium	106		0.381	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Beryllium	U		0.190	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Cadmium	U		0.150	1.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Chromium	1.45	J	1.24	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Cobalt	U		0.0596	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Lead	1.85	B J	0.849	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Molybdenum	U		0.348	5.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Selenium	5.86		0.300	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Thallium	U		0.121	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>
Lithium	3.00		0.695	2.00	1	09/14/2023 21:58	<a href="#">WG2130296</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	400000		100000	1	09/11/2023 09:37	<a href="#">WG2129770</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	896	J	379	1000	1	09/10/2023 07:35	<a href="#">WG2129329</a>
Fluoride	208		64.0	150	1	09/10/2023 07:35	<a href="#">WG2129329</a>
Sulfate	4720	J	594	5000	1	09/10/2023 07:35	<a href="#">WG2129329</a>

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	09/14/2023 13:34	<a href="#">WG2129688</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	67.0	J	20.0	200	1	09/13/2023 22:00	<a href="#">WG2130316</a>
Calcium	86100		79.3	1000	1	09/13/2023 22:00	<a href="#">WG2130316</a>

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	09/14/2023 22:01	<a href="#">WG2130296</a>
Arsenic	4.99		0.180	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Barium	247		0.381	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Beryllium	U		0.190	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Cadmium	U		0.150	1.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Chromium	U		1.24	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Cobalt	0.720	J	0.0596	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Lead	2.11	B	0.849	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Molybdenum	1.00	J	0.348	5.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Selenium	U		0.300	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Thallium	U		0.121	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>
Lithium	5.05		0.695	2.00	1	09/14/2023 22:01	<a href="#">WG2130296</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	ND		10000	1	09/11/2023 09:37	<a href="#">WG2129770</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	U		379	1000	1	09/10/2023 08:43	<a href="#">WG2129329</a>
Fluoride	U		64.0	150	1	09/10/2023 08:43	<a href="#">WG2129329</a>
Sulfate	U		594	5000	1	09/10/2023 08:43	<a href="#">WG2129329</a>

## 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	09/14/2023 13:36	<a href="#">WG2129688</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	U		20.0	200	1	09/13/2023 22:02	<a href="#">WG2130316</a>
Calcium	U		79.3	1000	1	09/13/2023 22:02	<a href="#">WG2130316</a>

## 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	09/14/2023 22:05	<a href="#">WG2130296</a>
Arsenic	U		0.180	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Barium	U		0.381	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Beryllium	U		0.190	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Cadmium	U		0.150	1.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Chromium	2.22		1.24	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Cobalt	U		0.0596	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Lead	2.45	<u>B</u>	0.849	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Molybdenum	U		0.348	5.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Selenium	U		0.300	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Thallium	U		0.121	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>
Lithium	U		0.695	2.00	1	09/14/2023 22:05	<a href="#">WG2130296</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3972345-1 09/11/23 09:37

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

1 Cp

2 Tc

3 Ss

L1654240-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1654240-07 09/11/23 09:37 • (DUP) R3972345-3 09/11/23 09:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1400000	1550000	1	10.5	J3	5

4 Cn

5 Sr

L1654246-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1654246-01 09/11/23 09:37 • (DUP) R3972345-4 09/11/23 09:37

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	309000	330000	1	6.57	J3	5

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3972345-2 09/11/23 09:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8580000	97.5	77.3-123	

9 Sc

Method Blank (MB)

(MB) R3971476-1 09/10/23 00:30

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

L1654084-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1654084-01 09/10/23 00:57 • (DUP) R3971476-3 09/10/23 01:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	20300	20400	1	0.337		15
Fluoride	102	88.1	1	14.2	U	15
Sulfate	57800	58000	1	0.291		15

L1654246-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1654246-05 09/10/23 07:35 • (DUP) R3971476-6 09/10/23 07:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	896	907	1	1.25	U	15
Fluoride	208	209	1	0.672		15
Sulfate	4720	4750	1	0.735	U	15

Laboratory Control Sample (LCS)

(LCS) R3971476-2 09/10/23 00:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	39000	97.5	80.0-120	
Fluoride	8000	7820	97.7	80.0-120	
Sulfate	40000	39400	98.5	80.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1654084-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1654084-01 09/10/23 00:57 • (MS) R3971476-4 09/10/23 01:25 • (MSD) R3971476-5 09/10/23 01:38

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	20300	69500	69500	98.5	98.4	1	80.0-120			0.112	15
Fluoride	5000	102	5080	5070	99.6	99.4	1	80.0-120			0.189	15
Sulfate	50000	57800	104000	104000	91.9	91.7	1	80.0-120			0.0965	15

L1654246-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1654246-05 09/10/23 07:35 • (MS) R3971476-7 09/10/23 08:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	896	51100	100	1	80.0-120	
Fluoride	5000	208	5200	99.9	1	80.0-120	
Sulfate	50000	4720	53000	96.5	1	80.0-120	

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

Method Blank (MB)

(MB) R3973102-1 09/14/23 12:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.100	0.200

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3973102-2 09/14/23 12:21

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	3.00	3.04	101	80.0-120	

4 Cn

5 Sr

L1654157-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1654157-03 09/14/23 12:24 • (MS) R3973102-3 09/14/23 12:31 • (MSD) R3973102-4 09/14/23 12:33

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	3.00	U	3.15	3.10	105	103	1	75.0-125			1.40	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3972935-1 09/13/23 20:43

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) R3972935-2 09/13/23 20:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	972	97.2	80.0-120	
Calcium	10000	10000	100	80.0-120	

L1654155-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1654155-06 09/13/23 20:48 • (MS) R3972935-4 09/13/23 20:54 • (MSD) R3972935-5 09/13/23 20:56

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	94.7	1080	1080	98.7	98.2	1	75.0-125			0.520	20
Calcium	10000	143000	150000	150000	70.4	70.1	1	75.0-125	V	V	0.0242	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3973373-1 09/14/23 20:53

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	1.24	U	0.849	2.00
Molybdenum	U		0.348	5.00
Selenium	U		0.300	2.00
Thallium	0.155	U	0.121	2.00
Lithium	U		0.695	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3973373-2 09/14/23 20:56

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	47.7	95.4	80.0-120	
Arsenic	50.0	49.2	98.3	80.0-120	
Barium	50.0	47.7	95.4	80.0-120	
Beryllium	50.0	45.4	90.7	80.0-120	
Cadmium	50.0	49.9	99.8	80.0-120	
Chromium	50.0	50.0	99.9	80.0-120	
Cobalt	50.0	48.8	97.7	80.0-120	
Lead	50.0	49.7	99.4	80.0-120	
Molybdenum	50.0	49.3	98.5	80.0-120	
Selenium	50.0	49.8	99.6	80.0-120	
Thallium	50.0	47.4	94.7	80.0-120	
Lithium	50.0	44.9	89.8	80.0-120	

L1654135-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1654135-01 09/14/23 21:00 • (MS) R3973373-4 09/14/23 21:06 • (MSD) R3973373-5 09/14/23 21:10

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	49.5	49.8	98.9	99.7	1	75.0-125			0.760	20
Arsenic	50.0	3.81	53.7	52.0	99.7	96.5	1	75.0-125			3.09	20
Barium	50.0	84.9	132	134	95.2	97.7	1	75.0-125			0.946	20

L1654135-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1654135-01 09/14/23 21:00 • (MS) R3973373-4 09/14/23 21:06 • (MSD) R3973373-5 09/14/23 21:10

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	46.5	45.6	93.0	91.3	1	75.0-125			1.92	20
Cadmium	50.0	U	50.1	49.4	100	98.8	1	75.0-125			1.46	20
Chromium	50.0	U	49.5	47.9	98.9	95.8	1	75.0-125			3.18	20
Cobalt	50.0	0.151	48.6	47.4	96.8	94.6	1	75.0-125			2.36	20
Lead	50.0	3.22	49.2	49.1	92.0	91.8	1	75.0-125			0.214	20
Molybdenum	50.0	1.71	53.2	52.0	103	101	1	75.0-125			2.29	20
Selenium	50.0	0.326	51.3	50.8	103	102	1	75.0-125			1.01	20
Thallium	50.0	U	46.7	46.9	93.4	93.7	1	75.0-125			0.343	20
Lithium	50.0	5.14	48.4	48.0	86.5	85.7	1	75.0-125			0.871	20

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

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

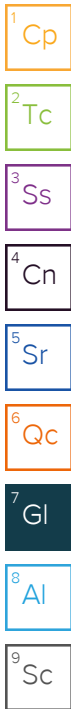
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
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.
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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr


<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

11054246

<b>Company Name/Address:</b> <b>Plum Point Services Co., LLC</b> 2739 SCR 623 Osceola, AR 72370		<b>Billing Information:</b> <b>Accounts Payable</b> P.O. Box 567 Osceola, AR 72370		Pres Chk L2 L2 L2	<b>Analysis / Container / Preservative</b>						Chain of Custody Page <u>1</u> of <u>2</u>							
<b>Report to:</b> <b>Dana Derrington</b>		Email To: dld@ftn-assoc.com; hlf@ftn-assoc.com; mcc@ftn-assoc.com								 <b>MT JULIET, TN</b> <small>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</small>								
<b>Project Description:</b> Plum Point Energy Station		City/State Collected: <u>Osceola Ar</u>		Please Circle: PT MT <u>CT</u> ET								SDR <b>B068</b>						
Phone: <b>501-920-9642</b>		Client Project # <b>14590-3037-001</b>		Lab Project # <b>NAESOAR-PLUMPOINT</b>								Acctnum: <b>NAESOAR</b> Template: <b>T106048</b> Prelogin: <b>P1021391</b> PM: <b>134 - Mark W. Beasley</b> PB:						
Collected by (print): <u>Michael Clayton</u>		Site/Facility ID #		P.O. # <b>2023-00048</b>								Shipped Via:						
Collected by (signature): <u>[Signature]</u>		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day		Quote #		Date Results Needed		No. of Cntrs					Remarks Sample # (lab only)					
Packed on ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>																		
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	C1	F	S04	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				
MW-104	Grab	GW		9/7/23	1215	5	X	X	X	X	X	X	X	X				-01
MW-110		GW		9/7/23	1025	5	X	X	X	X	X	X	X	X				-02
MW-120		GW		9/7/23	1335	5	X	X	X	X	X	X	X	X				-03
MW-121		GW		9/7/23	1500	5	X	X	X	X	X	X	X	X				-04
MW-110 DUP		GW		9/7/23	1030	5	X	X	X	X	X	X	X	X				-05
EPA EB		GW		9/7/23	1540	5	X	X	X	X	X	X	X	X				-06
		GW																
		GW																
		GW																

**Sample Receipt Checklist**

COC Seal Present/Intact:  NP  N

COC Signed/Accurate:  N  N

Bottles arrive intact:  N  N

Correct bottles used:  N  N

Sufficient volume sent:  N  N

If Applicable

VOA Zero HeadSpace:  Y  N

Preservation Correct/Checked:  Y  N

RAD Screen <0.5 mR/hr:  Y  N

PH-10BDH4321 TRC-2352362  
 CR6-20221V

\* 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

Relinquished by: (Signature) <u>[Signature]</u>	Date: <u>9/7/23</u>	Time: <u>1730</u>	Received by: (Signature)	Trip Blank Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	HCL / MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C <u>30</u>	Bottles Received: <u>30</u>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: <u>9-8-23</u>	Time: <u>9:00</u>

Condition: NCF  OK

L1654246

<u>Tracking Numbers</u>	<u>Temperature</u>
7019 5681 7743	NFAS 2.3+0=2.3
7019 5681 7754	NFAS 1.1+0=1.1

## Plum Point Services Co., LLC

Sample Delivery Group: L1654251  
Samples Received: 09/08/2023  
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.

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	1	
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	
<b>Cn: Case Narrative</b>	4	
<b>Sr: Sample Results</b>	5	
MW-104 L1654251-01	5	
MW-110 L1654251-02	6	
MW-120 L1654251-03	7	
MW-121 L1654251-04	8	
MW-110 DUP L1654251-05	9	
EPA EB L1654251-06	10	
<b>Qc: Quality Control Summary</b>	11	
Radiochemistry by Method 904/9320	11	
Radiochemistry by Method SM7500Ra B M	12	
<b>Gl: Glossary of Terms</b>	13	
<b>Al: Accreditations &amp; Locations</b>	14	
<b>Sc: Sample Chain of Custody</b>	15	

# SAMPLE SUMMARY

## MW-104 L1654251-01 Non-Potable Water

Collected by Michael Clayton    Collected date/time 09/07/23 12:15    Received date/time 09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2141583	1	09/29/23 19:41	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2135792	1	09/20/23 16:26	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2135792	1	09/20/23 16:26	09/22/23 13:29	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## MW-110 L1654251-02 Non-Potable Water

Collected by Michael Clayton    Collected date/time 09/07/23 10:25    Received date/time 09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2141583	1	09/29/23 19:41	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2135792	1	09/20/23 16:26	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2135792	1	09/20/23 16:26	09/22/23 13:29	RGT	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

## MW-120 L1654251-03 Non-Potable Water

Collected by Michael Clayton    Collected date/time 09/07/23 13:35    Received date/time 09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2141583	1	09/29/23 19:41	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2135792	1	09/20/23 16:26	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2135792	1	09/20/23 16:26	09/22/23 13:29	RGT	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

## MW-121 L1654251-04 Non-Potable Water

Collected by Michael Clayton    Collected date/time 09/07/23 15:00    Received date/time 09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2141583	1	09/29/23 19:41	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2135792	1	09/20/23 16:26	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2135792	1	09/20/23 16:26	09/22/23 13:29	RGT	Mt. Juliet, TN

## MW-110 DUP L1654251-05 Non-Potable Water

Collected by Michael Clayton    Collected date/time 09/07/23 10:30    Received date/time 09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2141583	1	09/29/23 19:41	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2135792	1	09/20/23 16:26	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2135792	1	09/20/23 16:26	09/22/23 13:29	RGT	Mt. Juliet, TN

## EPA EB L1654251-06 Non-Potable Water

Collected by Michael Clayton    Collected date/time 09/07/23 15:40    Received date/time 09/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2141583	1	09/29/23 19:41	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2135792	1	09/20/23 16:26	10/04/23 17:26	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2135792	1	09/20/23 16:26	09/22/23 13:29	RGT	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

## Report Revision History

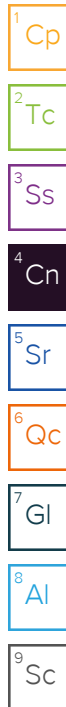
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Level II Report - Version 1: 10/13/23 12:42

## Project Narrative

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Corrected project #



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.198	<u>U</u>	0.262	0.480	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Barium	128			30.0-143	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Yttrium	102			30.0-136	10/04/2023 17:26	<a href="#">WG2141583</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.29		0.492	0.516	10/04/2023 17:26	<a href="#">WG2135792</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	1.09		0.417	0.188	09/22/2023 13:29	<a href="#">WG2135792</a>
(T) Barium-133	85.8			30.0-143	09/22/2023 13:29	<a href="#">WG2135792</a>

6 Qc

7 Gl

8 Al

9 Sc



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.283	J	0.221	0.404	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Barium	137			30.0-143	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Yttrium	91.9			30.0-136	10/04/2023 17:26	<a href="#">WG2141583</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.41		0.607	0.480	10/04/2023 17:26	<a href="#">WG2135792</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	2.13		0.565	0.260	09/22/2023 13:29	<a href="#">WG2135792</a>
(T) Barium-133	85.7			30.0-143	09/22/2023 13:29	<a href="#">WG2135792</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.36		0.242	0.404	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Barium	123			30.0-143	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Yttrium	97.3			30.0-136	10/04/2023 17:26	<a href="#">WG2141583</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.51		0.302	0.474	10/04/2023 17:26	<a href="#">WG2135792</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.150	J	0.180	0.248	09/22/2023 13:29	<a href="#">WG2135792</a>
(T) Barium-133	76.8			30.0-143	09/22/2023 13:29	<a href="#">WG2135792</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.839		0.313	0.554	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Barium	129			30.0-143	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Yttrium	104			30.0-136	10/04/2023 17:26	<a href="#">WG2141583</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.965		0.373	0.637	10/04/2023 17:26	<a href="#">WG2135792</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.126	J	0.202	0.314	09/22/2023 13:29	<a href="#">WG2135792</a>
(T) Barium-133	74.5			30.0-143	09/22/2023 13:29	<a href="#">WG2135792</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.186	<u>U</u>	0.201	0.384	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Barium	121			30.0-143	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Yttrium	102			30.0-136	10/04/2023 17:26	<a href="#">WG2141583</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.655		0.426	0.539	10/04/2023 17:26	<a href="#">WG2135792</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.655		0.376	0.378	09/22/2023 13:29	<a href="#">WG2135792</a>
(T) Barium-133	92.8			30.0-143	09/22/2023 13:29	<a href="#">WG2135792</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.0387	<u>U</u>	0.239	0.448	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Barium	137			30.0-143	10/04/2023 17:26	<a href="#">WG2141583</a>
(T) Yttrium	83.7			30.0-136	10/04/2023 17:26	<a href="#">WG2141583</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.177	<u>U</u>	0.332	0.557	10/04/2023 17:26	<a href="#">WG2135792</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.177	<u>J</u>	0.231	0.331	09/22/2023 13:29	<a href="#">WG2135792</a>
(T) Barium-133	90.1			30.0-143	09/22/2023 13:29	<a href="#">WG2135792</a>

Method Blank (MB)

(MB) R3984999-1 10/04/23 17:26

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.440		0.192	0.343
(T) Barium	108		108	
(T) Yttrium	89.0		89.0	

L1654251-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1654251-04 10/04/23 17:26 • (DUP) R3984999-5 10/04/23 17:26

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.839	0.313	0.554	0.229	0.317	0.584	1	114	1.37	<u>U</u>	20	3
(T) Barium	129			123	123							
(T) Yttrium	104			94.0	94.0							

Laboratory Control Sample (LCS)

(LCS) R3984999-2 10/04/23 17:26

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.43	88.7	80.0-120	
(T) Barium			126		
(T) Yttrium			104		

L1654335-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1654335-01 10/04/23 17:26 • (MS) R3984999-3 10/04/23 17:26 • (MSD) R3984999-4 10/04/23 17:26

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	0.479	18.1	16.3	106	94.7	1	70.0-130			10.6		20
(T) Barium		128			111	136							
(T) Yttrium		93.5			93.6	95.9							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3977554-1 09/22/23 13:29

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	0.107	<u>J</u>	0.0977	0.123
(T) Barium-133	62.4		62.4	

L1654251-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1654251-06 09/22/23 13:29 • (DUP) R3977554-5 09/22/23 13:29

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.177	0.231	0.331	0.0924	0.222	0.374	1	63.0	0.265	<u>U</u>	20	3
(T) Barium-133	90.1			69.8	69.8							

Laboratory Control Sample (LCS)

(LCS) R3977554-2 09/22/23 13:29

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.85	96.9	80.0-120	
(T) Barium-133			73.3		

L1654251-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1654251-01 09/22/23 13:29 • (MS) R3977554-3 09/22/23 13:29 • (MSD) R3977554-4 09/22/23 13:29

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-226	20.0	1.09	20.0	19.6	94.3	92.5	1	75.0-125			1.77		20
(T) Barium-133		85.8			83.7	60.8							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# GLOSSARY OF TERMS

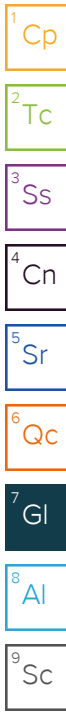
## Guide to Reading and Understanding Your Laboratory Report

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

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

### Abbreviations and Definitions

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

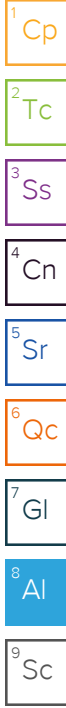
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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



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

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

Analysis / Container / Preservative	Pres Chk
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	

Chain of Custody Page 1 of 2



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/html/pas-standard-terms.pdf>

SDR: **B068**  
 Tat: **UL54251**  
 Acctnum: **NAESOAR**  
 Template: **T106048**  
 Prelogin: **P1021391**  
 PM: **134 - Mark W. Beasley**  
 PB:  
 Shipped Via:

Report to:  
**Dana Derrington**

Email To: [dld@ftn-assoc.com](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto:mcc@ftn-assoc.com)

Project Description:  
**Plum Point Energy Station**

City/State Collected: **Osceola AR**

Please Circle: PT MT **Cl** ET

Phone: **501-920-9642**

Client Project #  
**14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

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

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		9/7/23	1215	5	X	X	X	X	X	X		-01
MW-110		GW		9/7/23	1025	5	X	X	X	X	X	X		-02
MW-120		GW		9/7/23	1335	5	X	X	X	X	X	X		-03
MW-121		GW		9/9/23	1500	5	X	X	X	X	X	X		-04
MW-110 DUP		GW		9/7/23	1030	5	X	X	X	X	X	X		-05
EPA EB		GW		9/7/23	1540	5	X	X	X	X	X	X		-06
		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 #

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

Relinquished by: (Signature)  
*Michael Clayton*

Date: **9/7/23** Time: **1730**

Received by: (Signature)

Trip Blank Received: Yes  No   
 HCL/MeOH TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)

Temp: \_\_\_\_\_ °C Bottles Received: **30**

PH-10BDH4321 TRC-2352362  
 CR6-20221V

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature)  
**9 10**

Date: **9-8-23** Time: **9:00**

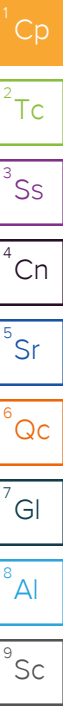
Condition: NCF  OK

U654251

<u>Tracking Numbers</u>	<u>Temperature</u>
7019 5681 7743	NFA8 2.3+0=2.3
7019 5681 7754	NFA8 1.1+0=1.1

---

**Second Half 2023 Detection Monitoring & Monthly Background  
Sampling Event  
October 2023**



## Plum Point Services Co., LLC

Sample Delivery Group: L1666237  
Samples Received: 10/13/2023  
Project Number: R14590-3037-001  
Description: Plum Point Energy Station

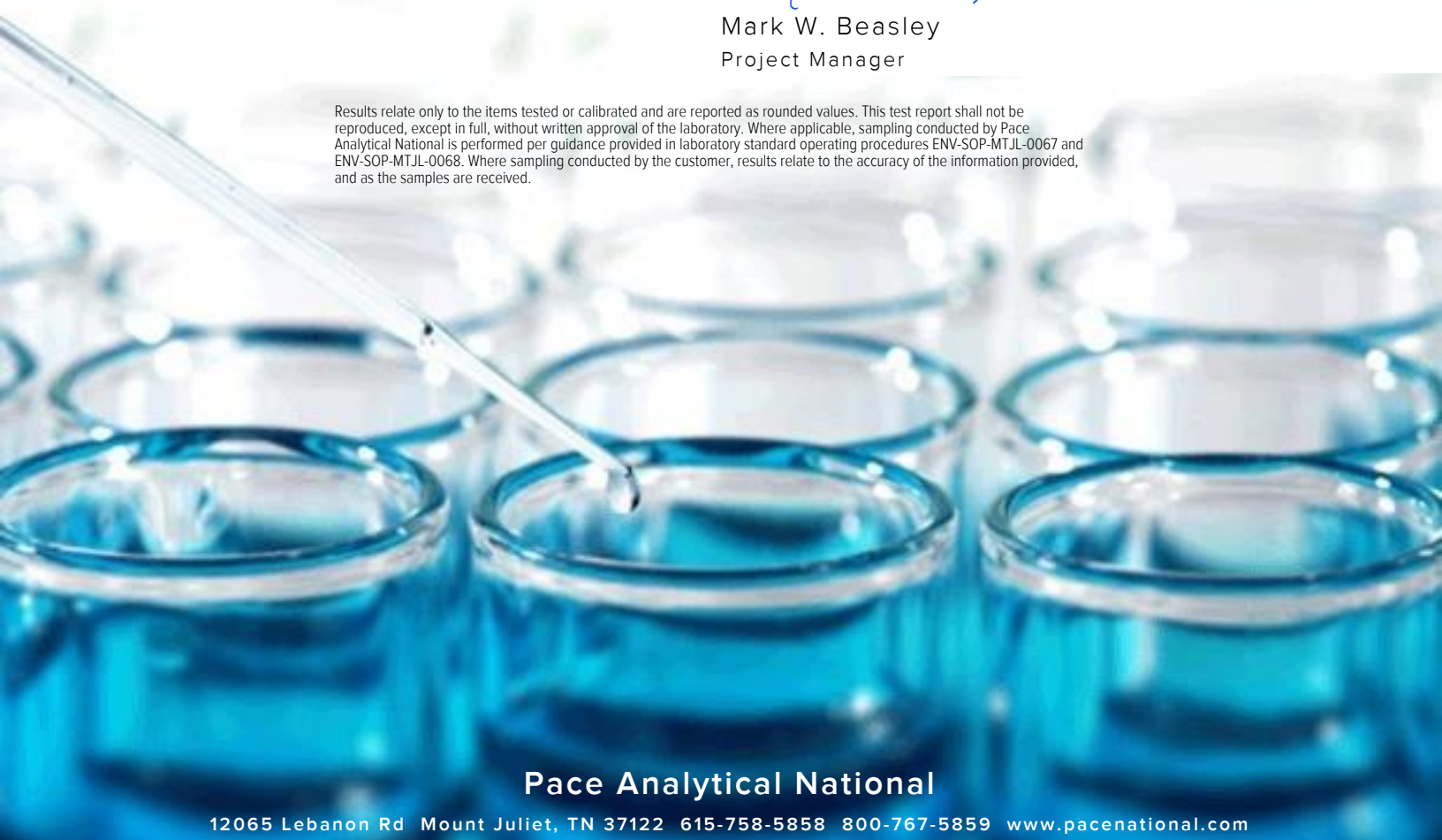
Report To: Dana Derrington  
2739 SCR 623  
Osceola, AR 72370

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

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>5</b>	
<b>Sr: Sample Results</b>	<b>6</b>	
MW-101 L1666237-01	6	
MW-102 L1666237-02	7	
MW-103 L1666237-03	8	
MW-113 L1666237-04	9	
MW-115 L1666237-05	10	
MW-116 L1666237-06	11	
MW-117 L1666237-07	12	
MW-118 L1666237-08	13	
MW-119 L1666237-09	14	
MW-117 DUP L1666237-10	15	
EPA EB-1 L1666237-11	16	
<b>Qc: Quality Control Summary</b>	<b>17</b>	
Gravimetric Analysis by Method 2540 C-2011	17	
Wet Chemistry by Method 9056A	22	
Metals (ICP) by Method 6010B	24	
<b>Gl: Glossary of Terms</b>	<b>25</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>26</b>	
<b>Sc: Sample Chain of Custody</b>	<b>27</b>	

# SAMPLE SUMMARY

## MW-101 L1666237-01 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 16:10  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152576	1	10/17/23 08:57	10/17/23 16:06	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 03:02	10/18/23 03:02	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:32	ZSA	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## MW-102 L1666237-02 GW

Collected by Michael Clayton  
 Collected date/time 10/12/23 11:05  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2153405	1	10/18/23 09:44	10/19/23 10:08	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 04:05	10/18/23 04:05	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:34	ZSA	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

## MW-103 L1666237-03 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 14:15  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152576	1	10/17/23 08:57	10/17/23 16:06	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 04:21	10/18/23 04:21	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:37	ZSA	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

## MW-113 L1666237-04 GW

Collected by Michael Clayton  
 Collected date/time 10/10/23 10:35  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152512	1	10/17/23 08:43	10/17/23 13:25	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 04:37	10/18/23 04:37	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:40	ZSA	Mt. Juliet, TN

## MW-115 L1666237-05 GW

Collected by Michael Clayton  
 Collected date/time 10/10/23 09:35  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152512	1	10/17/23 08:43	10/17/23 13:25	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 04:53	10/18/23 04:53	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:43	ZSA	Mt. Juliet, TN

## MW-116 L1666237-06 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 17:10  
 Received date/time 10/13/23 09:00

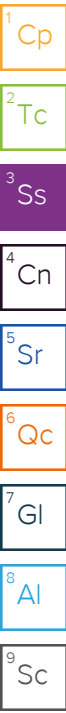
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152594	1	10/17/23 09:24	10/17/23 16:47	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 05:41	10/18/23 05:41	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:46	ZSA	Mt. Juliet, TN

# SAMPLE SUMMARY

## MW-117 L1666237-07 GW

Collected by Michael Clayton  
 Collected date/time 10/12/23 12:10  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2153450	1	10/18/23 10:59	10/19/23 12:06	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 05:57	10/18/23 05:57	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:49	ZSA	Mt. Juliet, TN



## MW-118 L1666237-08 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 13:10  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152594	1	10/17/23 09:24	10/17/23 16:47	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 06:13	10/18/23 06:13	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:57	ZSA	Mt. Juliet, TN

## MW-119 L1666237-09 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 15:10  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152576	1	10/17/23 08:57	10/17/23 16:06	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 06:28	10/18/23 06:28	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 13:00	ZSA	Mt. Juliet, TN

## MW-117 DUP L1666237-10 GW

Collected by Michael Clayton  
 Collected date/time 10/12/23 12:15  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2153405	1	10/18/23 09:44	10/19/23 10:08	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 06:44	10/18/23 06:44	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 13:03	ZSA	Mt. Juliet, TN

## EPA EB-1 L1666237-11 GW

Collected by Michael Clayton  
 Collected date/time 10/12/23 12:45  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2153405	1	10/18/23 09:44	10/19/23 10:08	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 07:00	10/18/23 07:00	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 13:06	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	376000		10000	1	10/17/2023 16:06	<a href="#">WG2152576</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	8760		379	1000	1	10/18/2023 03:02	<a href="#">WG2153158</a>
Fluoride	283		64.0	150	1	10/18/2023 03:02	<a href="#">WG2153158</a>
Sulfate	6920		594	5000	1	10/18/2023 03:02	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	53.0	J	20.0	200	1	10/22/2023 12:32	<a href="#">WG2152498</a>
Calcium	101000		79.3	1000	1	10/22/2023 12:32	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	411000		10000	1	10/19/2023 10:08	<a href="#">WG2153405</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	2680		379	1000	1	10/18/2023 04:05	<a href="#">WG2153158</a>
Fluoride	168		64.0	150	1	10/18/2023 04:05	<a href="#">WG2153158</a>
Sulfate	74600		594	5000	1	10/18/2023 04:05	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	77.7	J	20.0	200	1	10/22/2023 12:34	<a href="#">WG2152498</a>
Calcium	106000		79.3	1000	1	10/22/2023 12:34	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	335000		10000	1	10/17/2023 16:06	<a href="#">WG2152576</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1080		379	1000	1	10/18/2023 04:21	<a href="#">WG2153158</a>
Fluoride	201		64.0	150	1	10/18/2023 04:21	<a href="#">WG2153158</a>
Sulfate	15900		594	5000	1	10/18/2023 04:21	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	74.3	J	20.0	200	1	10/22/2023 12:37	<a href="#">WG2152498</a>
Calcium	88000		79.3	1000	1	10/22/2023 12:37	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	247000	<u>J3</u>	10000	1	10/17/2023 13:25	<a href="#">WG2152512</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	751	<u>J</u>	379	1000	1	10/18/2023 04:37	<a href="#">WG2153158</a>
Fluoride	98.2	<u>J</u>	64.0	150	1	10/18/2023 04:37	<a href="#">WG2153158</a>
Sulfate	3640	<u>J</u>	594	5000	1	10/18/2023 04:37	<a href="#">WG2153158</a>

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	78.2	<u>J</u>	20.0	200	1	10/22/2023 12:40	<a href="#">WG2152498</a>
Calcium	64500		79.3	1000	1	10/22/2023 12:40	<a href="#">WG2152498</a>

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	383000		10000	1	10/17/2023 13:25	<a href="#">WG2152512</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1000		379	1000	1	10/18/2023 04:53	<a href="#">WG2153158</a>
Fluoride	207		64.0	150	1	10/18/2023 04:53	<a href="#">WG2153158</a>
Sulfate	4960	J	594	5000	1	10/18/2023 04:53	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	44.3	J	20.0	200	1	10/22/2023 12:43	<a href="#">WG2152498</a>
Calcium	107000		79.3	1000	1	10/22/2023 12:43	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	361000		10000	1	10/17/2023 16:47	<a href="#">WG2152594</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	5710		379	1000	1	10/18/2023 05:41	<a href="#">WG2153158</a>
Fluoride	201		64.0	150	1	10/18/2023 05:41	<a href="#">WG2153158</a>
Sulfate	50400		594	5000	1	10/18/2023 05:41	<a href="#">WG2153158</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	76.3	J	20.0	200	1	10/22/2023 12:46	<a href="#">WG2152498</a>
Calcium	91400		79.3	1000	1	10/22/2023 12:46	<a href="#">WG2152498</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	325000		10000	1	10/19/2023 12:06	<a href="#">WG2153450</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1330		379	1000	1	10/18/2023 05:57	<a href="#">WG2153158</a>
Fluoride	121	J	64.0	150	1	10/18/2023 05:57	<a href="#">WG2153158</a>
Sulfate	14400		594	5000	1	10/18/2023 05:57	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	73.6	J	20.0	200	1	10/22/2023 12:49	<a href="#">WG2152498</a>
Calcium	89000		79.3	1000	1	10/22/2023 12:49	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	335000		10000	1	10/17/2023 16:47	<a href="#">WG2152594</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1140		379	1000	1	10/18/2023 06:13	<a href="#">WG2153158</a>
Fluoride	154		64.0	150	1	10/18/2023 06:13	<a href="#">WG2153158</a>
Sulfate	20700		594	5000	1	10/18/2023 06:13	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	58.5	J	20.0	200	1	10/22/2023 12:57	<a href="#">WG2152498</a>
Calcium	86400		79.3	1000	1	10/22/2023 12:57	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	451000		10000	1	10/17/2023 16:06	<a href="#">WG2152576</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	2130		379	1000	1	10/18/2023 06:28	<a href="#">WG2153158</a>
Fluoride	237		64.0	150	1	10/18/2023 06:28	<a href="#">WG2153158</a>
Sulfate	46500		594	5000	1	10/18/2023 06:28	<a href="#">WG2153158</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	61.6	J	20.0	200	1	10/22/2023 13:00	<a href="#">WG2152498</a>
Calcium	119000		79.3	1000	1	10/22/2023 13:00	<a href="#">WG2152498</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	334000		10000	1	10/19/2023 10:08	<a href="#">WG2153405</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1330		379	1000	1	10/18/2023 06:44	<a href="#">WG2153158</a>
Fluoride	124	J	64.0	150	1	10/18/2023 06:44	<a href="#">WG2153158</a>
Sulfate	14400		594	5000	1	10/18/2023 06:44	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	68.5	J	20.0	200	1	10/22/2023 13:03	<a href="#">WG2152498</a>
Calcium	88500		79.3	1000	1	10/22/2023 13:03	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	12000		10000	1	10/19/2023 10:08	<a href="#">WG2153405</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	U		379	1000	1	10/18/2023 07:00	<a href="#">WG2153158</a>
Fluoride	U		64.0	150	1	10/18/2023 07:00	<a href="#">WG2153158</a>
Sulfate	U		594	5000	1	10/18/2023 07:00	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	U		20.0	200	1	10/22/2023 13:06	<a href="#">WG2152498</a>
Calcium	U		79.3	1000	1	10/22/2023 13:06	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3988543-1 10/17/23 13:25

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1664233-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1664233-01 10/17/23 13:25 • (DUP) R3988543-3 10/17/23 13:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2070000	2180000	1	5.19	J3	5

L1666237-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1666237-04 10/17/23 13:25 • (DUP) R3988543-4 10/17/23 13:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	247000	266000	1	7.41	J3	5

Laboratory Control Sample (LCS)

(LCS) R3988543-2 10/17/23 13:25

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8370000	95.1	77.3-123	

Method Blank (MB)

(MB) R3989032-1 10/17/23 16:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	↓	10000	10000

1 Cp

2 Tc

3 Ss

L1665890-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1665890-01 10/17/23 16:06 • (DUP) R3989032-3 10/17/23 16:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	689000	756000	1	9.23	J3	5

4 Cn

5 Sr

6 Qc

L1665890-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1665890-02 10/17/23 16:06 • (DUP) R3989032-4 10/17/23 16:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	603000	635000	1	5.17	J3	5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3989032-2 10/17/23 16:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8820000	100	77.3-123	

Method Blank (MB)

(MB) R3989044-1 10/17/23 16:47

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

1 Cp

2 Tc

3 Ss

L1665890-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1665890-04 10/17/23 16:47 • (DUP) R3989044-3 10/17/23 16:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	603000	621000	1	2.94		5

4 Cn

5 Sr

6 Qc

L1665932-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1665932-01 10/17/23 16:47 • (DUP) R3989044-4 10/17/23 16:47

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1580000	1580000	1	0.000		5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3989044-2 10/17/23 16:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8720000	99.1	77.3-123	

Method Blank (MB)

(MB) R3989316-1 10/19/23 10:08

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

1 Cp

2 Tc

3 Ss

L1666239-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1666239-09 10/19/23 10:08 • (DUP) R3989316-3 10/19/23 10:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	327000	337000	1	3.01		5

4 Cn

5 Sr

L1666465-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1666465-01 10/19/23 10:08 • (DUP) R3989316-4 10/19/23 10:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	320000	319000	1	0.313		5

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3989316-2 10/19/23 10:08

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8670000	98.5	77.3-123	

9 Sc



Method Blank (MB)

(MB) R3989915-1 10/19/23 12:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	↓	10000	10000

1 Cp

2 Tc

3 Ss

L1666422-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1666422-08 10/19/23 12:06 • (DUP) R3989915-3 10/19/23 12:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	990000	1060000	1	6.45	J3	5

4 Cn

5 Sr

6 Qc

L1666431-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1666431-01 10/19/23 12:06 • (DUP) R3989915-4 10/19/23 12:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	212000	229000	1	7.71	J3	5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3989915-2 10/19/23 12:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8430000	95.8	77.3-123	

Method Blank (MB)

(MB) R3987755-1 10/17/23 10:32

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

L1666237-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1666237-01 10/18/23 03:02 • (DUP) R3987755-3 10/18/23 03:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	8760	8750	1	0.0297		15
Fluoride	283	282	1	0.213		15
Sulfate	6920	6920	1	0.0289		15

L1666239-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1666239-07 10/18/23 09:24 • (DUP) R3987755-6 10/18/23 09:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	751	752	1	0.173	↓	15
Fluoride	97.7	98.1	1	0.409	↓	15
Sulfate	3490	3500	1	0.218	↓	15

Laboratory Control Sample (LCS)

(LCS) R3987755-2 10/17/23 10:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	40000	100	80.0-120	
Fluoride	8000	7860	98.3	80.0-120	
Sulfate	40000	40300	101	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1666237-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666237-01 10/18/23 03:02 • (MS) R3987755-4 10/18/23 03:33 • (MSD) R3987755-5 10/18/23 03:49

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 %
Chloride	40000	8760	47300	47300	96.2	96.3	1	80.0-120			0.0874	15
Fluoride	8000	283	8440	8440	102	102	1	80.0-120			0.0735	15
Sulfate	40000	6920	45000	45000	95.1	95.2	1	80.0-120			0.130	15

L1666239-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1666239-07 10/18/23 09:24 • (MS) R3987755-7 10/18/23 09:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	751	40100	98.4	1	80.0-120	
Fluoride	8000	97.7	8180	101	1	80.0-120	
Sulfate	40000	3490	41800	95.7	1	80.0-120	

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

Method Blank (MB)

(MB) R3989454-1 10/22/23 11:42

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) R3989454-2 10/22/23 11:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	971	97.1	80.0-120	
Calcium	10000	9870	98.7	80.0-120	

L1666123-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666123-05 10/22/23 11:48 • (MS) R3989454-4 10/22/23 11:53 • (MSD) R3989454-5 10/22/23 11:56

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	U	934	953	93.4	95.3	1	75.0-125			2.04	20
Calcium	10000	23000	32400	32800	93.6	97.6	1	75.0-125			1.22	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

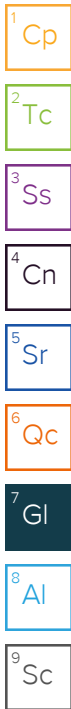
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

MDL	Method Detection Limit.
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.



# ACCREDITATIONS & LOCATIONS

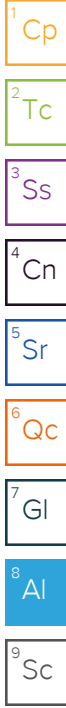
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

Analysis / Container / Preservative

Report to:  
**Dana Derrington**

Email To: [dld@ftn-assoc.com](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto:mcc@ftn-assoc.com)

Project Description:  
**Plum Point Energy Station**

City/State Collected: **Osceola Ar**

Please Circle:  
 PT MT **C** ET

Phone: **501-920-9642**

Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CI, F, SO4 125m HDPE-NoPres	TDS 250m HDPE-NoPres	Total B, Ca 250m HDPE-HNO3
MW-101	Grab	GW		10/11/23	1610	3	X	X	X
MW-102		GW		10/12/23	1105	3	X	X	X
MW-103		GW		10/11/23	1415	3	X	X	X
MW-108		GW				3	X	X	X
MW-113		GW		10/10/23	1035	3	X	X	X
MW-115		GW		10/10/23	935	3	X	X	X
MW-116		GW		10/11/23	1710	3	X	X	X
MW-117		GW		10/12/23	1210	3	X	X	X
MW-118		GW		10/11/23	1310	3	X	X	X
MW-119		GW		10/11/23	1510	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/hubs/pas-standard-terms.pdf>

SDG # **Uldd0237**  
**A216**  
 Acctnum: **NAESOAR**  
 Template: **T175308**  
 Prelogin: **P1028478**  
 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 # **7074 8790 7738**

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

Relinquished by: (Signature)  
*Michael Clayton*  
 Date: **10/12/23**  
 Time: **1600**

Date: **10/12/23**  
 Time: **1600**

Received by: (Signature)  
*Mark W. Beasley*  
 Date: **10/13/23**  
 Time: **9:00**

Trip Blank Received: Yes (No)  
 HCL/MeOH  
 TBR  
 Temp: **1.3±0=1.5±0.8**  
 Bottles Received: **33**

If preservation required by Login: Date/Time  
 Hold:  
 Condition: **NCF / OK**

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:  
**Dana Derrington**

Project Description:  
**Plum Point Energy Station**

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

City/State Collected: **OSCEOLA AR**

Please Circle:  
 PT MT **ET**

Phone: **501-920-9642**

Collected by (print):  
*Michael Clayton*

Client Project #  
**R14590-3037-001**

Site/Facility ID #

Lab Project #  
**NAESOAR-PLUMPOINT**

P.O. #  
**2023-00048**

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125m HDPE-NoPres	TDS 250m HDPE-NoPres	Total B, Ca 250m HDPE-HNO3								
MW-117 DUP	Grab	GW		10/12/23	1215	3	X	X	X								
EPA EB-1	↓	GW		10/12/23	1245	3	X	X	X								
		GW				3	X	X	X								
		GW				3	X	X	X								
		GW				3	X	X	X								

Analysis / Container / Preservative

Pres Chk *u*

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/hubs/pas-standard-terms.pdf>

SDG # *L1666237*

Table #

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P1028478**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

\* 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 # **7074 8790 7738**

Sample Receipt Checklist

COC Seal Present/Intact:  NP  N

COC Signed/Accurate:  Y  N

Bottles arrive intact:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

If Applicable

VOA Zero Headspace:  Y  N

Preservation Correct/Checked:  Y  N

RAD Screen <0.5 mR/hr:  Y  N

Relinquished by: (Signature)  
*Michael Clayton*

Relinquished by: (Signature)

Relinquished by: (Signature)

Date: **10/12/23**

Time: **1600**

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)  
*Mark Kemp*

Trip Blank Received: Yes/No  
 HCL/MeOH  TBR

Temp: **1.3 ± 0.1 32.8** °C

Bottles Received: **33**

Date: **10/13/23**

Time: **9:10**

If preservation required by Login: Date/Time

Hold:

Condition: **(OK)**



## Plum Point Services Co., LLC

Sample Delivery Group: L1666502  
Samples Received: 10/13/2023  
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

# TABLE OF CONTENTS

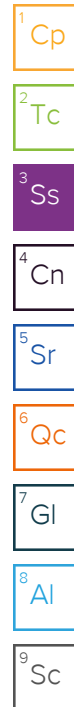
<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	
<b>MW-104 L1666502-01</b>	<b>5</b>	
<b>MW-110 L1666502-02</b>	<b>6</b>	
<b>MW-121 L1666502-03</b>	<b>7</b>	
<b>MW-104 DUP L1666502-04</b>	<b>8</b>	
<b>EPA EB-BG L1666502-05</b>	<b>9</b>	
<b>Qc: Quality Control Summary</b>	<b>10</b>	
<b>Gravimetric Analysis by Method 2540 C-2011</b>	<b>10</b>	
<b>Wet Chemistry by Method 9056A</b>	<b>12</b>	
<b>Mercury by Method 7470A</b>	<b>14</b>	
<b>Metals (ICP) by Method 6010B</b>	<b>15</b>	
<b>Metals (ICPMS) by Method 6020</b>	<b>16</b>	
<b>Gl: Glossary of Terms</b>	<b>20</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>21</b>	
<b>Sc: Sample Chain of Custody</b>	<b>22</b>	

# SAMPLE SUMMARY

## MW-104 L1666502-01 GW

Collected by Michael Clayton    Collected date/time 10/11/23 10:20    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152646	1	10/17/23 10:16	10/18/23 08:55	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153927	1	10/19/23 08:28	10/19/23 08:28	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2151362	1	10/18/23 17:30	10/19/23 15:12	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2153557	1	10/19/23 11:20	10/21/23 17:35	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152046	1	10/19/23 14:13	10/24/23 17:59	LD	Mt. Juliet, TN



## MW-110 L1666502-02 GW

Collected by Michael Clayton    Collected date/time 10/10/23 13:40    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152512	1	10/17/23 08:43	10/17/23 13:25	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153927	1	10/19/23 08:42	10/19/23 08:42	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2151362	1	10/18/23 17:30	10/19/23 15:15	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2153557	1	10/19/23 11:20	10/21/23 17:38	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152046	1	10/19/23 14:13	10/24/23 18:03	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152046	5	10/19/23 14:13	10/24/23 18:12	LD	Mt. Juliet, TN

## MW-121 L1666502-03 GW

Collected by Michael Clayton    Collected date/time 10/10/23 15:20    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152512	1	10/17/23 08:43	10/17/23 13:25	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153927	1	10/19/23 08:54	10/19/23 08:54	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2151362	1	10/18/23 17:30	10/19/23 15:17	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2153557	1	10/19/23 11:20	10/21/23 17:40	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152049	1	10/19/23 12:03	10/23/23 18:41	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152049	1	10/19/23 12:03	10/23/23 23:59	LD	Mt. Juliet, TN

## MW-104 DUP L1666502-04 GW

Collected by Michael Clayton    Collected date/time 10/11/23 10:25    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152646	1	10/17/23 10:16	10/18/23 08:55	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153927	1	10/19/23 09:07	10/19/23 09:07	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2151362	1	10/18/23 17:30	10/19/23 15:51	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2153557	1	10/19/23 11:20	10/21/23 17:43	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152049	1	10/19/23 12:03	10/23/23 18:44	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152049	1	10/19/23 12:03	10/24/23 00:02	LD	Mt. Juliet, TN

## EPA EB-BG L1666502-05 GW

Collected by Michael Clayton    Collected date/time 10/11/23 12:00    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152646	1	10/17/23 10:16	10/18/23 08:55	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153927	1	10/19/23 09:20	10/19/23 09:20	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2151362	1	10/18/23 17:30	10/19/23 15:53	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2153557	1	10/19/23 11:20	10/21/23 17:46	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152049	1	10/19/23 12:03	10/23/23 18:47	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2152049	1	10/19/23 12:03	10/24/23 00:05	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	320000	<u>J3</u>	10000	1	10/18/2023 08:55	<a href="#">WG2152646</a>

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	993	<u>J</u>	379	1000	1	10/19/2023 08:28	<a href="#">WG2153927</a>
Fluoride	307		64.0	150	1	10/19/2023 08:28	<a href="#">WG2153927</a>
Sulfate	4520	<u>J</u>	594	5000	1	10/19/2023 08:28	<a href="#">WG2153927</a>

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	10/19/2023 15:12	<a href="#">WG2151362</a>

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	51.6	<u>J</u>	20.0	200	1	10/21/2023 17:35	<a href="#">WG2153557</a>
Calcium	83200		79.3	1000	1	10/21/2023 17:35	<a href="#">WG2153557</a>

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	10/24/2023 17:59	<a href="#">WG2152046</a>
Arsenic	4.65		0.180	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Barium	159		0.381	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Beryllium	U		0.190	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Cadmium	U		0.150	1.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Chromium	U		1.24	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Cobalt	0.246	<u>J</u>	0.0596	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Lead	U		0.849	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Molybdenum	3.78	<u>J</u>	0.348	5.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Selenium	0.662	<u>J</u>	0.300	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Thallium	U		0.121	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>
Lithium	6.06		0.695	2.00	1	10/24/2023 17:59	<a href="#">WG2152046</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	312000		10000	1	10/17/2023 13:25	<a href="#">WG2152512</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	954	J	379	1000	1	10/19/2023 08:42	<a href="#">WG2153927</a>
Fluoride	205		64.0	150	1	10/19/2023 08:42	<a href="#">WG2153927</a>
Sulfate	6120		594	5000	1	10/19/2023 08:42	<a href="#">WG2153927</a>

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	10/19/2023 15:15	<a href="#">WG2151362</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	62.0	J	20.0	200	1	10/21/2023 17:38	<a href="#">WG2153557</a>
Calcium	79600		79.3	1000	1	10/21/2023 17:38	<a href="#">WG2153557</a>

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	10/24/2023 18:03	<a href="#">WG2152046</a>
Arsenic	5.89		0.180	2.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Barium	254		1.90	10.0	5	10/24/2023 18:12	<a href="#">WG2152046</a>
Beryllium	U		0.190	2.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Cadmium	U		0.150	1.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Chromium	U		1.24	2.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Cobalt	0.742	J	0.0596	2.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Lead	U		0.849	2.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Molybdenum	0.571	J	0.348	5.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Selenium	U		0.300	2.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Thallium	U		0.121	2.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>
Lithium	5.23		0.695	2.00	1	10/24/2023 18:03	<a href="#">WG2152046</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	165000		10000	1	10/17/2023 13:25	<a href="#">WG2152512</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1320		379	1000	1	10/19/2023 08:54	<a href="#">WG2153927</a>
Fluoride	126	J	64.0	150	1	10/19/2023 08:54	<a href="#">WG2153927</a>
Sulfate	21400		594	5000	1	10/19/2023 08:54	<a href="#">WG2153927</a>

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	10/19/2023 15:17	<a href="#">WG2151362</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	38.6	J	20.0	200	1	10/21/2023 17:40	<a href="#">WG2153557</a>
Calcium	43100		79.3	1000	1	10/21/2023 17:40	<a href="#">WG2153557</a>

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	10/23/2023 18:41	<a href="#">WG2152049</a>
Arsenic	1.07	J	0.180	2.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Barium	119		0.381	2.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Beryllium	U		0.190	2.00	1	10/23/2023 23:59	<a href="#">WG2152049</a>
Cadmium	U		0.150	1.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Chromium	U		1.24	2.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Cobalt	U		0.0596	2.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Lead	U		0.849	2.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Molybdenum	U		0.348	5.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Selenium	6.17		0.300	2.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Thallium	U		0.121	2.00	1	10/23/2023 18:41	<a href="#">WG2152049</a>
Lithium	2.53		0.695	2.00	1	10/23/2023 23:59	<a href="#">WG2152049</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	307000		10000	1	10/18/2023 08:55	<a href="#">WG2152646</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	998	J	379	1000	1	10/19/2023 09:07	<a href="#">WG2153927</a>
Fluoride	328		64.0	150	1	10/19/2023 09:07	<a href="#">WG2153927</a>
Sulfate	4630	J	594	5000	1	10/19/2023 09:07	<a href="#">WG2153927</a>

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	10/19/2023 15:51	<a href="#">WG2151362</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	51.5	J	20.0	200	1	10/21/2023 17:43	<a href="#">WG2153557</a>
Calcium	83500		79.3	1000	1	10/21/2023 17:43	<a href="#">WG2153557</a>

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	10/23/2023 18:44	<a href="#">WG2152049</a>
Arsenic	5.17		0.180	2.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Barium	159		0.381	2.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Beryllium	U		0.190	2.00	1	10/24/2023 00:02	<a href="#">WG2152049</a>
Cadmium	U		0.150	1.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Chromium	U		1.24	2.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Cobalt	0.242	J	0.0596	2.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Lead	U		0.849	2.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Molybdenum	3.85	J	0.348	5.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Selenium	0.493	J	0.300	2.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Thallium	U		0.121	2.00	1	10/23/2023 18:44	<a href="#">WG2152049</a>
Lithium	5.20		0.695	2.00	1	10/24/2023 00:02	<a href="#">WG2152049</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	ND		10000	1	10/18/2023 08:55	<a href="#">WG2152646</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	U		379	1000	1	10/19/2023 09:20	<a href="#">WG2153927</a>
Fluoride	U		64.0	150	1	10/19/2023 09:20	<a href="#">WG2153927</a>
Sulfate	U		594	5000	1	10/19/2023 09:20	<a href="#">WG2153927</a>

## 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	10/19/2023 15:53	<a href="#">WG2151362</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	U		20.0	200	1	10/21/2023 17:46	<a href="#">WG2153557</a>
Calcium	U		79.3	1000	1	10/21/2023 17:46	<a href="#">WG2153557</a>

## 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	10/23/2023 18:47	<a href="#">WG2152049</a>
Arsenic	U		0.180	2.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Barium	U		0.381	2.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Beryllium	U		0.190	2.00	1	10/24/2023 00:05	<a href="#">WG2152049</a>
Cadmium	U		0.150	1.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Chromium	U		1.24	2.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Cobalt	U		0.0596	2.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Lead	U		0.849	2.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Molybdenum	U		0.348	5.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Selenium	U		0.300	2.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Thallium	U		0.121	2.00	1	10/23/2023 18:47	<a href="#">WG2152049</a>
Lithium	U		0.695	2.00	1	10/24/2023 00:05	<a href="#">WG2152049</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3988543-1 10/17/23 13:25

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

1 Cp

2 Tc

3 Ss

L1664233-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1664233-01 10/17/23 13:25 • (DUP) R3988543-3 10/17/23 13:25

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2070000	2180000	1	5.19	J3	5

4 Cn

5 Sr

L1666237-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1666237-04 10/17/23 13:25 • (DUP) R3988543-4 10/17/23 13:25

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	247000	266000	1	7.41	J3	5

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3988543-2 10/17/23 13:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8370000	95.1	77.3-123	

9 Sc

Method Blank (MB)

(MB) R3989030-1 10/18/23 08:55

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

1 Cp

2 Tc

3 Ss

L1666422-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1666422-01 10/18/23 08:55 • (DUP) R3989030-3 10/18/23 08:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	431000	425000	1	1.40		5

4 Cn

5 Sr

L1666502-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1666502-01 10/18/23 08:55 • (DUP) R3989030-4 10/18/23 08:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	320000	338000	1	5.47	J3	5

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3989030-2 10/18/23 08:55

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8270000	94.0	77.3-123	

9 Sc

Method Blank (MB)

(MB) R3988409-1 10/19/23 02:48

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

L1666239-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1666239-08 10/19/23 04:51 • (DUP) R3988409-3 10/19/23 05:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	5700	5670	1	0.556		15
Fluoride	206	217	1	5.19		15
Sulfate	51100	51100	1	0.00411		15

L1666502-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1666502-05 10/19/23 09:20 • (DUP) R3988409-6 10/19/23 09:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Chloride	U	U	1	0.000		15
Fluoride	U	U	1	0.000		15
Sulfate	U	U	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3988409-2 10/19/23 03:02

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Chloride	40000	39900	99.8	80.0-120	
Fluoride	8000	8310	104	80.0-120	
Sulfate	40000	39400	98.5	80.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1666239-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666239-08 10/19/23 04:51 • (MS) R3988409-4 10/19/23 05:45 • (MSD) R3988409-5 10/19/23 05:58

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	5700	45400	45400	99.2	99.2	1	80.0-120			0.0399	15
Fluoride	8000	206	8680	8690	106	106	1	80.0-120			0.207	15
Sulfate	40000	51100	81400	81300	75.9	75.7	1	80.0-120	J6	J6	0.111	15

L1666502-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1666502-05 10/19/23 09:20 • (MS) R3988409-7 10/19/23 09:48

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	U	39800	99.6	1	80.0-120	
Fluoride	8000	U	8100	101	1	80.0-120	
Sulfate	40000	U	38500	96.2	1	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3988613-1 10/19/23 14:57

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.100	0.200

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3988613-2 10/19/23 15:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	3.00	3.43	114	80.0-120	

4 Cn

5 Sr

L1666453-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666453-01 10/19/23 15:02 • (MS) R3988613-3 10/19/23 15:05 • (MSD) R3988613-4 10/19/23 15:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	3.00	0.121	3.20	3.19	103	102	1	75.0-125			0.405	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3989406-1 10/21/23 16:52

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

Laboratory Control Sample (LCS)

(LCS) R3989406-2 10/21/23 16:55

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	963	96.3	80.0-120	
Calcium	10000	9500	95.0	80.0-120	

L1666526-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666526-06 10/21/23 16:57 • (MS) R3989406-4 10/21/23 17:02 • (MSD) R3989406-5 10/21/23 17:05

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	U	968	993	96.8	99.3	1	75.0-125			2.57	20
Calcium	10000	55100	63400	63000	82.8	78.2	1	75.0-125			0.733	20

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

Method Blank (MB)

(MB) R3990588-1 10/24/23 16:25

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3990588-2 10/24/23 16:28

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	50.0	48.2	96.3	80.0-120	
Arsenic	50.0	50.1	100	80.0-120	
Barium	50.0	48.4	96.8	80.0-120	
Beryllium	50.0	48.2	96.5	80.0-120	
Cadmium	50.0	52.1	104	80.0-120	
Chromium	50.0	52.1	104	80.0-120	
Cobalt	50.0	51.2	102	80.0-120	
Lead	50.0	47.7	95.5	80.0-120	
Molybdenum	50.0	49.6	99.2	80.0-120	
Selenium	50.0	55.2	110	80.0-120	
Thallium	50.0	46.8	93.6	80.0-120	
Lithium	50.0	48.2	96.5	80.0-120	

L1666421-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666421-08 10/24/23 16:31 • (MS) R3990588-4 10/24/23 16:38 • (MSD) R3990588-5 10/24/23 16:41

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	49.6	54.2	99.1	108	1	75.0-125			9.05	20
Arsenic	50.0	86.5	136	134	98.2	94.8	1	75.0-125			1.25	20
Barium	50.0	264	310	306	93.2	85.3	1	75.0-125	E	E	1.28	20



L1666421-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666421-08 10/24/23 16:31 • (MS) R3990588-4 10/24/23 16:38 • (MSD) R3990588-5 10/24/23 16:41

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	47.4	46.4	94.9	92.8	1	75.0-125			2.17	20
Cadmium	50.0	U	51.3	52.0	103	104	1	75.0-125			1.39	20
Chromium	50.0	U	47.5	48.2	95.0	96.3	1	75.0-125			1.34	20
Cobalt	50.0	0.224	47.6	47.6	94.7	94.8	1	75.0-125			0.151	20
Lead	50.0	U	48.5	50.0	97.0	100	1	75.0-125			3.04	20
Molybdenum	50.0	0.725	52.3	53.2	105	106	1	75.0-125			1.77	20
Selenium	50.0	1.30	59.2	61.7	116	121	1	75.0-125			4.14	20
Thallium	50.0	U	48.0	49.3	96.0	98.7	1	75.0-125			2.75	20
Lithium	50.0	170	221	216	103	92.1	1	75.0-125			2.53	20

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

Method Blank (MB)

(MB) R3990032-1 10/23/23 18:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Antimony	U		1.03	4.00
Arsenic	U		0.180	2.00
Barium	U		0.381	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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3990072-1 10/23/23 23:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Beryllium	U		0.190	2.00
Lithium	U		0.695	2.00

Laboratory Control Sample (LCS)

(LCS) R3990032-2 10/23/23 18:24

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Antimony	50.0	48.9	97.7	80.0-120	
Arsenic	50.0	52.5	105	80.0-120	
Barium	50.0	47.5	95.0	80.0-120	
Cadmium	50.0	52.9	106	80.0-120	
Chromium	50.0	51.7	103	80.0-120	
Cobalt	50.0	52.0	104	80.0-120	
Lead	50.0	51.5	103	80.0-120	
Molybdenum	50.0	49.5	98.9	80.0-120	
Selenium	50.0	53.8	108	80.0-120	
Thallium	50.0	51.1	102	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3990072-2 10/23/23 23:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Beryllium	50.0	48.5	97.1	80.0-120	
Lithium	50.0	45.1	90.2	80.0-120	

L1666526-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666526-11 10/23/23 18:27 • (MS) R3990032-4 10/23/23 18:34 • (MSD) R3990032-5 10/23/23 18:37

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Antimony	50.0	U	48.9	48.7	97.8	97.3	1	75.0-125			0.467	20
Arsenic	50.0	U	50.9	51.7	102	103	1	75.0-125			1.55	20
Barium	50.0	U	48.5	48.2	96.9	96.3	1	75.0-125			0.638	20
Cadmium	50.0	U	51.6	52.9	103	106	1	75.0-125			2.48	20
Chromium	50.0	U	50.4	50.5	101	101	1	75.0-125			0.0617	20
Cobalt	50.0	U	50.3	51.1	101	102	1	75.0-125			1.60	20
Lead	50.0	0.925	49.9	50.2	97.9	98.6	1	75.0-125			0.639	20
Molybdenum	50.0	U	50.7	49.8	101	99.6	1	75.0-125			1.78	20
Selenium	50.0	U	54.5	53.7	109	107	1	75.0-125			1.54	20
Thallium	50.0	U	48.8	50.7	97.7	101	1	75.0-125			3.82	20

L1666526-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666526-11 10/23/23 23:45 • (MS) R3990072-4 10/23/23 23:52 • (MSD) R3990072-5 10/23/23 23:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Beryllium	50.0	U	49.5	49.8	99.0	99.6	1	75.0-125			0.573	20
Lithium	50.0	U	45.7	45.7	91.4	91.5	1	75.0-125			0.0828	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

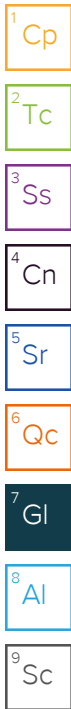
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.



# ACCREDITATIONS & LOCATIONS

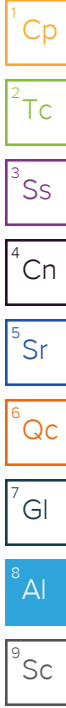
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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



Company Name/Address:

**Plum Point Services Co., LLC**

2739 SCR 623  
Osceola, AR 72370

Billing Information:

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

Pres  
Chk

Analysis / Container / Preservative

Chain of custody Page 1 of 2



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/hubs/pas-standard-terms.pdf>

Report to:  
**Dana Derrington**

Email To: [dld@ftn-assoc.com](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto:mcc@ftn-assoc.com)

Project Description:  
**Plum Point Energy Station**

City/State

Collected: *Osceola AR*

Please Circle:

PT MT  ET

Phone: **501-920-9642**

Client Project #  
**14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):

*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):

*Michael Clayton*

**Rush?** (Lab MUST Be Notified)

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

Quote #

Date Results Needed

No.  
of  
Cntrs

Immediately  
Packed on Ice N  Y

SDG # *114502*  
**A232**

Acctnum: **NAESOAR**

Template: **T106048**

Prelogin: **P1028485**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SQ4 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		
MW-104	<i>Grab</i>	GW		<i>10/11/23</i>	<i>1020</i>	<i>5</i>	X	X	X	X	X	X		<i>-01</i>
MW-110		GW		<i>10/10/23</i>	<i>1340</i>	<i>5</i>	X	X	X	X	X	X		<i>-02</i>
MW-120		GW					X	X	X	X	X	X		
MW-121		GW		<i>10/10/23</i>	<i>1520</i>	<i>5</i>	X	X	X	X	X	X		<i>-03</i>
<del>MW-122</del>		GW		<i>10/11/23</i>	<i>1025</i>	<i>5</i>	X	X	X	X	X	X		<i>-04</i>
<i>MW 104 Dup</i>		GW		<i>10/11/23</i>	<i>1200</i>	<i>5</i>	X	X	X	X	X	X		<i>-05</i>
EPA EB-BG		GW					X	X	X	X	X	X		
		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, TI**

PH-10BBDH4321 TRC-2357  
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)

*Michael Clayton*

Date:

*10/12/23*

Time:

*1600*

Received by: (Signature)

*[Signature]*

Trip Blank Received: Yes/No

HCL/MeOH  
TBR

Temp *10.1* Bottles Received: *25*

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

*[Signature]*

Date:

*10/13/23*

Time:

*0945*

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

*[Signature]*

If preservation required by Login: Date/Time

Hold:

Condition:  
NCF  OK

**Plum Point Services Co., LLC**

Sample Delivery Group: L1666503  
Samples Received: 10/13/2023  
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](http://www.pacenational.com)

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	1	
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	
<b>Cn: Case Narrative</b>	4	
<b>Sr: Sample Results</b>	5	
MW-104 L1666503-01	5	
MW-110 L1666503-02	6	
MW-121 L1666503-03	7	
MW-104 DUP L1666503-04	8	
EPA EB-BG L1666503-05	9	
<b>Qc: Quality Control Summary</b>	10	
Radiochemistry by Method 904/9320	10	
Radiochemistry by Method SM7500Ra B M	11	
<b>Gl: Glossary of Terms</b>	12	
<b>Al: Accreditations &amp; Locations</b>	13	
<b>Sc: Sample Chain of Custody</b>	14	



# SAMPLE SUMMARY

## MW-104 L1666503-01 Non-Potable Water

Collected by Michael Clayton    Collected date/time 10/11/23 10:20    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2163965	1	11/03/23 13:16	11/13/23 12:19	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2161518	1	10/31/23 17:41	11/13/23 12:19	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2161518	1	10/31/23 17:41	11/03/23 17:23	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## MW-110 L1666503-02 Non-Potable Water

Collected by Michael Clayton    Collected date/time 10/10/23 13:40    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2163965	1	11/03/23 13:16	11/13/23 12:19	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2161518	1	10/31/23 17:41	11/13/23 12:19	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2161518	1	10/31/23 17:41	11/03/23 17:23	RGT	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

## MW-121 L1666503-03 Non-Potable Water

Collected by Michael Clayton    Collected date/time 10/10/23 15:20    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2163965	1	11/03/23 13:16	11/13/23 12:19	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2161518	1	10/31/23 17:41	11/13/23 12:19	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2161518	1	10/31/23 17:41	11/03/23 17:30	RGT	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

## MW-104 DUP L1666503-04 Non-Potable Water

Collected by Michael Clayton    Collected date/time 10/11/23 10:25    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2163965	1	11/03/23 13:16	11/13/23 12:19	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2161518	1	10/31/23 17:41	11/13/23 12:19	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2161518	1	10/31/23 17:41	11/03/23 17:30	RGT	Mt. Juliet, TN

## EPA EB-BG L1666503-05 Non-Potable Water

Collected by Michael Clayton    Collected date/time 10/11/23 12:00    Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2163965	1	11/03/23 13:16	11/13/23 12:19	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2161518	1	10/31/23 17:41	11/13/23 12:19	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2161518	1	10/31/23 17:41	11/03/23 17:30	RGT	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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	0.690		0.256		0.446		11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Barium	99.5					30.0-143	11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Yttrium	92.3					30.0-136	11/13/2023 12:19	<a href="#">WG2163965</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.07		0.358	0.502	11/13/2023 12:19	<a href="#">WG2161518</a>

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	0.379		0.250		0.231		11/03/2023 17:23	<a href="#">WG2161518</a>
(T) Barium-133	77.8					30.0-143	11/03/2023 17:23	<a href="#">WG2161518</a>

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	0.302	J	0.293		0.525		11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Barium	98.2					30.0-143	11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Yttrium	93.1					30.0-136	11/13/2023 12:19	<a href="#">WG2163965</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.941		0.462	0.593	11/13/2023 12:19	<a href="#">WG2161518</a>

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	0.639		0.357		0.276		11/03/2023 17:23	<a href="#">WG2161518</a>
(T) Barium-133	67.5					30.0-143	11/03/2023 17:23	<a href="#">WG2161518</a>

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	0.517		0.291		0.516		11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Barium	107					30.0-143	11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Yttrium	91.2					30.0-136	11/13/2023 12:19	<a href="#">WG2163965</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.537	J	0.372	0.679	11/13/2023 12:19	<a href="#">WG2161518</a>

4 Cn

5 Sr

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	0.0200	U	0.232		0.441		11/03/2023 17:30	<a href="#">WG2161518</a>
(T) Barium-133	77.5					30.0-143	11/03/2023 17:30	<a href="#">WG2161518</a>

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	0.187	<u>U</u>	0.308		0.556		11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Barium	105					30.0-143	11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Yttrium	85.2					30.0-136	11/13/2023 12:19	<a href="#">WG2163965</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.393	<u>J</u>	0.433	0.717	11/13/2023 12:19	<a href="#">WG2161518</a>

4 Cn

5 Sr

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	0.206	<u>J</u>	0.304		0.452		11/03/2023 17:30	<a href="#">WG2161518</a>
(T) Barium-133	71.8					30.0-143	11/03/2023 17:30	<a href="#">WG2161518</a>

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	0.508		0.284		0.503		11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Barium	108					30.0-143	11/13/2023 12:19	<a href="#">WG2163965</a>
(T) Yttrium	114					30.0-136	11/13/2023 12:19	<a href="#">WG2163965</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.723		0.399	0.643	11/13/2023 12:19	<a href="#">WG2161518</a>

4 Cn

5 Sr

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	0.215	J	0.280		0.401		11/03/2023 17:30	<a href="#">WG2161518</a>
(T) Barium-133	74.4					30.0-143	11/03/2023 17:30	<a href="#">WG2161518</a>

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3999861-1 11/13/23 12:19

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.0187	<u>U</u>	0.200	0.333	
(T) Barium	110		110		
(T) Yttrium	92.1		92.1		

L1666504-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1666504-03 11/13/23 12:19 • (DUP) R3999861-5 11/13/23 12:19

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	-0.0328	0.377	0.688		0.534	0.408	0.663		200	1.02	<u>J</u>	20	3
(T) Barium	118				96.1	96.1							
(T) Yttrium	94.4				93.6	93.6							

Laboratory Control Sample (LCS)

(LCS) R3999861-2 11/13/23 12:19

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.28	106	80.0-120	
(T) Barium			96.2		
(T) Yttrium			106		

L1666635-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666635-03 11/13/23 12:19 • (MS) R3999861-3 11/13/23 12:19 • (MSD) R3999861-4 11/13/23 12:19

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	1.42	15.9	17.7	86.6	97.7	1	70.0-130			11.0		20
(T) Barium		102			101	111							
(T) Yttrium		98.4			105	112							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R4002321-5 11/03/23 17:34

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.0128	<u>J</u>	0.0187	0.0299	
(T) Barium-133	66.9		66.9		

L1670206-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1670206-02 11/03/23 17:30 • (DUP) R4002321-4 11/03/23 17:23

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	0.159	0.204	0.291		0.0183	0.113	0.264		159	0.604	<u>U</u>	20	3
(T) Barium-133	92.4				81.5	81.5							

Laboratory Control Sample (LCS)

(LCS) R4002321-1 11/03/23 17:23

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.89	118	80.0-120	
(T) Barium-133			73.0		

L1665584-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1665584-01 11/03/23 17:23 • (MS) R4002321-2 11/03/23 17:23 • (MSD) R4002321-3 11/03/23 17:23

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	0.0717	22.0	23.2	110	116	1	75.0-125			5.26		20
(T) Barium-133		72.7			69.8	67.7							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

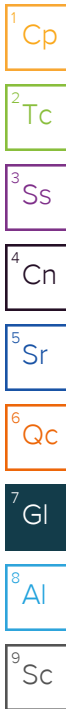
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

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

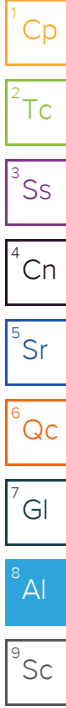
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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/ .ss:

**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](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto:mcc@ftn-assoc.com)

Project Description:  
**Plum Point Energy Station**

City/State

Collected: *Osceola AR*

Please Circle:

PT MT  ET

Phone: 501-920-9642

Client Project #  
**14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):

*Mikael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):

*Mikael Clayton*

**Rush?** (Lab MUST Be Notified)

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

Quote #

Date Results Needed

Immediately

Packed on Ice N  Y

Pres  
Chk

Analysis / Container / Preservative

Chain of custody Page 1 of 2



**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/hubs/pas-standard-terms.pdf>

SDG # *11660503*  
**A232**

Acctnum: **NAESOAR**

Template: **T106048**

Prelogin: **P1028485**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

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		10/11/23	1020	5'	X	X	X	X	X	X		-01
MW-110		GW		10/10/23	1340	5'	X	X	X	X	X	X		-02
MW-120		GW					X	X	X	X	X	X		
MW-121		GW		10/10/23	1520	5'	X	X	X	X	X	X		-03
MW-104 DUP		GW		10/11/23	1025	5'	X	X	X	X	X	X		-04
EPA EB-BG		GW		10/11/23	1200	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		

\* 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-10BDH4321 TRC-275; V  
CR6-20221V

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

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

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

Relinquished by: (Signature)

*Mikael Clayton*

Date:

10/12/23

Time:

1600

Received by: (Signature)

Received by: (Signature)

Trip Blank Received: Yes  No   
HCL / MeOH  
TBR

Term: *9.1.2024.1*  
Bottles Received: *25*

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

*Mikael Clayton*

Date:

10/13/23

Time:

0900

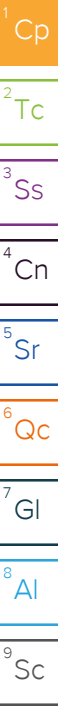
Hold:

Condition:

NCF  OK

---

**Monthly Background Sampling Event  
November 2023**



## Plum Point Services Co., LLC

Sample Delivery Group: L1675625  
Samples Received: 11/08/2023  
Project Number: 14590-3037-001  
Description: Plum Point Energy Station

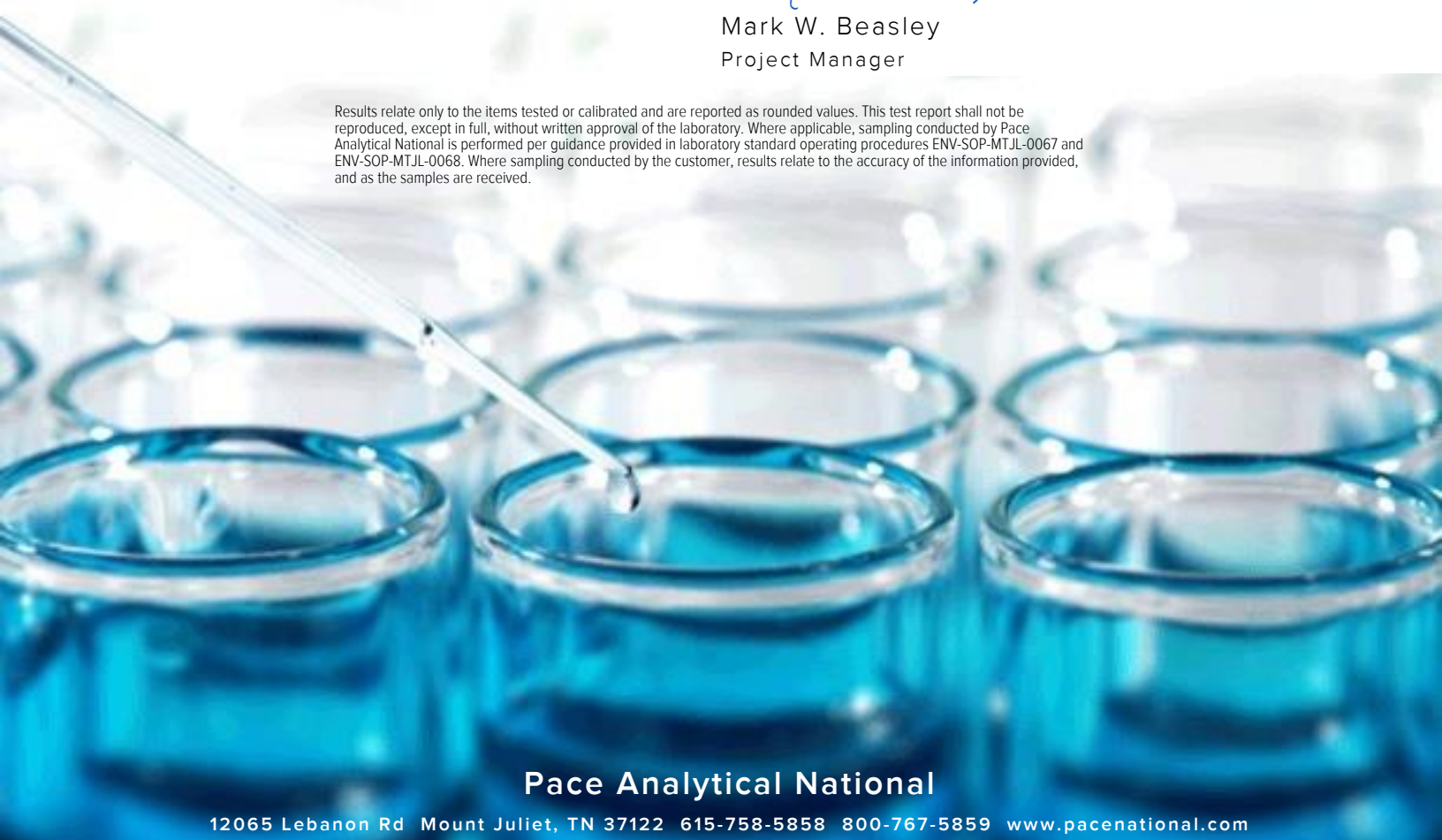
Report To: Dana Derrington  
2739 SCR 623  
Osceola, AR 72370

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](http://www.pacenational.com)

# TABLE OF CONTENTS

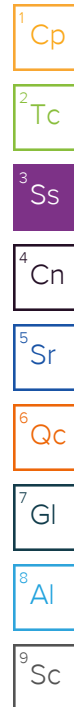
<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	
<b>MW-104 L1675625-01</b>	<b>5</b>	
<b>MW-110 L1675625-02</b>	<b>6</b>	
<b>MW-121 L1675625-03</b>	<b>7</b>	
<b>EPA EB-BG L1675625-04</b>	<b>8</b>	
<b>MW 104 DUP L1675625-05</b>	<b>9</b>	
<b>Qc: Quality Control Summary</b>	<b>10</b>	
<b>Gravimetric Analysis by Method 2540 C-2011</b>	<b>10</b>	
<b>Wet Chemistry by Method 9056A</b>	<b>14</b>	
<b>Mercury by Method 7470A</b>	<b>16</b>	
<b>Metals (ICP) by Method 6010B</b>	<b>17</b>	
<b>Metals (ICPMS) by Method 6020</b>	<b>18</b>	
<b>Gl: Glossary of Terms</b>	<b>20</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>21</b>	
<b>Sc: Sample Chain of Custody</b>	<b>22</b>	

# SAMPLE SUMMARY

## MW-104 L1675625-01 GW

Collected by Michael Clayton  
 Collected date/time 11/07/23 13:20  
 Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2170071	1	11/13/23 12:46	11/13/23 19:21	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2169825	1	11/14/23 23:56	11/14/23 23:56	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2168759	1	11/11/23 22:36	11/12/23 21:34	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2168455	1	11/13/23 12:02	11/14/23 11:36	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/16/23 21:00	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/17/23 12:54	JPD	Mt. Juliet, TN



## MW-110 L1675625-02 GW

Collected by Michael Clayton  
 Collected date/time 11/07/23 11:00  
 Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2172380	1	11/16/23 14:13	11/16/23 17:07	DLS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2169825	1	11/15/23 00:08	11/15/23 00:08	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2168759	1	11/11/23 22:36	11/12/23 21:36	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2168455	1	11/13/23 12:02	11/14/23 11:39	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/16/23 21:03	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/17/23 13:05	JPD	Mt. Juliet, TN

## MW-121 L1675625-03 GW

Collected by Michael Clayton  
 Collected date/time 11/07/23 12:15  
 Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2170094	1	11/13/23 12:01	11/14/23 08:41	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2169825	1	11/15/23 00:21	11/15/23 00:21	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2168759	1	11/11/23 22:36	11/12/23 21:39	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2168455	1	11/13/23 12:02	11/14/23 11:42	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/16/23 21:07	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/17/23 13:08	JPD	Mt. Juliet, TN

## EPA EB-BG L1675625-04 GW

Collected by Michael Clayton  
 Collected date/time 11/07/23 14:10  
 Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2170102	1	11/13/23 11:08	11/13/23 15:43	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2169825	1	11/15/23 00:34	11/15/23 00:34	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2168759	1	11/11/23 22:36	11/12/23 21:41	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2168455	1	11/13/23 12:02	11/14/23 11:45	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/16/23 21:10	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/17/23 13:12	JPD	Mt. Juliet, TN

## MW 104 DUP L1675625-05 GW

Collected by Michael Clayton  
 Collected date/time 11/07/23 13:25  
 Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2170071	1	11/13/23 12:46	11/13/23 19:21	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2169825	1	11/15/23 00:47	11/15/23 00:47	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2168759	1	11/11/23 22:36	11/12/23 21:44	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2168455	1	11/13/23 12:02	11/14/23 11:47	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/16/23 21:14	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2168469	1	11/15/23 14:25	11/17/23 13:15	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	349000		10000	1	11/13/2023 19:21	<a href="#">WG2170071</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1060		379	1000	1	11/14/2023 23:56	<a href="#">WG2169825</a>
Fluoride	251		64.0	150	1	11/14/2023 23:56	<a href="#">WG2169825</a>
Sulfate	3130	J	594	5000	1	11/14/2023 23:56	<a href="#">WG2169825</a>

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	11/12/2023 21:34	<a href="#">WG2168759</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	63.2	J	20.0	200	1	11/14/2023 11:36	<a href="#">WG2168455</a>
Calcium	83300		79.3	1000	1	11/14/2023 11:36	<a href="#">WG2168455</a>

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	11/16/2023 21:00	<a href="#">WG2168469</a>
Arsenic	5.24		0.180	2.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Barium	161		0.381	2.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Beryllium	U		0.190	2.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Cadmium	U		0.150	1.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Chromium	U		1.24	2.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Cobalt	0.369	J	0.0596	2.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Lead	U		0.849	2.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Molybdenum	4.05	J	0.348	5.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Selenium	0.576	J	0.300	2.00	1	11/17/2023 12:54	<a href="#">WG2168469</a>
Thallium	U		0.121	2.00	1	11/16/2023 21:00	<a href="#">WG2168469</a>
Lithium	6.38		0.695	2.00	1	11/17/2023 12:54	<a href="#">WG2168469</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Dissolved Solids	332000	<u>Q</u>	10000	1	11/16/2023 17:07	<a href="#">WG2172380</a>

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloride	1520		379	1000	1	11/15/2023 00:08	<a href="#">WG2169825</a>
Fluoride	163		64.0	150	1	11/15/2023 00:08	<a href="#">WG2169825</a>
Sulfate	4290	<u>J</u>	594	5000	1	11/15/2023 00:08	<a href="#">WG2169825</a>

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	11/12/2023 21:36	<a href="#">WG2168759</a>

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Boron	64.1	<u>J</u>	20.0	200	1	11/14/2023 11:39	<a href="#">WG2168455</a>
Calcium	82700		79.3	1000	1	11/14/2023 11:39	<a href="#">WG2168455</a>

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	11/16/2023 21:03	<a href="#">WG2168469</a>
Arsenic	4.21		0.180	2.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Barium	249		0.381	2.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Beryllium	U		0.190	2.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Cadmium	U		0.150	1.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Chromium	U		1.24	2.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Cobalt	0.669	<u>J</u>	0.0596	2.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Lead	U		0.849	2.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Molybdenum	0.914	<u>J</u>	0.348	5.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Selenium	0.686	<u>J</u>	0.300	2.00	1	11/17/2023 13:05	<a href="#">WG2168469</a>
Thallium	U		0.121	2.00	1	11/16/2023 21:03	<a href="#">WG2168469</a>
Lithium	6.43		0.695	2.00	1	11/17/2023 13:05	<a href="#">WG2168469</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	194000		10000	1	11/14/2023 08:41	<a href="#">WG2170094</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	4310		379	1000	1	11/15/2023 00:21	<a href="#">WG2169825</a>
Fluoride	79.9	J	64.0	150	1	11/15/2023 00:21	<a href="#">WG2169825</a>
Sulfate	27500		594	5000	1	11/15/2023 00:21	<a href="#">WG2169825</a>

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	11/12/2023 21:39	<a href="#">WG2168759</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	32.8	J	20.0	200	1	11/14/2023 11:42	<a href="#">WG2168455</a>
Calcium	43400		79.3	1000	1	11/14/2023 11:42	<a href="#">WG2168455</a>

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	11/16/2023 21:07	<a href="#">WG2168469</a>
Arsenic	0.891	J	0.180	2.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Barium	119		0.381	2.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Beryllium	U		0.190	2.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Cadmium	U		0.150	1.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Chromium	U		1.24	2.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Cobalt	U		0.0596	2.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Lead	U		0.849	2.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Molybdenum	U		0.348	5.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Selenium	5.30		0.300	2.00	1	11/17/2023 13:08	<a href="#">WG2168469</a>
Thallium	U		0.121	2.00	1	11/16/2023 21:07	<a href="#">WG2168469</a>
Lithium	3.12		0.695	2.00	1	11/17/2023 13:08	<a href="#">WG2168469</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	ND		10000	1	11/13/2023 15:43	<a href="#">WG2170102</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	U		379	1000	1	11/15/2023 00:34	<a href="#">WG2169825</a>
Fluoride	U		64.0	150	1	11/15/2023 00:34	<a href="#">WG2169825</a>
Sulfate	U		594	5000	1	11/15/2023 00:34	<a href="#">WG2169825</a>

## 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	11/12/2023 21:41	<a href="#">WG2168759</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	U		20.0	200	1	11/14/2023 11:45	<a href="#">WG2168455</a>
Calcium	U		79.3	1000	1	11/14/2023 11:45	<a href="#">WG2168455</a>

## 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	11/16/2023 21:10	<a href="#">WG2168469</a>
Arsenic	U		0.180	2.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Barium	U		0.381	2.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Beryllium	U		0.190	2.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Cadmium	U		0.150	1.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Chromium	U		1.24	2.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Cobalt	U		0.0596	2.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Lead	U		0.849	2.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Molybdenum	U		0.348	5.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Selenium	U		0.300	2.00	1	11/17/2023 13:12	<a href="#">WG2168469</a>
Thallium	U		0.121	2.00	1	11/16/2023 21:10	<a href="#">WG2168469</a>
Lithium	U		0.695	2.00	1	11/17/2023 13:12	<a href="#">WG2168469</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	354000		10000	1	11/13/2023 19:21	<a href="#">WG2170071</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	991	J	379	1000	1	11/15/2023 00:47	<a href="#">WG2169825</a>
Fluoride	314		64.0	150	1	11/15/2023 00:47	<a href="#">WG2169825</a>
Sulfate	3100	J	594	5000	1	11/15/2023 00:47	<a href="#">WG2169825</a>

Mercury by Method 7470A

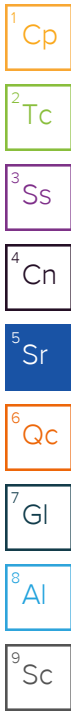
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	11/12/2023 21:44	<a href="#">WG2168759</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	57.8	J	20.0	200	1	11/14/2023 11:47	<a href="#">WG2168455</a>
Calcium	82900		79.3	1000	1	11/14/2023 11:47	<a href="#">WG2168455</a>

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	11/16/2023 21:14	<a href="#">WG2168469</a>
Arsenic	5.12		0.180	2.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Barium	160		0.381	2.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Beryllium	U		0.190	2.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Cadmium	U		0.150	1.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Chromium	U		1.24	2.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Cobalt	0.366	J	0.0596	2.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Lead	U		0.849	2.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Molybdenum	3.99	J	0.348	5.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Selenium	0.627	J	0.300	2.00	1	11/17/2023 13:15	<a href="#">WG2168469</a>
Thallium	U		0.121	2.00	1	11/16/2023 21:14	<a href="#">WG2168469</a>
Lithium	5.68		0.695	2.00	1	11/17/2023 13:15	<a href="#">WG2168469</a>



Method Blank (MB)

(MB) R4000454-1 11/13/23 19:21

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1675296-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1675296-02 11/13/23 19:21 • (DUP) R4000454-3 11/13/23 19:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1140000	1230000	1	7.92	J3	5

L1675296-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1675296-04 11/13/23 19:21 • (DUP) R4000454-4 11/13/23 19:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1940000	2080000	1	6.97	J3	5

Laboratory Control Sample (LCS)

(LCS) R4000454-2 11/13/23 19:21

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8660000	98.4	85.0-115	

Method Blank (MB)

(MB) R4000620-1 11/14/23 08:41

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1675201-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1675201-05 11/14/23 08:41 • (DUP) R4000620-3 11/14/23 08:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	164000	175000	1	6.49	J3	5

L1675201-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1675201-06 11/14/23 08:41 • (DUP) R4000620-4 11/14/23 08:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	187000	194000	1	3.67		5

Laboratory Control Sample (LCS)

(LCS) R4000620-2 11/14/23 08:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8410000	95.6	85.0-115	



Method Blank (MB)

(MB) R4000431-1 11/13/23 15:43

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

1 Cp

2 Tc

3 Ss

L1675825-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1675825-05 11/13/23 15:43 • (DUP) R4000431-3 11/13/23 15:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	153000	151000	1	1.32		5

4 Cn

5 Sr

L1675825-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1675825-07 11/13/23 15:43 • (DUP) R4000431-4 11/13/23 15:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	154000	155000	1	0.647		5

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R4000431-2 11/13/23 15:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8460000	96.1	85.0-115	

9 Sc

Method Blank (MB)

(MB) R4001975-1 11/16/23 17:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	⬇	10000	10000

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1675473-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1675473-10 11/16/23 17:07 • (DUP) R4001975-3 11/16/23 17:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1430000	1520000	1	6.12	J3	5

<sup>4</sup>Cn

<sup>5</sup>Sr

L1675473-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1675473-11 11/16/23 17:07 • (DUP) R4001975-4 11/16/23 17:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1430000	1440000	1	1.05		5

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

Laboratory Control Sample (LCS)

(LCS) R4001975-2 11/16/23 17:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8650000	98.3	85.0-115	

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4000243-1 11/14/23 10:44

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

L1675190-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1675190-01 11/14/23 12:37 • (DUP) R4000243-3 11/14/23 12:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	1070	1060	1	0.526		15
Fluoride	79.0	80.2	1	0.000		15
Sulfate	30000	29900	1	0.110		15

L1675420-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1675420-06 11/14/23 16:13 • (DUP) R4000243-6 11/14/23 16:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	15600	15400	1	0.780		15
Fluoride	U	U	1	0.000		15
Sulfate	1240	1220	1	1.60	U	15

Laboratory Control Sample (LCS)

(LCS) R4000243-2 11/14/23 10:57

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	39800	99.4	80.0-120	
Fluoride	8000	8130	102	80.0-120	
Sulfate	40000	39200	98.0	80.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1675190-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1675190-01 11/14/23 12:37 • (MS) R4000243-4 11/14/23 13:02 • (MSD) R4000243-5 11/14/23 13:15

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 %
Chloride	40000	1070	38200	38200	92.8	92.9	1	80.0-120			0.126	15
Fluoride	8000	79.0	7730	7770	95.6	96.2	1	80.0-120			0.582	15
Sulfate	40000	30000	62400	62400	81.1	81.0	1	80.0-120			0.0418	15

L1675420-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1675420-06 11/14/23 16:13 • (MS) R4000243-7 11/14/23 17:04 • (MSD) R4000243-8 11/14/23 17:17

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	15600	52100	52200	91.5	91.5	1	80.0-120			0.0161	15
Fluoride	8000	U	7700	7770	96.3	97.1	1	80.0-120			0.901	15
Sulfate	40000	1240	38100	38200	92.1	92.5	1	80.0-120			0.392	15

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

Method Blank (MB)

(MB) R3998862-1 11/12/23 20:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.100	0.200

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3998862-2 11/12/23 20:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	3.00	3.05	102	80.0-120	

4 Cn

5 Sr

L1675481-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1675481-10 11/12/23 20:43 • (MS) R3998862-3 11/12/23 20:46 • (MSD) R3998862-4 11/12/23 20:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	3.00	U	2.87	2.96	95.6	98.6	1	75.0-125			3.16	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3999604-1 11/14/23 10:20

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3999604-2 11/14/23 10:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	976	97.6	80.0-120	
Calcium	10000	9130	91.3	80.0-120	

L1675481-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1675481-09 11/14/23 10:26 • (MS) R3999604-4 11/14/23 10:31 • (MSD) R3999604-5 11/14/23 10:34

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	119	1110	1120	99.4	99.7	1	75.0-125			0.268	20
Calcium	10000	172000	177000	176000	55.4	46.9	1	75.0-125	V	V	0.476	20

L1675481-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1675481-10 11/14/23 10:37 • (MS) R3999604-6 11/14/23 10:39 • (MSD) R3999604-7 11/14/23 10:42

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	169	1140	1150	97.2	97.9	1	75.0-125			0.580	20
Calcium	10000	56000	63900	64000	79.4	80.5	1	75.0-125			0.163	20

Method Blank (MB)

(MB) R4001193-1 11/16/23 19:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	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
Thallium	U		0.121	2.00
Lithium	U		0.695	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4001305-1 11/17/23 11:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Selenium	U		0.300	2.00

Laboratory Control Sample (LCS)

(LCS) R4001193-2 11/16/23 19:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Antimony	50.0	45.8	91.6	80.0-120	
Arsenic	50.0	50.2	100	80.0-120	
Barium	50.0	44.8	89.7	80.0-120	
Beryllium	50.0	46.7	93.4	80.0-120	
Cadmium	50.0	50.1	100	80.0-120	
Chromium	50.0	51.5	103	80.0-120	
Cobalt	50.0	51.7	103	80.0-120	
Lead	50.0	47.7	95.3	80.0-120	
Molybdenum	50.0	47.9	95.8	80.0-120	
Thallium	50.0	47.7	95.4	80.0-120	
Lithium	50.0	44.3	88.5	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R4001305-2 11/17/23 11:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Selenium	50.0	55.8	112	80.0-120	

L1675231-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1675231-06 11/16/23 19:19 • (MS) R4001193-4 11/16/23 19:25 • (MSD) R4001193-5 11/16/23 19:29

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	45.8	45.6	91.6	91.2	1	75.0-125			0.431	20
Arsenic	50.0	3.31	52.6	51.3	98.5	96.0	1	75.0-125			2.39	20
Barium	50.0	125	170	167	90.0	83.4	1	75.0-125			1.94	20
Beryllium	50.0	U	46.5	45.4	93.0	90.7	1	75.0-125			2.46	20
Cadmium	50.0	U	50.6	49.5	101	98.9	1	75.0-125			2.35	20
Chromium	50.0	U	49.5	49.2	98.9	98.3	1	75.0-125			0.629	20
Cobalt	50.0	0.360	49.2	48.4	97.6	96.0	1	75.0-125			1.62	20
Lead	50.0	U	47.0	46.8	93.9	93.6	1	75.0-125			0.354	20
Molybdenum	50.0	U	47.9	47.5	95.8	95.0	1	75.0-125			0.834	20
Thallium	50.0	U	46.9	46.9	93.8	93.7	1	75.0-125			0.0259	20
Lithium	50.0	3.56	46.0	45.0	84.8	82.8	1	75.0-125			2.20	20

L1675231-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1675231-06 11/17/23 11:53 • (MS) R4001305-5 11/17/23 12:03 • (MSD) R4001305-6 11/17/23 12:06

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 %
Selenium	50.0	U	55.5	54.7	111	109	1	75.0-125			1.32	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

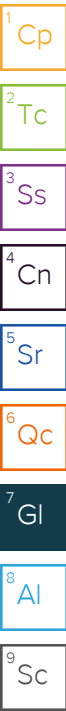
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
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.
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

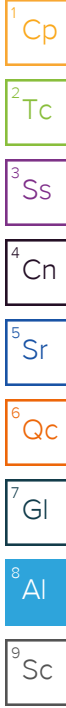
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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  
 u u u u

Chain of Custody Page 1 of 2  
  
**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>

Report to:  
**Dana Derrington**

Email To: [dld@ftn-assoc.com](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto: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*

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):  
*Michael Clayton*

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

Quote #  
 Date Results Needed

Immediately  
 Packed on Ice N  Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
MW-104	Grab	GW		11/7/23	1320	5
MW-110		GW		11/7/23	1100	5
MW-120		GW				5
MW-121		GW		11/7/23	1215	5
MW-120 DUP		GW				5
EPA EB-BG		GW		11/7/23	1410	5
MW 104 DUP		GW		11/7/23	1325	5
		GW				
		GW				

Analysis / Container / Preservative	CI, 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
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X
	X	X	X	X	X	X

SDG # **41675625**  
**A221**  
 Acctnum: **NAESOAR**  
 Template: **T106048**  
 Prelogin: **P1032532**  
 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**

Samples returned via:  UPS  FedEx  Courier  
 Tracking # **6643 4313 9630**

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

Relinquished by: (Signature)  
*Michael Clayton*  
 Relinquished by: (Signature)  
 Relinquished by: (Signature)

Date: **11/7/23**  
 Time: **1700**  
 Date: **11/7/23**  
 Time: **1550**  
 Date:  
 Time:

Received by: (Signature)  
 Received by: (Signature)  
 Received for lab by: (Signature)  
*Paul Henry*

Trip Blank Received: Yes/No  
 HCL/MeOH  
 TBR  
 Temp: **20.0 ± 0.2 °C**  
 Date: **11/8/23**  
 Time: **9:00**

If PH-10BDH4321 TRC-2362362  
 CR6-20221V  
 Date/Time  
 Condition:  
 NCF / OK

**Plum Point Services Co., LLC**

Sample Delivery Group: L1675626  
Samples Received: 11/08/2023  
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](http://www.pacenational.com)

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	
MW-104 L1675626-01	<b>5</b>	
MW-110 L1675626-02	<b>6</b>	
MW-121 L1675626-03	<b>7</b>	
EPA EB-BG L1675626-04	<b>8</b>	
MW 104 DUP L1675626-05	<b>9</b>	
<b>Qc: Quality Control Summary</b>	<b>10</b>	
Radiochemistry by Method 904/9320	<b>10</b>	
Radiochemistry by Method SM7500Ra B M	<b>11</b>	
<b>Gl: Glossary of Terms</b>	<b>13</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>14</b>	
<b>Sc: Sample Chain of Custody</b>	<b>15</b>	

# SAMPLE SUMMARY

## MW-104 L1675626-01 Non-Potable Water

Collected by Michael Clayton    Collected date/time 11/07/23 13:20    Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2181185	1	12/01/23 18:08	12/12/23 14:14	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2178646	1	11/29/23 10:53	12/12/23 14:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2178646	1	11/29/23 10:53	11/30/23 00:00	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## MW-110 L1675626-02 Non-Potable Water

Collected by Michael Clayton    Collected date/time 11/07/23 11:00    Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2181185	1	12/01/23 18:08	12/12/23 14:14	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2178646	1	11/29/23 10:53	12/12/23 14:14	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2178646	1	11/29/23 10:53	11/30/23 00:00	RGT	Mt. Juliet, TN

## MW-121 L1675626-03 Non-Potable Water

Collected by Michael Clayton    Collected date/time 11/07/23 12:15    Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2181185	1	12/01/23 18:08	12/06/23 18:40	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2178646	1	11/29/23 10:53	12/06/23 18:40	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2178646	1	11/29/23 10:53	11/30/23 00:00	RGT	Mt. Juliet, TN

## EPA EB-BG L1675626-04 Non-Potable Water

Collected by Michael Clayton    Collected date/time 11/07/23 14:10    Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2181185	1	12/01/23 18:08	12/06/23 18:40	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2178646	1	11/29/23 10:53	12/06/23 18:40	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2178646	1	11/29/23 10:53	11/30/23 00:00	RGT	Mt. Juliet, TN

## MW 104 DUP L1675626-05 Non-Potable Water

Collected by Michael Clayton    Collected date/time 11/07/23 13:25    Received date/time 11/08/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2181185	1	12/01/23 18:08	12/06/23 18:40	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2179469	1	11/30/23 09:26	12/06/23 18:40	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2179469	1	11/30/23 09:26	12/06/23 10:42	RGT	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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	0.463		0.194		0.355		12/12/2023 14:14	<a href="#">WG2181185</a>
(T) Barium	104					30.0-143	12/12/2023 14:14	<a href="#">WG2181185</a>
(T) Yttrium	107					30.0-136	12/12/2023 14:14	<a href="#">WG2181185</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.463	J	0.211	0.501	12/12/2023 14:14	<a href="#">WG2178646</a>

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	-0.0268	U	0.0830	0.00942	0.354	0.278	11/30/2023 00:00	<a href="#">WG2178646</a>
(T) Barium-133	49.6					30.0-143	11/30/2023 00:00	<a href="#">WG2178646</a>



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	0.737		0.203		0.360		12/12/2023 14:14	<a href="#">WG2181185</a>
(T) Barium	110					30.0-143	12/12/2023 14:14	<a href="#">WG2181185</a>
(T) Yttrium	114					30.0-136	12/12/2023 14:14	<a href="#">WG2181185</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.910		0.283	0.440	12/12/2023 14:14	<a href="#">WG2178646</a>

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	0.173	J	0.197	0.0654	0.253	0.199	11/30/2023 00:00	<a href="#">WG2178646</a>
(T) Barium-133	67.3					30.0-143	11/30/2023 00:00	<a href="#">WG2178646</a>

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	0.720		0.262		0.486		12/06/2023 18:40	<a href="#">WG2181185</a>
(T) Barium	124					30.0-143	12/06/2023 18:40	<a href="#">WG2181185</a>
(T) Yttrium	126					30.0-136	12/06/2023 18:40	<a href="#">WG2181185</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.01		0.346	0.525	12/06/2023 18:40	<a href="#">WG2178646</a>

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	0.292		0.226	0.0857	0.198	0.163	11/30/2023 00:00	<a href="#">WG2178646</a>
(T) Barium-133	75.0					30.0-143	11/30/2023 00:00	<a href="#">WG2178646</a>

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	0.889		0.244		0.445		12/06/2023 18:40	<a href="#">WG2181185</a>
(T) Barium	121					30.0-143	12/06/2023 18:40	<a href="#">WG2181185</a>
(T) Yttrium	104					30.0-136	12/06/2023 18:40	<a href="#">WG2181185</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.889		0.248	0.504	12/06/2023 18:40	<a href="#">WG2178646</a>

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	-0.0102	<u>U</u>	0.0449	0.00687	0.236	0.195	11/30/2023 00:00	<a href="#">WG2178646</a>
(T) Barium-133	67.0					30.0-143	11/30/2023 00:00	<a href="#">WG2178646</a>

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	0.664		0.277		0.516		12/06/2023 18:40	<a href="#">WG2181185</a>
(T) Barium	111					30.0-143	12/06/2023 18:40	<a href="#">WG2181185</a>
(T) Yttrium	124					30.0-136	12/06/2023 18:40	<a href="#">WG2181185</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.20		0.575	0.576	12/06/2023 18:40	<a href="#">WG2179469</a>

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	1.54		0.504	0.217	0.257	0.191	12/06/2023 10:42	<a href="#">WG2179469</a>
(T) Barium-133	82.3					30.0-143	12/06/2023 10:42	<a href="#">WG2179469</a>

Method Blank (MB)

(MB) R4012155-4 12/12/23 14:14

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.192	<u>L</u>	0.169	0.315	
(T) Barium	105		105		
(T) Yttrium	99.5		99.5		

L1676553-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1676553-01 12/06/23 18:40 • (DUP) R4012155-3 12/06/23 14:10

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	1.07	0.255	0.428		0.226	0.389	0.704		131	1.82	<u>U</u>	20	3
(T) Barium	118				89.7	89.7							
(T) Yttrium	114				82.7	82.7							

Laboratory Control Sample (LCS)

(LCS) R4012155-5 12/12/23 14:14

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.06	81.2	80.0-120	
(T) Barium			109		
(T) Yttrium			103		

L1675653-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1675653-01 12/06/23 18:40 • (MS) R4012155-1 12/06/23 14:10 • (MSD) R4012155-2 12/06/23 14:10

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	10.0	4.36	12.5	12.8	81.0	84.9	1	70.0-130			3.08		20
(T) Barium		110			118	105							
(T) Yttrium		99.2			78.7	88.6							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4010097-1 11/30/23 00:00

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.00296	<u>U</u>	0.0431	0.103	0.0738
(T) Barium-133	64.5		64.5		

L1672751-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1672751-03 11/30/23 00:00 • (DUP) R4010097-5 11/30/23 00:00

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	0.513	0.298	0.201	0.166	0.288	0.341	0.471	0.316	56.1	0.496	<u>J</u>	20	3
(T) Barium-133	71.6				70.9	70.9							

Laboratory Control Sample (LCS)

(LCS) R4010097-2 11/30/23 00:00

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	4.88	97.6	80.0-120	
(T) Barium-133			72.2		

L1672746-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1672746-01 11/30/23 00:00 • (MS) R4010097-3 11/30/23 00:00 • (MSD) R4010097-4 11/30/23 00:00

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	0.572	19.2	18.6	92.9	90.2	1	75.0-125			2.86		20
(T) Barium-133		73.1			70.6	66.6							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4012157-1 12/06/23 10:42

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.0554	↓	0.0642	0.0875	0.0619
(T) Barium-133	72.5		72.5		

L1676570-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1676570-03 12/06/23 10:42 • (DUP) R4012157-5 12/06/23 10:42

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	2.65	0.652	0.253	0.188	2.38	0.581	0.302	0.203	10.8	0.313		20	3
(T) Barium-133	87.9				87.7	87.7							

Laboratory Control Sample (LCS)

(LCS) R4012157-2 12/06/23 10:42

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.08	102	80.0-120	
(T) Barium-133			74.8		

L1672751-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1672751-01 12/06/23 10:42 • (MS) R4012157-3 12/06/23 10:42 • (MSD) R4012157-4 12/06/23 10:42

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	0.745	20.6	24.8	99.1	120	1	75.0-125			18.5		20
(T) Barium-133		83.6			76.4	83.0							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

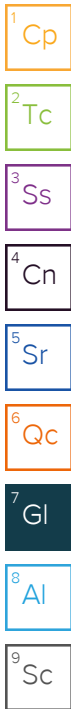
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Company Name/Address:

**Plum Point Services Co., LLC**

2739 SCR 623  
Osceola, AR 72370

Billing Information:

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

Report to:  
**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*

Site/Facility ID #

P.O. #  
2023-00048

Collected by (signature):  
*Michael Clayton*

Rush? (Lab MUST Be Notified)

Quote #

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

Date Results Needed

Immediately  
Packed on Ice N \_\_\_ Y ✓

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2



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/hubs/pas-standard-terms.pdf>

SDG # *4475626*  
*A221*

Acctnum: NAESOAR

Template: T106048

Prelogin: P1032532

PM: 134 - Mark W. Beasley

PB:

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CI, F, SO4 250m HDPE-NoPres	Metals 250m HDPE-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	<i>Grab</i>	GW		<i>11/7/23</i>	<i>1320</i>	<i>5</i>	X	X	X	X	X	X		<i>-01</i>
MW-110		GW		<i>11/7/23</i>	<i>1100</i>	<i>5</i>	X	X	X	X	X	X		<i>-02</i>
MW-120		GW				<i>5</i>	X	X	X	X	X	X		
MW-121		GW		<i>11/7/23</i>	<i>1215</i>	<i>5</i>	X	X	X	X	X	X		<i>-03</i>
MW-120 DUP		GW				<i>5</i>	X	X	X	X	X	X		
EPA EB-BG		GW		<i>11/7/23</i>	<i>1410</i>	<i>5</i>	X	X	X	X	X	X		<i>-04</i>
<i>MW 104 DUP</i>		GW		<i>11/7/23</i>	<i>1325</i>	<i>5</i>	X	X	X	X	X	X		<i>-05</i>
		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 # *6643 4313 9630*

Sample Receipt Checklist

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

Relinquished by: (Signature)  
*Michael Clayton*

Date: *11/7/23*  
Time: *1700*  
~~*1500*~~

Received by: (Signature)

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

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: *20.0 ± 0.2 °C*  
Bottles Received: *25*

If PH-10BDH4321 TRC-2362362 CR6-20221V Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

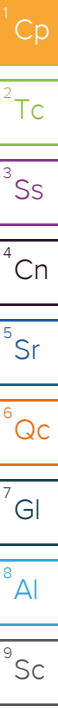
Received for lab by: (Signature)

Date: *11/8/23*  
Time: *9:00*

Hold: \_\_\_\_\_ Condition: NCF / OK

---

**Second Half 2023 Verification & Monthly Background Sampling Event  
December 2023**



## Plum Point Services Co., LLC

Sample Delivery Group: L1685565  
Samples Received: 12/07/2023  
Project Number: R14590-3037-001  
Description: PPES DEQ Program

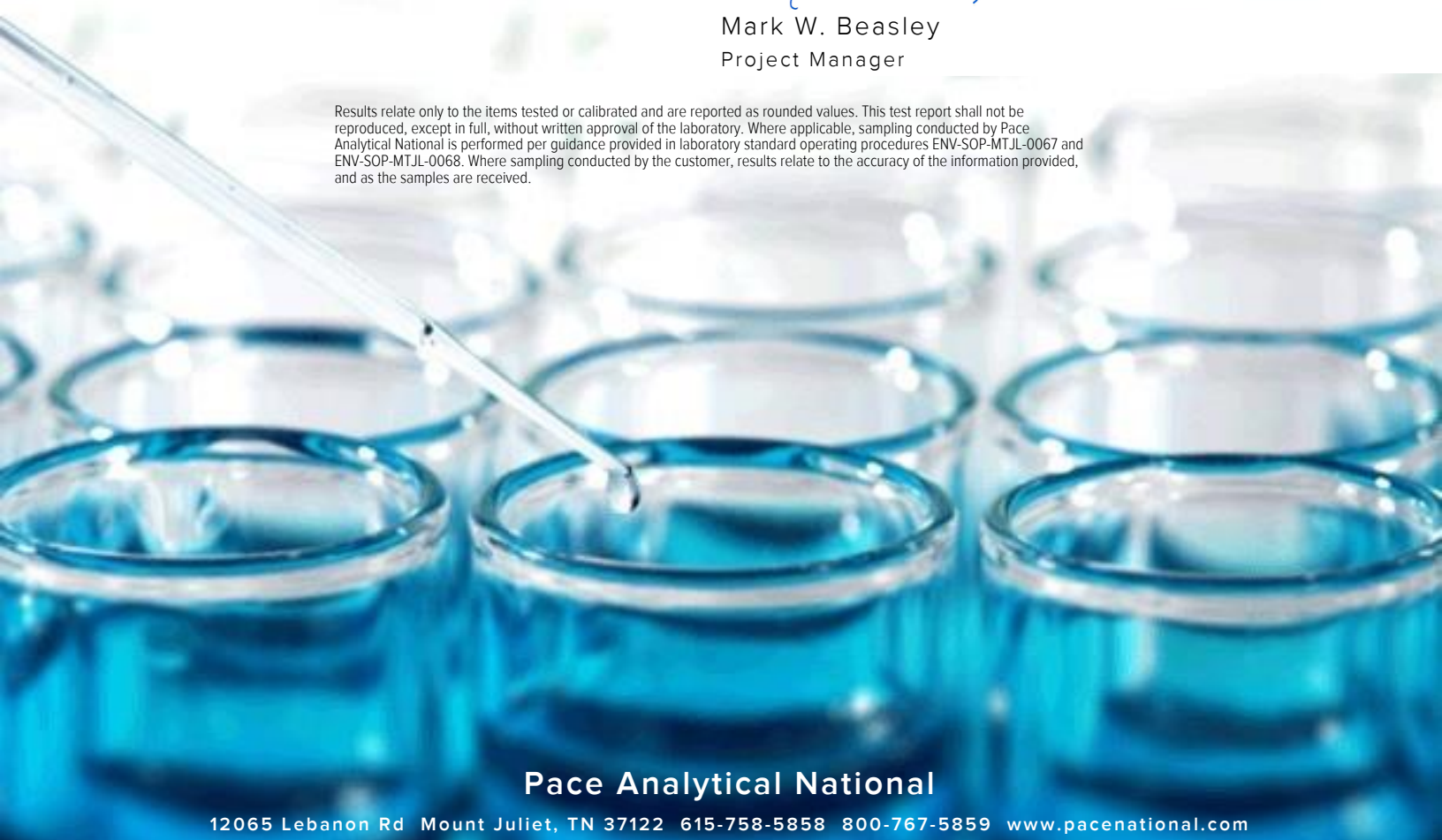
Report To: Dana Derrington  
2739 SCR 623  
Osceola, AR 72370

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](http://www.pacenational.com)

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	1	
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	
<b>Cn: Case Narrative</b>	4	
<b>Sr: Sample Results</b>	5	
MW-117 L1685565-01	5	
MW-117 DUP L1685565-02	6	
EPA EB-2 L1685565-03	7	
<b>Qc: Quality Control Summary</b>	8	
Gravimetric Analysis by Method 2540 C-2011	8	
<b>Gl: Glossary of Terms</b>	10	
<b>Al: Accreditations &amp; Locations</b>	11	
<b>Sc: Sample Chain of Custody</b>	12	
		

# SAMPLE SUMMARY

## MW-117 L1685565-01 GW

Collected by Michael Clayton  
 Collected date/time 12/06/23 13:55  
 Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187498	1	12/12/23 12:06	12/12/23 22:50	JAC	Mt. Juliet, TN

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

## MW-117 DUP L1685565-02 GW

Collected by Michael Clayton  
 Collected date/time 12/06/23 14:00  
 Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187498	1	12/12/23 12:06	12/12/23 22:50	JAC	Mt. Juliet, TN

<sup>4</sup> Cn

<sup>5</sup> Sr

## EPA EB-2 L1685565-03 GW

Collected by Michael Clayton  
 Collected date/time 12/06/23 14:25  
 Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187494	1	12/12/23 11:36	12/13/23 09:50	JAC	Mt. Juliet, TN

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	328000		10000	1	12/12/2023 22:50	<a href="#">WG2187498</a>

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



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	319000		10000	1	12/12/2023 22:50	<a href="#">WG2187498</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	12/13/2023 09:50	<a href="#">WG2187494</a>

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

Method Blank (MB)

(MB) R4012691-1 12/13/23 09:50

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

1 Cp

2 Tc

3 Ss

L1685249-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1685249-04 12/13/23 09:50 • (DUP) R4012691-3 12/13/23 09:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1350000	1420000	1	4.87		5

4 Cn

5 Sr

6 Qc

L1685281-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1685281-09 12/13/23 09:50 • (DUP) R4012691-4 12/13/23 09:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	660000	697000	1	5.50	J3	5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R4012691-2 12/13/23 09:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8400000	95.5	85.0-115	

Method Blank (MB)

(MB) R4012689-1 12/12/23 22:50

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1685565-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1685565-01 12/12/23 22:50 • (DUP) R4012689-3 12/12/23 22:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	328000	334000	1	1.81		5

<sup>4</sup>Cn

<sup>5</sup>Sr

L1685565-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1685565-02 12/12/23 22:50 • (DUP) R4012689-4 12/12/23 22:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	319000	322000	1	0.936		5

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

Laboratory Control Sample (LCS)

(LCS) R4012689-2 12/12/23 22:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8500000	96.6	85.0-115	

<sup>9</sup>Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

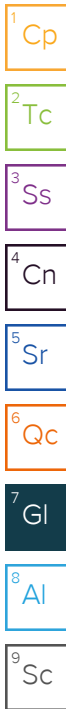
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

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

### Qualifier Description

J3	The associated batch QC was outside the established quality control range for precision.
----	--



# ACCREDITATIONS & LOCATIONS

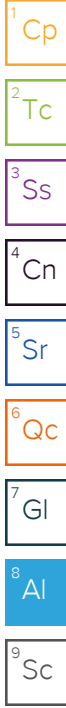
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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](mailto:dld@ftn-assoc.com); [hlf@ftn-assoc.com](mailto:hlf@ftn-assoc.com); [mcc@ftn-assoc.com](mailto:mcc@ftn-assoc.com)

Project Description:  
**PPES DEQ Program**

City/State Collected: **Osceola AR** Please Circle: PT MT  ET

Phone: **501-920-9642**

Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TDS	IL	HDPE	NoPres
MW-117	Grab	GW		12/6/23	1355	1				X
MW-117 DUP	↓	GW		↓	1400	1				X
EPA EB-2		GW			1425	1				X
		GW				1				X

Analysis / Container / Preservative		Chain of Custody Page ___ of ___
		 <b>MT JULIET, TN</b> 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: <a href="https://info.pacelabs.com/hubs/pas-standard-terms.pdf">https://info.pacelabs.com/hubs/pas-standard-terms.pdf</a> SDG # <b>11685565</b> <b>C179</b> Acctnum: <b>NAESOAR</b> Template: <b>T242518</b> Prelogin: <b>P1039069</b> PM: <b>134 - Mark W. Beasley</b> PB: Shipped Via: <b>FedEX Ground</b>
Remarks	Sample # (lab only)	
	-01	
	-02	
	-03	

\* 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 # **7155 0296 8433**

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

Relinquished by: (Signature)  
*Michael Clayton*  
 Date: **12/6/23**  
 Time: **1700**

Received by: (Signature)  
 Date: **12/17/23**  
 Time: **09:00**

Trip Blank Received: Yes  No   
 HCL / MeOH TBR  
 Temp: **0.5** °C  
 Bottles Received: **3**  
 If preservation required by Login: Date/Time  
 Hold:  
 Condition: **OK**

**Plum Point Services Co., LLC**

Sample Delivery Group: L1686005  
Samples Received: 12/07/2023  
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](http://www.pacenational.com)



# TABLE OF CONTENTS

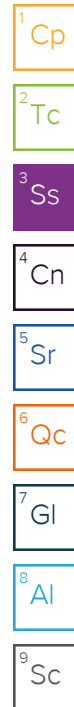
<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	
<b>MW-104 L1686005-01</b>	<b>5</b>	
<b>MW-110 L1686005-02</b>	<b>6</b>	
<b>MW-121 L1686005-03</b>	<b>7</b>	
<b>MW-121 DUP L1686005-04</b>	<b>8</b>	
<b>EPA EB-BG L1686005-05</b>	<b>9</b>	
<b>Qc: Quality Control Summary</b>	<b>10</b>	
<b>Gravimetric Analysis by Method 2540 C-2011</b>	<b>10</b>	
<b>Wet Chemistry by Method 9056A</b>	<b>14</b>	
<b>Mercury by Method 7470A</b>	<b>16</b>	
<b>Metals (ICP) by Method 6010B</b>	<b>17</b>	
<b>Metals (ICPMS) by Method 6020</b>	<b>18</b>	
<b>Gl: Glossary of Terms</b>	<b>21</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>22</b>	
<b>Sc: Sample Chain of Custody</b>	<b>23</b>	

# SAMPLE SUMMARY

## MW-104 L1686005-01 GW

Collected by Michael Clayton    Collected date/time 12/05/23 14:00    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2186613	1	12/11/23 12:14	12/11/23 21:46	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2187791	1	12/13/23 16:40	12/13/23 16:40	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2186619	1	12/10/23 19:39	12/12/23 13:27	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2186710	1	12/12/23 09:37	12/13/23 18:46	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2186723	1	12/13/23 09:54	12/15/23 00:33	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2190268	1	12/17/23 14:33	12/17/23 20:38	LD	Mt. Juliet, TN



## MW-110 L1686005-02 GW

Collected by Michael Clayton    Collected date/time 12/05/23 15:20    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2186616	1	12/11/23 11:52	12/11/23 14:17	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2187791	1	12/13/23 17:18	12/13/23 17:18	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2186619	1	12/10/23 19:39	12/12/23 13:37	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2186710	1	12/12/23 09:37	12/13/23 18:49	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2186723	1	12/13/23 09:54	12/15/23 00:37	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2190268	1	12/17/23 14:33	12/17/23 20:42	LD	Mt. Juliet, TN

## MW-121 L1686005-03 GW

Collected by Michael Clayton    Collected date/time 12/06/23 11:30    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187498	1	12/12/23 12:06	12/12/23 22:50	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2187791	1	12/13/23 17:31	12/13/23 17:31	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2186619	1	12/10/23 19:39	12/12/23 13:39	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2186710	1	12/12/23 09:37	12/13/23 18:52	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2186723	1	12/13/23 09:54	12/15/23 00:40	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2190268	1	12/17/23 14:33	12/17/23 20:45	LD	Mt. Juliet, TN

## MW-121 DUP L1686005-04 GW

Collected by Michael Clayton    Collected date/time 12/06/23 11:35    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187498	1	12/12/23 12:06	12/12/23 22:50	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2187791	1	12/13/23 17:44	12/13/23 17:44	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2186619	1	12/10/23 19:39	12/12/23 13:41	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2186710	1	12/12/23 09:37	12/13/23 17:34	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2186723	1	12/13/23 09:54	12/15/23 00:44	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2190268	1	12/17/23 14:33	12/17/23 20:48	LD	Mt. Juliet, TN

## EPA EB-BG L1686005-05 GW

Collected by Michael Clayton    Collected date/time 12/06/23 12:00    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187483	1	12/12/23 13:01	12/13/23 08:17	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2187791	1	12/13/23 17:57	12/13/23 17:57	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2186619	1	12/10/23 19:39	12/12/23 13:44	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2186710	1	12/12/23 09:37	12/13/23 17:37	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2186723	1	12/13/23 09:54	12/15/23 00:47	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	344000		10000	1	12/11/2023 21:46	<a href="#">WG2186613</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1090		379	1000	1	12/13/2023 16:40	<a href="#">WG2187791</a>
Fluoride	242		64.0	150	1	12/13/2023 16:40	<a href="#">WG2187791</a>
Sulfate	3320	J	594	5000	1	12/13/2023 16:40	<a href="#">WG2187791</a>

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	12/12/2023 13:27	<a href="#">WG2186619</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	72.5	J	20.0	200	1	12/13/2023 18:46	<a href="#">WG2186710</a>
Calcium	85700		79.3	1000	1	12/13/2023 18:46	<a href="#">WG2186710</a>

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	12/15/2023 00:33	<a href="#">WG2186723</a>
Arsenic	6.71		0.180	2.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Barium	179		0.381	2.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Beryllium	U		0.190	2.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Cadmium	U		0.150	1.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Chromium	U		1.24	2.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Cobalt	0.733	J	0.0596	2.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Lead	U		0.849	2.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Molybdenum	4.12	J	0.348	5.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Selenium	0.564	J	0.300	2.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Thallium	U		0.121	2.00	1	12/15/2023 00:33	<a href="#">WG2186723</a>
Lithium	5.96		0.695	2.00	1	12/17/2023 20:38	<a href="#">WG2190268</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	316000		10000	1	12/11/2023 14:17	<a href="#">WG2186616</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1010		379	1000	1	12/13/2023 17:18	<a href="#">WG2187791</a>
Fluoride	168		64.0	150	1	12/13/2023 17:18	<a href="#">WG2187791</a>
Sulfate	4390	J	594	5000	1	12/13/2023 17:18	<a href="#">WG2187791</a>

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	12/12/2023 13:37	<a href="#">WG2186619</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	76.3	J	20.0	200	1	12/13/2023 18:49	<a href="#">WG2186710</a>
Calcium	85200		79.3	1000	1	12/13/2023 18:49	<a href="#">WG2186710</a>

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	12/15/2023 00:37	<a href="#">WG2186723</a>
Arsenic	6.16		0.180	2.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Barium	249		0.381	2.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Beryllium	U		0.190	2.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Cadmium	U		0.150	1.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Chromium	U		1.24	2.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Cobalt	0.431	J	0.0596	2.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Lead	U		0.849	2.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Molybdenum	0.869	J	0.348	5.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Selenium	U		0.300	2.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Thallium	U		0.121	2.00	1	12/15/2023 00:37	<a href="#">WG2186723</a>
Lithium	5.46		0.695	2.00	1	12/17/2023 20:42	<a href="#">WG2190268</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	187000		10000	1	12/12/2023 22:50	<a href="#">WG2187498</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1440		379	1000	1	12/13/2023 17:31	<a href="#">WG2187791</a>
Fluoride	89.1	J	64.0	150	1	12/13/2023 17:31	<a href="#">WG2187791</a>
Sulfate	28100		594	5000	1	12/13/2023 17:31	<a href="#">WG2187791</a>

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	12/12/2023 13:39	<a href="#">WG2186619</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	46.7	J	20.0	200	1	12/13/2023 18:52	<a href="#">WG2186710</a>
Calcium	44900		79.3	1000	1	12/13/2023 18:52	<a href="#">WG2186710</a>

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	12/15/2023 00:40	<a href="#">WG2186723</a>
Arsenic	0.925	J	0.180	2.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Barium	125		0.381	2.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Beryllium	U		0.190	2.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Cadmium	U		0.150	1.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Chromium	U		1.24	2.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Cobalt	0.0889	J	0.0596	2.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Lead	U		0.849	2.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Molybdenum	U		0.348	5.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Selenium	3.22		0.300	2.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Thallium	U		0.121	2.00	1	12/15/2023 00:40	<a href="#">WG2186723</a>
Lithium	2.93		0.695	2.00	1	12/17/2023 20:45	<a href="#">WG2190268</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	203000		10000	1	12/12/2023 22:50	<a href="#">WG2187498</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1500		379	1000	1	12/13/2023 17:44	<a href="#">WG2187791</a>
Fluoride	86.4	J	64.0	150	1	12/13/2023 17:44	<a href="#">WG2187791</a>
Sulfate	27700		594	5000	1	12/13/2023 17:44	<a href="#">WG2187791</a>

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	12/12/2023 13:41	<a href="#">WG2186619</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	34.4	J	20.0	200	1	12/13/2023 17:34	<a href="#">WG2186710</a>
Calcium	44700		79.3	1000	1	12/13/2023 17:34	<a href="#">WG2186710</a>

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	12/15/2023 00:44	<a href="#">WG2186723</a>
Arsenic	1.04	J	0.180	2.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Barium	126		0.381	2.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Beryllium	U		0.190	2.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Cadmium	U		0.150	1.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Chromium	U		1.24	2.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Cobalt	0.0775	J	0.0596	2.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Lead	U		0.849	2.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Molybdenum	0.453	J	0.348	5.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Selenium	3.20		0.300	2.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Thallium	U		0.121	2.00	1	12/15/2023 00:44	<a href="#">WG2186723</a>
Lithium	2.94		0.695	2.00	1	12/17/2023 20:48	<a href="#">WG2190268</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	ND		10000	1	12/13/2023 08:17	<a href="#">WG2187483</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	398	J	379	1000	1	12/13/2023 17:57	<a href="#">WG2187791</a>
Fluoride	U		64.0	150	1	12/13/2023 17:57	<a href="#">WG2187791</a>
Sulfate	U		594	5000	1	12/13/2023 17:57	<a href="#">WG2187791</a>

## 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	12/12/2023 13:44	<a href="#">WG2186619</a>

## Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	U		20.0	200	1	12/13/2023 17:37	<a href="#">WG2186710</a>
Calcium	U		79.3	1000	1	12/13/2023 17:37	<a href="#">WG2186710</a>

## 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	12/15/2023 00:47	<a href="#">WG2186723</a>
Arsenic	U		0.180	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Barium	0.508	J	0.381	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Beryllium	U		0.190	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Cadmium	U		0.150	1.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Chromium	1.74	J	1.24	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Cobalt	U		0.0596	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Lead	U		0.849	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Molybdenum	U		0.348	5.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Selenium	U		0.300	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Thallium	U		0.121	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>
Lithium	U		0.695	2.00	1	12/15/2023 00:47	<a href="#">WG2186723</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R4012135-1 12/11/23 21:46

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

1 Cp

2 Tc

3 Ss

L1684555-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1684555-02 12/11/23 21:46 • (DUP) R4012135-3 12/11/23 21:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1530000	1580000	1	3.09		5

4 Cn

5 Sr

6 Qc

L1684557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1684557-01 12/11/23 21:46 • (DUP) R4012135-4 12/11/23 21:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1380000	1430000	1	3.75		5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R4012135-2 12/11/23 21:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8720000	99.1	85.0-115	

Method Blank (MB)

(MB) R4012142-1 12/11/23 14:17

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

1 Cp

2 Tc

3 Ss

L1684690-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1684690-04 12/11/23 14:17 • (DUP) R4012142-3 12/11/23 14:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	186000	194000	1	4.21		5

4 Cn

5 Sr

6 Qc

L1684717-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1684717-01 12/11/23 14:17 • (DUP) R4012142-4 12/11/23 14:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	960000	1030000	1	7.23	J3	5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R4012142-2 12/11/23 14:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8510000	96.7	85.0-115	

Method Blank (MB)

(MB) R4012690-1 12/13/23 08:17

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

1 Cp

2 Tc

3 Ss

L1684675-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1684675-07 12/13/23 08:17 • (DUP) R4012690-3 12/13/23 08:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	120000	127000	1	5.67	J3	5

4 Cn

5 Sr

6 Qc

L1684675-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1684675-08 12/13/23 08:17 • (DUP) R4012690-4 12/13/23 08:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	137000	147000	1	7.04	J3	5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R4012690-2 12/13/23 08:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8530000	96.9	85.0-115	

Method Blank (MB)

(MB) R4012689-1 12/12/23 22:50

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

1 Cp

2 Tc

3 Ss

L1685565-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1685565-01 12/12/23 22:50 • (DUP) R4012689-3 12/12/23 22:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	328000	334000	1	1.81		5

4 Cn

5 Sr

6 Qc

L1685565-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1685565-02 12/12/23 22:50 • (DUP) R4012689-4 12/12/23 22:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	319000	322000	1	0.936		5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R4012689-2 12/12/23 22:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8500000	96.6	85.0-115	

Method Blank (MB)

(MB) R4012672-1 12/13/23 11:59

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

L1685481-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1685481-11 12/13/23 14:58 • (DUP) R4012672-3 12/13/23 15:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	20700	21700	5	4.70		15
Fluoride	U	U	5	0.000		15
Sulfate	67900	73700	5	8.29		15

L1686144-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1686144-01 12/13/23 18:09 • (DUP) R4012672-6 12/13/23 18:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	4350	4460	1	2.32		15
Fluoride	158	201	1	24.2	P1	15
Sulfate	10200	10200	1	0.499		15

Laboratory Control Sample (LCS)

(LCS) R4012672-2 12/13/23 12:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	40100	100	80.0-120	
Fluoride	8000	7990	99.9	80.0-120	
Sulfate	40000	37800	94.5	80.0-120	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1685481-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1685481-11 12/13/23 14:58 • (MS) R4012672-4 12/13/23 15:24 • (MSD) R4012672-5 12/13/23 15:37

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 %
Chloride	40000	20700	56300	57800	89.0	92.7	5	80.0-120			2.61	15
Fluoride	8000	U	7990	7450	99.9	93.2	5	80.0-120			6.95	15
Sulfate	40000	67900	93600	95900	64.4	70.2	5	80.0-120	J6	J6	2.43	15

L1686144-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1686144-01 12/13/23 18:09 • (MS) R4012672-7 12/13/23 18:35

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	4350	45500	103	1	80.0-120	
Fluoride	8000	158	8480	104	1	80.0-120	
Sulfate	40000	10200	47800	94.1	1	80.0-120	

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

Method Blank (MB)

(MB) R4011454-1 12/12/23 12:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.100	0.200

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R4011454-2 12/12/23 12:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	3.00	2.90	96.7	80.0-120	

4 Cn

5 Sr

L1685886-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1685886-01 12/12/23 12:51 • (MS) R4011454-3 12/12/23 12:53 • (MSD) R4011454-4 12/12/23 12:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	3.00	U	2.91	2.92	97.1	97.2	1	75.0-125			0.143	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4012216-1 12/13/23 17:53

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) R4012216-2 12/13/23 17:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	948	94.8	80.0-120	
Calcium	10000	9940	99.4	80.0-120	

L1686081-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1686081-02 12/13/23 18:00 • (MS) R4012216-4 12/13/23 18:05 • (MSD) R4012216-5 12/13/23 18:08

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	72.3	1010	1070	94.0	99.3	1	75.0-125			5.11	20
Calcium	10000	13800	24400	24600	107	109	1	75.0-125			0.783	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R4012735-1 12/14/23 22:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	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	4.65		0.695	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R4012735-2 12/14/23 22:53

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Antimony	50.0	53.4	107	80.0-120	
Arsenic	50.0	50.6	101	80.0-120	
Barium	50.0	51.5	103	80.0-120	
Beryllium	50.0	52.0	104	80.0-120	
Cadmium	50.0	52.0	104	80.0-120	
Chromium	50.0	51.2	102	80.0-120	
Cobalt	50.0	50.7	101	80.0-120	
Lead	50.0	52.8	106	80.0-120	
Molybdenum	50.0	50.3	101	80.0-120	
Selenium	50.0	52.7	105	80.0-120	
Thallium	50.0	52.6	105	80.0-120	
Lithium	50.0	50.9	102	80.0-120	

L1685580-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1685580-01 12/14/23 22:57 • (MS) R4012735-4 12/14/23 23:04 • (MSD) R4012735-5 12/14/23 23:07

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	%	%		%			%	%
Antimony	50.0	U	55.3	55.4	111	111	1	75.0-125			0.107	20
Arsenic	50.0	4.04	56.3	56.1	105	104	1	75.0-125			0.308	20
Barium	50.0	522	575	574	106	104	1	75.0-125			0.167	20

L1685580-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1685580-01 12/14/23 22:57 • (MS) R4012735-4 12/14/23 23:04 • (MSD) R4012735-5 12/14/23 23:07

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 %
Beryllium	50.0	U	50.7	52.4	101	105	1	75.0-125			3.24	20
Cadmium	50.0	U	51.5	51.0	103	102	1	75.0-125			0.840	20
Chromium	50.0	U	52.1	50.8	104	102	1	75.0-125			2.52	20
Cobalt	50.0	0.493	51.0	50.8	101	101	1	75.0-125			0.446	20
Lead	50.0	U	52.9	53.1	106	106	1	75.0-125			0.422	20
Molybdenum	50.0	1.78	54.1	54.2	105	105	1	75.0-125			0.218	20
Selenium	50.0	U	51.9	52.3	104	105	1	75.0-125			0.714	20
Thallium	50.0	U	52.9	52.9	106	106	1	75.0-125			0.116	20
Lithium	50.0	22.8	71.7	74.1	97.7	102	1	75.0-125			3.27	20

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

Method Blank (MB)

(MB) R4013556-1 12/17/23 20:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Lithium	U		0.695	2.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Laboratory Control Sample (LCS)

(LCS) R4013556-2 12/17/23 20:22

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Lithium	50.0	47.8	95.7	80.0-120	

<sup>4</sup>Cn

<sup>5</sup>Sr

L1688374-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1688374-04 12/17/23 20:25 • (MS) R4013556-4 12/17/23 20:32 • (MSD) R4013556-5 12/17/23 20:35

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Lithium	50.0	49.0	94.2	91.4	90.5	84.9	1	75.0-125			3.01	20

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

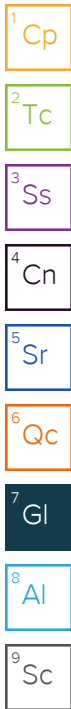
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

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

### Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

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

Report to:  
**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 **W** ET

Phone: **501-920-9642**

Client Project #  
**14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

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

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
MW-104	Grab	GW		12/5/23	1400	5	X	X	X	X	X	X
MW-110		GW		12/5/23	1520	5	X	X	X	X	X	X
<del>MW-120</del>		<del>GW</del>					X	X	X	X	X	X
MW-121		GW		12/6/23	1130	5	X	X	X	X	X	X
MW-121 DUP		GW		12/6/23	1135	5	X	X	X	X	X	X
EPA EB-BG		GW		12/6/23	1200	5	X	X	X	X	X	X
		GW					X	X	X	X	X	X
	GW					X	X	X	X	X	X	
	GW					X	X	X	X	X	X	

Analysis / Container / Preservative	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	

Chain of Custody Page **1** of **2**  
  
**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 # **11686005**  
**G223**

Acctnum: **NAESOAR**  
 Template: **T106048**  
 Prelogin: **P1039066**  
 PM: **134 - Mark W. Beasley**  
 PB:

Shipped Via: **FedEX Ground**

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04

\* 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 \_\_\_\_\_

**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

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **7155 0296 8363**

Relinquished by: (Signature) <i>Michael Clayton</i>	Date: 12/6/23	Time: 1700	Received by: (Signature) <i>Ei Derrington</i>	Trip Blank Received: Yes / <input checked="" type="checkbox"/> No HCL / MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <b>16.8°C</b> Bottles Received: <b>1.3+0=1.3 25</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Ei Derrington</i>	Date: <b>12-7-23</b> Time: <b>900</b>

If preservation required by Login: Date/Time  
 PH-10BDH4321 TRC-2352 352  
 CR6-20221V  
 PH-10BDH4321 TRC-2352 352  
 CR6-20221V  
 Condition: NCF /  OK

## Plum Point Services Co., LLC

Sample Delivery Group: L1686007  
Samples Received: 12/07/2023  
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

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	1	
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	
<b>Cn: Case Narrative</b>	4	
<b>Sr: Sample Results</b>	5	
MW-104 L1686007-01	5	
MW-110 L1686007-02	6	
MW-121 L1686007-03	7	
MW-121 DUP L1686007-04	8	
EPA EB-BG L1686007-05	9	
<b>Qc: Quality Control Summary</b>	10	
Radiochemistry by Method 904/9320	10	
Radiochemistry by Method SM7500Ra B M	11	
<b>Gl: Glossary of Terms</b>	12	
<b>Al: Accreditations &amp; Locations</b>	13	
<b>Sc: Sample Chain of Custody</b>	14	



# SAMPLE SUMMARY

## MW-104 L1686007-01 Non-Potable Water

Collected by Michael Clayton    Collected date/time 12/05/23 14:00    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2187889	1	12/12/23 19:54	12/15/23 20:47	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## MW-110 L1686007-02 Non-Potable Water

Collected by Michael Clayton    Collected date/time 12/05/23 15:20    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2187889	1	12/12/23 19:54	12/15/23 20:47	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

## MW-121 L1686007-03 Non-Potable Water

Collected by Michael Clayton    Collected date/time 12/06/23 11:30    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2187889	1	12/12/23 19:54	12/15/23 20:47	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

## MW-121 DUP L1686007-04 Non-Potable Water

Collected by Michael Clayton    Collected date/time 12/06/23 11:35    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2187889	1	12/12/23 19:54	12/15/23 20:47	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN

## EPA EB-BG L1686007-05 Non-Potable Water

Collected by Michael Clayton    Collected date/time 12/06/23 12:00    Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2187889	1	12/12/23 19:54	12/15/23 20:47	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2189412	1	12/14/23 14:01	12/16/23 00:00	RGT	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> 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	0.723		0.216		0.354		12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Barium	99.7					30.0-143	12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Yttrium	106					30.0-136	12/15/2023 20:47	<a href="#">WG2187889</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.961		0.410	0.623	12/16/2023 00:00	<a href="#">WG2189412</a>

4 Cn

5 Sr

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	0.238	J	0.348	0.0904	0.513	0.342	12/16/2023 00:00	<a href="#">WG2189412</a>
(T) Barium-133	57.8					30.0-143	12/16/2023 00:00	<a href="#">WG2189412</a>

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	0.834		0.231		0.377		12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Barium	98.5					30.0-143	12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Yttrium	106					30.0-136	12/15/2023 20:47	<a href="#">WG2187889</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.04		0.318	0.476	12/16/2023 00:00	<a href="#">WG2189412</a>

4 Cn

5 Sr

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	0.202	J	0.218	0.0843	0.290	0.198	12/16/2023 00:00	<a href="#">WG2189412</a>
(T) Barium-133	83.2					30.0-143	12/16/2023 00:00	<a href="#">WG2189412</a>

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	1.00		0.295		0.485		12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Barium	96.8					30.0-143	12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Yttrium	112					30.0-136	12/15/2023 20:47	<a href="#">WG2187889</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.30		0.400	0.582	12/16/2023 00:00	<a href="#">WG2189412</a>

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	0.292	J	0.270	0.0872	0.321	0.234	12/16/2023 00:00	<a href="#">WG2189412</a>
(T) Barium-133	66.4					30.0-143	12/16/2023 00:00	<a href="#">WG2189412</a>

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	0.694		0.232		0.382		12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Barium	111					30.0-143	12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Yttrium	118					30.0-136	12/15/2023 20:47	<a href="#">WG2187889</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.924		0.378	0.574	12/16/2023 00:00	<a href="#">WG2189412</a>

4 Cn

5 Sr

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	0.230	J	0.299	0.0977	0.429	0.297	12/16/2023 00:00	<a href="#">WG2189412</a>
(T) Barium-133	70.6					30.0-143	12/16/2023 00:00	<a href="#">WG2189412</a>

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	0.118	<u>U</u>	0.253		0.438		12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Barium	113					30.0-143	12/15/2023 20:47	<a href="#">WG2187889</a>
(T) Yttrium	94.0					30.0-136	12/15/2023 20:47	<a href="#">WG2187889</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.188	<u>U</u>	0.354	0.608	12/16/2023 00:00	<a href="#">WG2189412</a>

4 Cn

5 Sr

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	0.0700	<u>U</u>	0.248	0.0907	0.422	0.277	12/16/2023 00:00	<a href="#">WG2189412</a>
(T) Barium-133	87.0					30.0-143	12/16/2023 00:00	<a href="#">WG2189412</a>

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4014462-1 12/15/23 20:47

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.886		0.177	0.290	
(T) Barium	93.2		93.2		
(T) Yttrium	95.4		95.4		

L1682975-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1682975-05 12/15/23 20:47 • (DUP) R4014462-5 12/15/23 20:47

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	0.835	0.293	0.505		0.745	0.422	0.735		11.4	0.175		20	3
(T) Barium	99.5				93.8	93.8							
(T) Yttrium	114				97.2	97.2							

Laboratory Control Sample (LCS)

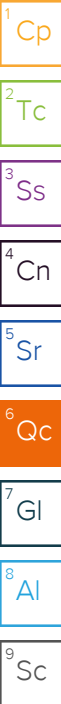
(LCS) R4014462-2 12/15/23 20:47

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.23	105	80.0-120	
(T) Barium			93.9		
(T) Yttrium			106		

L1682975-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1682975-01 12/15/23 20:47 • (MS) R4014462-3 12/15/23 20:47 • (MSD) R4014462-4 12/15/23 20:47

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	10.0	0.629	10.1	11.0	94.3	103	1	70.0-130			8.47		20
(T) Barium		94.4			99.6	103							
(T) Yttrium		98.9			106	107							





Method Blank (MB)

(MB) R4015396-1 12/16/23 00:00

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.0236	<u>U</u>	0.0310	0.0663	0.0397
(T) Barium-133	88.8		88.8		

L1679743-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1679743-06 12/16/23 00:00 • (DUP) R4015396-5 12/16/23 00:00

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	8.53	1.29	0.314	0.233	7.37	1.13	0.388	0.260	14.7	0.681		20	3
(T) Barium-133	71.0				77.5	77.5							

Laboratory Control Sample (LCS)

(LCS) R4015396-2 12/16/23 00:00

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.17	103	80.0-120	
(T) Barium-133			81.8		

L1686007-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1686007-05 12/16/23 00:00 • (MS) R4015396-3 12/16/23 00:00 • (MSD) R4015396-4 12/16/23 00:00

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	0.0700	23.4	20.6	117	103	1	75.0-125			13.0		20
(T) Barium-133		87.0			77.4	78.3							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# GLOSSARY OF TERMS

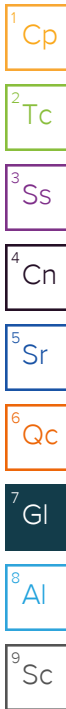
## Guide to Reading and Understanding Your Laboratory Report

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

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

### Abbreviations and Definitions

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

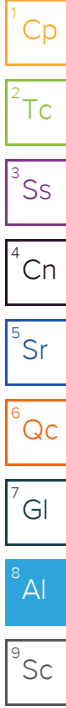
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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**

Project Description:  
**Plum Point Energy Station**

City/State Collected: **OSCEOLA AR**

Please Circle:  
 PT MT  ET

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

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/hubs/pas-standard-terms.pdf>

SDG # **4686007**  
**G223**

Phone: **501-920-9642**

Client Project # **14590-3037-001**

Lab Project # **NAESOAR-PLUMPOINT**

Site/Facility ID #

P.O. # **2023-00048**

Collected by (print): **Michael Clayton**

Collected by (signature): *[Signature]*

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

Date Results Needed

Quote #

Immediately

Packed on Ice N  Y

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cl, F, S04 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
MW-104	Grab	GW		12/5/23	1400	5	X	X	X	X	X
MW-110		GW		12/5/23	1520	5	X	X	X	X	X
MW-120		GW					X	X	X	X	X
MW-121		GW		12/6/23	1130	5	X	X	X	X	X
MW-121 DUP		GW		12/6/23	1135	5	X	X	X	X	X
EPA EB-BG		GW		12/6/23	1200	5	X	X	X	X	X
		GW					X	X	X	X	X
		GW					X	X	X	X	X
		GW					X	X	X	X	X

Acctnum: **NAESOAR**

Template: **T106048**

Prelogin: **P1039066**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Remarks

Sample # (lab only)

\* 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, Ti**

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **7155 0296 8363**

**Sample Receipt Checklist**

COC Seal Present/Intact:  Y  N

COC Signed/Accurate:  Y  N

Bottles arrive intact:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

If Applicable

VOA Zero Headspace:  Y  N

Preservation Correct/Checked:  Y  N

RAD Screen <0.5 mR/hr:  Y  N

Relinquished by: (Signature) *[Signature]* Date: **12/6/23** Time: **1700**

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

Temp **11.8°C** Bottles Received: **1.3 + 0 = 1.3 25**

Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Date: **12-7-23** Time: **900**

Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature) *[Signature]* Date: **12-7-23** Time: **900**

PH-10BDH4321 TRC-2352367  
 CR6-20221V  
 PH-10BDH4321 TRC-2352367  
 CR6-20221V

Condition: **NCF /**

# **APPENDIX C**

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## **Water Elevation Data and Hydrographs**

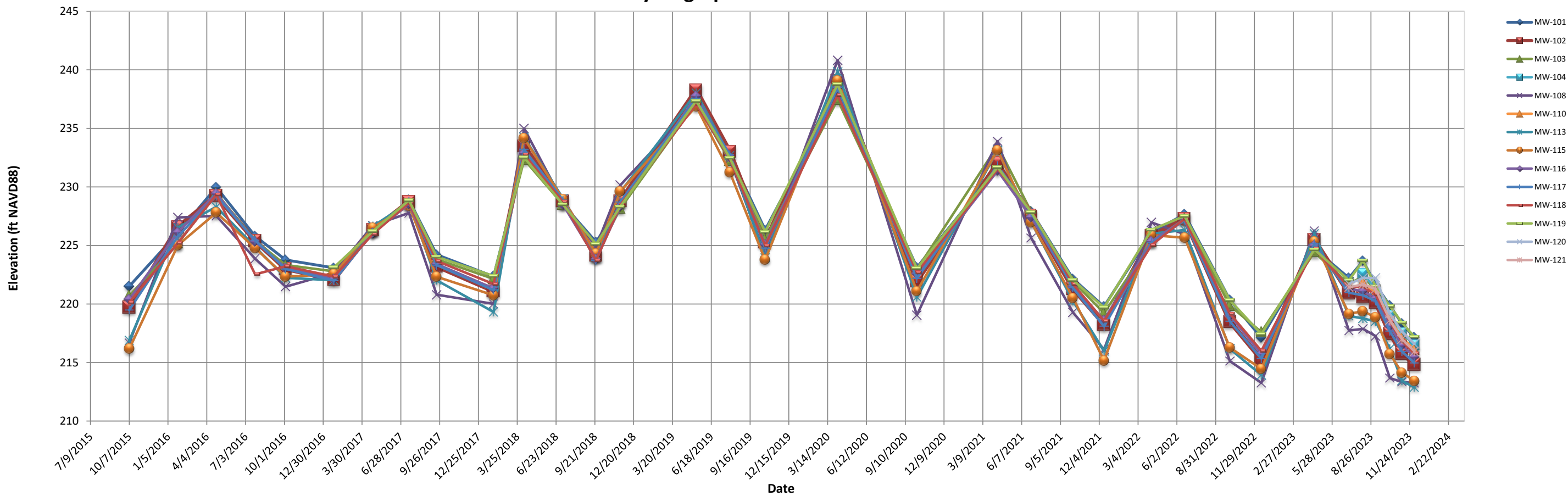
Historical water levels.

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*

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

\*Monitoring well not added to EPA CCR program yet.

### Hydrographs of Groundwater Elevations





# **APPENDIX D**

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## **Groundwater Quality Historical Database**

Plum Point Energy Station EPA CCR Landfill 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)
<b>MW-101</b>	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	
<b>MW-102</b>	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

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 was rejected due to suspected error; not used in statistics.

Plum Point Energy Station EPA CCR Landfill 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)
<b>MW-102</b>	10/6/2016	<0.002	0.00066(J)	0.165	<0.002	0.0999(J)	<0.001	120	5.18	<0.002	<0.002
<b>(cont.)</b>	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
<b>MW-103</b>	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

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 was rejected due to suspected error; not used in statistics.

Plum Point Energy Station EPA CCR Landfill 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)
<b>MW-103</b> (cont.)	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	
<b>MW-104</b>	u										
	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
	9/7/2023	<0.004	0.00284	0.157	<0.002	0.0548(J)	<0.001	85.1	1.03	0.002(BJ)	0.000112(J)
	10/11/2023	<0.004	0.00465	0.159	<0.002	0.0516(J)	<0.001	83.2	0.993(J)	<0.002	0.000246(J)
	11/7/2023	<0.004	0.00524	0.161	<0.002	0.0632(J)	<0.001	83.3	1.06	<0.002	0.000369(J)
12/5/2023	<0.004	0.00671	0.179	<0.002	0.0725(J)	<0.001	85.7	1.09	<0.002	0.000733(J)	
<b>MW-108</b>	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	

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 was rejected due to suspected error; not used in statistics.

Plum Point Energy Station EPA CCR Landfill 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)
<b>MW-108</b>	8/1/2019	n/a	n/a	n/a	n/a	0.127(BJ)	n/a	n/a	n/a	n/a	n/a
<b>(cont.)</b>	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
	10/7/2020	n/a	n/a	n/a	n/a	0.111(J)	n/a	151	2.23	n/a	n/a
	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
<b>MW-110</b>	u										
	8/8/2023	<0.004	0.00884	0.253	<0.002	0.0609(J)	<0.001	82.8	0.862(J)	<0.002	0.000602(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)	0.000691(J)
	10/10/2023	<0.004	0.00589	0.254	<0.002	0.062(J)	<0.001	79.6	0.954(J)	<0.002	0.000742(J)
	11/7/2023	<0.004	0.00421	0.249	<0.002	0.0641(J)	<0.001	82.7	1.52	<0.002	0.000669(J)
	12/5/2023	<0.004	0.00616	0.249	<0.002	0.0763(J)	<0.001	85.2	1.01	<0.002	0.000431(J)
<b>MW-113</b>	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
	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
	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

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<b>MW-113 (cont.)</b>	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
<b>MW-115</b>	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
	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
	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

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MW-115	10/3/2022	n/a	n/a	n/a	n/a	0.037(J)	n/a	109	0.742(J)	n/a	n/a
(cont.)	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
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)	0.000365(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
	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
	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	0.000343(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

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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
	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
	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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<b>MW-118</b>	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	
10/11/2023	n/a	n/a	n/a	n/a	0.0585(J)	n/a	86.4	1.14	n/a	n/a	
<b>MW-119</b>	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)

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Plum Point Energy Station EPA CCR Landfill 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)
<b>MW-119</b> <b>(cont.)</b>	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	
<b>MW-120</b>	u										
	7/6/2023	<0.004	0.000593(BJ)	0.144	<0.002	0.0563(J)	<0.001	65.7	1.22	<0.002	0.000153(BJ)
	8/8/2023	<0.004	0.000686(J)	0.154	<0.002	0.0511(J)	<0.001	68.7	1.03	<0.002	0.000123(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)
<b>MW-121</b>	u										
	7/6/2023	<0.004	0.000927(BJ)	0.104	<0.002	0.0501(J)	<0.001	38.7	0.966(J)	<0.002	6.71E-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	0.000128(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)

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium		Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Thallium (mg/L)
							Radium (pCi/L)	Error Level (pCi/L)				
<b>MW-101</b>	d											
	10/7/2015	0.281	<0.002	0.0147(J)	<0.0002	<0.005	0.601	0.489	0.00831	12.4	401	<0.002
	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)	<0.002
	4/27/2016	0.283	<0.002	0.0134(J)	<0.0002	<0.005	0.712(J)	0.642	0.0143	19.9	437	<0.002
	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)	<0.01
	10/6/2016	0.267	<0.002	0.0121(J)	<0.0002	<0.005	0.242(J)	0.683	0.00565	8.44	387	<0.002
	1/25/2017	0.3	<0.002	0.0118(J)	<0.0002	<0.005	0.031(J)	0.573	0.00326	11.5	381	<0.002
	4/26/2017	0.273	<0.002	<0.135	<0.0002	<0.045	0(J)	0.569	0.00299	9.57	407	<0.002
	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	<0.002
	9/20/2017	0.328	<0.002	<0.015	<0.0002	0.00289(J)	1.17	0.771	0.000402(J)	9.68	385	<0.002
	12/11/2017	n/a	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	n/a
	9/26/2018	0.29(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	14.6	421	n/a
	5/16/2019	0.263(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.17	392	n/a
	10/23/2019	0.264	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.9	404	n/a
	4/8/2020	0.279	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.3	362	n/a
	10/9/2020	0.309	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.91	389	n/a
	4/15/2021	0.385	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.73	335	n/a
	6/29/2021	0.307	n/a	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	n/a
	4/7/2022	0.228	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.63	388	n/a
	10/5/2022	0.258	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.93	388	n/a
	4/19/2023	0.243	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.48	376	n/a
	10/11/2023	0.283	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6.92	376(B)	n/a
<b>MW-102</b>	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	<0.002
	1/28/2016	0.157	<0.002	0.0148(J)	<0.0002	<0.005	0.116(J)	0.777	0.00687	85.9	470	<0.002
	4/27/2016	0.154	<0.002	0.017	<0.0002	<0.005	1.32	0.78	0.00397	103	478	<0.002
	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)	<0.01

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Radium										
		Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium (pCi/L)	Error Level (pCi/L)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Thallium (mg/L)
MW-102 (cont.)	10/6/2016	0.158	<0.002	0.0169	<0.0002	<0.005	0.439(J)	0.837	<0.002	83.2	458	<0.002
	1/25/2017	0.182	<0.002	0.0172	<0.0002	<0.005	0.69	0.541	0.00262	88.8	435	<0.002
	4/27/2017	0.175	<0.002	0.017	<0.0002	<0.005	2	0.695	0.00232	91	504	<0.002
	7/19/2017	0.207	<0.002	0.0105(J)	<0.0002	<0.005	2.07	0.872	0.00119(J)	85.4	461	<0.002
	9/20/2017	0.194	<0.002	<0.015	<0.0002	<0.005	0.193(J)	1.12	<0.002	88.7	454	<0.002
	4/11/2018	0.206	n/a	n/a	n/a	n/a	n/a	n/a	n/a	46.7(O)	472	n/a
	7/9/2018	n/a	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	n/a
	5/16/2019	0.196(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	75.4	466	n/a
	10/23/2019	0.201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	85.6	461	n/a
	4/7/2020	0.199	n/a	n/a	n/a	n/a	n/a	n/a	n/a	84.7	461	n/a
	10/9/2020	0.178	n/a	n/a	n/a	n/a	n/a	n/a	n/a	96.1	438	n/a
	4/15/2021	0.21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	79.4	446	n/a
	10/6/2021	0.215	n/a	n/a	n/a	n/a	n/a	n/a	n/a	95.3	415	n/a
	4/6/2022	0.142(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	79	442	n/a
	10/5/2022	0.174	n/a	n/a	n/a	n/a	n/a	n/a	n/a	93.4	439	n/a
	4/19/2023	0.158	n/a	n/a	n/a	n/a	n/a	n/a	n/a	63.5	390	n/a
	10/12/2023	0.168	n/a	n/a	n/a	n/a	n/a	n/a	n/a	74.6	411(B)	n/a
	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	<0.002
1/28/2016		0.188	<0.002	0.0197	<0.0002	<0.005	0.242(J)	0.627	0.00868	60.1	539(B)	<0.002
4/27/2016		0.17	<0.002	0.0214	<0.0002	<0.005	0.735	0.558	0.00272	62	517	<0.002
7/26/2016		0.163	<0.005	0.0194	<0.0002	<0.005	1.83	1.03	0.0115	60.9	539(B)	<0.01
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	<0.002
1/26/2017		0.223	<0.002	0.019	<0.0002	<0.005	0.402(J)	0.533	0.000759(J)	52	477	<0.002
4/27/2017		0.2	<0.002	0.0222	<0.0002	<0.005	1.28	0.625	<0.002	49.8	513	<0.002
7/20/2017		0.24	<0.002	0.015	<0.0002	<0.005	0.735(J)	0.619	<0.002	52.2	506	<0.002
9/20/2017		0.24	<0.002	0.0192	<0.0002	<0.005	0.625(J)	0.678	<0.002	48.2	496	<0.002
4/11/2018		0.163	n/a	n/a	n/a	n/a	n/a	n/a	n/a	80.6	468	n/a

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Radium										
		Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium (pCi/L)	Error Level (pCi/L)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Thallium (mg/L)
<b>MW-103</b> (cont.)	9/26/2018	0.217(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	32.8	440	n/a
	5/15/2019	0.213(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	23.4	396	n/a
	10/22/2019	0.253	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24.4	384	n/a
	4/8/2020	0.219	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.93	318	n/a
	10/8/2020	0.234	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15	319	n/a
	4/15/2021	0.258	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.4	294	n/a
	10/7/2021	0.256	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12.6	324	n/a
	4/7/2022	0.128(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.84	278	n/a
	10/5/2022	0.188	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.8	285	n/a
	4/18/2023	0.157	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.82	322	n/a
10/11/2023	0.201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15.9	335(B)	n/a	
<b>MW-104</b>	u											
	8/8/2023	0.257	<0.002	0.00878	<0.0002	0.000768(J)	1.63	0.759	0.00636	3.42(J)	296	<0.002
	9/7/2023	0.28	<0.002	0.00728	<0.0002	0.00183(J)	1.29	0.492	0.00416	3.57(J)	309	<0.002
	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	<0.002
	11/7/2023	0.251	<0.002	0.00638	<0.0002	0.00405(J)	n/a	n/a	0.000576(J)	3.13(J)	349	<0.002
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	<0.002	
<b>MW-108</b>	u											
	1/28/2016	0.158	<0.002	0.0201	<0.0002	<0.005	1.24	0.946	0.00271	44.4	555	<0.002
	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)	<0.002
	7/26/2016	0.144	<0.005	0.0167	<0.0002	<0.005	1.65(J)	1.14	<0.01	39.3	475(B)	<0.01
	10/6/2016	0.169	<0.002	0.0183	<0.0002	<0.005	1.07	0.687	0.00214	41.4	539	<0.002
	1/26/2017	0.202	<0.002	0.0186	<0.0002	<0.005	0.454(J)	0.541	0.00178(J)	51.6	513	<0.002
	4/25/2017	0.167	<0.002	0.0197	<0.0002	<0.005	0.922	0.71	0.00337	45.7	488	<0.002
	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	<0.002
	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	<0.002
	4/10/2018	0.177	n/a	n/a	n/a	n/a	n/a	n/a	n/a	44.5	582	n/a
	9/25/2018	0.188(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52.2	537	n/a
5/14/2019	0.184(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	34.5	529	n/a	

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium		Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Thallium (mg/L)
							Radium (pCi/L)	Error Level (pCi/L)				
<b>MW-108</b>	8/1/2019	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>(cont.)</b>	10/22/2019	0.205	n/a	n/a	n/a	n/a	n/a	n/a	n/a	32.9	528	n/a
	4/6/2020	0.185	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33.8	557	n/a
	10/7/2020	0.185	n/a	n/a	n/a	n/a	n/a	n/a	n/a	42.4	515	n/a
	4/13/2021	0.216	n/a	n/a	n/a	n/a	n/a	n/a	n/a	36.8	541	n/a
	10/5/2021	0.203	n/a	n/a	n/a	n/a	n/a	n/a	n/a	23.4	505	n/a
	4/5/2022	0.138(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	478	n/a
	10/4/2022	0.164	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	471	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	n/a
	4/18/2023	0.161	n/a	n/a	n/a	n/a	n/a	n/a	n/a	34.8	493	n/a
<b>MW-110</b>	u											
	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	<0.002
	9/7/2023	0.198	0.00128(BJ)	0.00509	<0.0002	0.000697(J)	2.41	0.607	0.000407(J)	4.79(J)	326	<0.002
	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	<0.002
	11/7/2023	0.163	<0.002	0.00643	<0.0002	0.000914(J)	n/a	n/a	0.000686(J)	4.29(J)	332	<0.002
	12/5/2023	0.168	<0.002	0.00546	<0.0002	0.000869(J)	1.04	0.318	<0.002	4.39(J)	316	<0.002
<b>MW-113</b>	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)	<0.002
	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)	<0.002
	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)	<0.01
	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	<0.002
	1/26/2017	0.0901(J)	<0.002	0.00709(J)	<0.0002	<0.005	0.819	0.586	<0.002	13.3	332	<0.002
	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	<0.002
	7/18/2017	0.119	<0.002	<0.015	<0.0002	<0.005	0.092(J)	0.638	0.000678(J)	10.9	321	<0.002
	9/19/2017	0.117	<0.002	0.0059(J)	<0.0002	<0.005	0.746(J)	0.694	0.00236	9.45	326	<0.002
	4/10/2018	0.0562(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.1	340	n/a
	9/25/2018	0.114(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.81	337	n/a
	5/14/2019	0.12(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.15(J)	342	n/a
	10/22/2019	0.11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.88(J)	307	n/a

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Radium										
		Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium (pCi/L)	Error Level (pCi/L)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Thallium (mg/L)
<b>MW-113</b> (cont.)	4/6/2020	0.0943(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.61(J)	332	n/a
	10/7/2020	0.106(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.61(J)	274	n/a
	4/13/2021	0.102(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.83	372	n/a
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	303	n/a
	10/5/2021	0.139(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.75(J)	275	n/a
	4/5/2022	0.0846(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.7	326	n/a
	10/4/2022	0.0828(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.02(J)	291	n/a
	4/17/2023	0.0907(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.57(J)	293	n/a
	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)	n/a
<b>MW-115</b>	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	<0.002
	1/28/2016	0.201	<0.002	0.00722(J)	<0.0002	<0.005	0.71	0.699	0.0113	14.8(O)	376	<0.002
	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)	<0.002
	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)	<0.01
	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	<0.002
	1/27/2017	0.244	<0.002	0.00789(J)	<0.0002	<0.005	0.524(J)	0.545	0.00636	6.52	406	<0.002
	4/25/2017	0.203	<0.002	0.00835(J)	<0.0002	<0.005	0.624(J)	0.502	0.00304	6.75	385	<0.002
	7/18/2017	0.238	<0.002	0.00579(J)	<0.0002	<0.005	0.534(J)	0.778	0.00263	7.1	369	<0.002
	9/19/2017	0.243	<0.002	0.00746(J)	<0.0002	<0.005	0.134(J)	0.601	0.00213	5.37	403	<0.002
	4/10/2018	0.209	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.81	368	n/a
	9/25/2018	0.216(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5(J)	417	n/a
	5/14/2019	0.184(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.63	440	n/a
	8/1/2019	n/a	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	n/a
	4/6/2020	0.192	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.37	398	n/a
	10/7/2020	0.18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2.97(J)	334	n/a
	4/13/2021	0.239	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.67	441	n/a
	10/5/2021	0.225	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.7(J)	379	n/a
	4/5/2022	0.165	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.95(J)	374	n/a

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MW-115	10/3/2022	0.208	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.68(J)	377	n/a
(cont.)	4/17/2023	0.205	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.19	351	n/a
	10/10/2023	0.207	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4.96(J)	383(B)	n/a
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	<0.002
	1/28/2016	0.165	<0.002	0.0133(J)	<0.0002	<0.005	0.219(J)	0.566	0.00387	78	426	<0.002
	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)	<0.002
	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)	<0.01
	10/6/2016	0.172	<0.002	0.0132(J)	<0.0002	<0.005	0.194(J)	0.489	0.00208	86.5	443	<0.002
	1/25/2017	0.201	0.000358(J)	0.0151	<0.0002	<0.005	1.53	0.57	0.0026	89.2	467	<0.002
	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	<0.002
	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	<0.002
	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	<0.002
	1/30/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35.5	n/a	n/a
	4/11/2018	0.166	n/a	n/a	n/a	n/a	n/a	n/a	n/a	113	511	n/a
	7/9/2018	n/a	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	n/a
	5/16/2019	0.189(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	349	n/a
	10/23/2019	0.216	n/a	n/a	n/a	n/a	n/a	n/a	n/a	63.1	417	n/a
	4/8/2020	0.184	n/a	n/a	n/a	n/a	n/a	n/a	n/a	38.7	365	n/a
	10/9/2020	0.187	n/a	n/a	n/a	n/a	n/a	n/a	n/a	103	537(R)	n/a
	4/15/2021	0.226	n/a	n/a	n/a	n/a	n/a	n/a	n/a	126(R)	541(R)	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	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)	n/a
	12/14/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	200(R)	730(R)	n/a
	4/6/2022	0.132(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	55.6	338	n/a
	10/5/2022	0.194	n/a	n/a	n/a	n/a	n/a	n/a	n/a	57.1	360	n/a
	4/19/2023	0.156	n/a	n/a	n/a	n/a	n/a	n/a	n/a	50.6	377	n/a
	10/11/2023	0.201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	50.4	361(B)	n/a

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							Radium (pCi/L)	Error Level (pCi/L)				
MW-117	d											
	10/8/2015	0.077(J)	0.000674(J)	0.00662(J)	<0.0002	<0.005	0.425(J)	0.508	0.00155(J)	5.21	281	<0.002
	1/28/2016	0.126	<0.002	<0.015	<0.0002	<0.005	0.289(J)	0.499	0.00471	6.32	271(B)	<0.002
	4/27/2016	0.101	0.000295(J)	0.00588(J)	<0.0002	<0.005	0.196(J)	0.784	0.00229	6.19	272	<0.002
	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)	<0.01
	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	<0.002
	1/26/2017	0.12	<0.002	0.00707(J)	<0.0002	<0.005	0.546(J)	0.661	0.00378	7.46	268	<0.002
	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	<0.002
	7/18/2017	0.151	<0.002	<0.015	<0.0002	<0.005	1.29	0.737	0.00222	6.56	292	<0.002
	9/20/2017	0.144	<0.002	0.00706(J)	<0.0002	<0.005	1.18	0.607	0.00219	6.43	280	<0.002
	4/11/2018	0.124	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.28	290	n/a
	9/27/2018	0.144(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.19	318	n/a
	11/19/2018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	288	n/a
	5/15/2019	0.147(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6.66	341	n/a
	8/2/2019	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	302	n/a
	10/22/2019	0.136	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5.45	322	n/a
	4/7/2020	0.144(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.47	323	n/a
	6/22/2020	n/a	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	n/a
	4/13/2021	0.152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7.46	351	n/a
	6/29/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	314	n/a
	10/6/2021	0.162	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.09	314	n/a
	12/14/2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.31	308	n/a
	4/6/2022	0.0916(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.03	341	n/a
	6/20/2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9.63	318	n/a
	10/5/2022	0.122(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10.3	311	n/a
	4/19/2023	0.108(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.4	309	n/a
	10/12/2023	0.121(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	14.4	325(B)	n/a
	12/6/2023	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	328	n/a

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							Radium (pCi/L)	Error Level (pCi/L)				
MW-118	d											
	10/9/2015	0.175	0.000678(J)	0.00757(J)	<0.0002	<0.005	0.101(J)	0.594	0.00325	12	271	<0.002
	1/28/2016	0.175	<0.002	<0.015	<0.0002	<0.005	0.355(J)	0.728	0.00732	11.5	269(B)	<0.002
	4/28/2016	0.119	<0.002	0.00585(J)	<0.0002	<0.005	3.31	1.16	0.00474	26.7	378(B)	<0.002
	7/26/2016	0.133	<0.005	<0.015	<0.0002	<0.005	0.921(J)	1.46	0.0132	26.6	322(B)	<0.01
	10/5/2016	0.157	<0.002	<0.015	<0.0002	<0.005	0.99(B)	0.594	0.00302	15.1	294	<0.002
	1/26/2017	0.188	<0.002	<0.015	<0.0002	<0.005	1.12	0.652	0.00291	13.4	275	<0.002
	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	<0.002
	7/20/2017	0.172	<0.002	<0.015	<0.0002	<0.005	0.176(J)	0.531	0.00333	20.4	313	<0.002
	9/20/2017	0.187	<0.002	<0.015	<0.0002	<0.005	1.29	0.724	0.00383	18.5	305	<0.002
	4/11/2018	0.157	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15.2	257	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	n/a
	9/27/2018	0.165(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	375	n/a
	5/15/2019	0.185	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16.5	286	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	n/a
	10/22/2019	0.162	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17.5	335	n/a
	4/8/2020	0.152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16.6	304	n/a
	10/8/2020	0.15(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	18.3	301	n/a
	4/15/2021	0.185	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20	329	n/a
	10/6/2021	0.189	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11.5	280	n/a
4/7/2022	0.129(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17.6	320	n/a	
10/5/2022	0.124(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	19.7	329	n/a	
4/18/2023	0.147(J)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	268	n/a	
10/11/2023	0.154	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20.7	335(B)	n/a	
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	<0.002
	4/27/2017	0.198	<0.002	0.0185	<0.0002	<0.005	1.08	0.645	0.00108(J)	39.1	403	<0.002
	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	<0.002
	9/20/2017	0.289	<0.002	0.0134(J)	<0.0002	<0.005	0.845(J)	0.685	0.00258	38.7	338	<0.002

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Radium										
		Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Radium (pCi/L)	Error Level (pCi/L)	Selenium (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Thallium (mg/L)
<b>MW-119</b> (cont.)	1/30/2018	0.259	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35.5	380	n/a
	4/11/2018	0.23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	31.1	315	n/a
	9/27/2018	0.253(B)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	41.6	290	n/a
	11/20/2018	0.271	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33	343	n/a
	12/18/2018	n/a	<0.002	0.0246	<0.0002	<0.005	1	0.577	0.00052(J)	n/a	n/a	<0.002
	2/18/2019	0.253	<0.002	0.0216	<0.0002	<0.005	0.705(J)	0.575	0.000592(J)	43	374	<0.002
	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	<0.002
	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	<0.002
	10/22/2019	0.266	n/a	n/a	n/a	n/a	n/a	n/a	n/a	47.7	400	n/a
	4/8/2020	0.229	n/a	n/a	n/a	n/a	n/a	n/a	n/a	39.4	426	n/a
	10/8/2020	0.251	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52.9	415	n/a
	4/15/2021	0.267	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33.6	413	n/a
	10/7/2021	0.269	n/a	n/a	n/a	n/a	n/a	n/a	n/a	39.1	388	n/a
	4/7/2022	0.195	n/a	n/a	n/a	n/a	n/a	n/a	n/a	37.1	397	n/a
	10/5/2022	0.23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	46.2	444	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	n/a
	4/18/2023	0.228	n/a	n/a	n/a	n/a	n/a	n/a	n/a	18.9	350	n/a
	10/11/2023	0.237	n/a	n/a	n/a	n/a	n/a	n/a	n/a	46.5	451(B)	n/a
<b>MW-120</b>	u											
	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	<0.002
	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	<0.002
	9/7/2023	0.204	<0.002	0.00784	<0.0002	0.000819(J)	1.51	0.302	0.00567	6.82	247	<0.002
<b>MW-121</b>	u											
	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	<0.002
	8/8/2023	0.121(J)	<0.002	0.00303	<0.0002	<0.005	0.768	0.295	0.00419	7.93	155	<0.002
	9/7/2023	0.108(J)	0.00185(BJ)	0.003	<0.0002	<0.005	0.965	0.373	0.00586	14.6	179	<0.002
	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	<0.002
	11/7/2023	0.0799(J)	<0.002	0.00312	<0.0002	<0.005	n/a	n/a	0.0053	27.5	194	<0.002
	12/6/2023	0.0891(J)	<0.002	0.00293	<0.0002	<0.005	1.3	0.4	0.00322	28.1	187	<0.002

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
<b>MW-101</b>	d				
	10/7/2015	n/a	6.4	n/a	1
	1/28/2016	n/a	6.6	n/a	0.9
	4/27/2016	n/a	6.3	n/a	1.2
	7/26/2016	n/a	6.6	n/a	2.2
	10/6/2016	n/a	6.2	n/a	1.6
	1/25/2017	650	6.7	17.8	4.2
	4/26/2017	598	6.9	18.9	1
	7/20/2017	631	6.7	20.4	1.4
	9/20/2017	626	7	19.9	0
	12/11/2017	566	6.4	19.4	0.9
	4/12/2018	692	6.4	16.7	2.7
	9/26/2018	657	6.8	18.8	2.3
	5/16/2019	565	6.6	18.9	3.1
	10/23/2019	618	7	13.9	<0.02
	4/8/2020	645	6.8	17.8	2.6
	10/9/2020	578	6.7	18.9	3.6
	4/15/2021	485	7.1	17	3.6
	6/29/2021	710	6.7	18.6	2
	10/7/2021	612	6.7	18.6	1.3
4/7/2022	531	6.8	16.5	2.9	
10/5/2022	501	6.2	18.7	2	
4/19/2023	584	6.9	17.7	2.7	
10/11/2023	522	6.8	19.2	1.1	
<b>MW-102</b>	d				
	11/10/2015	n/a	6.8	n/a	5.6
	1/28/2016	n/a	6.8	n/a	0.8
	4/27/2016	n/a	6.7	n/a	1
	7/26/2016	n/a	7.7(R)	n/a	3.2

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R: value was rejected due to suspected error; not used in statistics.

Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
<b>MW-102</b>	10/6/2016	n/a	6	n/a	2.5
<b>(cont.)</b>	1/25/2017	731	5.8	17.8	4.7
	4/27/2017	681	6.7	17.2	1.2
	7/19/2017	705	6.6	20.3	0.8
	9/20/2017	688	6.7	20.1	0.9
	4/11/2018	728	6.3	17.1	2.2
	7/9/2018	804	6.7	23.5	3
	9/27/2018	642	6.5	18.4	2.1
	5/16/2019	642	6.6	21.7	1
	10/23/2019	665	6.7	18	<0.02
	4/7/2020	661	6.6	17.6	0.6
	10/9/2020	614	6.5	19.4	2.8
	4/15/2021	605	6.9	16.8	3.3
	10/6/2021	630	6.8	21.1	4.3
	4/6/2022	574	6.6	16.7	3.4
	10/5/2022	526	6.3	20.7	2.7
	4/19/2023	562	6.7	18.5	3.7
	10/12/2023	529	6.6	21.1	7
<b>MW-103</b>	d				
	10/7/2015	n/a	6.5	n/a	0.4
	1/28/2016	n/a	6.3	n/a	3
	4/27/2016	n/a	6.5	n/a	1.7
	7/26/2016	n/a	6.3	n/a	0.8
	10/6/2016	n/a	6.3	n/a	2.3
	1/26/2017	761	6.8	16.3	1.3
	4/27/2017	740	6.5	17.9	0.5
	7/20/2017	778	6.6	24.8	0.5
	9/20/2017	781	6.6	19.9	1.5
	4/11/2018	766	6.2	17.6	1.1

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
<b>MW-103</b>	9/26/2018	705	6.6	19.4	1.3
<b>(cont.)</b>	5/15/2019	598	6.6	18.7	2.4
	10/22/2019	634	6.7	18.7	<0.02
	4/8/2020	560	6.7	17.4	3.1
	10/8/2020	491	6.4	19.5	4.2
	4/15/2021	442	6.9	17	4.3
	10/7/2021	496	6.5	18.4	2.9
	4/7/2022	380	6.8	16.5	9.5
	10/5/2022	375	6.3	19.6	9.1
	4/18/2023	482	6.7	18.7	4.5
	10/11/2023	454	6.5	19.6	4.6
<b>MW-104</b>	u				
	8/8/2023	461	6.7	18	8.2
	9/7/2023	466	6.8	19.5	6.2
	10/11/2023	486	6.6	17.7	4.8
	11/7/2023	510	6.9	18.5	5.2
	12/5/2023	581	6.8	17.7	9
<b>MW-108</b>	u				
	1/28/2016	n/a	6.7	n/a	2.4
	4/28/2016	n/a	6.6	n/a	2.7
	7/26/2016	n/a	9.8(R)	n/a	1.2
	10/6/2016	n/a	6.2	n/a	1
	1/26/2017	897	7	12.3	1.7
	4/25/2017	784	6.8	19.3	1.4
	7/18/2017	834	6.7	22.7	1.3
	9/19/2017	939	6.7	25.2	1.3
	4/10/2018	960	6.5	16.3	1.9
	9/25/2018	867	6.7	22.9	1.9
	5/14/2019	844	6.8	20.6	3.7

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
<b>MW-108</b>	8/1/2019	936	7.1	21	2.1
<b>(cont.)</b>	10/22/2019	862	6.7	15.3	<0.02
	4/6/2020	879	6.9	19.4	3.6
	10/7/2020	810	6.8	23.6	5.8
	4/13/2021	706	7	17.4	3.1
	10/5/2021	756	6.7	20.8	2.3
	4/5/2022	725	6.8	18.5	4
	10/4/2022	690	6.2(R)	21.5	3
	1/11/2023	708	6.8	19.5	3.1
	4/18/2023	728	6.8	20.2	4.7
<b>MW-110</b>	u				
	8/8/2023	533	6.8	19	7.5
	9/7/2023	490	6.8	19.5	8.8
	10/10/2023	456	7.1	18.8	5.8
	11/7/2023	488	7	19.4	1.5
	12/5/2023	557	7.1	17.8	8
<b>MW-113</b>	u				
	1/28/2016	n/a	6.6	n/a	1.2
	4/28/2016	n/a	6.9	n/a	0.6
	7/26/2016	n/a	8.1(R)	n/a	1.1
	10/5/2016	n/a	6	n/a	2.2
	1/26/2017	569	7.1	16.1	0.9
	4/25/2017	513	6.9	19	1.1
	7/18/2017	512	6.8	20.3	0.7
	9/19/2017	550	6.9	19.7	0.8
	4/10/2018	587	6.4	16.2	1.8
	9/25/2018	567	6.7	20.8	0.8
	5/14/2019	567	6.7	17.6	2.8
	10/22/2019	509	6.7	18.2	<0.02

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
<b>MW-113</b> (cont.)	4/6/2020	551	6.7	18	2.8
	10/7/2020	458	6.5	19.5	4.3
	4/13/2021	535	7.1	16.3	2.1
	6/29/2021	550	6.2	21.9	2.3
	10/5/2021	417	6.6	20.4	1.1
	4/5/2022	476	6.6	17.7	4.4
	10/4/2022	447	6.5	20.4	2.5
	4/17/2023	516	6.8	17.1	1.8
	10/10/2023	379	6.8	19.5	2.3
<b>MW-115</b>	u				
	11/10/2015	n/a	7	n/a	4.3
	1/28/2016	n/a	7.1	n/a	0.5
	4/28/2016	n/a	6.8	n/a	0.6
	7/26/2016	n/a	9(R)	n/a	1.3
	10/5/2016	n/a	6.1	n/a	0.4
	1/27/2017	557	7	16.1	1.1
	4/25/2017	559	6.8	18.6	0.9
	7/18/2017	607	6.6	20.2	0.7
	9/19/2017	678	6.8	19.9	0.6
	4/10/2018	647	6.3	15.9	0.7
	9/25/2018	701	6.7	21.8	1.1
	5/14/2019	663	6.6	17.1	3.2
	8/1/2019	712	7.1	20.9	1.5
	10/23/2019	643	6.9	17.7	<0.02
	4/6/2020	642	6.7	17.9	9
	10/7/2020	573	6.6	20.3	3.3
	4/13/2021	595	7	15.9	2.3
	10/5/2021	584	6.7	20.2	1
	4/5/2022	534	6.7	17.4	2.3

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-115	10/3/2022	618	6.7	18.6	2.3
(cont.)	4/17/2023	622	6.8	17.6	3
	10/10/2023	544	6.9	19	1.3
MW-116	d				
	10/8/2015	n/a	6.7	n/a	2.7
	1/28/2016	n/a	6.8	n/a	0.9
	4/28/2016	n/a	6.6	n/a	1.3
	7/26/2016	n/a	6.2	n/a	1.6
	10/6/2016	n/a	5.9	n/a	0.9
	1/25/2017	752	5.9	18.3	2
	4/27/2017	624	6.7	17.6	0.7
	7/19/2017	636	6.5	21.2	0.5
	9/20/2017	649	6.7	20.5	0
	1/30/2018	626	6.5	17.3	0.8
	4/11/2018	768	6.4	17.6	0.9
	7/9/2018	828	6.6	23.8	3.2
	9/26/2018	732	6.6	19.5	1.5
	5/16/2019	506	6.6	21.1	1
	10/23/2019	618	6.7	17.4	<0.02
	4/8/2020	607	6.6	19.5	2.3
	10/9/2020	696	6.3	19.1	3.4
	4/15/2021	677	6.9	16.7	1.7
	6/29/2021	1052	6.5	19.5	1.8
	10/6/2021	948	6.5	19.9	1
	12/14/2021	901	6.7	19.5	1.1
	4/6/2022	478	6.9	16.3	2.6
	10/5/2022	447	6.2	19.6	2.5
	4/19/2023	554	6.8	18.7	2.7
	10/11/2023	476	6.5	19.1	1.6

B: analyte was detected in associated blank sample.

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O: value is a statistical outlier; not used in statistics.

R: value was rejected due to suspected error; not used in statistics.

Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
MW-117	d				
	10/8/2015	n/a	6.6	n/a	0.3
	1/28/2016	n/a	6.5	n/a	1.8
	4/27/2016	n/a	6.6	n/a	3.5
	7/26/2016	n/a	7.9(R)	n/a	0.9
	10/5/2016	n/a	5.1	n/a	1
	1/26/2017	464	6.1	17	3.1
	4/25/2017	398	6.6	19.2	1.1
	7/18/2017	430	6.4	20.8	0.7
	9/20/2017	491	6.5	20.3	0.5
	4/11/2018	486	6.4	17.2	1.8
	9/27/2018	484	6.4	18.5	2.2
	11/19/2018	383	6.6	17.1	1.7
	5/15/2019	528	6.5	17.9	3
	8/2/2019	506	6.3	19.3	1.2
	10/22/2019	530	6.5	19.1	<0.02
	4/7/2020	537	6.6	17.4	0.3
	6/22/2020	573	6.1	18.6	2.8
	10/8/2020	443	6.3	20.1	3.5
	4/13/2021	507	6.9	18.1	2.2
	6/29/2021	566	6.4	20	1.4
	10/6/2021	491	6.5	19.6	2.1
	12/14/2021	435	6.5	18.8	1.1
	4/6/2022	487	6.5	16.4	2.2
	6/20/2022	586	5.8	20.3	5.9
	10/5/2022	410	5.7	18.5	1.9
	4/19/2023	492	6.5	17.8	1
	10/12/2023	461	6.4	19.1	1.2
	12/6/2023	408	6.4	17.2	0.7

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Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
<b>MW-118</b>	d				
	10/9/2015	n/a	6.4	n/a	2.6
	1/28/2016	n/a	6.2	n/a	1.7
	4/28/2016	n/a	6.2	n/a	1.3
	7/26/2016	n/a	8(R)	n/a	0.9
	10/5/2016	n/a	6.3	n/a	0.7
	1/26/2017	459	6.1	15.4	0.5
	4/26/2017	424	6.3	17.9	0.5
	7/20/2017	487	6.5	22.9	0.7
	9/20/2017	491	6.5	20.3	0.2
	4/11/2018	429	5.8	16.5	1.3
	7/10/2018	n/a	6.5	n/a	n/a
	9/27/2018	443	6.3	17.9	1
	5/15/2019	435	6	18.2	3.7
	8/2/2019	n/a	6.1	n/a	n/a
	10/22/2019	548	6.4	18.1	<0.02
	4/8/2020	530	6.1	17.8	2.7
	10/8/2020	454	6.1	19.6	3.9
	4/15/2021	484	6.6	15.7	2.4
	10/6/2021	457	6.4	18.8	1.1
4/7/2022	437	6.6	16.2	2.2	
10/5/2022	414	6.1	17.6	2.4	
4/18/2023	404	6.5	17.7	1.3	
10/11/2023	460	6.3	19.2	1.1	
<b>MW-119</b>	d				
	1/25/2017	678	6.6	18.8	4.6
	4/27/2017	607	6.8	18.3	0.9
	7/20/2017	625	6.6	20.9	1.2
	9/20/2017	549	6.8	20.5	0.4

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 was rejected due to suspected error; not used in statistics.

Plum Point Energy Station EPA CCR Landfill Historical Database

Well ID	Date	Conductivity (µmhos/cm)	pH (su)	Temperature (C)	Turbidity (NTU)
<b>MW-119</b>	1/30/2018	581	6.4	18.2	1.2
<b>(cont.)</b>	4/11/2018	524	6.4	18	0.9
	9/27/2018	562	6.7	19.2	1.3
	11/20/2018	426	6.8	18.5	0.6
	12/18/2018	n/a	n/a	n/a	n/a
	2/18/2019	450	6.6	16.4	1.8
	5/16/2019	695	6.4	18.9	1.7
	8/2/2019	502	6.4	19.6	1.9
	10/22/2019	725	6.7	18.9	<0.02
	4/8/2020	691	6.6	19.1	2.2
	10/8/2020	594	6.5	19.6	3.2
	4/15/2021	594	6.9	17.5	2.2
	10/7/2021	579	6.7	19.7	1.5
	4/7/2022	548	6.6	17.6	2.4
	10/5/2022	549	6.2(R)	19.5	2.7
	12/16/2022	595	6.9	16.8	2.1
	4/18/2023	536	6.9	19.3	2.3
	10/11/2023	616	6.8	20.7	1.5
<b>MW-120</b>	u				
	7/6/2023	474	6.6	20.5	3.4
	8/8/2023	430	6.4	19.4	1.3
	9/7/2023	390	6.5	20.8	1.9
<b>MW-121</b>	u				
	7/6/2023	294	6.4	19.9	2
	8/8/2023	240	6.2	20.2	1.7
	9/7/2023	249	6.2	20.9	1.4
	10/10/2023	258	6.4	21.4	1.4
	11/7/2023	279	6.2	21.5	0.6
	12/6/2023	268	6.4	19.1	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 was rejected due to suspected error; not used in statistics.

# **APPENDIX E**

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## **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 were evaluated for an update prior to the first half of 2022 monitoring period for all well-parameter pairs except for select parameters at MW-116, which were excluded from the evaluation due to an ongoing investigation. Well-parameter pairs that were not updated in 2022 will be re-evaluated prior to the first half 2023 monitoring period. Updated background data sets used for the first and second half of 2022 statistical evaluations are attached to this appendix.

### **Exploratory Analyses**

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 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	4/26/2017	<1.8	O	Laboratory reporting detection limit was nine times higher than normal due to a sample dilution.
Boron	MW-108	5/14/2019	0.224	R	Suspected laboratory/sampling error; disconfirmed by verification sampling in August 2019.
Calcium	MW-102	9/20/2017	25.9	O	Statistically low outlier; suspected laboratory error.
Chloride	MW-115	1/28/2016	7.55	O	Statistically high outlier.
Chloride	MW-119	7/20/2017	6.84	O	Statistically high outlier.
pH	MW-102	7/26/2016	7.7 (su)	R	Known equipment malfunction.
pH	MW-108	7/26/2016	9.8 (su)	R	Known equipment malfunction.
pH	MW-108	10/4/2022	6.2 (su)	R	Known equipment malfunction.
pH	MW-113	7/26/2016	8.1 (su)	R	Known equipment malfunction.
pH	MW-115	7/26/2016	9.0 (su)	R	Known equipment malfunction.
pH	MW-117	7/26/2016	7.9 (su)	R	Known equipment malfunction.
pH	MW-118	7/26/2016	8.0 (su)	R	Known equipment malfunction.
pH	MW-119	10/5/2022	6.2 (su)	R	Known equipment malfunction.
Sulfate	MW-102	4/11/2018	46.7	O	Statistically low outlier.
Sulfate	MW-115	1/28/2016	14.8	O	Statistically high outlier.

### Screening for Trends in Background Data Sets

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

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



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

<b>Parameter</b>	<b>Well(s)</b>
Boron	MW-103, MW-108
Calcium	MW-102, MW-103
Chloride	MW-101, MW-102, MW-103, MW-115, MW-116
Sulfate	MW-103
TDS	MW-103

# Date Ranges

Date: 9/14/2022 12:35 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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## 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:10/7/2015-10/23/2019  
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:10/7/2015-7/20/2017  
MW-103 background:10/7/2015-10/23/2019  
MW-108 background:10/7/2015-10/23/2019  
MW-113 background:10/7/2015-12/14/2021  
MW-115 background:10/7/2015-12/14/2021  
MW-116 background:10/7/2015-10/23/2019  
MW-117 background:10/7/2015-7/20/2017  
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: 9/14/2022 12:35 PM

Plum Point Energy Station

Client: Plum Point Services Company, LLC

Data: PPES EPA CCR Rule Groundwater Database

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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

# **APPENDIX F**

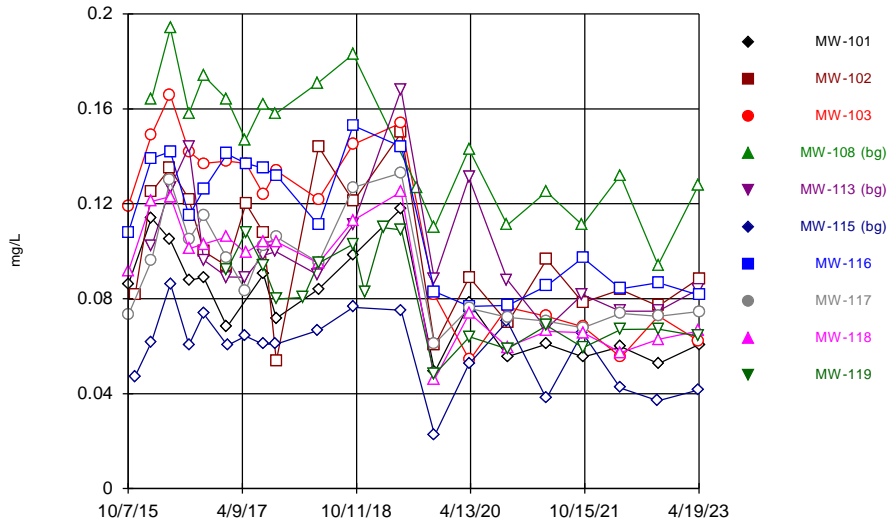
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## **Exploratory Data Analysis Plots**

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**Time-Series Plots, First Half of 2023 Data Set**

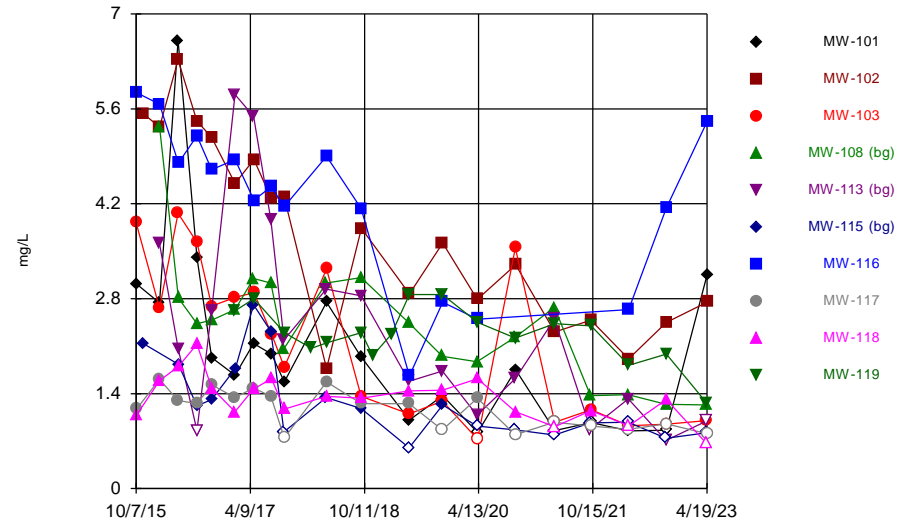
### Time Series



Constituent: Boron Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

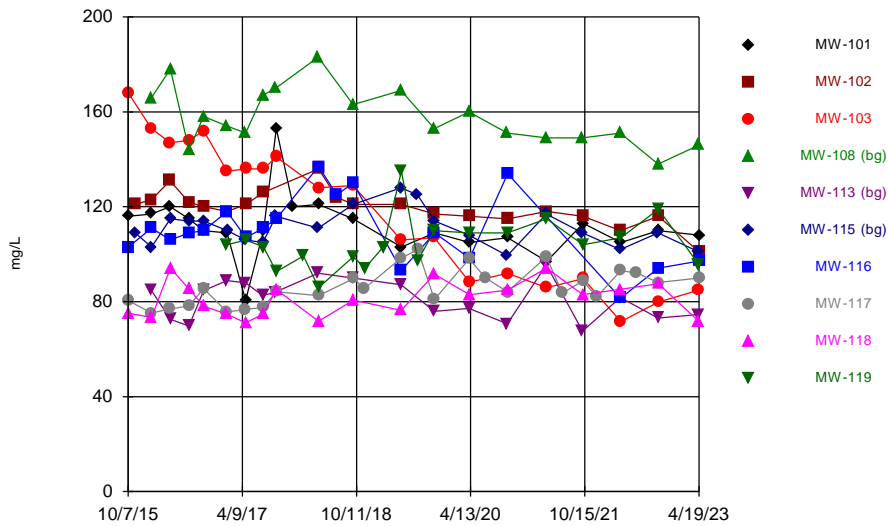
### Time Series



Constituent: Chloride Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

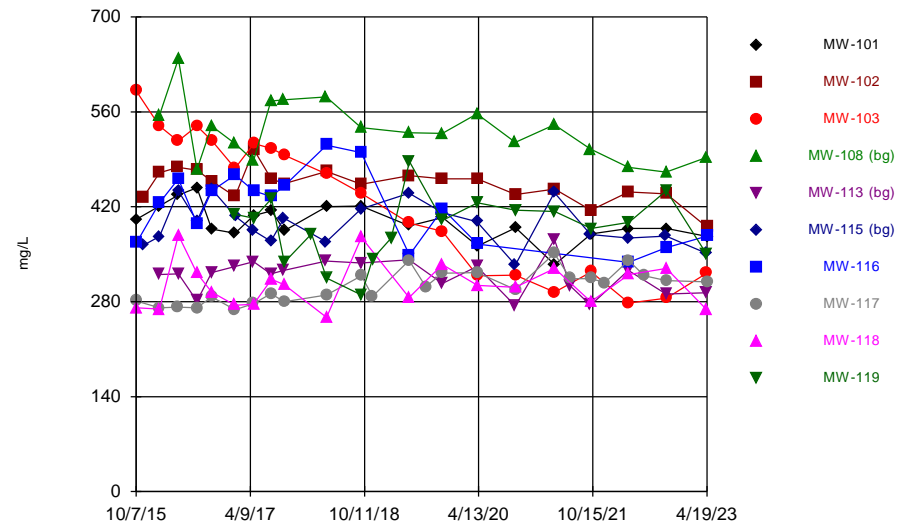
### Time Series



Constituent: Calcium Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

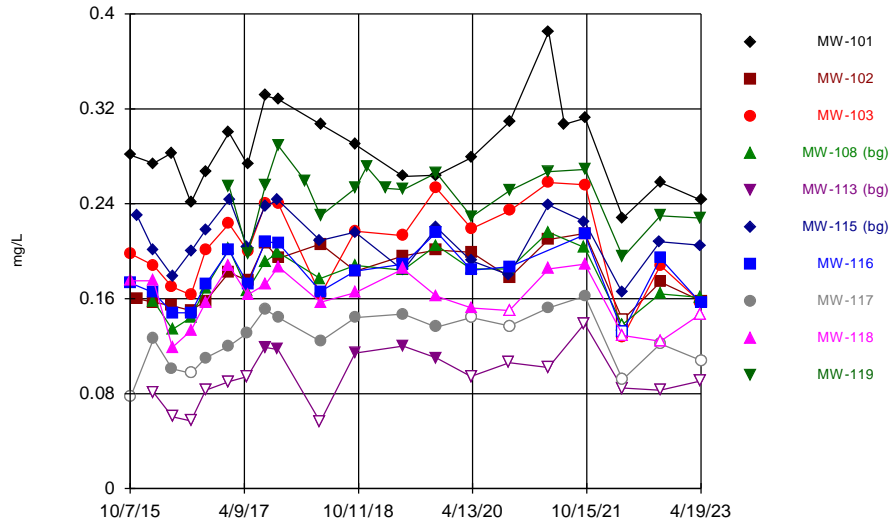
### Time Series



Constituent: Dissolved Solids Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

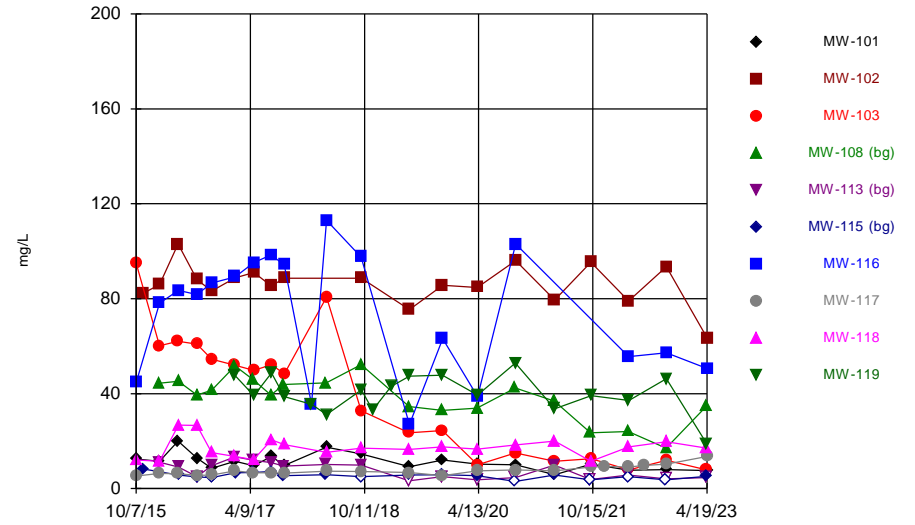
### Time Series



Constituent: Fluoride Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

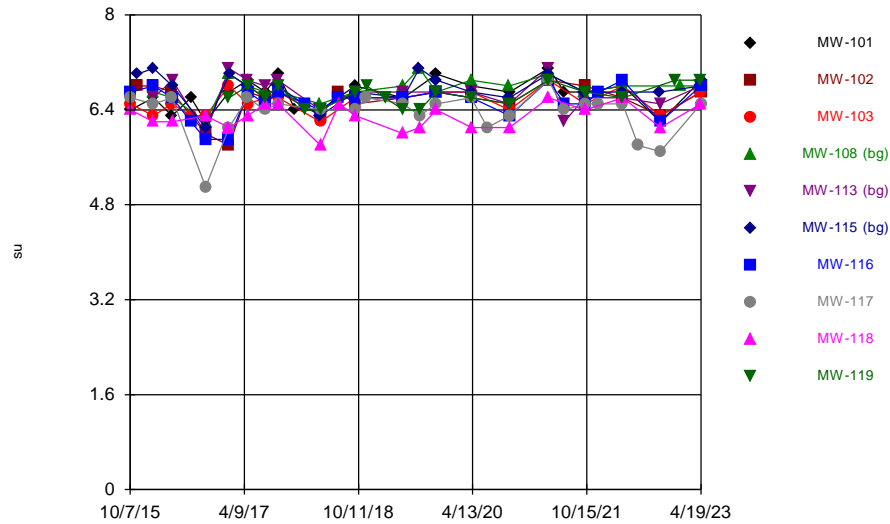
### Time Series



Constituent: Sulfate Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Time Series



Constituent: pH Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional

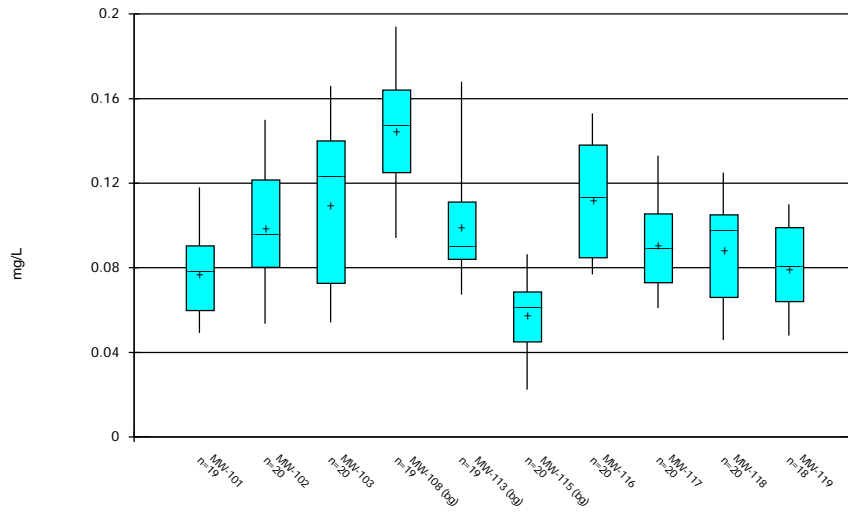
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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**Box-and-Whisker Plots, First Half of 2023 Data Set**

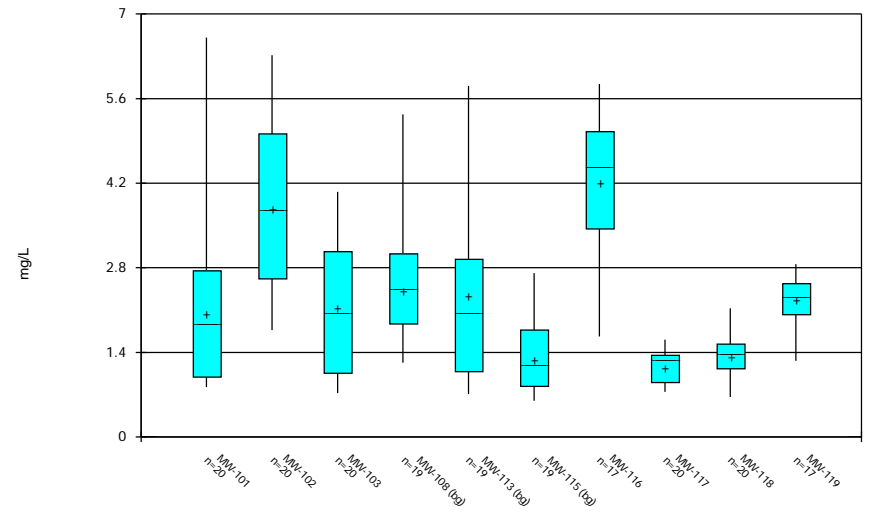


### Box & Whiskers Plot



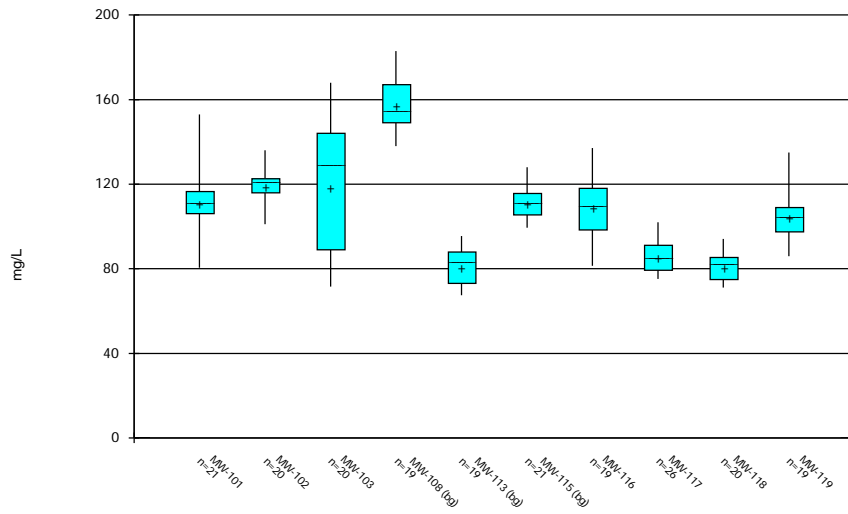
Constituent: Boron Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Box & Whiskers Plot



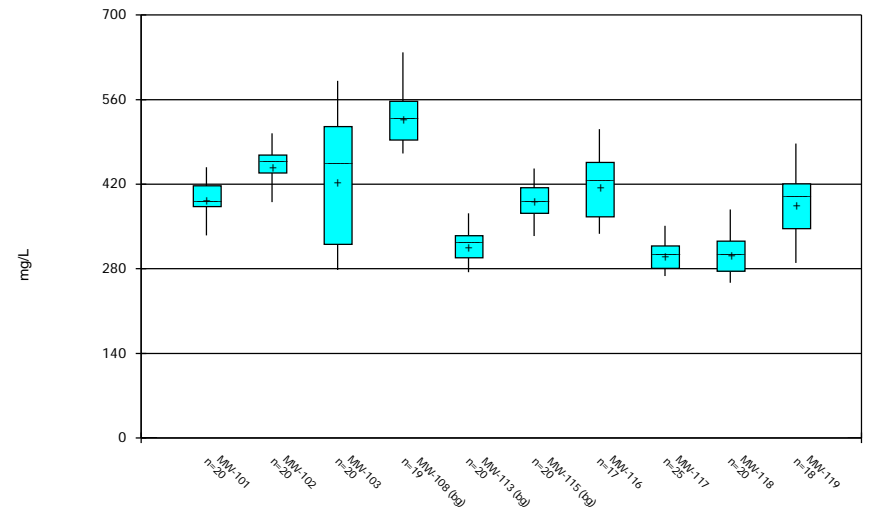
Constituent: Chloride Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Box & Whiskers Plot



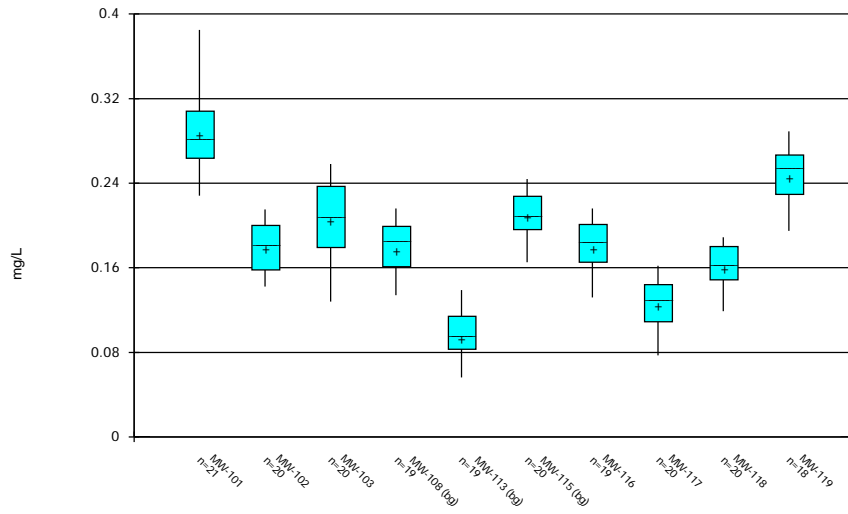
Constituent: Calcium Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Box & Whiskers Plot



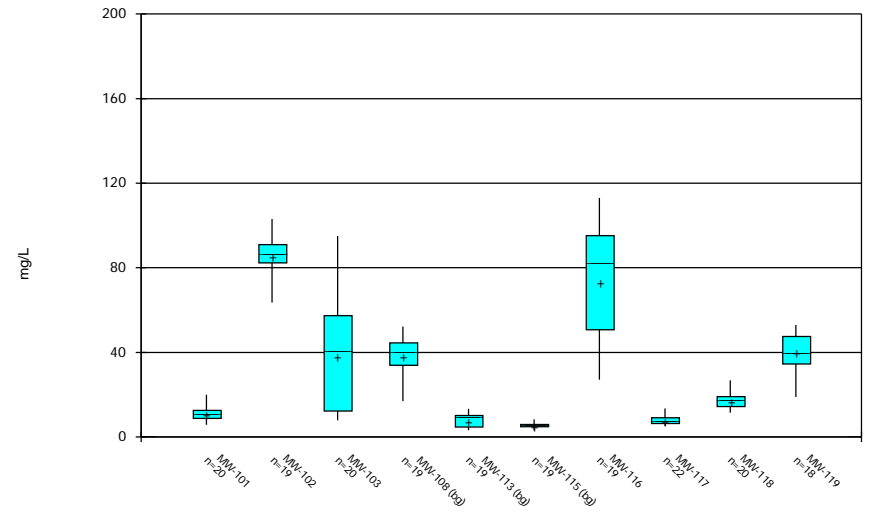
Constituent: Dissolved Solids Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Box & Whiskers Plot



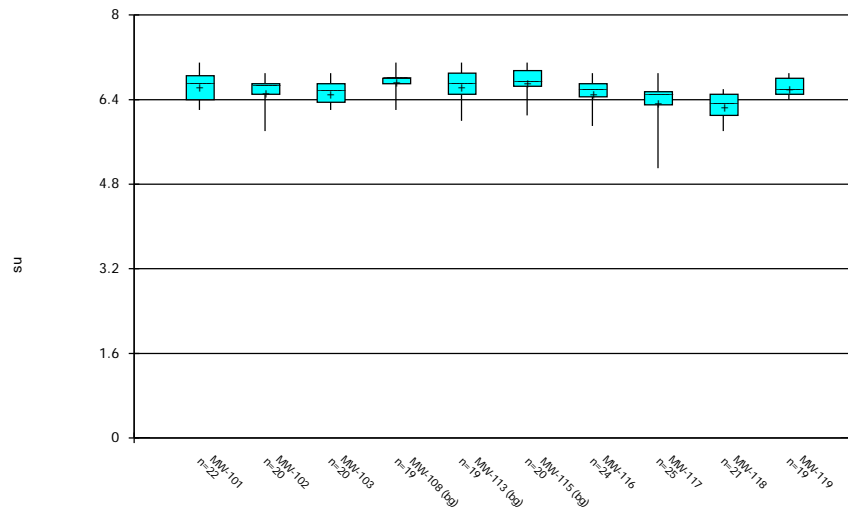
Constituent: Fluoride Analysis Run 5/2/2023 2:56 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Box & Whiskers Plot



Constituent: Sulfate Analysis Run 5/2/2023 2:57 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Box & Whiskers Plot



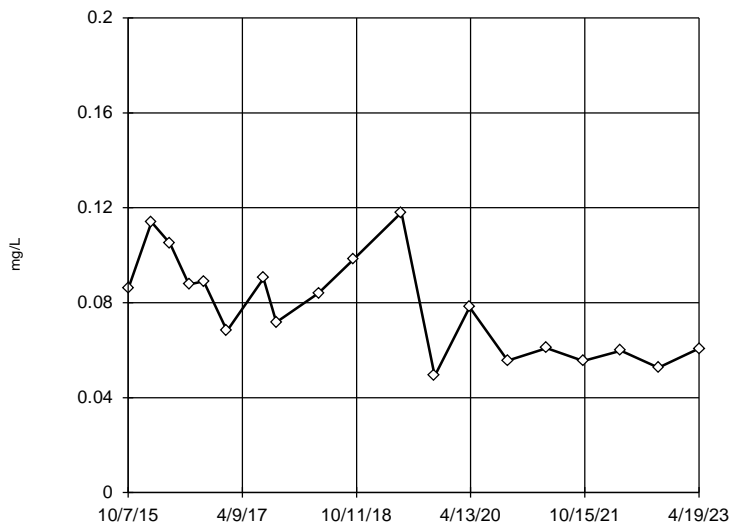
Constituent: pH Analysis Run 5/2/2023 2:57 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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**Outlier Plots, Period-of-Record Data through First Half of 2023**

### EPA Screening (suspected outliers for Dixon's Test)

MW-101



n = 19

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.07809, std. dev. 0.02115, critical Tn 2.532

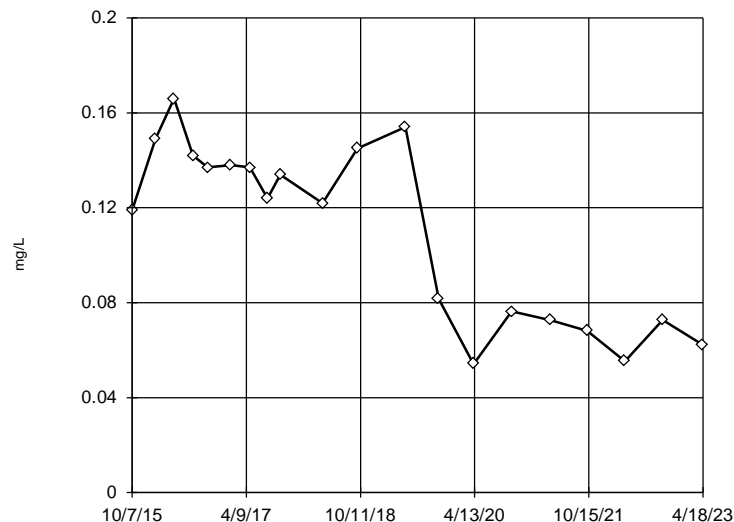
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.94  
Critical = 0.917  
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-103



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 cube transformed to achieve best W statistic (graph shown in original units).

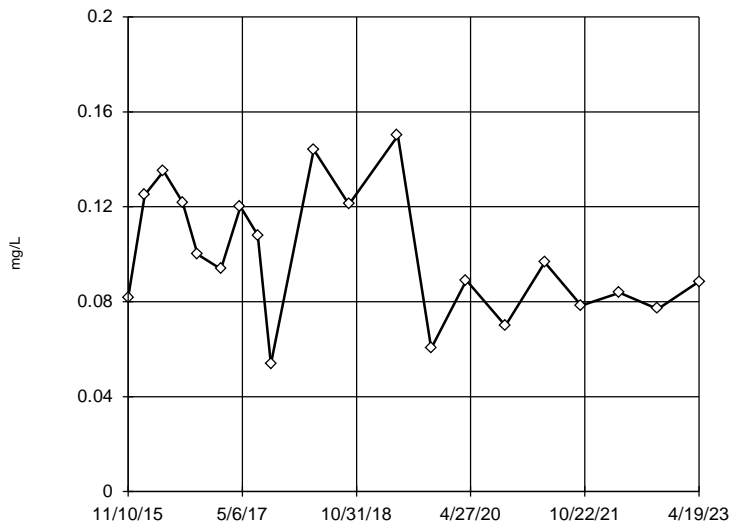
High cutoff = 0.2142,  
low cutoff = -0.1886,  
based on IQR multiplier of 3.

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 20

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.09987, std. dev. 0.02735, critical Tn 2.557

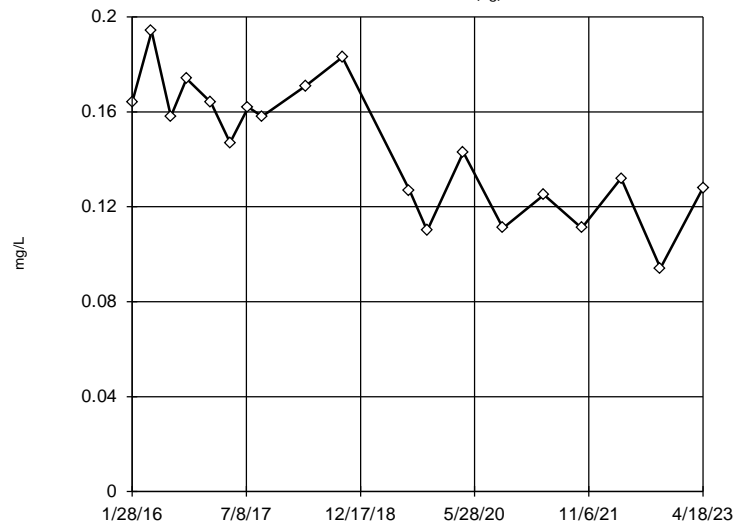
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9696  
Critical = 0.92  
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional

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 = 19

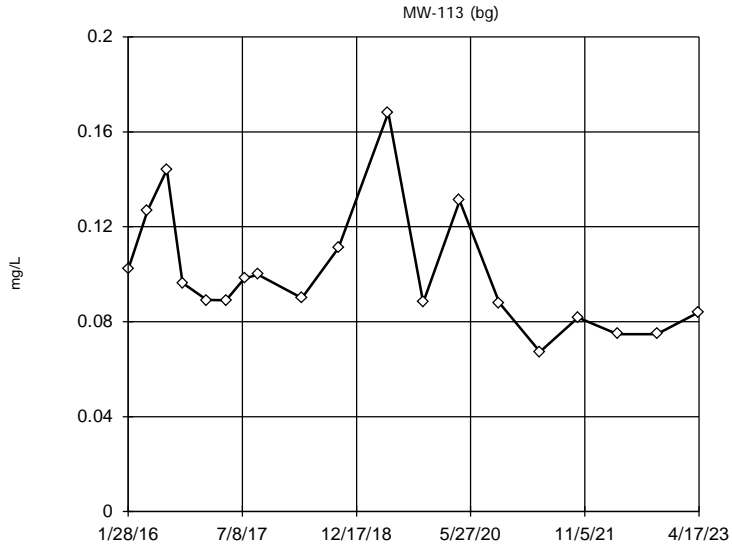
Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.1451, std. dev. 0.02792, critical Tn 2.532

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9663  
Critical = 0.917  
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional

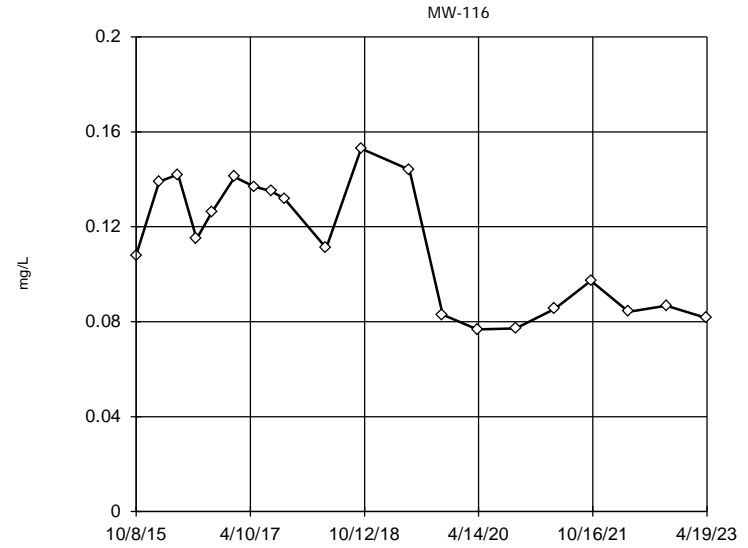
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)



n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.1002, std. dev. 0.02578, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9418  
 Critical = 0.917 (after natural log transformation)  
 The distribution was found to be log-normal.

### Tukey's Outlier Screening

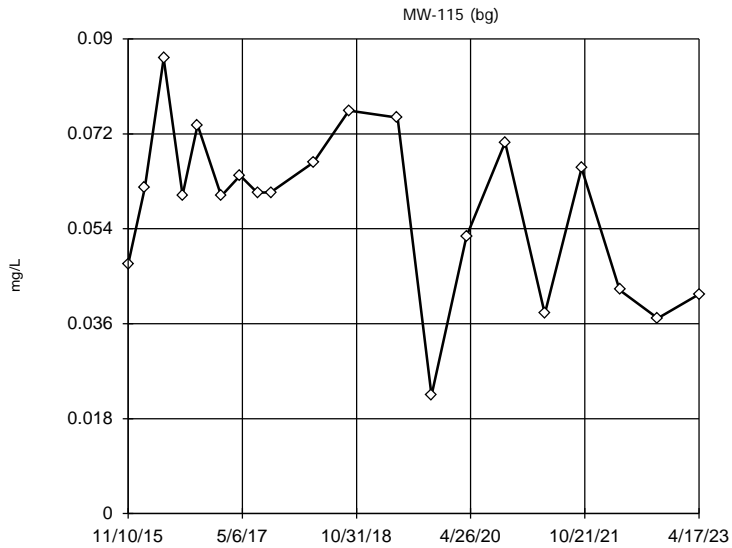


n = 20  
 No outliers found.  
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were square transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 0.2337, low cutoff = -0.1684, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

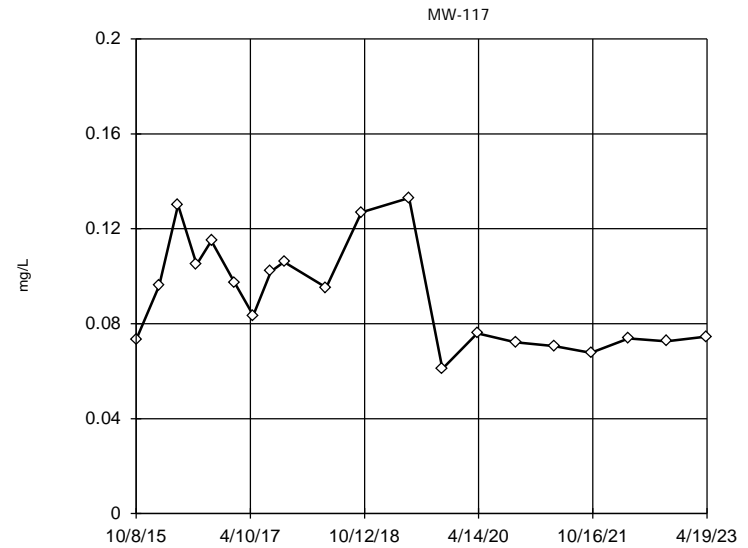
Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test



n = 20  
 No statistical outliers.  
 Testing for 1 low outlier.  
 Mean = 0.05816.  
 Std. Dev. = 0.01591.  
 0.0224 (J); c = 0.2941  
 tabl = 0.45.  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9548  
 Critical = 0.917  
 The distribution was found to be normally distributed.

### EPA Screening (suspected outliers for Dixon's Test)



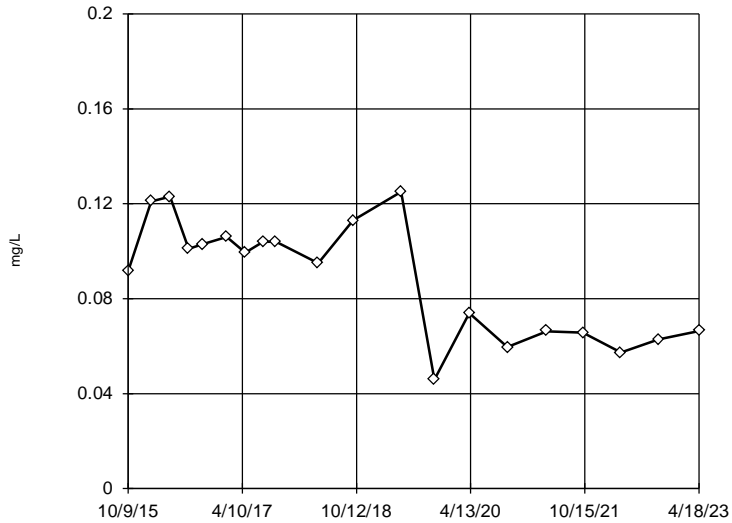
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.09155, std. dev. 0.02236, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9271  
 Critical = 0.92 (after natural log transformation)  
 The distribution was found to be log-normal.

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional  
 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 = 20

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.08919, std. dev. 0.0246, critical Tn 2.557

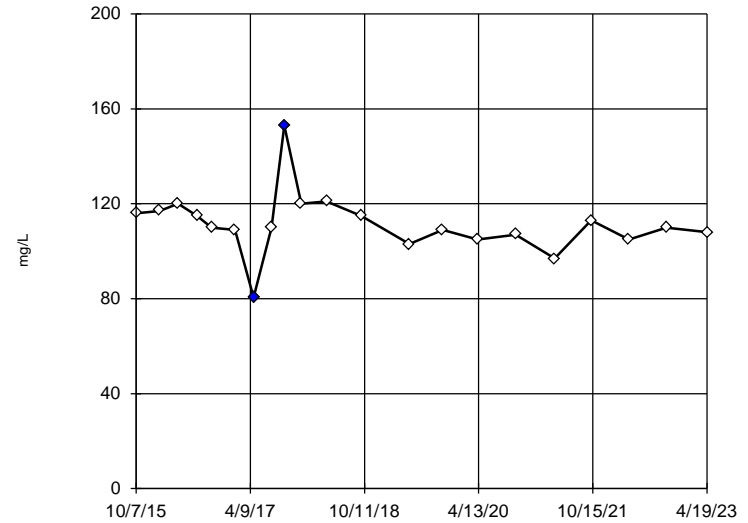
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9218  
Critical = 0.92  
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-101



n = 21

Statistical outliers are drawn as solid.  
Testing for 1 high and 1 low outliers.  
Mean = 111.6  
Std. Dev. = 13.07  
153: c = 0.66  
tabl = 0.44,  
80.5: c = 0.5696  
tabl = 0.44,  
Alpha = 0.05.

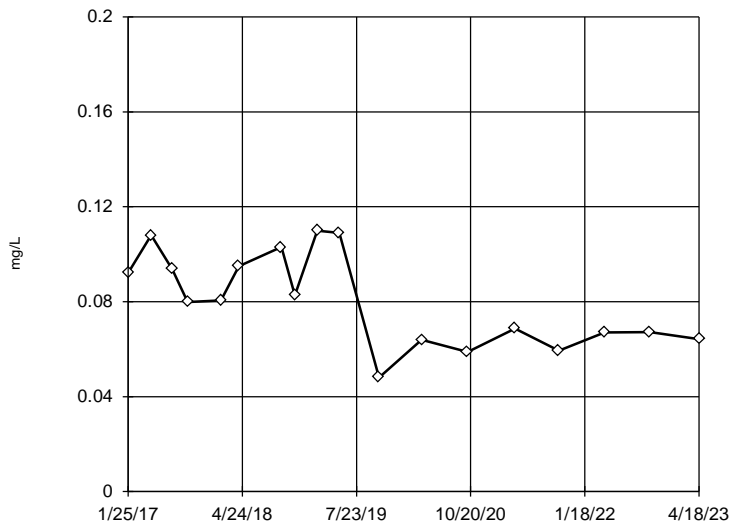
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.967  
Critical = 0.917  
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Calcium Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 18

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.0806, std. dev. 0.01953, critical Tn 2.504

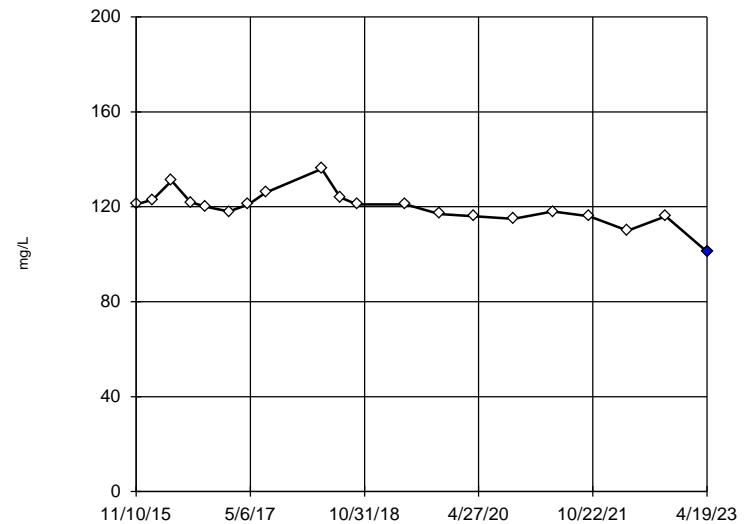
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9344  
Critical = 0.914  
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

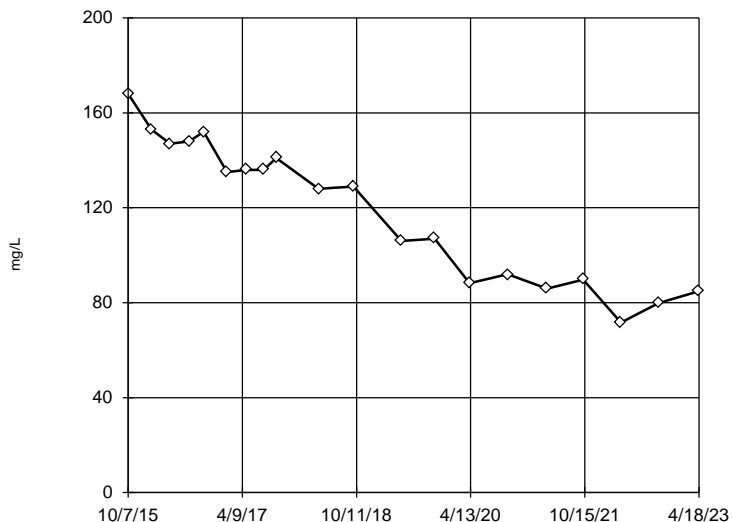
### Dixon's Outlier Test

MW-102



### EPA Screening (suspected outliers for Dixon's Test)

MW-103



n = 20

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 118.9, std. dev. 29.62, critical Tn 2.557

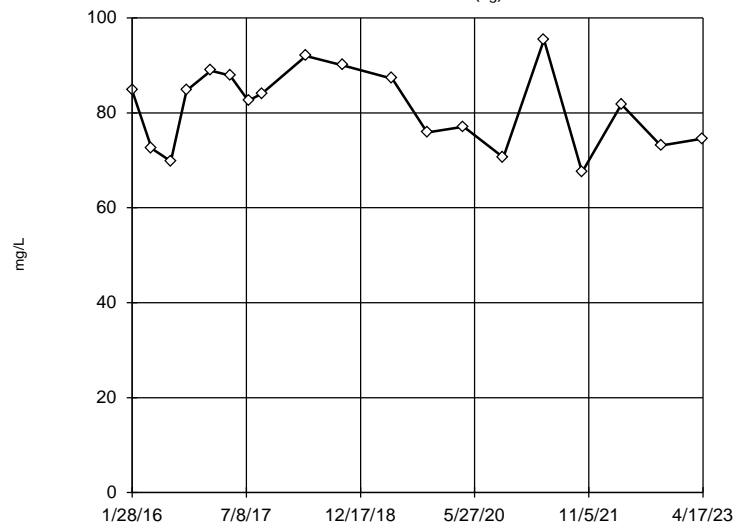
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9204  
Critical = 0.92  
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/2/2023 3:13 PM View: 2023-1H distributional

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 = 19

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 81.07, std. dev. 8.267, critical Tn 2.532

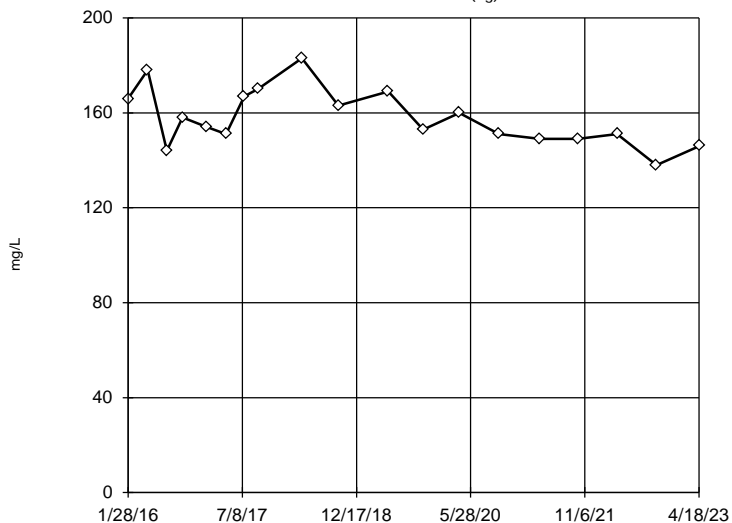
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9574  
Critical = 0.917  
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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 = 19

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 157.9, std. dev. 11.91, critical Tn 2.532

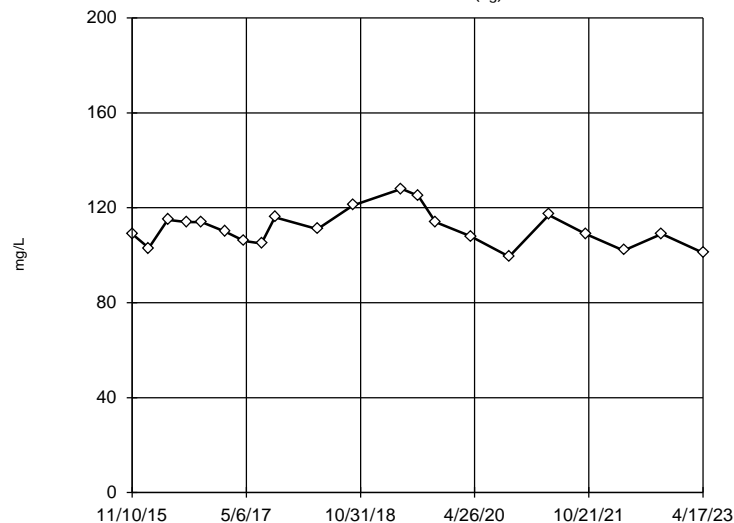
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9622  
Critical = 0.917  
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



n = 21

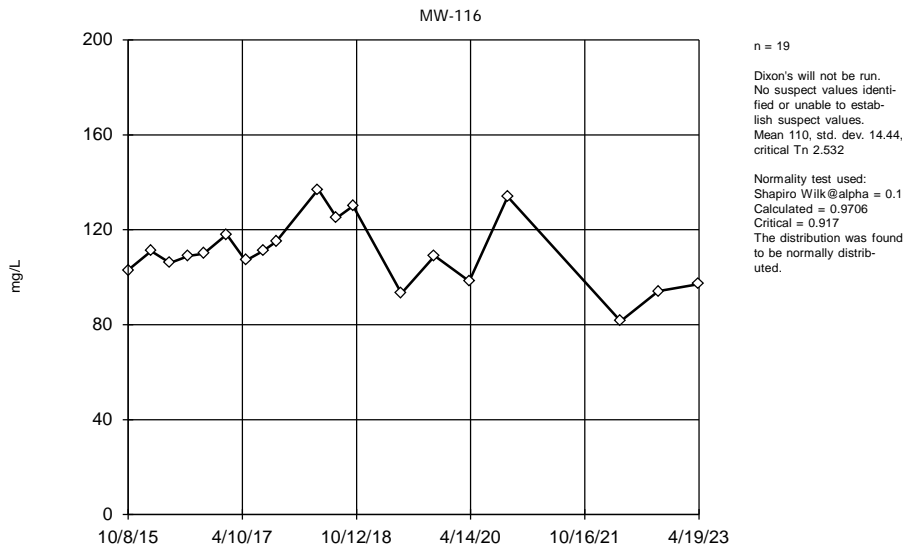
Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 111.3, std. dev. 7.583, critical Tn 2.58

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9659  
Critical = 0.923  
The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

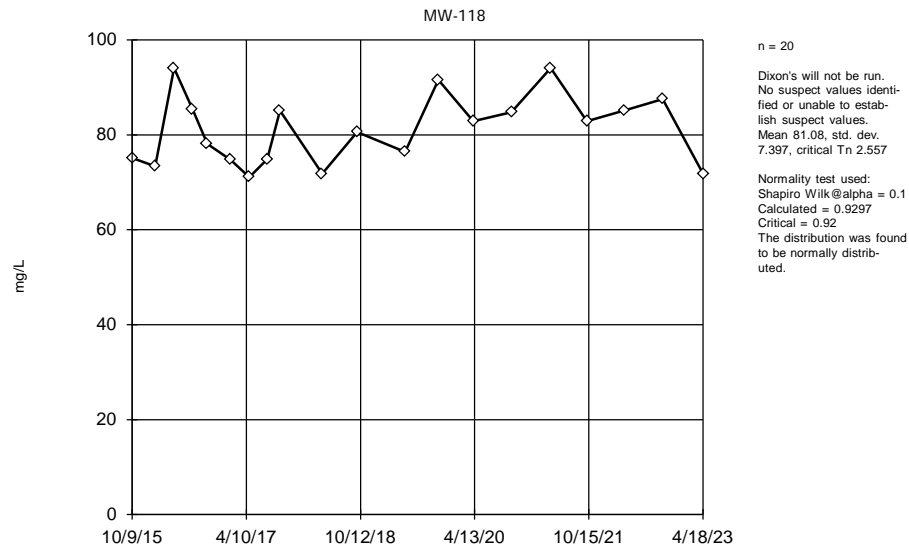
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)



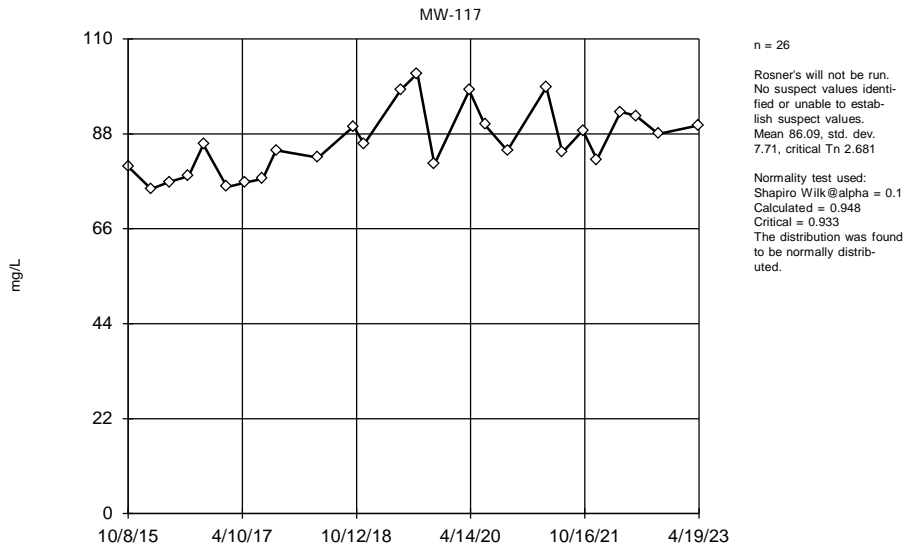
Constituent: Calcium Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)



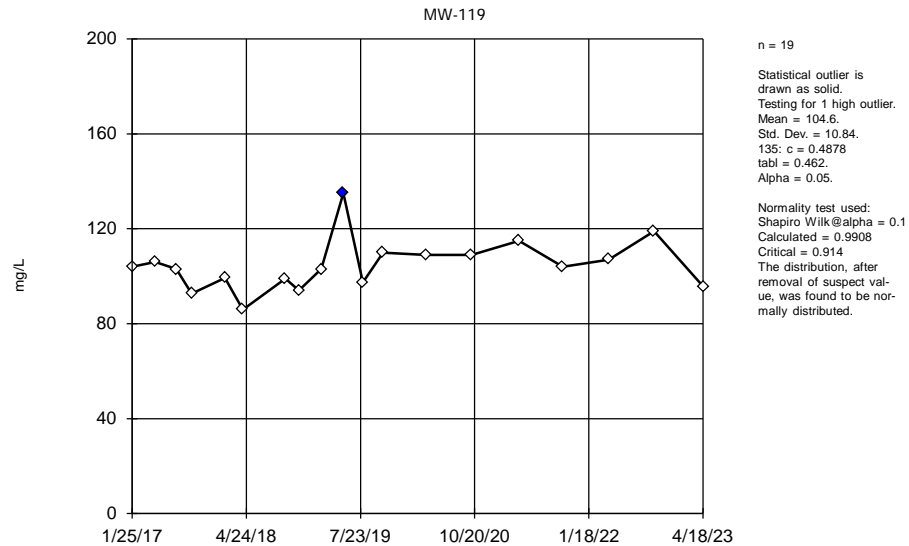
Constituent: Calcium Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Rosner's Test)



Constituent: Calcium Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

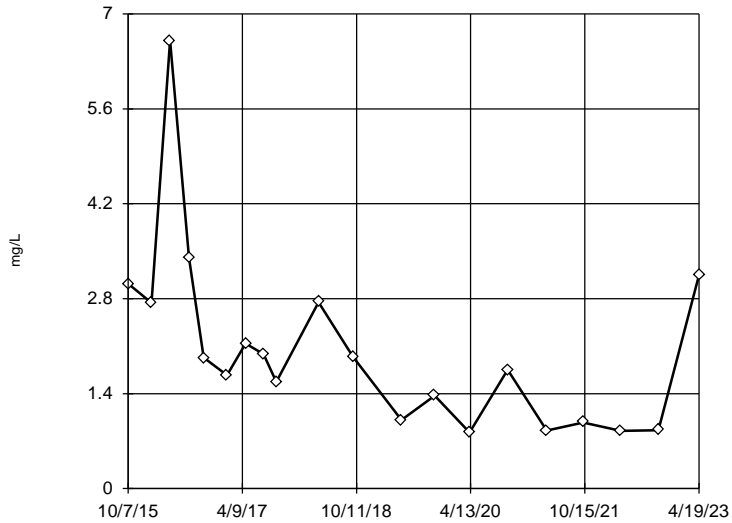


Constituent: Calcium Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



EPA Screening (suspected outliers for Dixon's Test)

MW-101



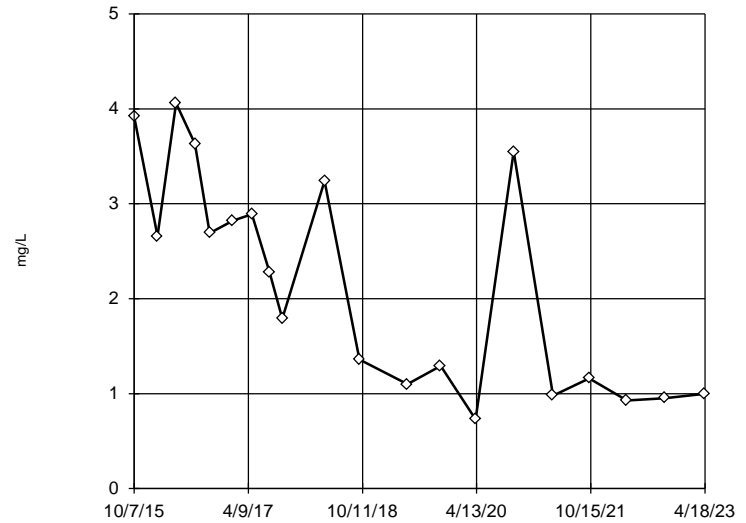
n = 20

Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 2.07, std. dev. 1.352, critical Tn 2.557

Normality test used: Shapiro Wilk@alpha = 0.1  
Calculated = 0.9396  
Critical = 0.92 (after natural log transformation)  
The distribution was found to be log-normal.

Tukey's Outlier Screening

MW-103



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 natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 76, low cutoff = 0.04223, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

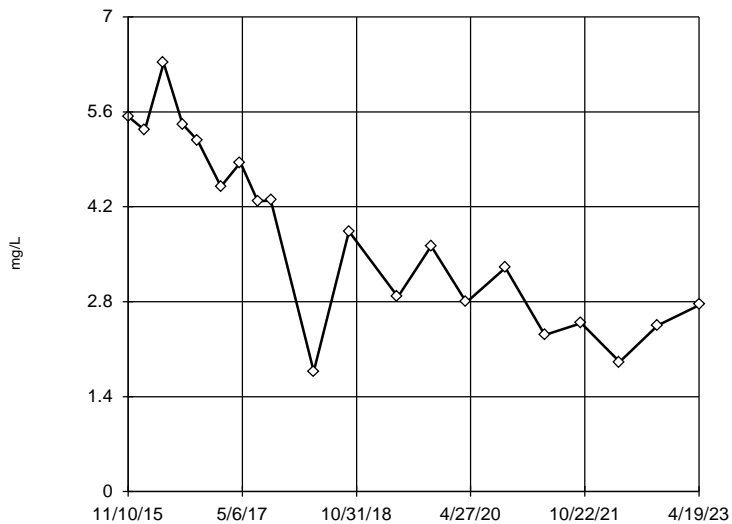
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



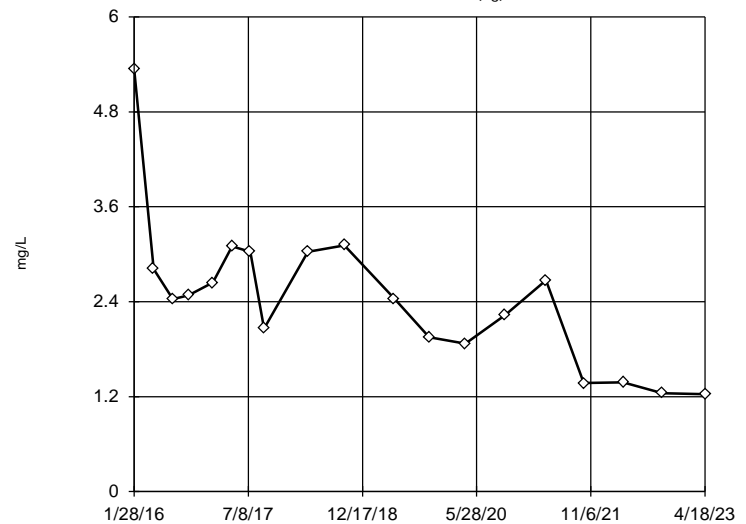
n = 20

Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 3.79, std. dev. 1.358, critical Tn 2.557

Normality test used: Shapiro Wilk@alpha = 0.1  
Calculated = 0.9501  
Critical = 0.92  
The distribution was found to be normally distributed.

EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 19

Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 2.443, std. dev. 0.9472, critical Tn 2.532

Normality test used: Shapiro Wilk@alpha = 0.1  
Calculated = 0.9348  
Critical = 0.917 (after natural log transformation)  
The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

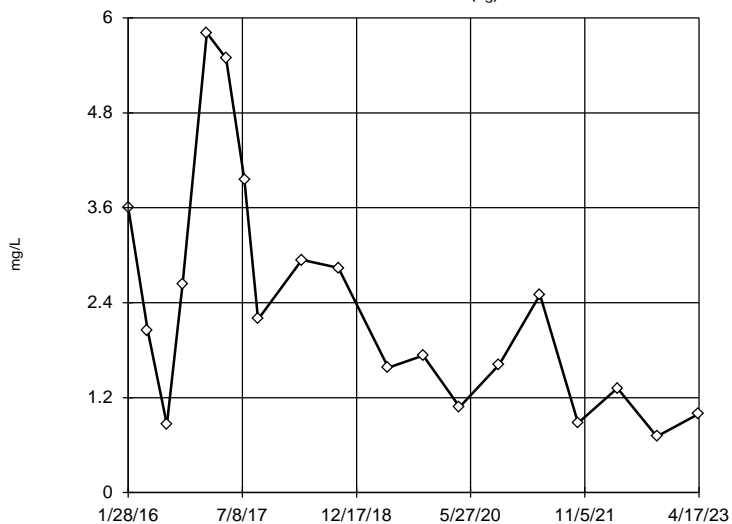
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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)



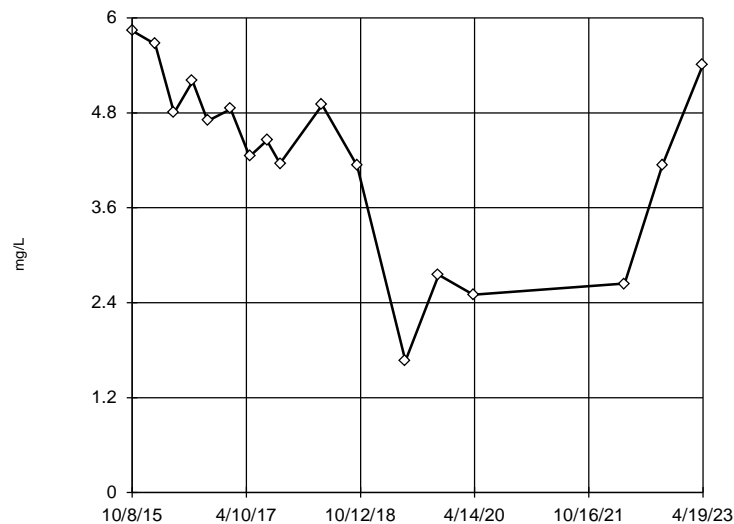
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 2.357, std. dev. 1.489, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9694  
 Critical = 0.917 (after natural log transformation)  
 The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-116



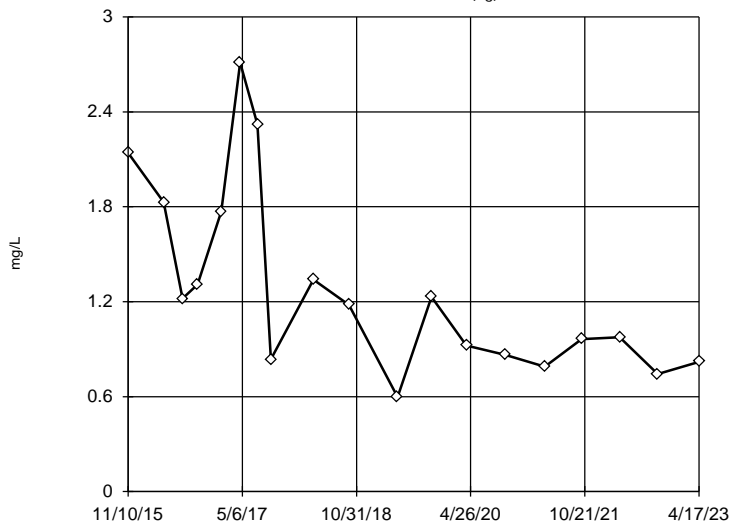
n = 17  
 No statistical outliers.  
 Testing for 1 low outlier.  
 Mean = 4.238,  
 Std. Dev. = 1.193,  
 1.66: c = 0.2613  
 tabl = 0.49,  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9102  
 Critical = 0.906  
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



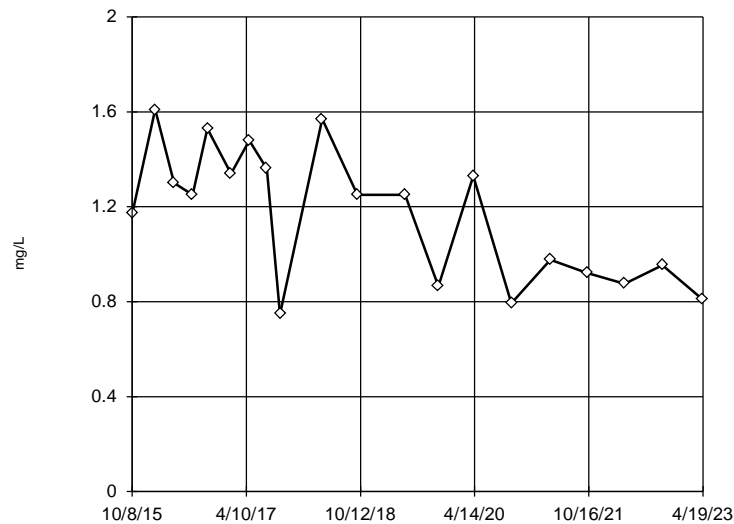
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 1.293, std. dev. 0.5928, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9516  
 Critical = 0.917 (after natural log transformation)  
 The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-117

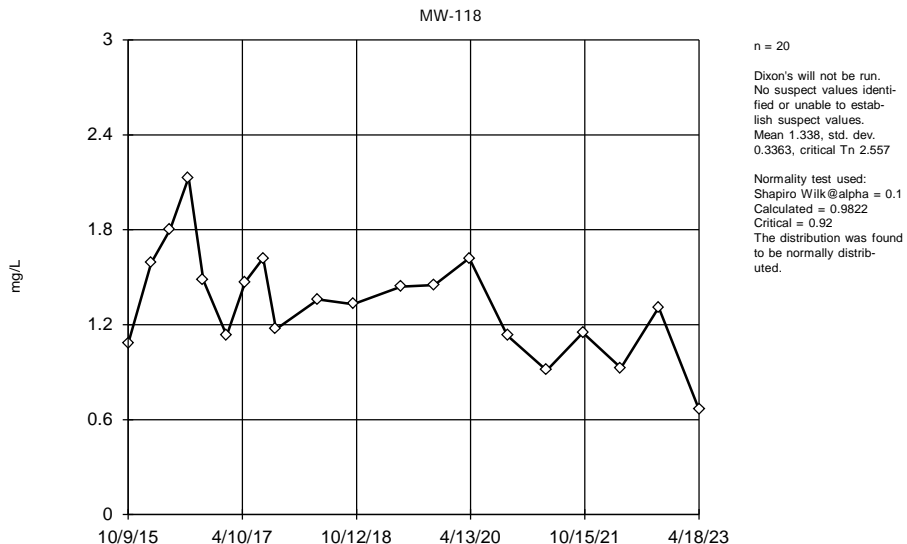


n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 1.169, std. dev. 0.2796, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9277  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

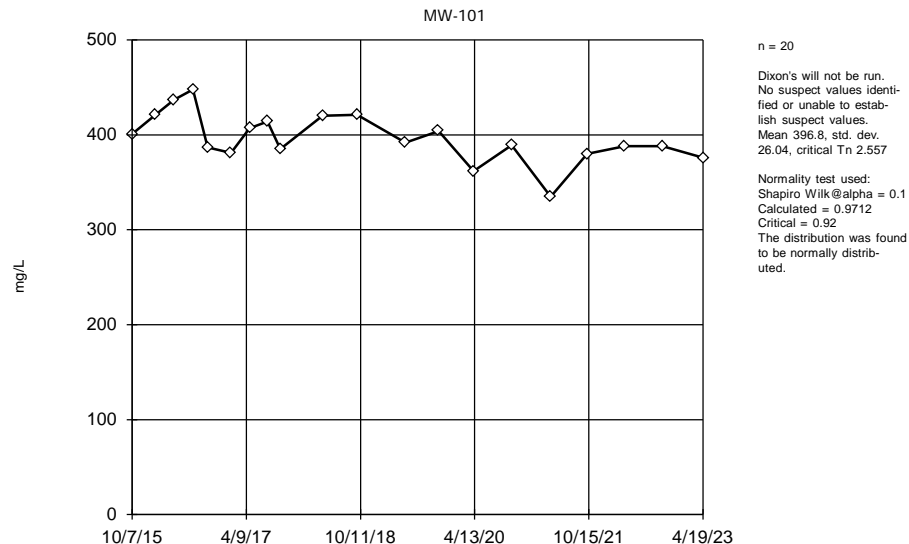
EPA Screening (suspected outliers for Dixon's Test)



Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

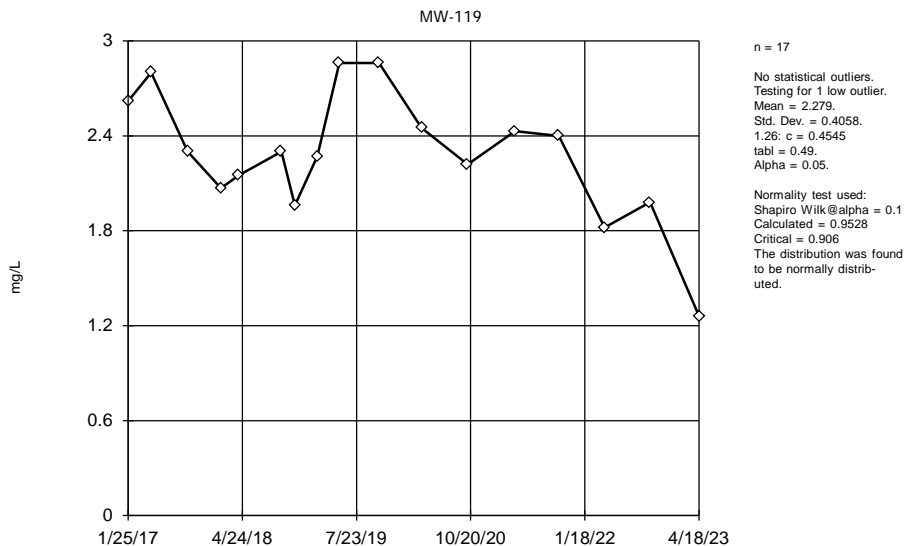
EPA Screening (suspected outliers for Dixon's Test)



Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

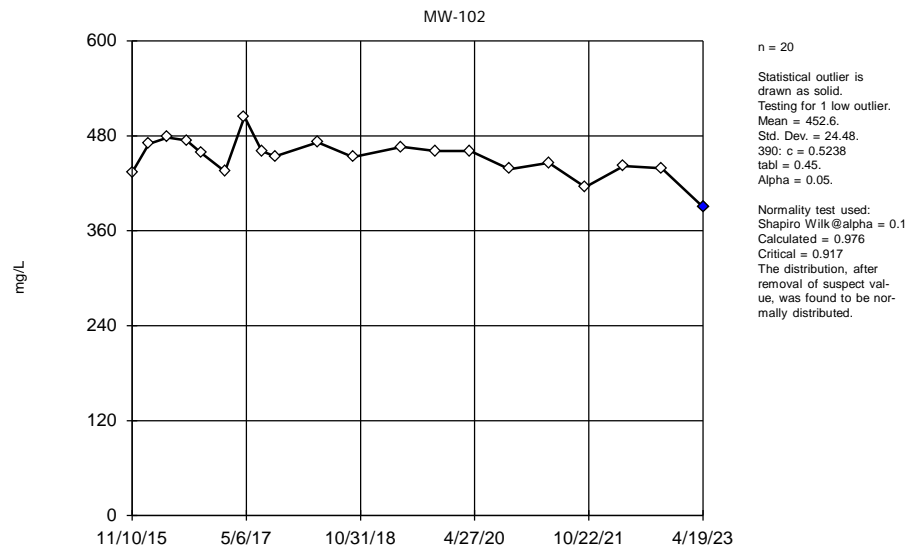
Dixon's Outlier Test



Constituent: Chloride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

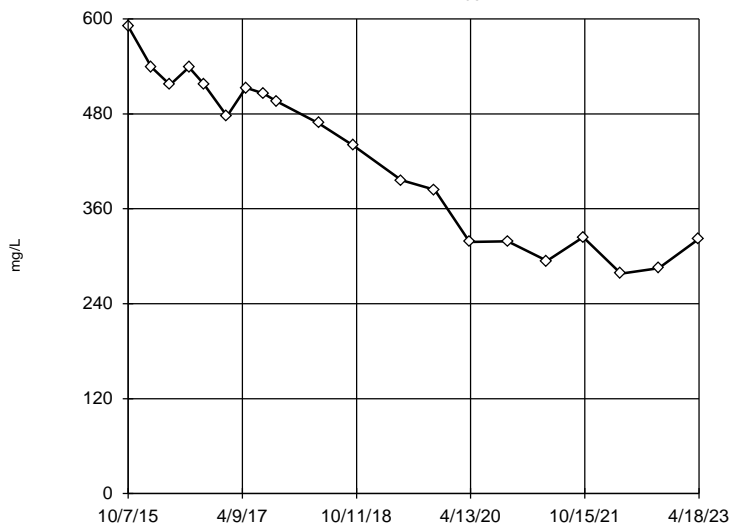


Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-103



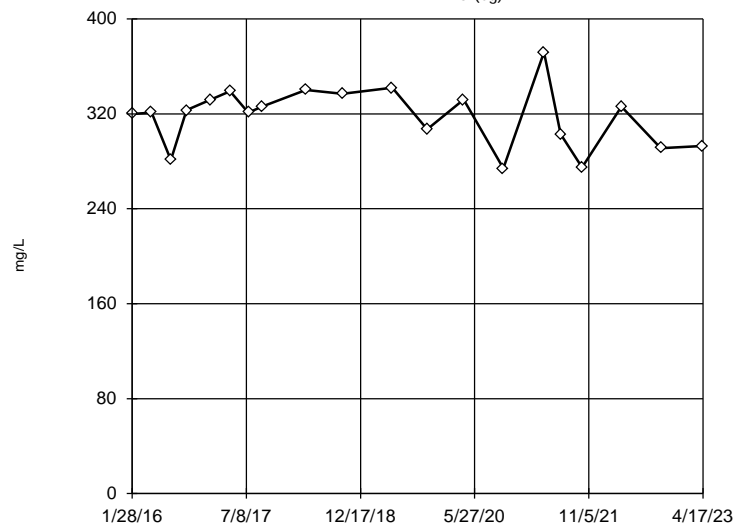
n = 20  
 No outliers found.  
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were square transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 867.6, low cutoff = -620.3, based on IQR multiplier of 3.

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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)



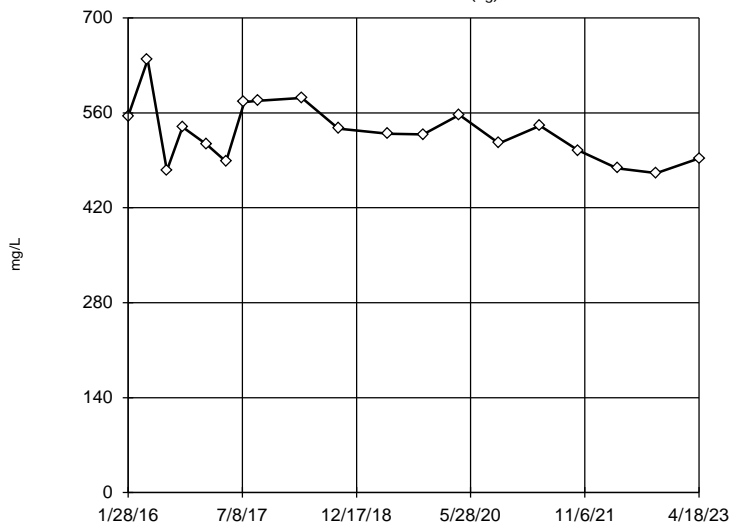
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 317.8, std. dev. 25.34, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.948  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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)



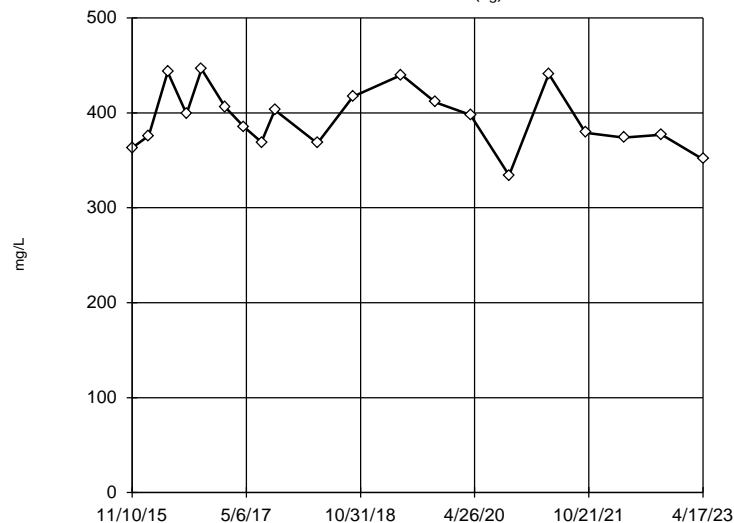
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 531.5, std. dev. 43.36, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9555  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



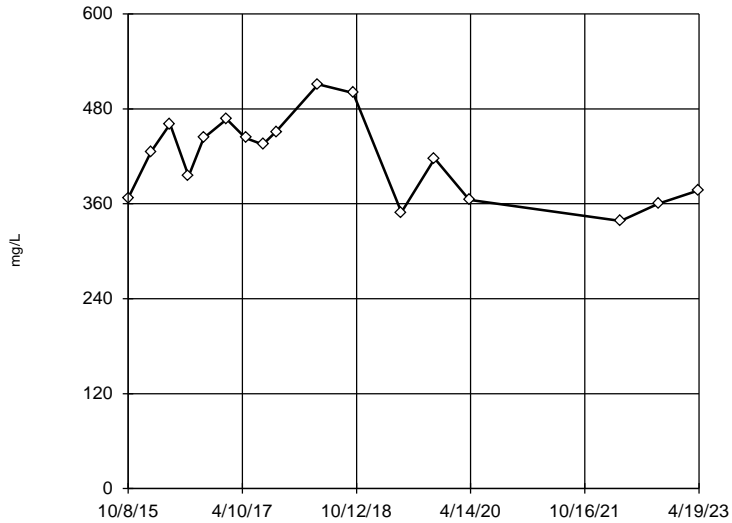
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 394, std. dev. 32.07, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9537  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



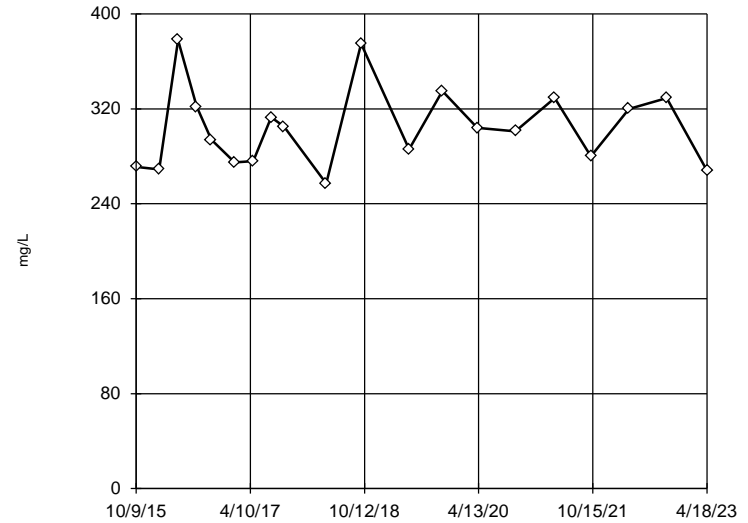
n = 17  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 417.9, std. dev. 52.71, critical Tn 2.475  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9533  
 Critical = 0.91  
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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



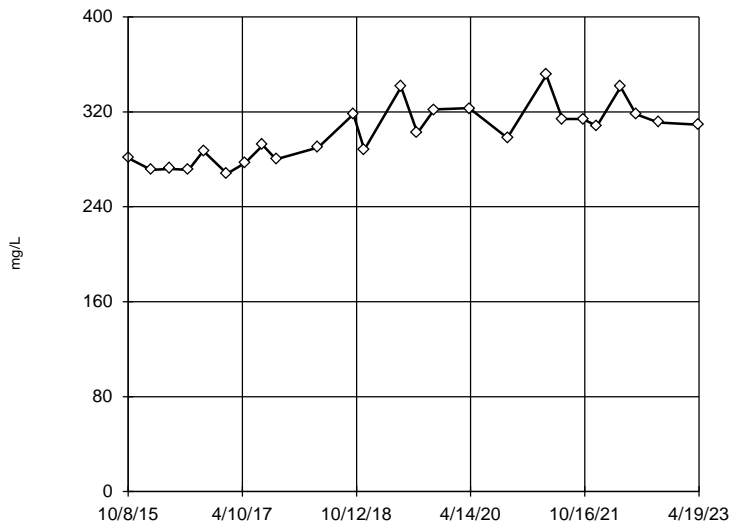
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 304.4, std. dev. 33.9, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9282  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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-117



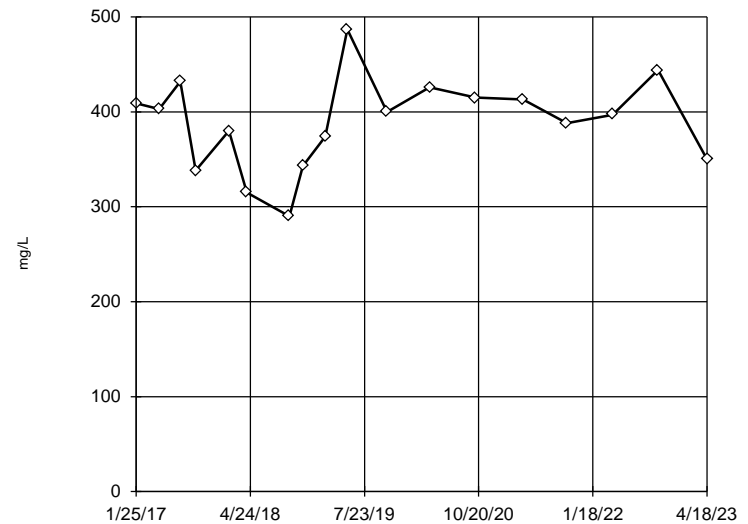
n = 25  
 Rosner's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 301.9, std. dev. 23.68, critical Tn 2.663  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9504  
 Critical = 0.931  
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-119



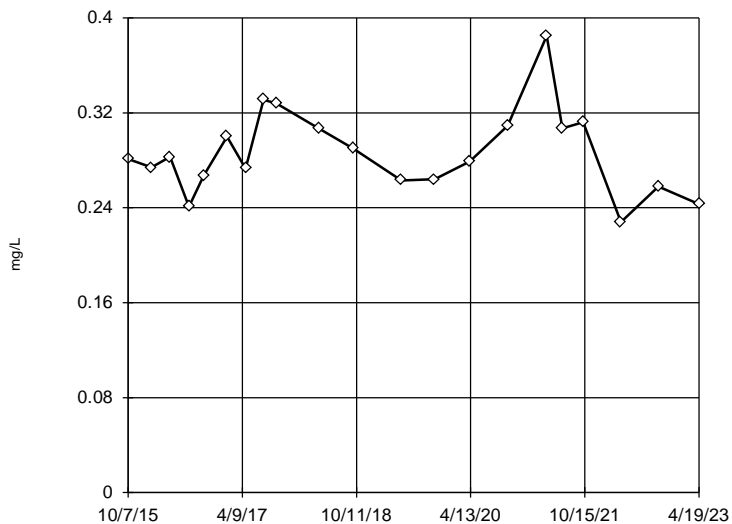
n = 18  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 389.1, std. dev. 48.33, critical Tn 2.504  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9799  
 Critical = 0.914  
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

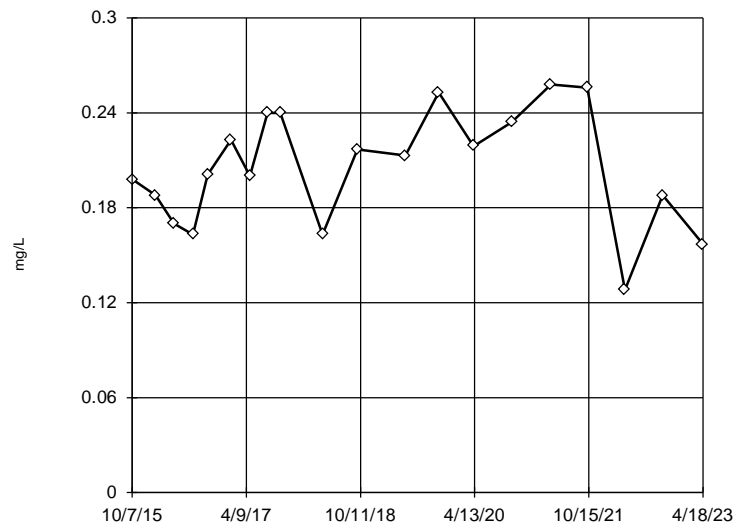
MW-101



n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.2868, std. dev. 0.03582, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9531  
 Critical = 0.923  
 The distribution was found to be normally distributed.

### EPA Screening (suspected outliers for Dixon's Test)

MW-103



n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.2055, std. dev. 0.03655, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9628  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

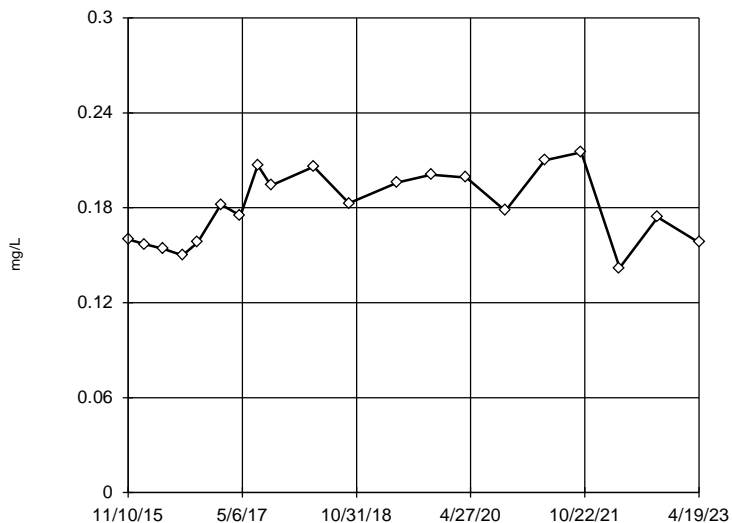
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Fluoride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

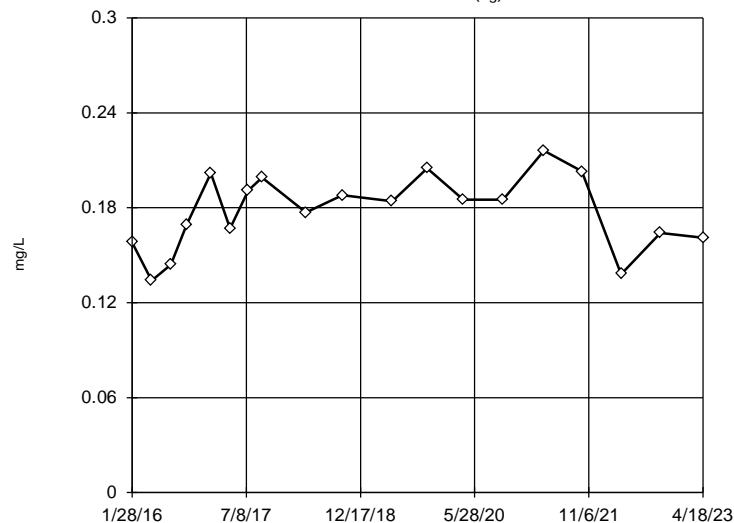
MW-102



n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.18, std. dev. 0.02269, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9388  
 Critical = 0.92  
 The distribution was found to be normally distributed.

### EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.1774, std. dev. 0.02356, critical Tn 2.532  
 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 5/2/2023 3:14 PM View: 2023-1H distributional

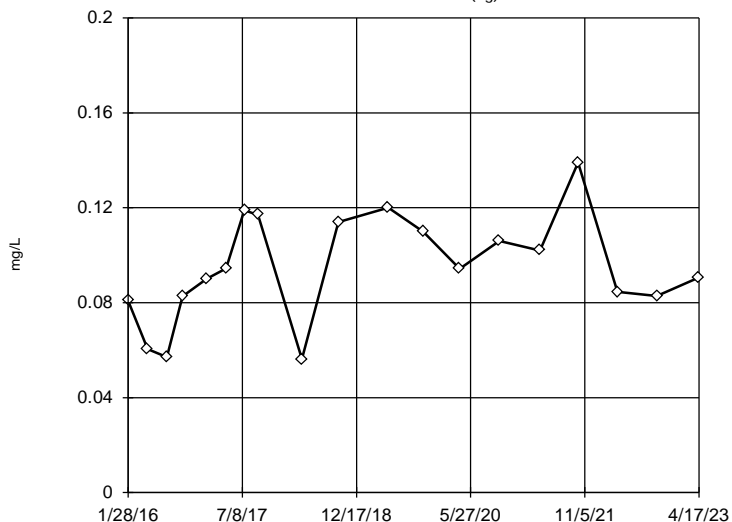
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Fluoride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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)



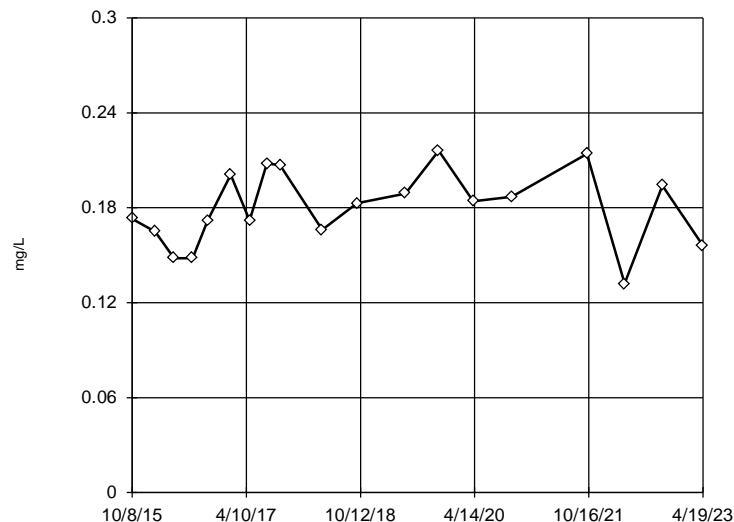
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.09479, std. dev. 0.02258, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9642  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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



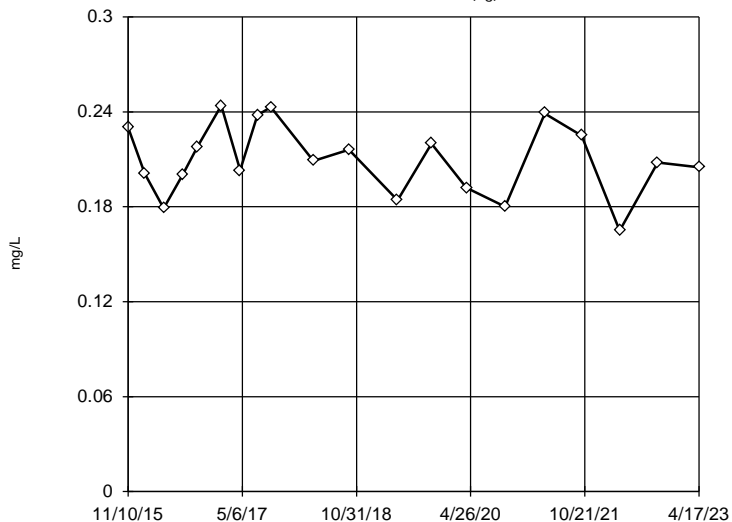
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.1797, std. dev. 0.0239, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9704  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



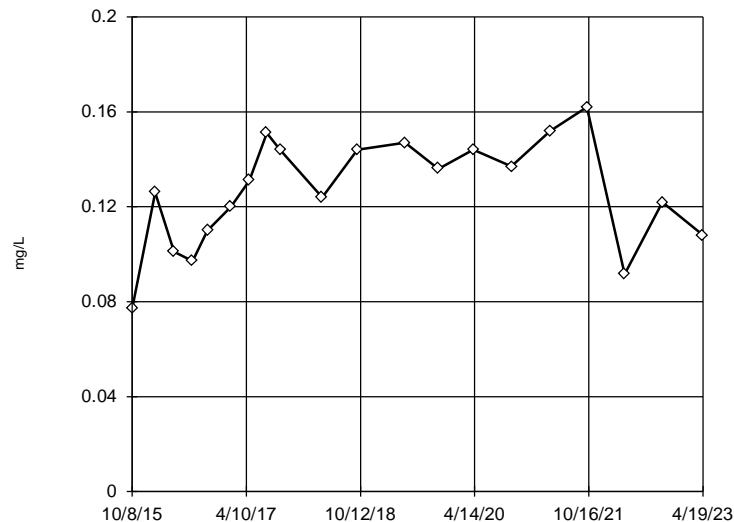
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.21, std. dev. 0.02276, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.967  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

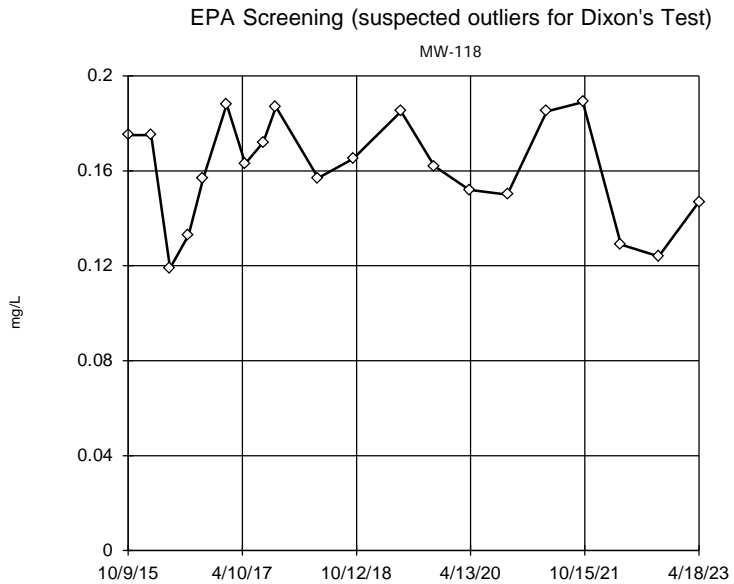
MW-117



n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.1262, std. dev. 0.02287, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9613  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

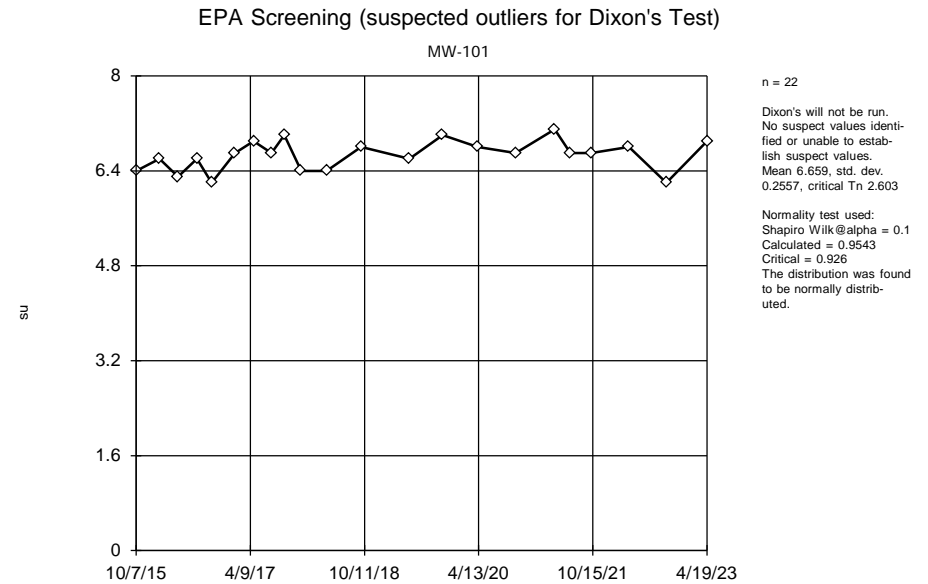
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.1607, std. dev. 0.02206, critical Tn 2.557

Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9335  
 Critical = 0.92  
 The distribution was found to be normally distributed.

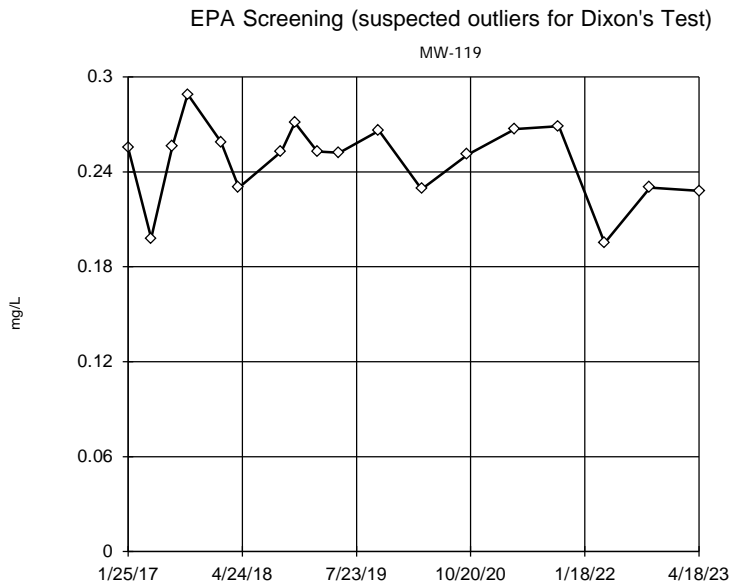
Constituent: Fluoride Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



n = 22  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 6.659, std. dev. 0.2557, 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.

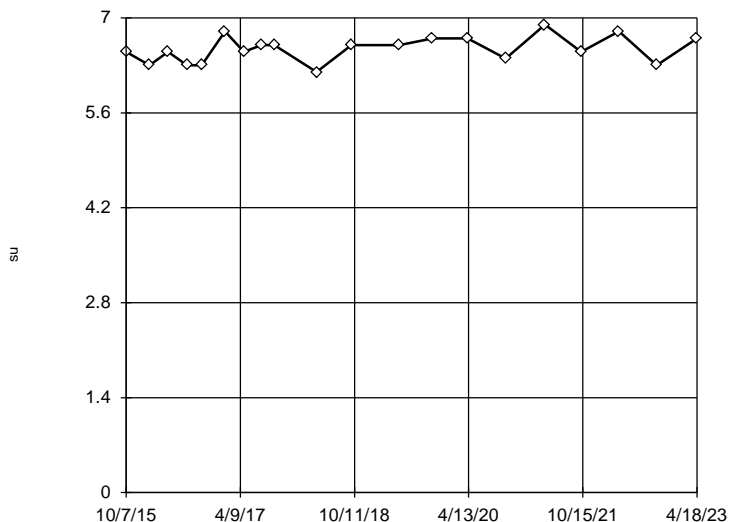
Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional  
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database





### EPA Screening (suspected outliers for Dixon's Test)

MW-103



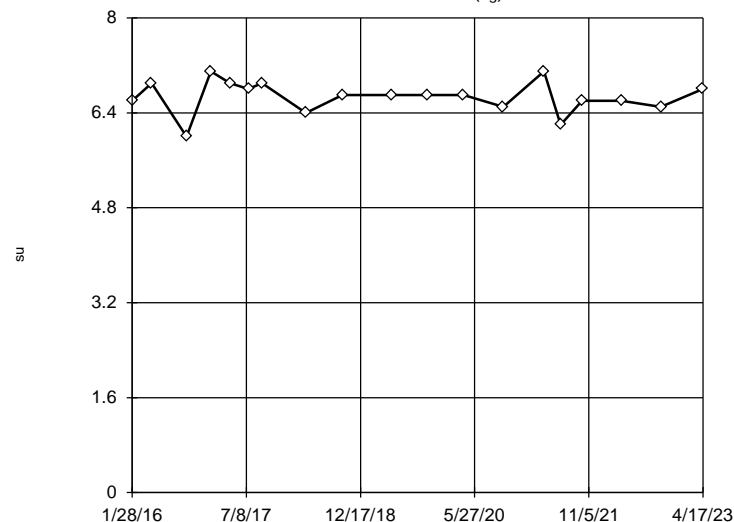
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 6.54, std. dev. 0.1957, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9552  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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)



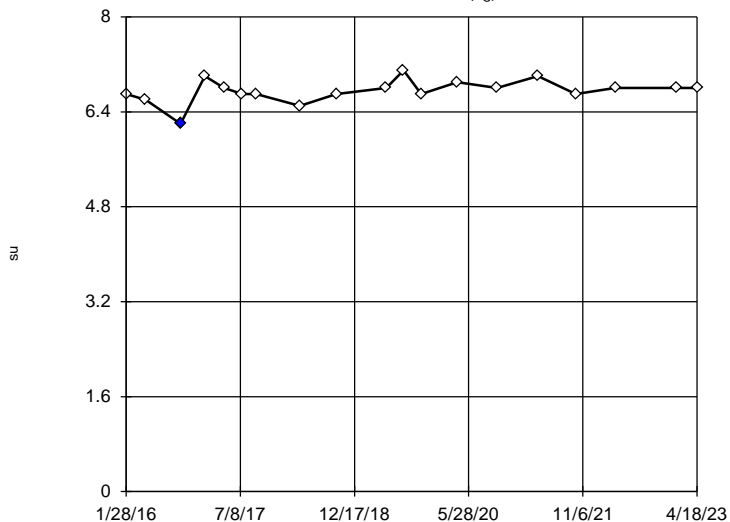
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 6.668, std. dev. 0.277, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9509  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-108 (bg)



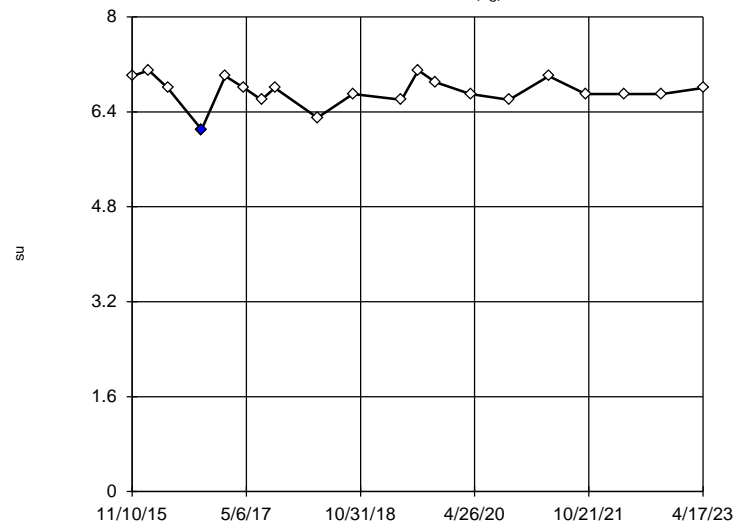
n = 19  
 Statistical outlier is drawn as solid.  
 Testing for 1 low outlier.  
 Mean = 6.753.  
 Std. Dev. = 0.1954.  
 6.2: c = 0.5  
 tab1 = 0.462.  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9267  
 Critical = 0.914  
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-115 (bg)



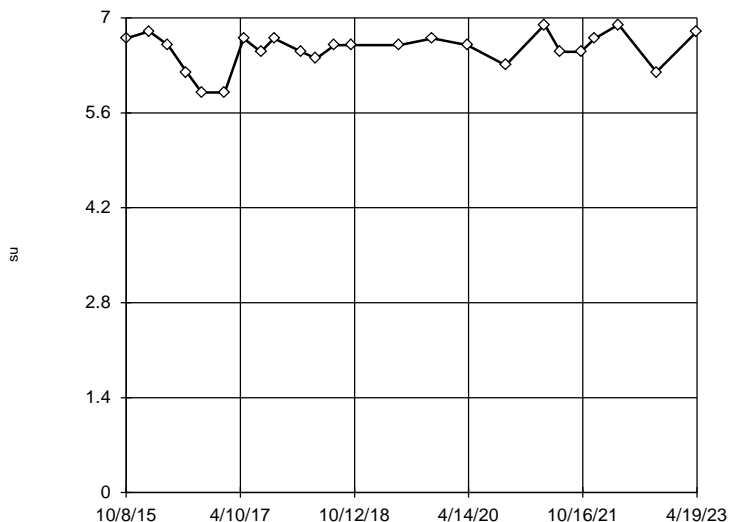
n = 20  
 Statistical outlier is drawn as solid.  
 Testing for 1 low outlier.  
 Mean = 6.75.  
 Std. Dev. = 0.2482.  
 6.1: c = 0.5556  
 tab1 = 0.45.  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9365  
 Critical = 0.917  
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-116



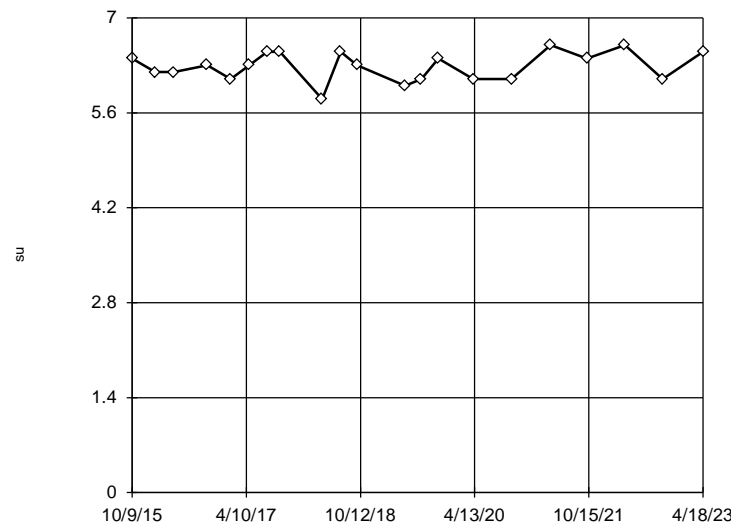
n = 24  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were x\*6 transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 7.253, low cutoff = 5.066, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

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



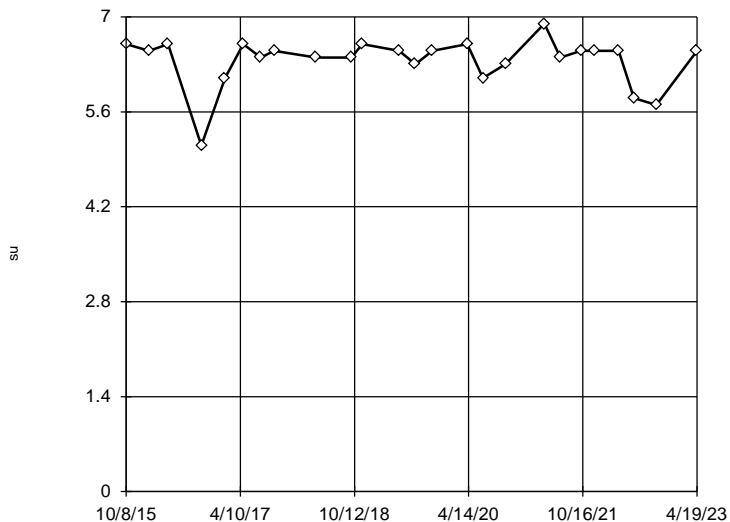
n = 21  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 6.286, std. dev. 0.2151, critical Tn 2.58  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9449 Critical = 0.923 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-117



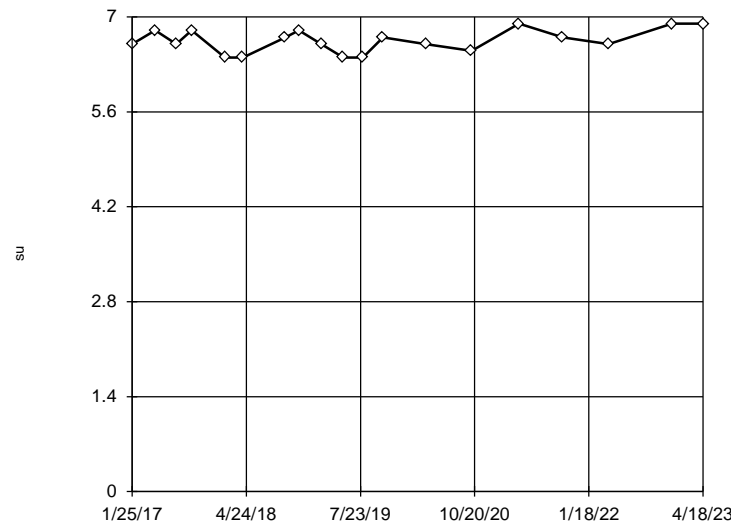
n = 25  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were x\*6 transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 7.104, low cutoff = 4.848, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-119



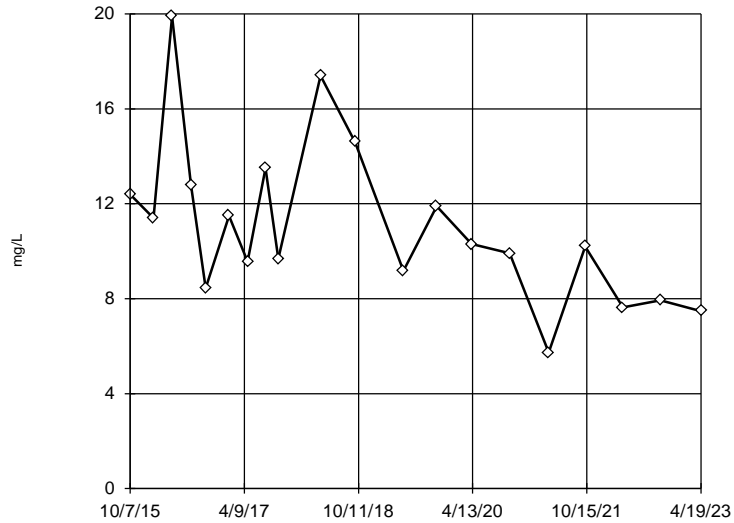
n = 19  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were x\*4 transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 7.52, low cutoff = 5.191, based on IQR multiplier of 3.

Constituent: pH Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

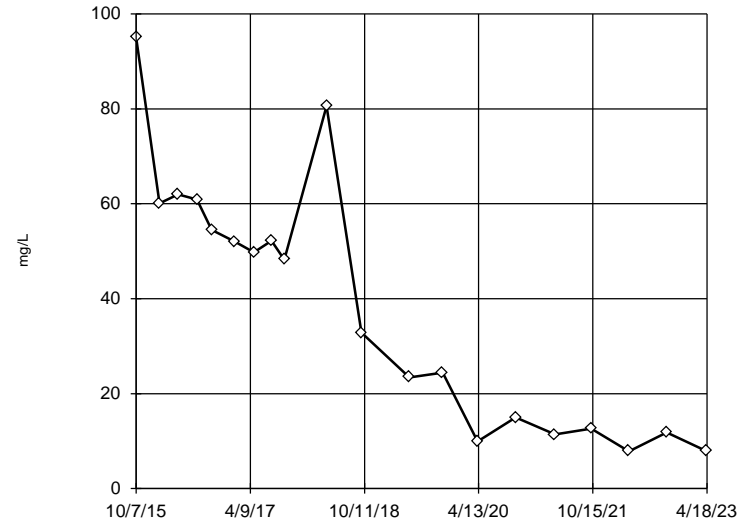
MW-101



n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 11.07, std. dev. 3.423, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk @ alpha = 0.1  
 Calculated = 0.9363  
 Critical = 0.92  
 The distribution was found to be normally distributed.

### Tukey's Outlier Screening

MW-103



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 root transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 391.7, low cutoff = -76.26, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

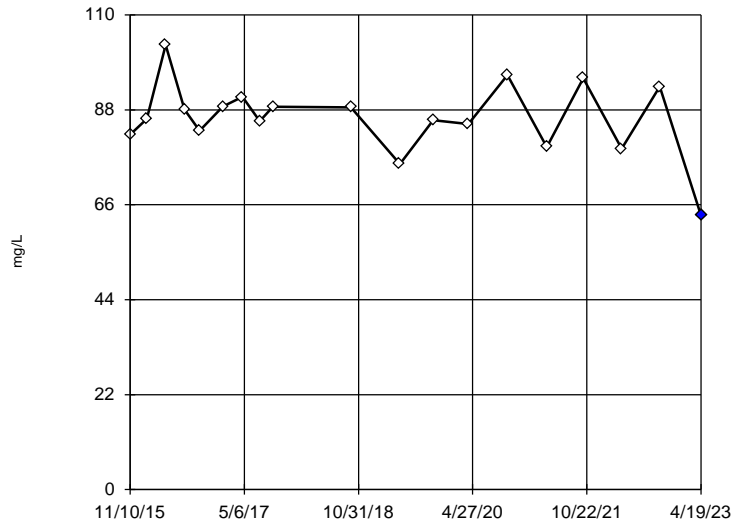
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Sulfate Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-102



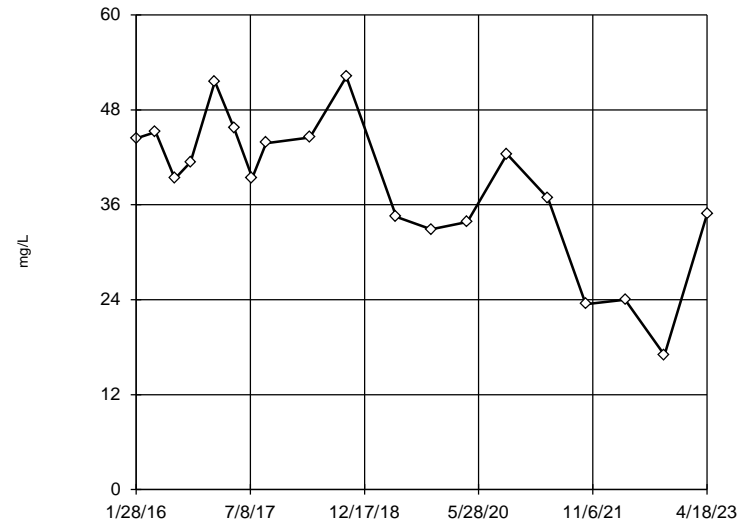
n = 19  
 Statistical outlier is drawn as solid.  
 Testing for 1 low outlier.  
 Mean = 86.18,  
 Std. Dev. = 8.557,  
 63.5: c = 0.4874  
 tab1 = 0.462,  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk @ alpha = 0.1  
 Calculated = 0.9792  
 Critical = 0.914  
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-108 (bg)



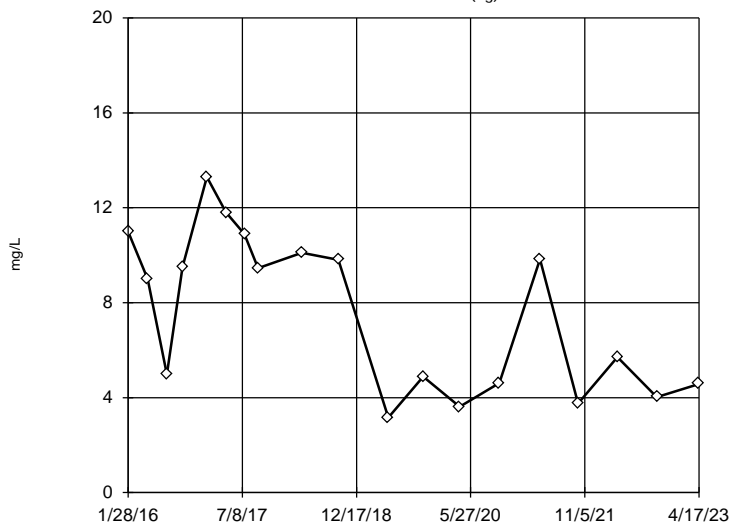
n = 19  
 No statistical outliers.  
 Testing for 1 low outlier.  
 Mean = 38.27,  
 Std. Dev. = 9.326,  
 17: c = 0.2439  
 tab1 = 0.462,  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk @ alpha = 0.1  
 Calculated = 0.9492  
 Critical = 0.914  
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/2/2023 3:14 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

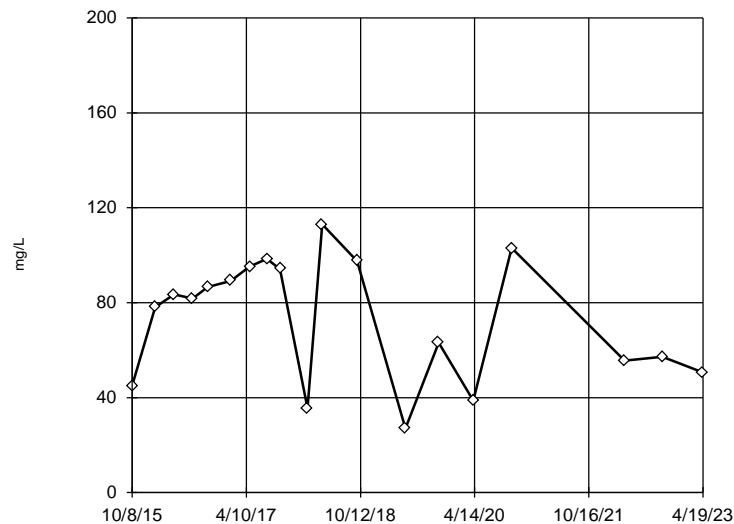
MW-113 (bg)



n = 19  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Ladder of Powers transformations did not improve normality; analysis run on raw data.  
 High cutoff = 26.69, low cutoff = -12.02, based on IQR multiplier of 3.

### 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 73.32, std. dev. 25.79, critical Tn 2.532  
 Normality test used: Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9393  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/2/2023 3:15 PM View: 2023-1H distributional

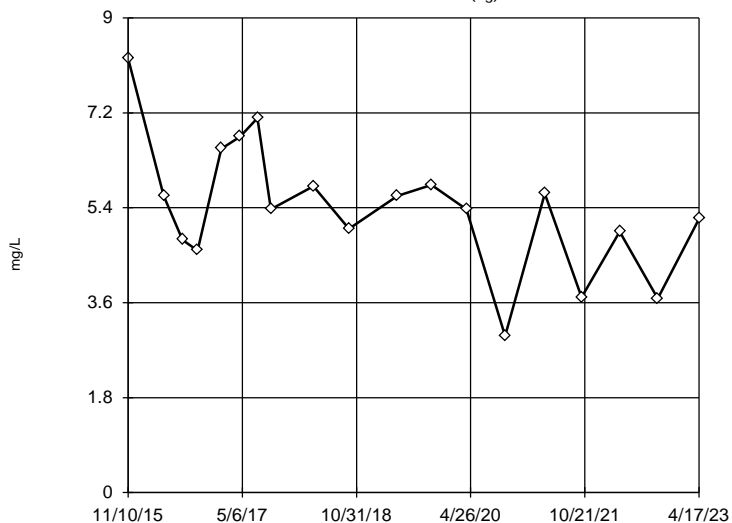
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Sulfate Analysis Run 5/2/2023 3:15 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



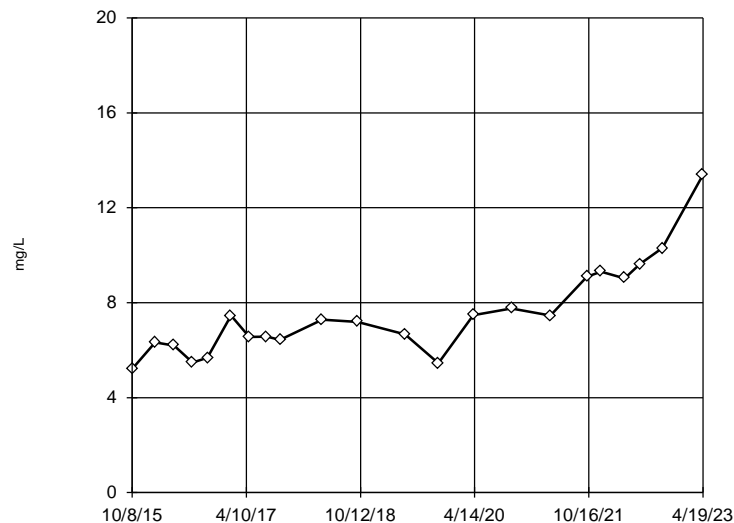
n = 19  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 5.409, std. dev. 1.24, critical Tn 2.532  
 Normality test used: Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9726  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 5/2/2023 3:15 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### EPA Screening (suspected outliers for Dixon's Test)

MW-117



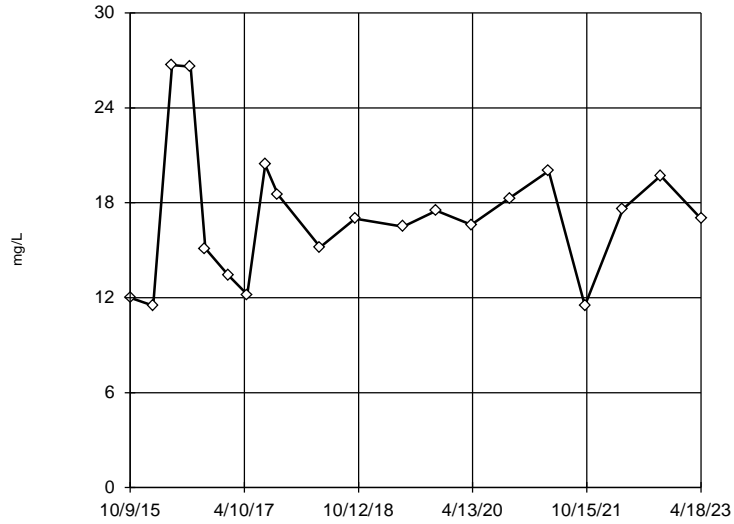
n = 22  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 7.541, std. dev. 1.941, critical Tn 2.603  
 Normality test used: Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9479  
 Critical = 0.926 (after natural log transformation)  
 The distribution was found to be log-normal.

Constituent: Sulfate Analysis Run 5/2/2023 3:15 PM View: 2023-1H distributional

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 = 20

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 17.17, std. dev. 4.273, critical Tn 2.557

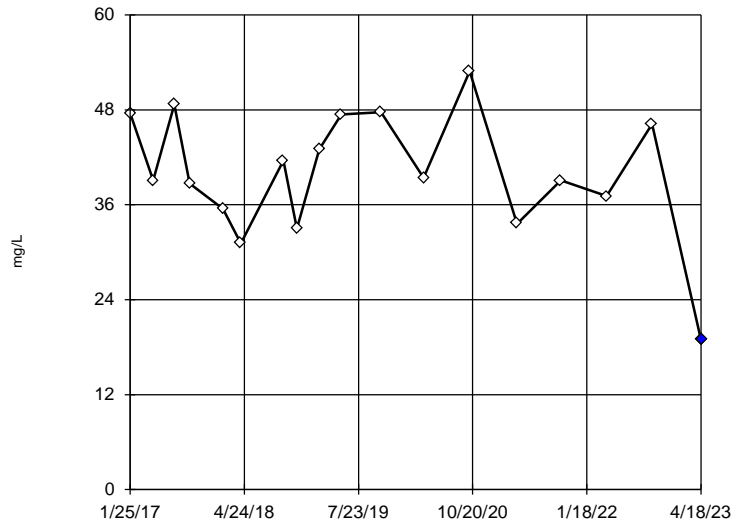
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.942  
Critical = 0.92 (after natural log transformation)  
The distribution was found to be log-normal.

Constituent: Sulfate Analysis Run 5/2/2023 3:15 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-119



n = 18

Statistical outlier is drawn as solid.  
Testing for 1 low outlier.  
Mean = 40.03.  
Std. Dev. = 8.083.  
18.9: c = 0.4896  
tabl = 0.475.  
Alpha = 0.05.

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.959  
Critical = 0.91  
The distribution, after removal of suspect value, was found to be normally distributed.

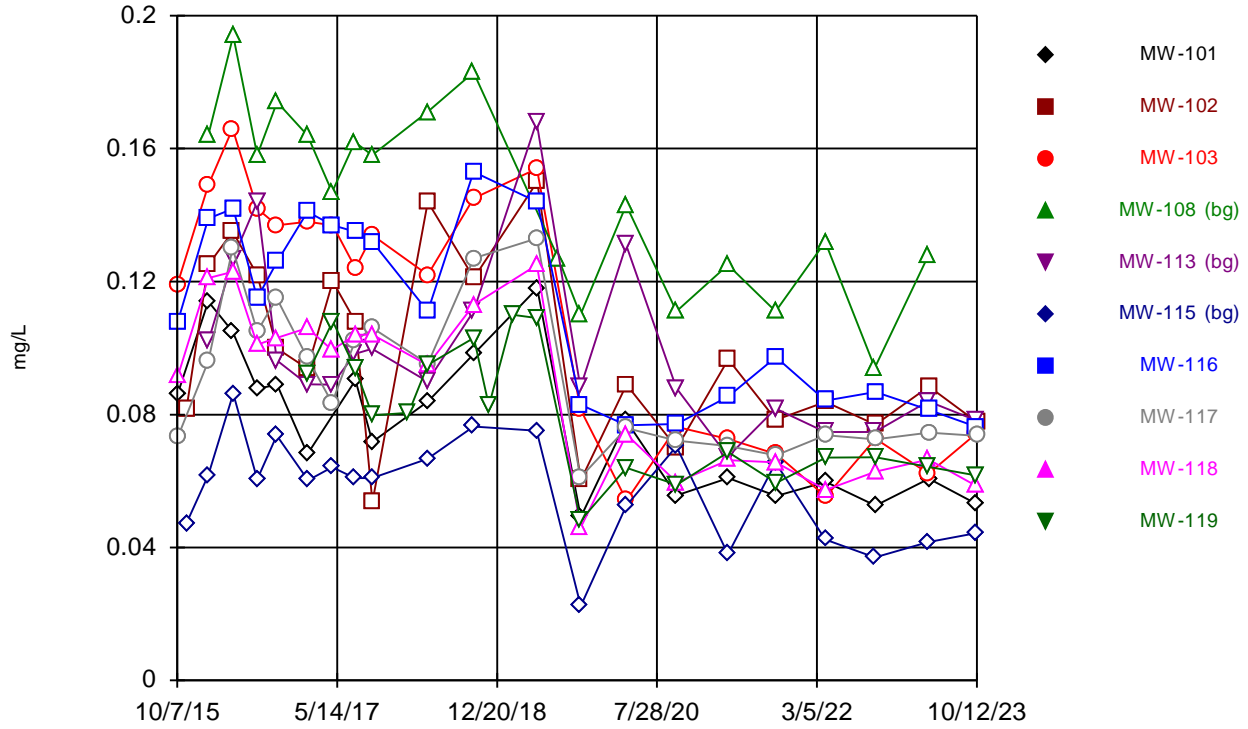
Constituent: Sulfate Analysis Run 5/2/2023 3:15 PM View: 2023-1H distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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**Time-Series Plots, Second Half of 2023 Data Set**

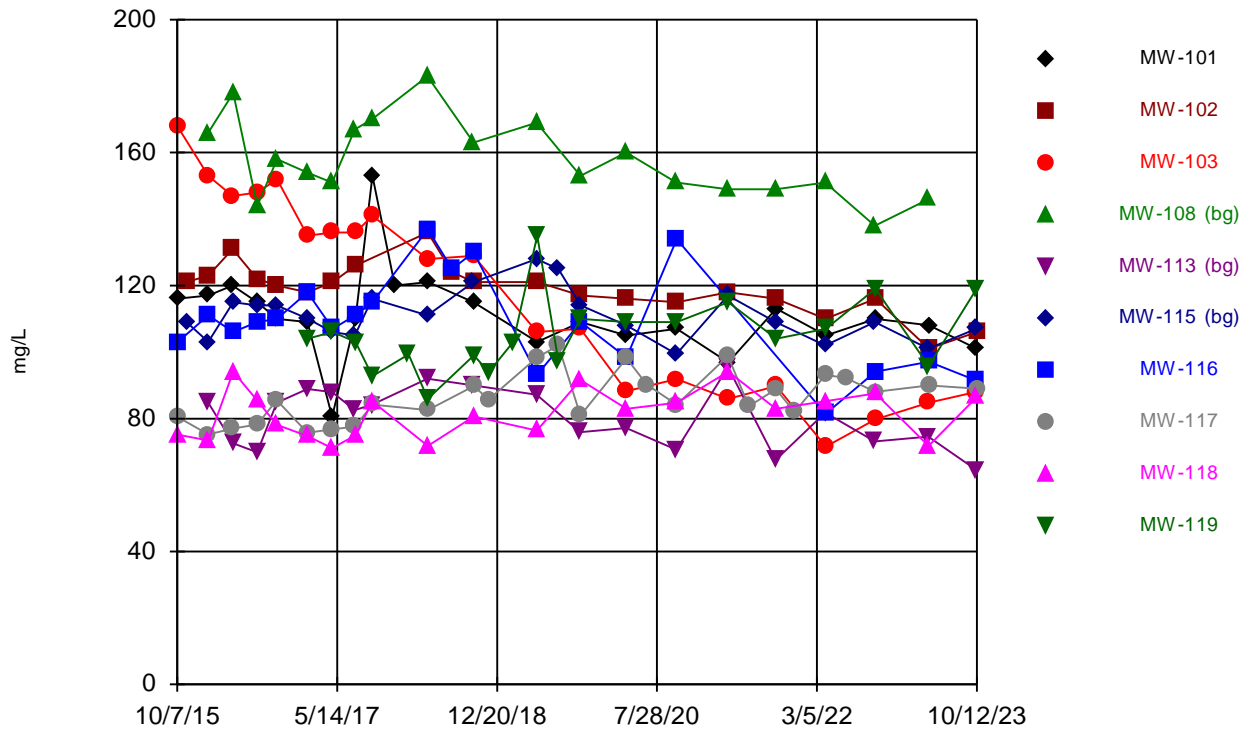
### Time Series



Constituent: Boron Analysis Run 10/25/2023 11:26 AM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

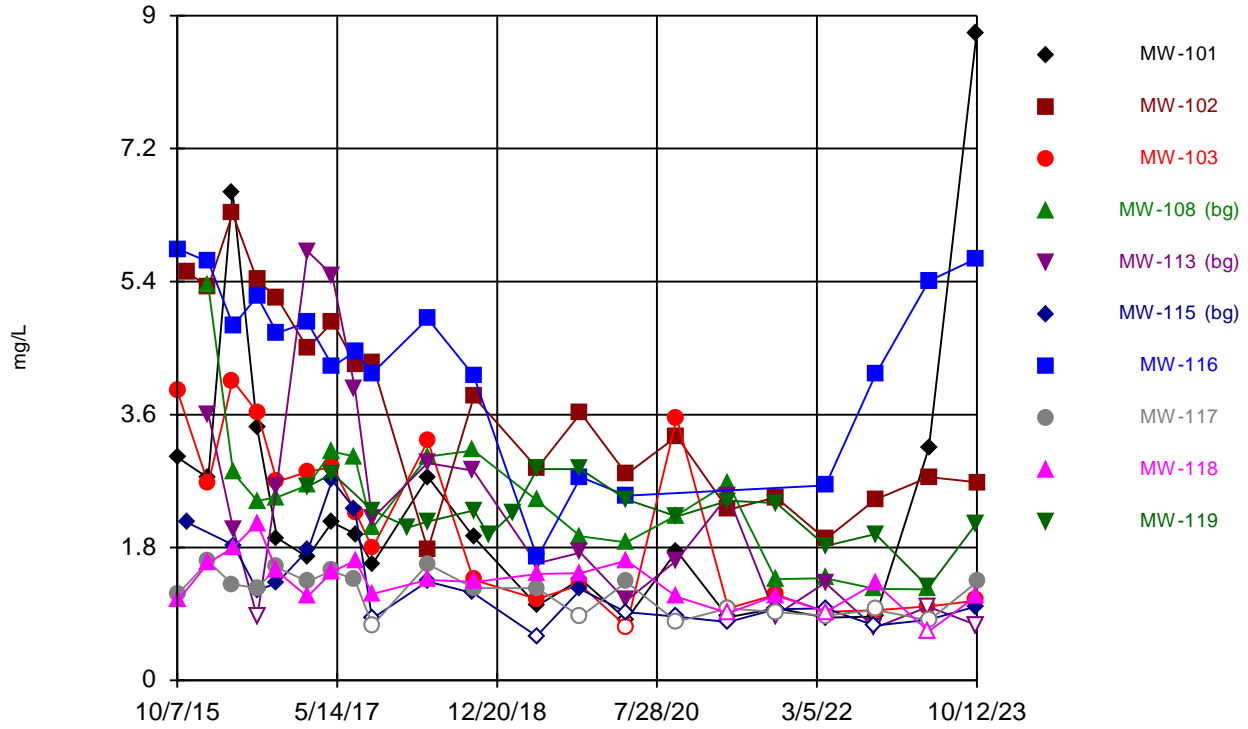
### Time Series



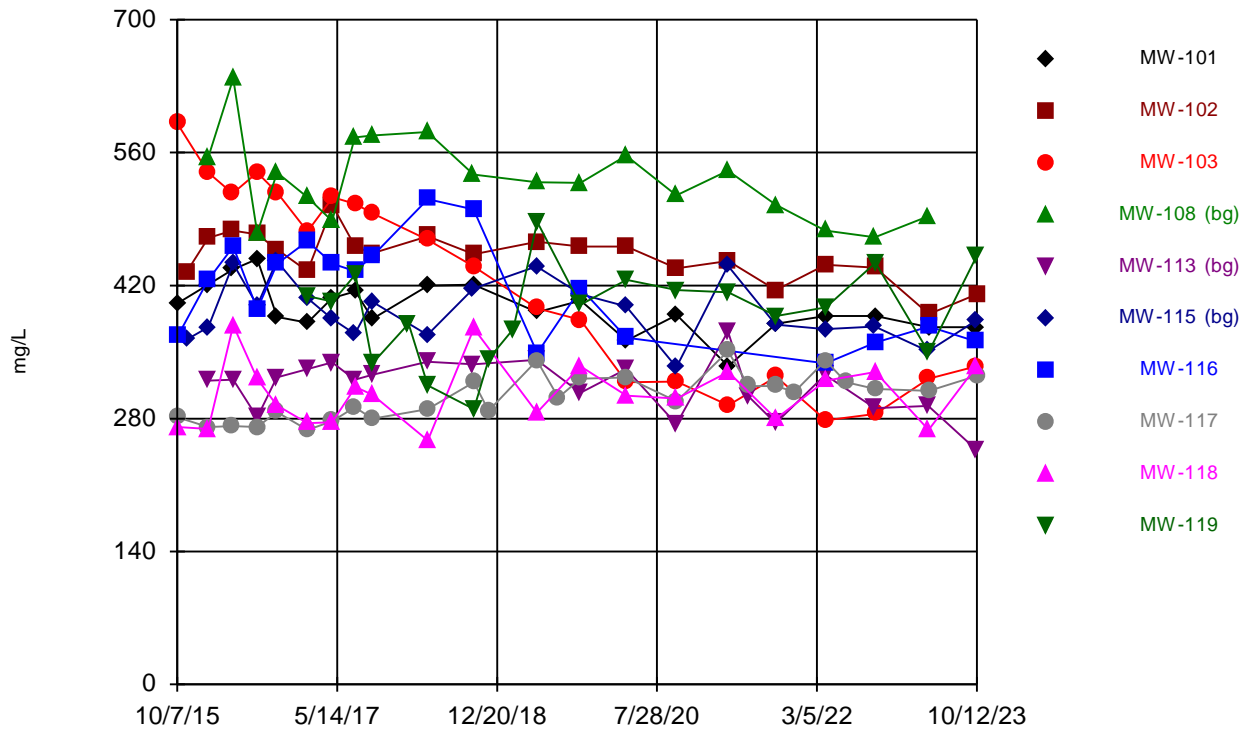
Constituent: Calcium Analysis Run 10/25/2023 11:26 AM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Time Series

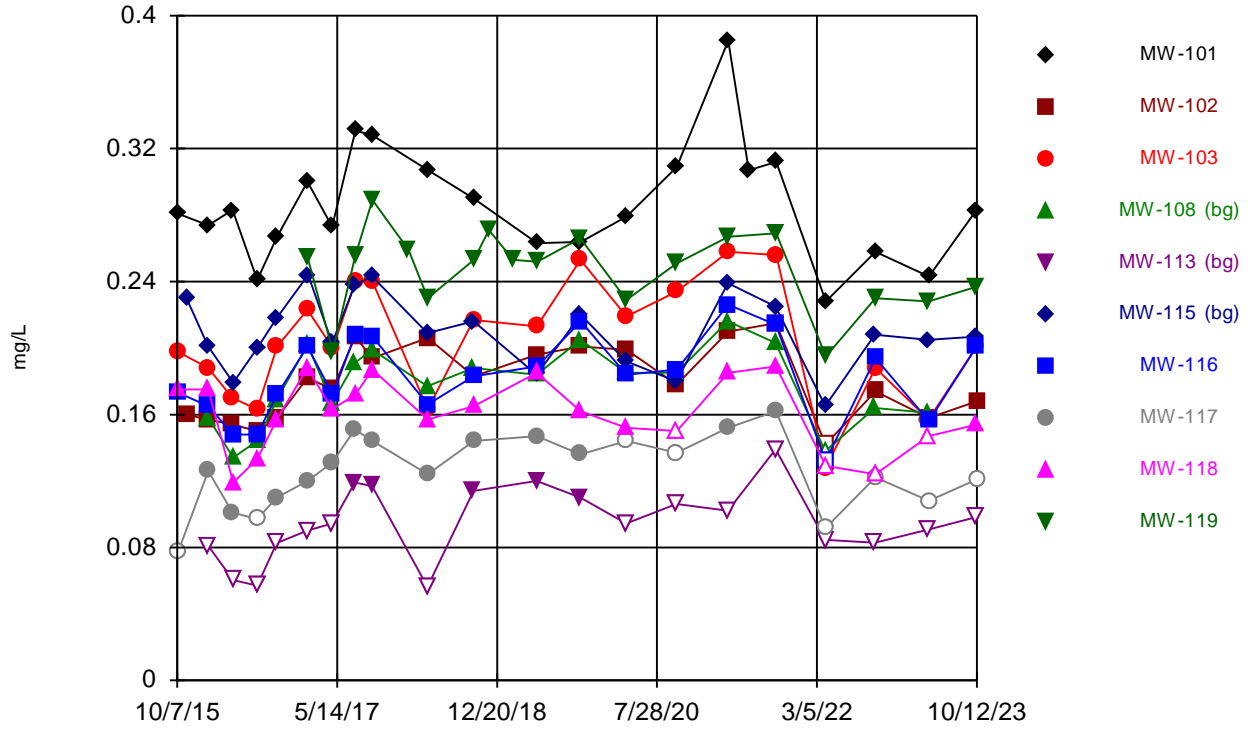


### Time Series





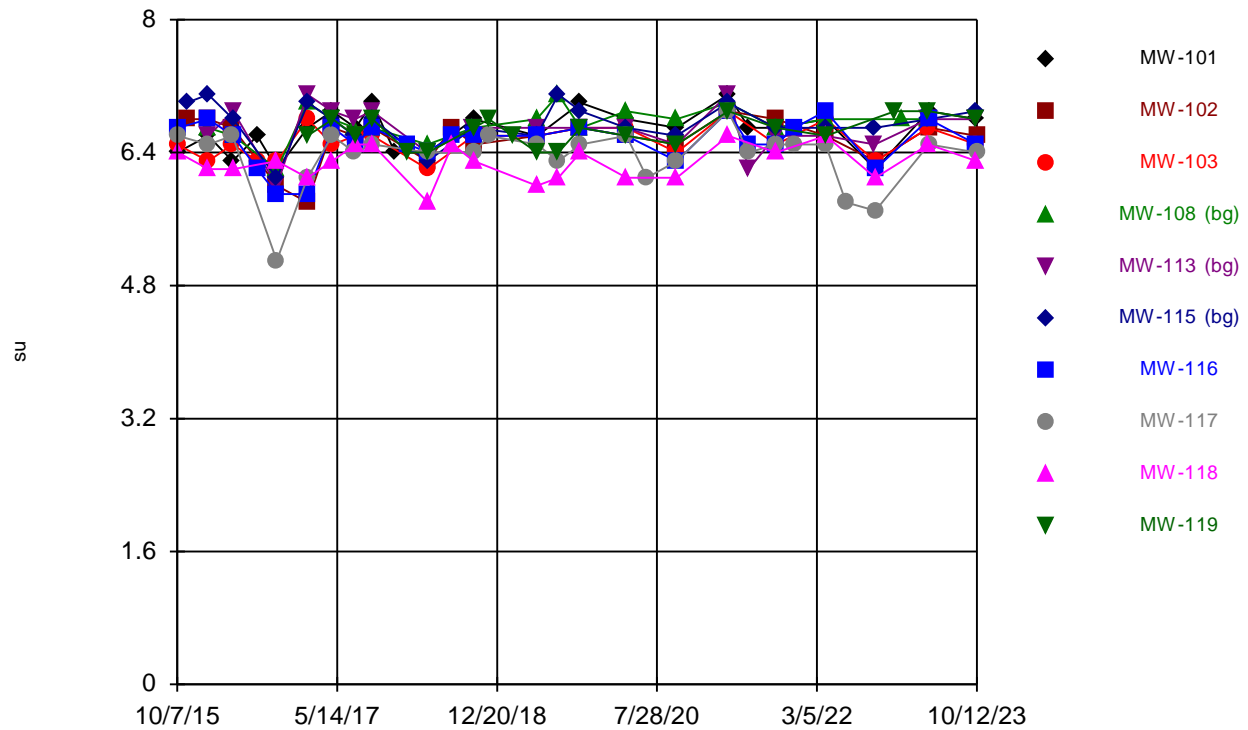
### Time Series



Constituent: Fluoride Analysis Run 10/25/2023 11:26 AM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

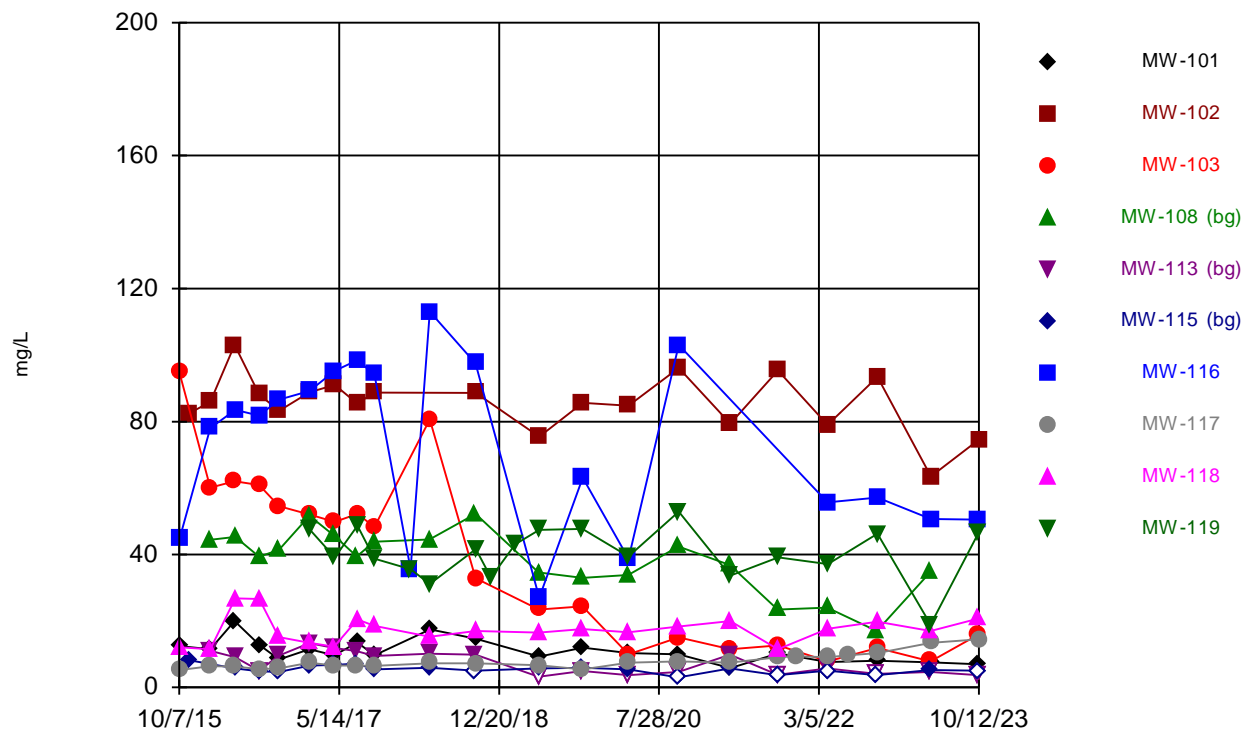
### Time Series



Constituent: pH Analysis Run 10/25/2023 11:26 AM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Time Series



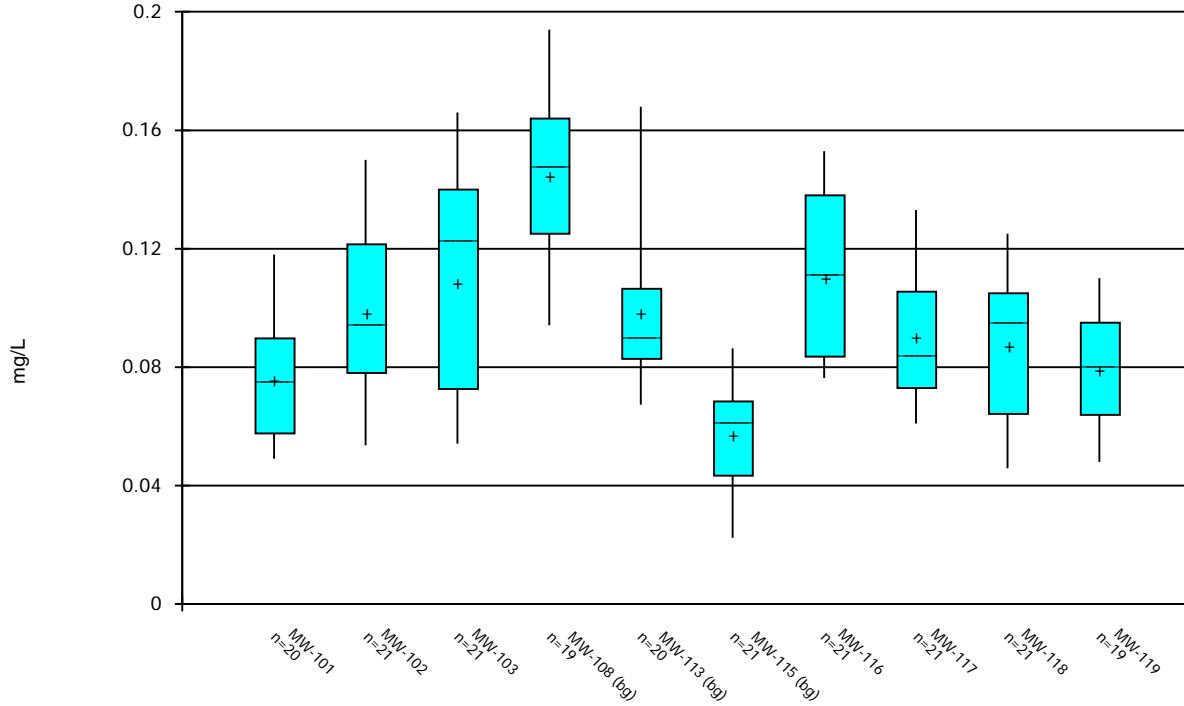
Constituent: Sulfate Analysis Run 10/25/2023 11:26 AM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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**Box-and-Whisker Plots, Second Half of 2023 Data Set**

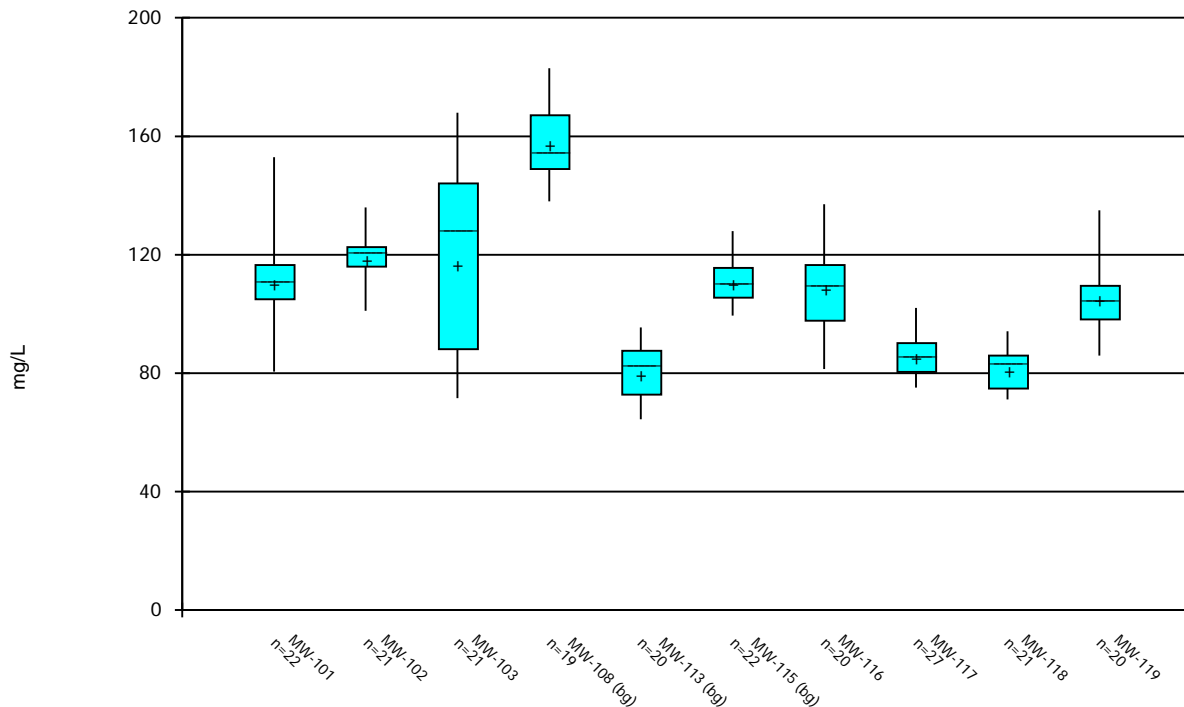
### Box & Whiskers Plot



Constituent: Boron Analysis Run 12/21/2023 12:43 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

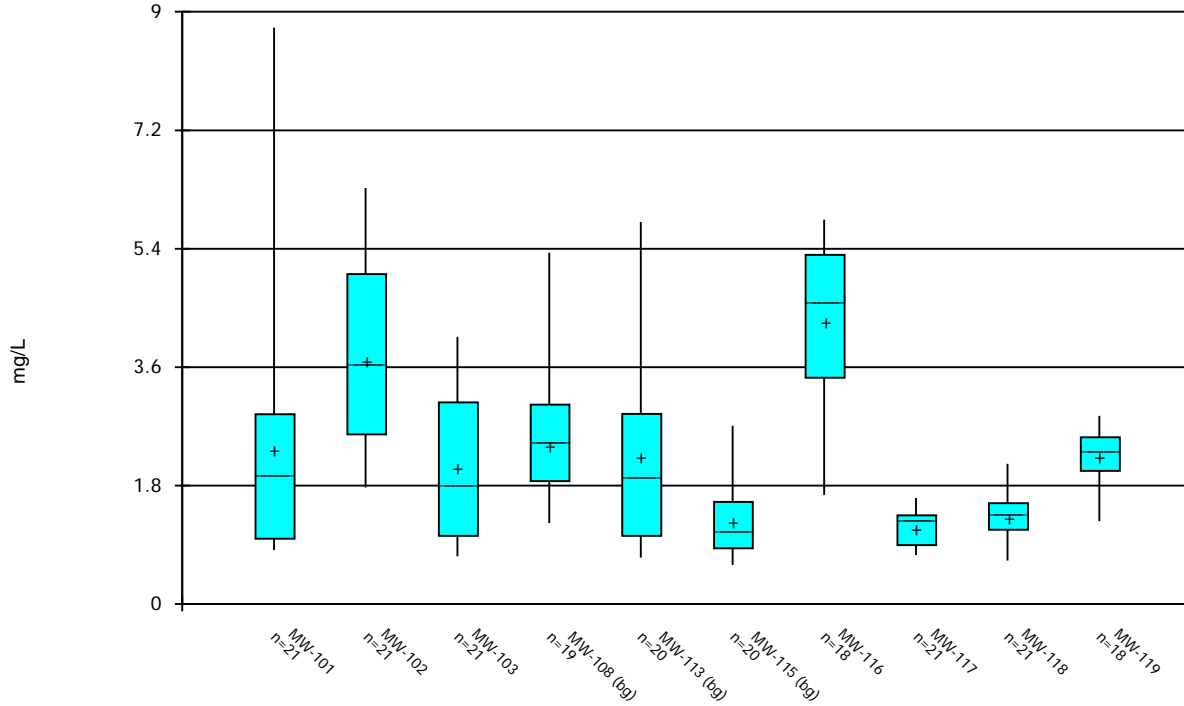
### Box & Whiskers Plot



Constituent: Calcium Analysis Run 12/21/2023 12:43 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

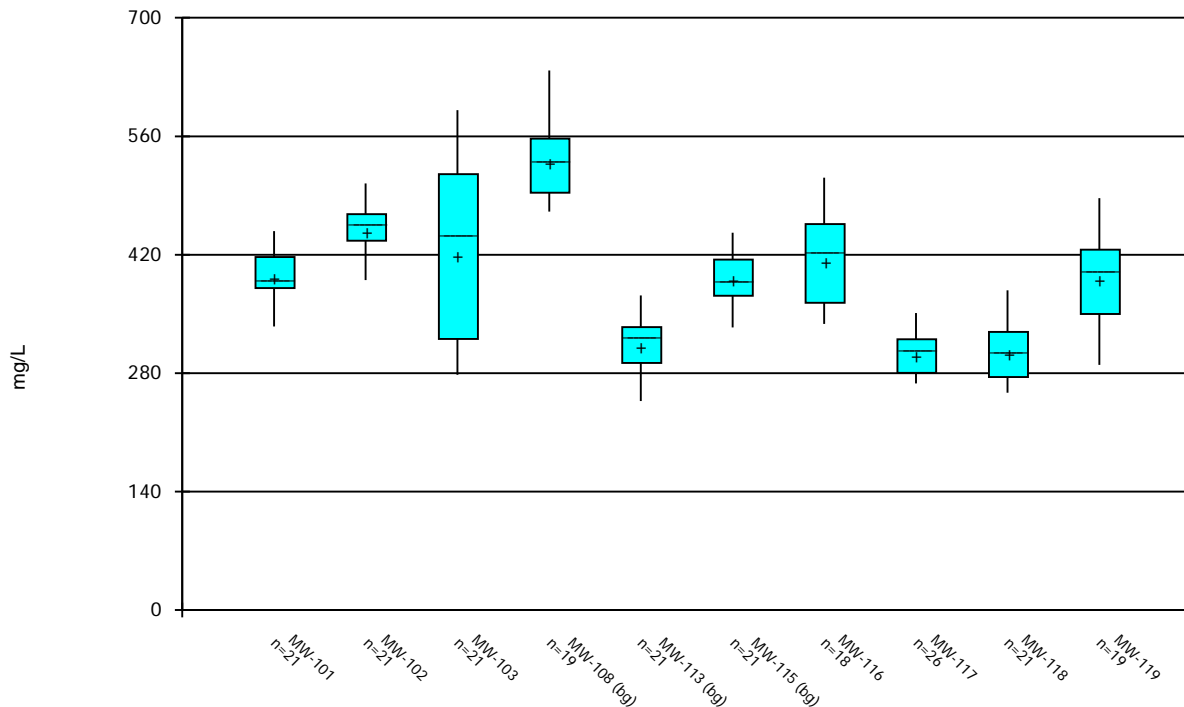
### Box & Whiskers Plot



Constituent: Chloride Analysis Run 12/21/2023 12:43 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

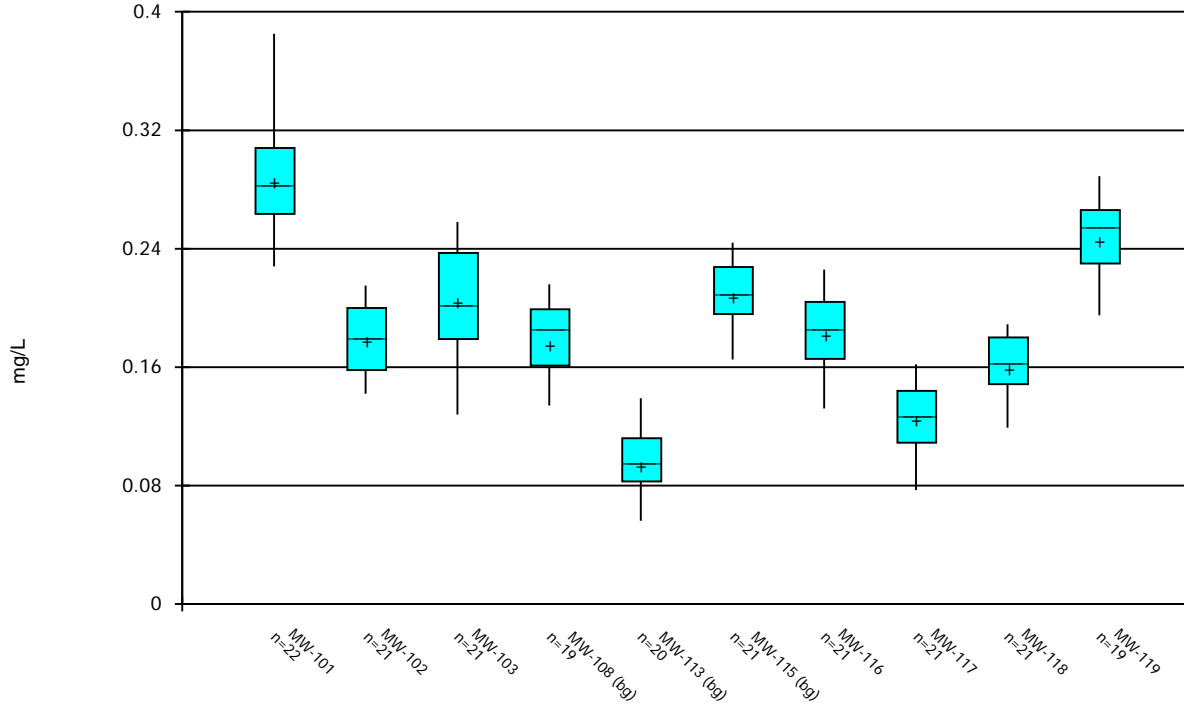
### Box & Whiskers Plot



Constituent: Dissolved Solids Analysis Run 12/21/2023 12:43 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

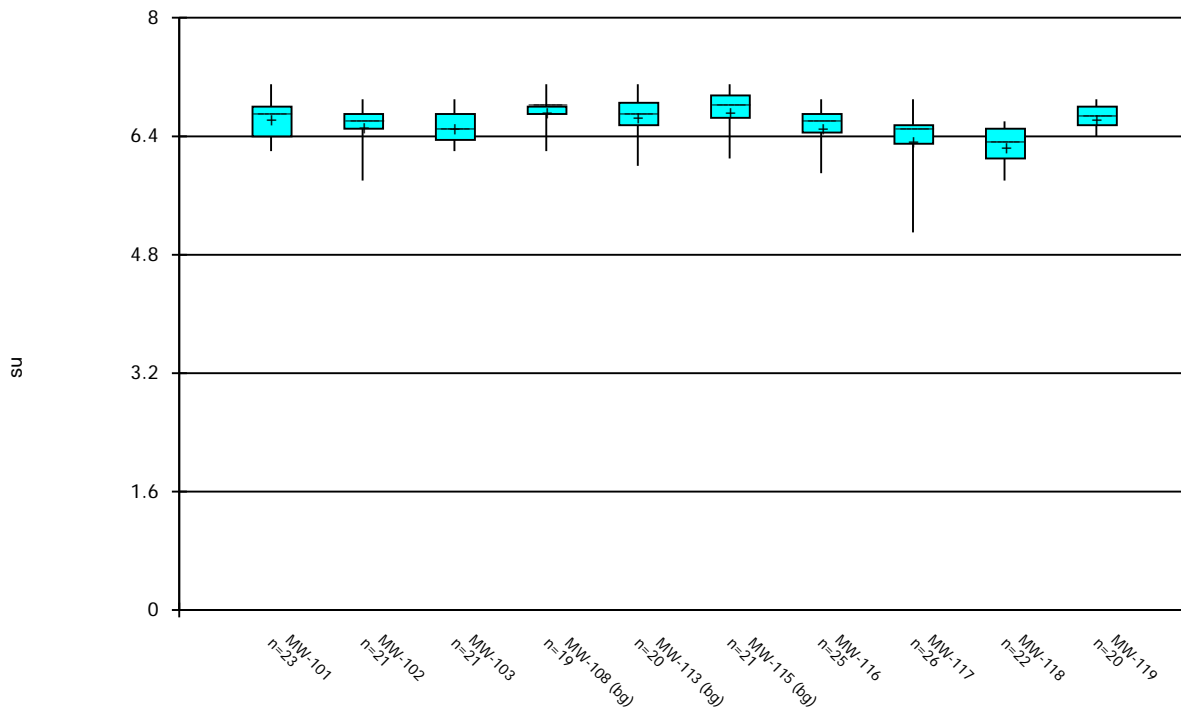
### Box & Whiskers Plot



Constituent: Fluoride Analysis Run 12/21/2023 12:43 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

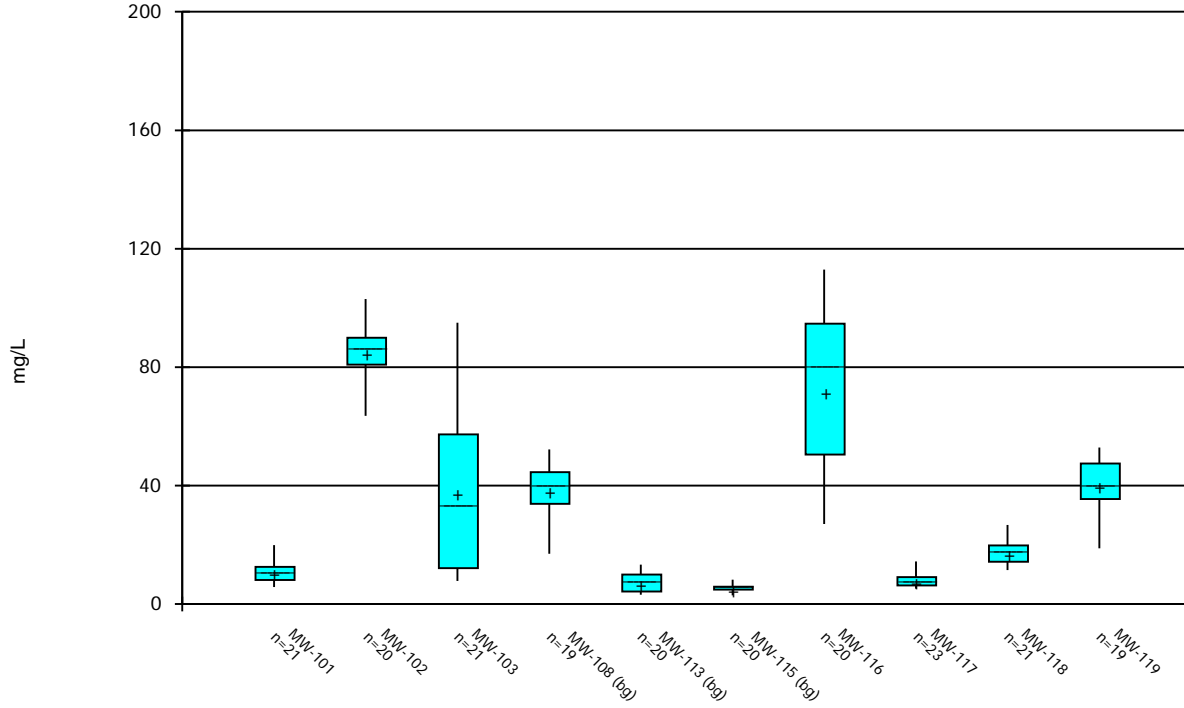
### Box & Whiskers Plot



Constituent: pH Analysis Run 12/21/2023 12:43 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Box & Whiskers Plot



Constituent: Sulfate Analysis Run 12/21/2023 12:43 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

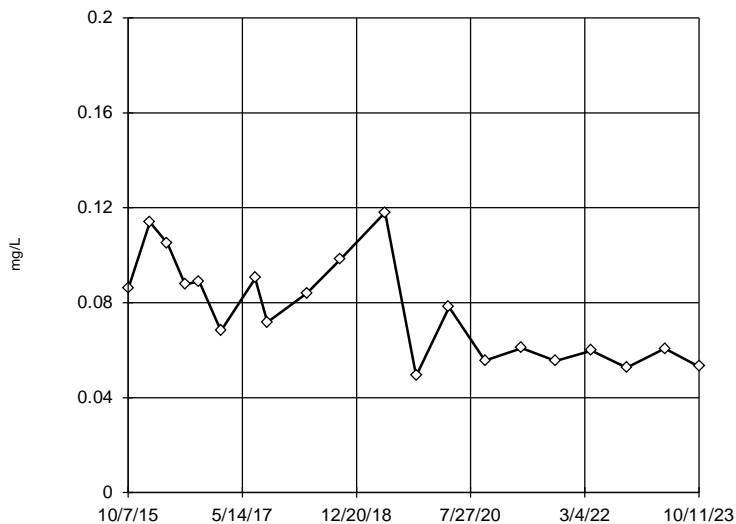
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**Outlier Plots, Period-of-Record Data through Second Half of 2023**



### EPA Screening (suspected outliers for Dixon's Test)

MW-101



n = 20

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.07684, std. dev. 0.02133, critical Tn 2.557

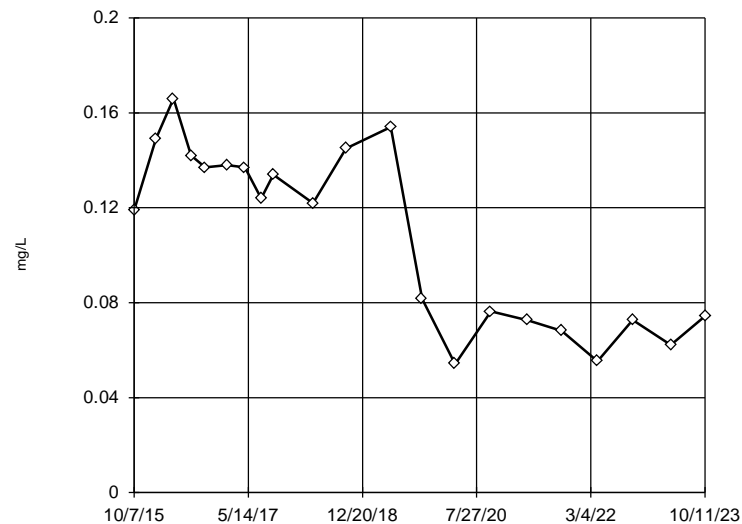
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9281  
Critical = 0.92  
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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 = 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 square transformed to achieve best W statistic (graph shown in original units).

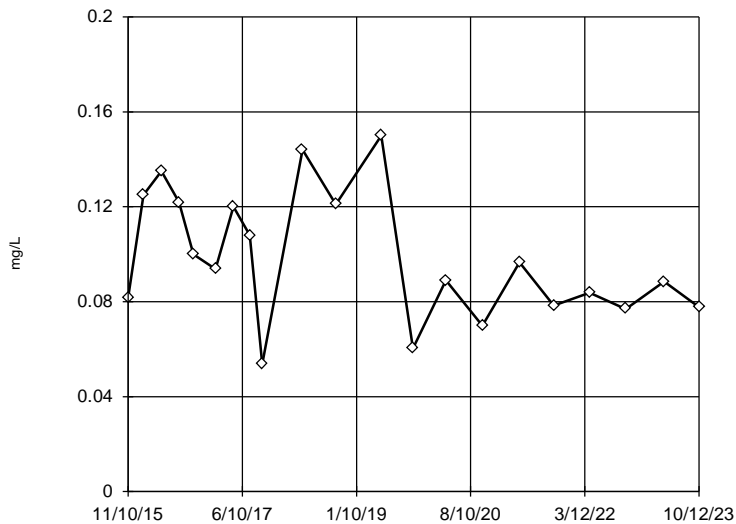
High cutoff = 0.2502,  
low cutoff = -0.1942,  
based on IQR multiplier of 3.

Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-102



n = 21

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.09881, std. dev. 0.0271, critical Tn 2.58

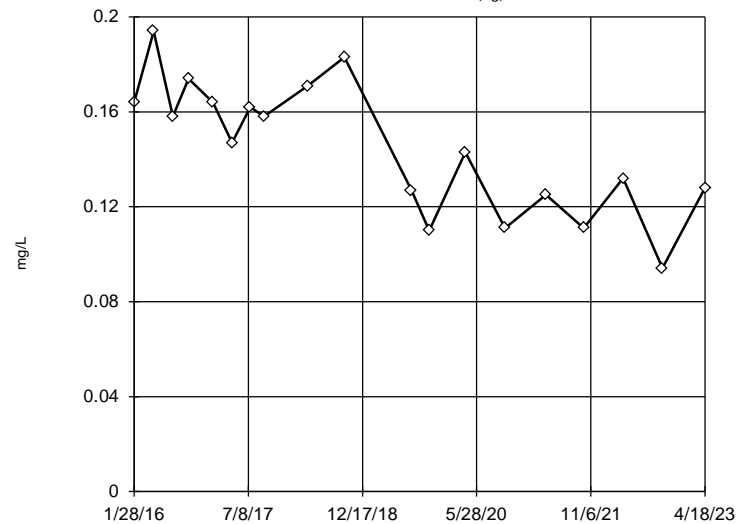
Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9643  
Critical = 0.923  
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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 = 19

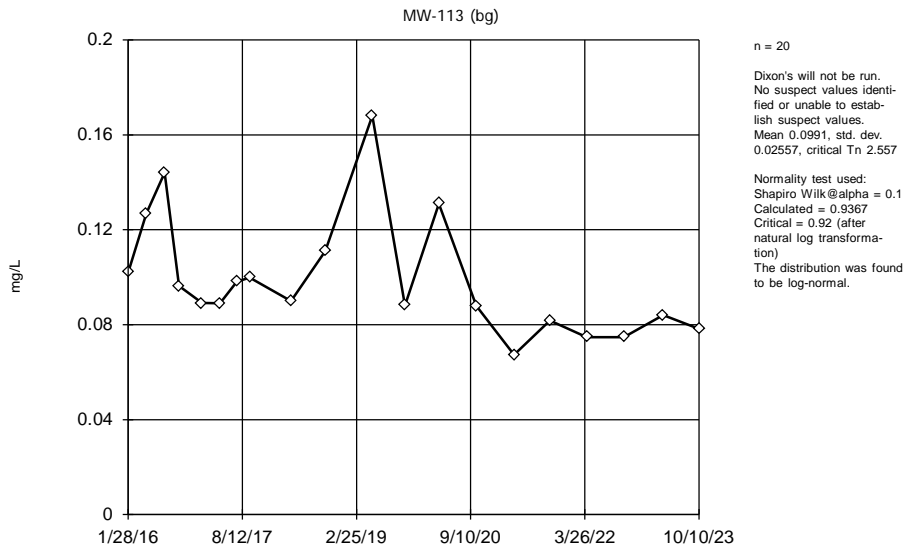
Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.1451, std. dev. 0.02792, critical Tn 2.532

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9663  
Critical = 0.917  
The distribution was found to be normally distributed.

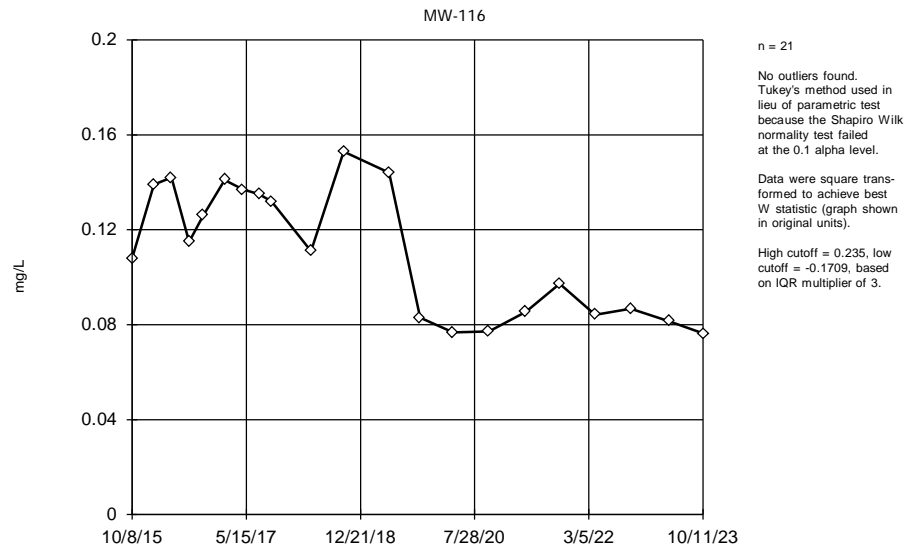
Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

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)



### Tukey's Outlier Screening



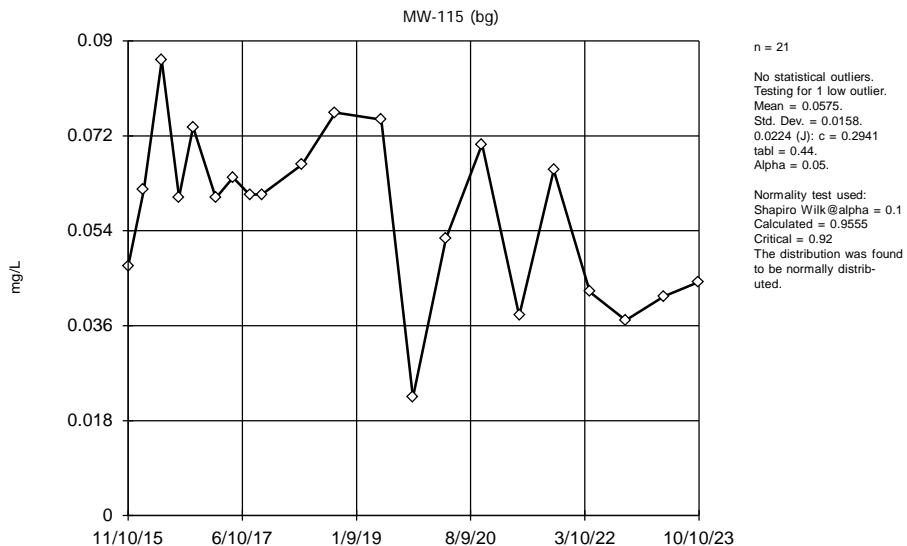
Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

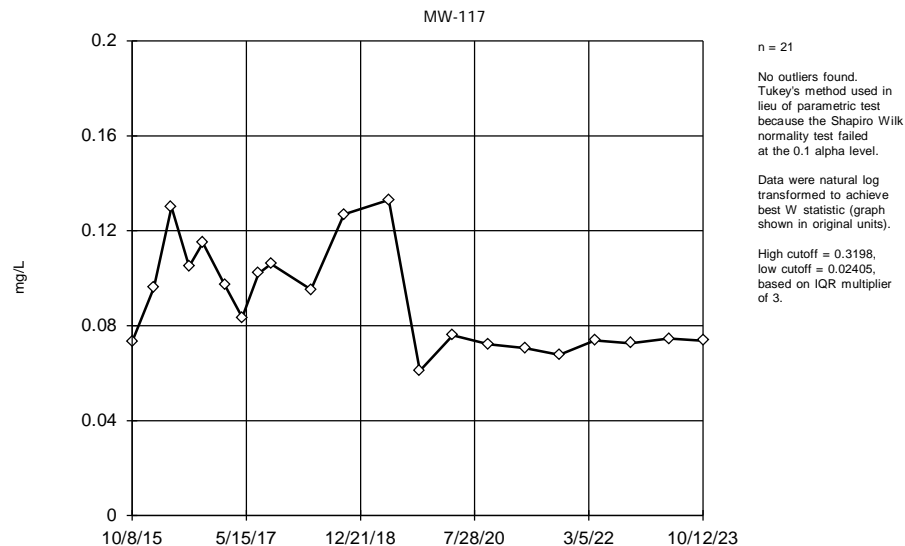
### Dixon's Outlier Test



Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

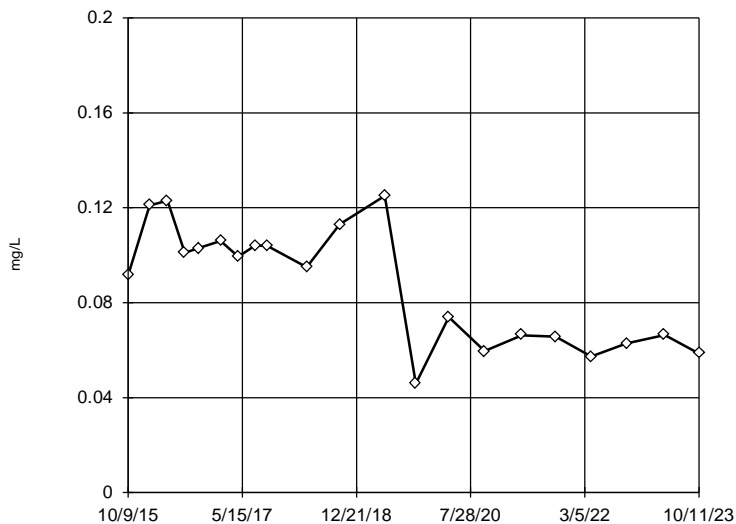


Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

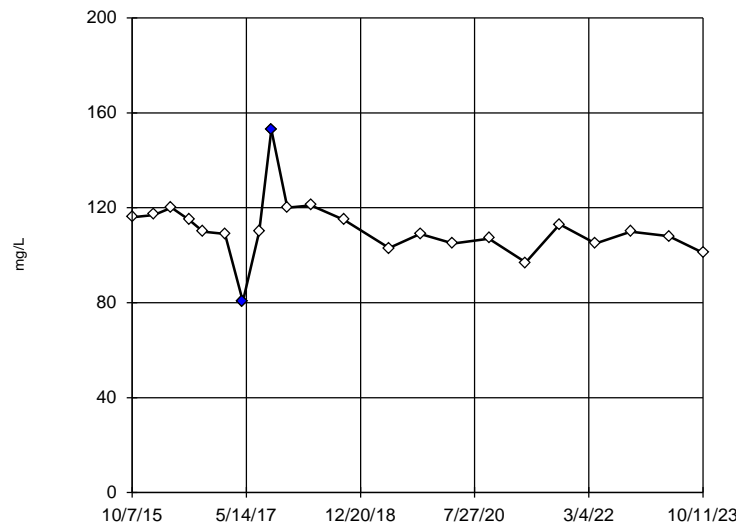
MW-118



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 = 0.2274, low cutoff = -0.0582, based on IQR multiplier of 3.

### Dixon's Outlier Test

MW-101



n = 22  
 Statistical outliers are drawn as solid.  
 Testing for 1 high and 1 low outliers.  
 Mean = 111.1, Std. Dev. = 12.95, 153: c = 0.6346 tab1 = 0.43, 80.5: c = 0.519 tab1 = 0.43, Alpha = 0.05.  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.972 Critical = 0.92 The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

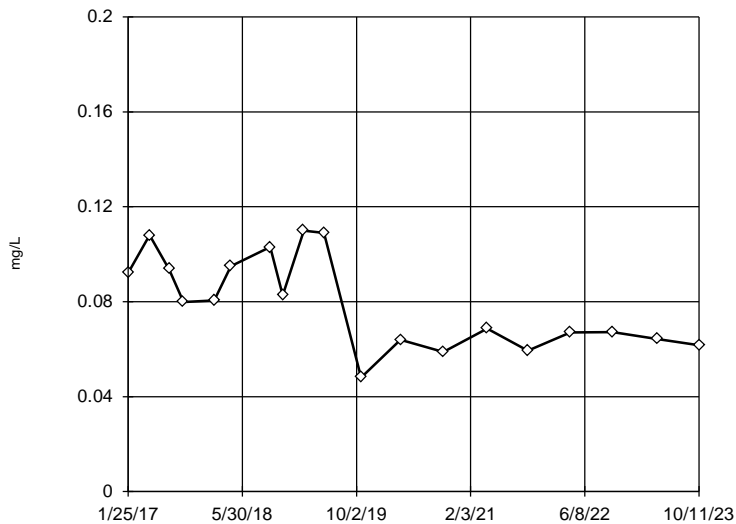
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-119



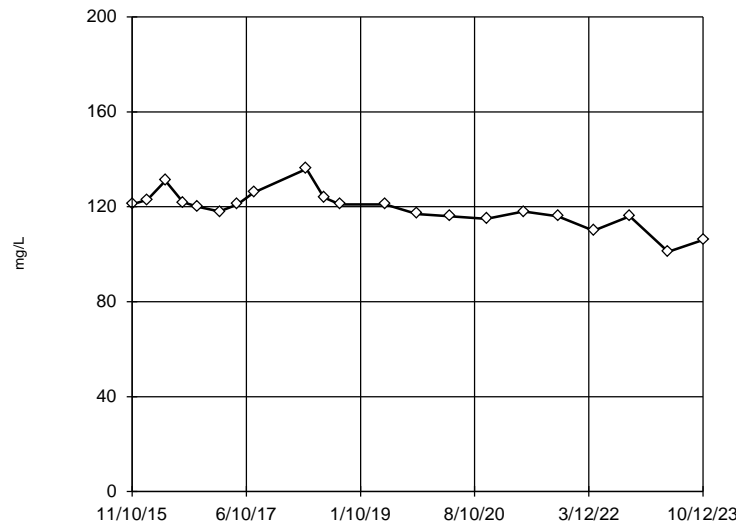
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.0796, std. dev. 0.01947, critical Tn 2.532  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.926 Critical = 0.917 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-102



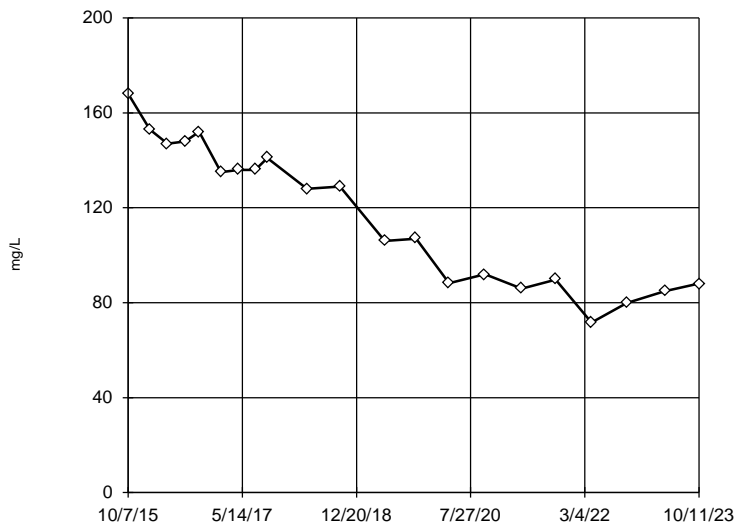
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 119, std. dev. 7.655, critical Tn 2.58  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9521 Critical = 0.923 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-103



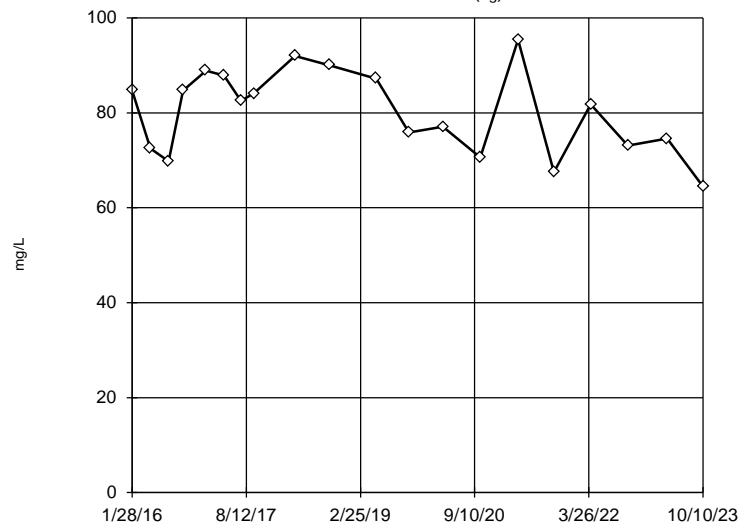
n = 21  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Ladder of Powers transformations did not improve normality; analysis run on raw data.  
 High cutoff = 311.7, low cutoff = -79.6, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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)



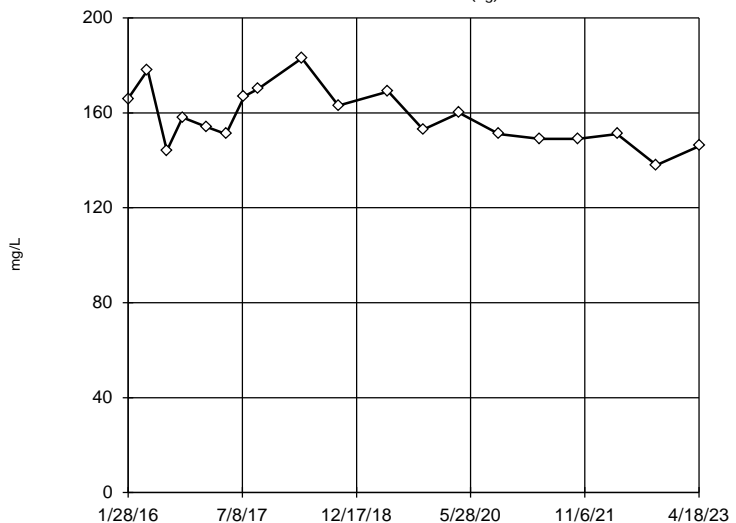
n = 20  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 80.24, std. dev. 8.859, critical Tn 2.557  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9645 Critical = 0.92 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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)



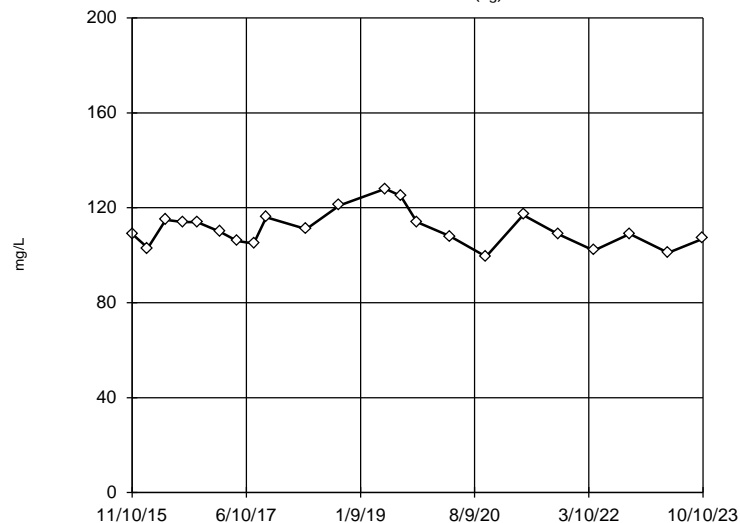
n = 19  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 157.9, std. dev. 11.91, critical Tn 2.532  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9622 Critical = 0.917 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-115 (bg)

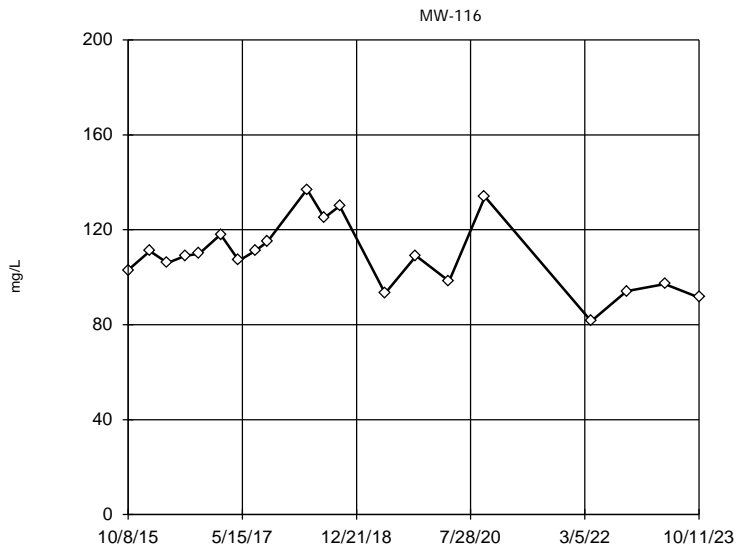


n = 22  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 111.1, std. dev. 7.456, critical Tn 2.603  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9633 Critical = 0.926 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

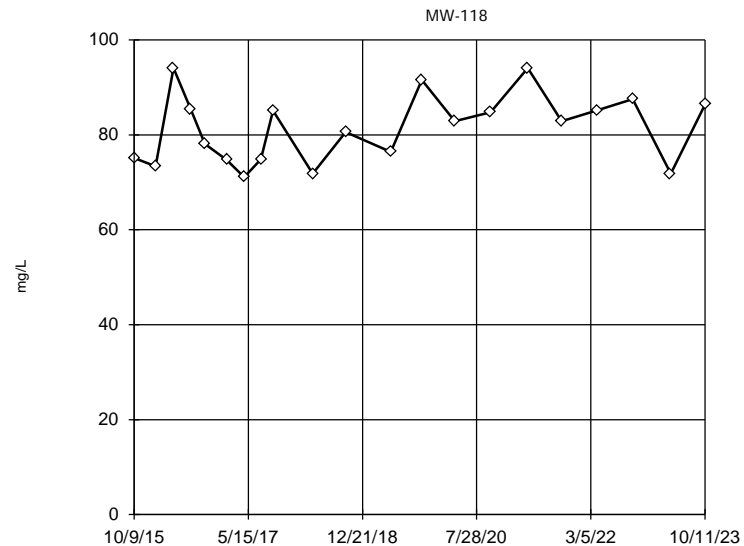
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)



n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 109, std. dev. 14.65, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9704  
 Critical = 0.92  
 The distribution was found to be normally distributed.

EPA Screening (suspected outliers for Dixon's Test)



n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 81.33, std. dev. 7.303, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9356  
 Critical = 0.923  
 The distribution was found to be normally distributed.

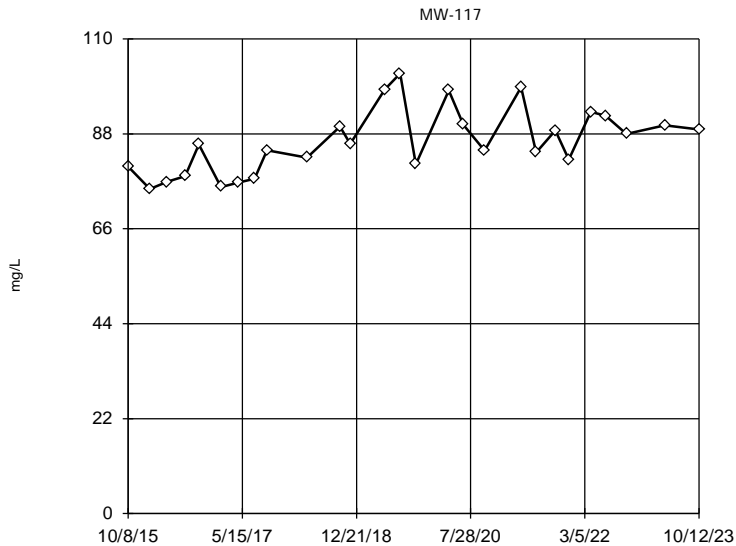
Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

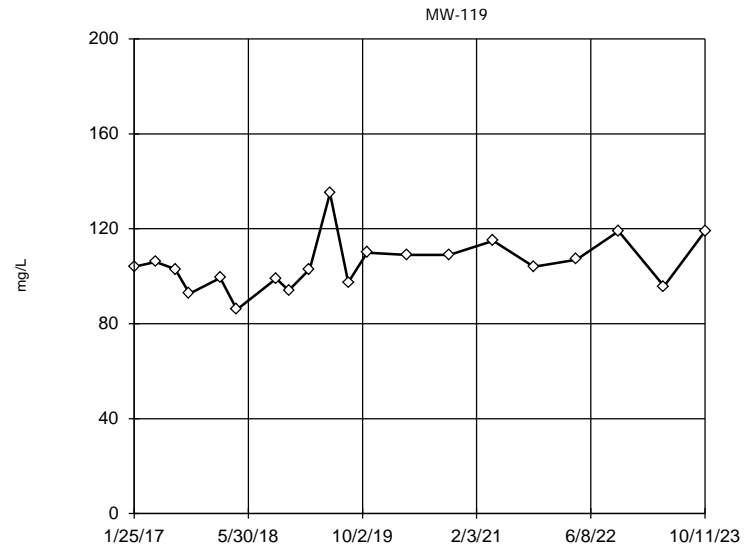
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Rosner's Test)



n = 27  
 Rosner's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 86.2, std. dev. 7.581, critical Tn 2.698  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9523  
 Critical = 0.935  
 The distribution was found to be normally distributed.

EPA Screening (suspected outliers for Dixon's Test)



n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 105.4, std. dev. 11.03, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9547  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

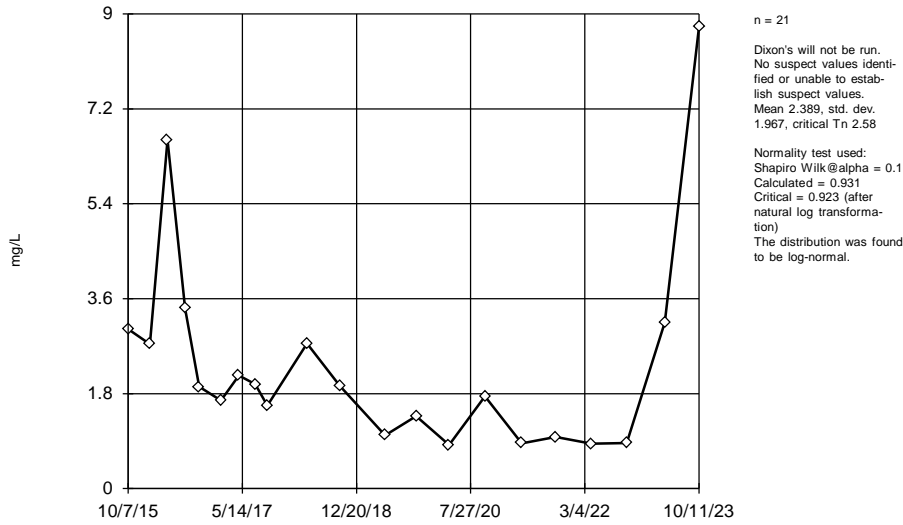
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Calcium Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-101

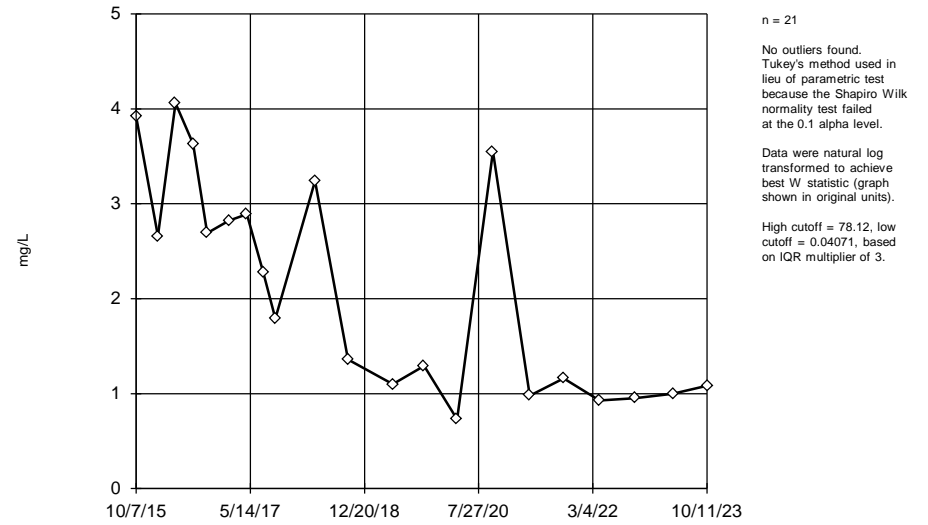


Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-103

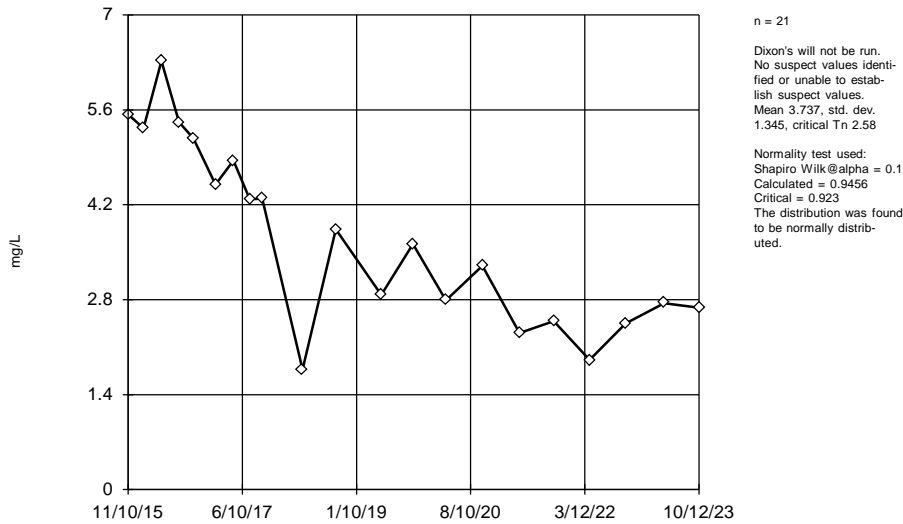


Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

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-102

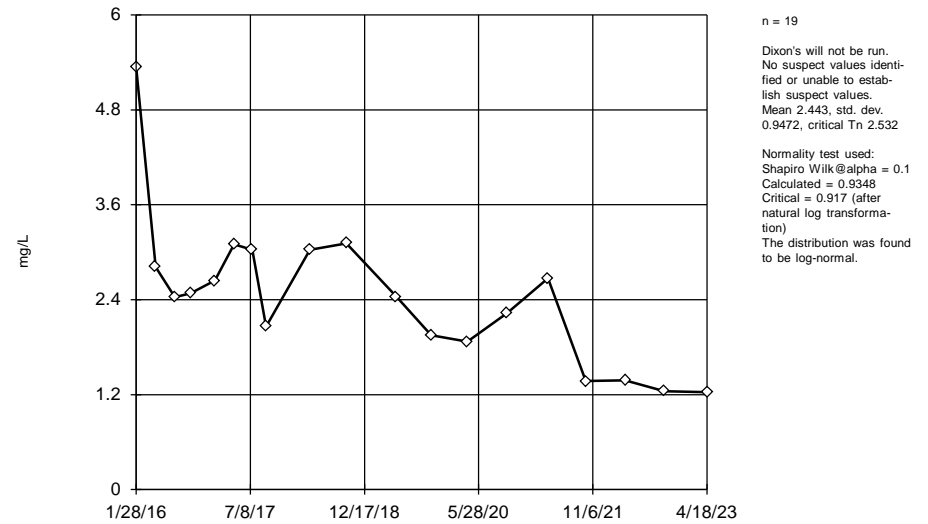


Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

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)

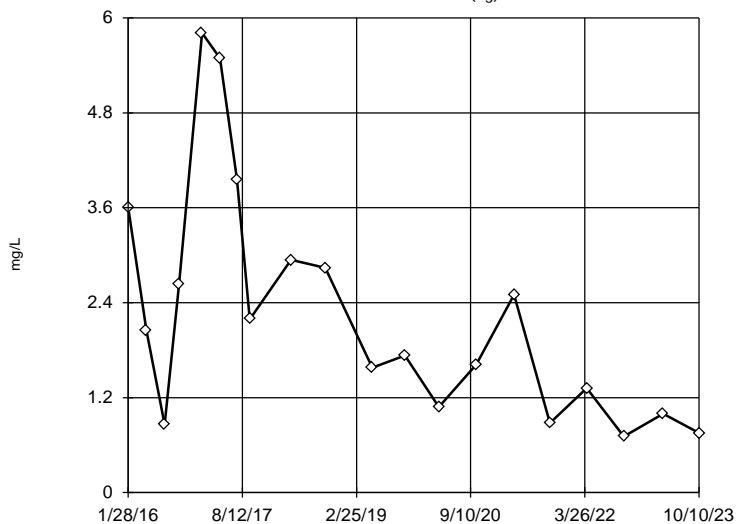


Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

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)



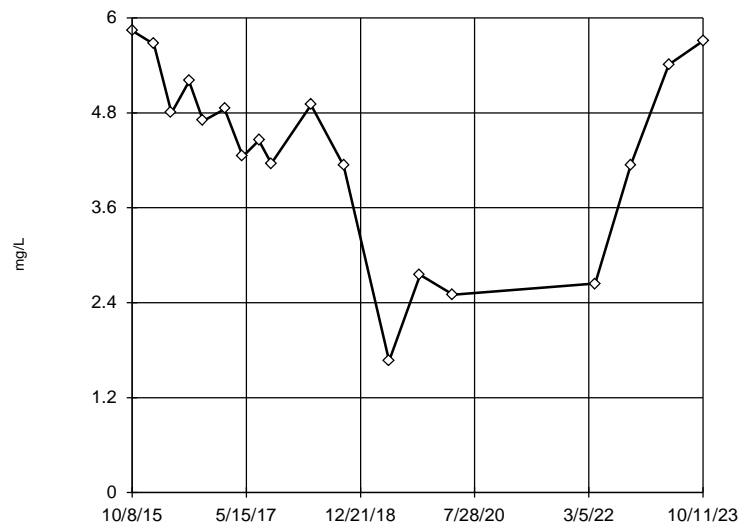
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 2.277, std. dev. 1.493, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9601  
 Critical = 0.92 (after natural log transformation)  
 The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-116



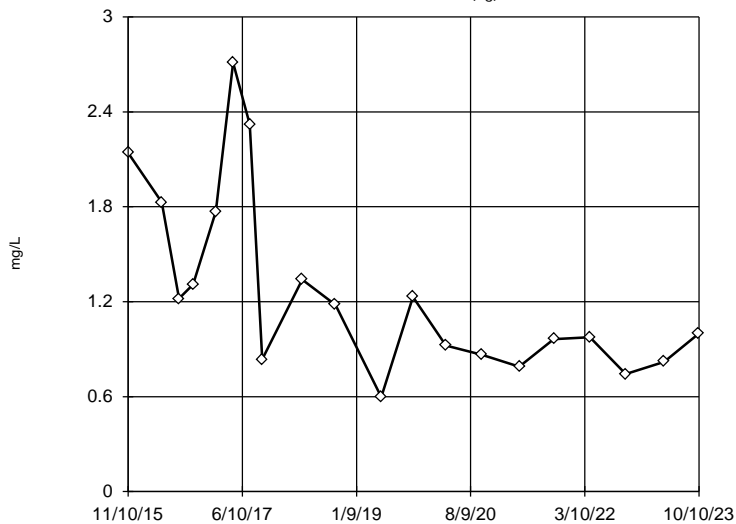
n = 18  
 No outliers found.  
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were cube transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 7.725, low cutoff = -6.431, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-115 (bg)



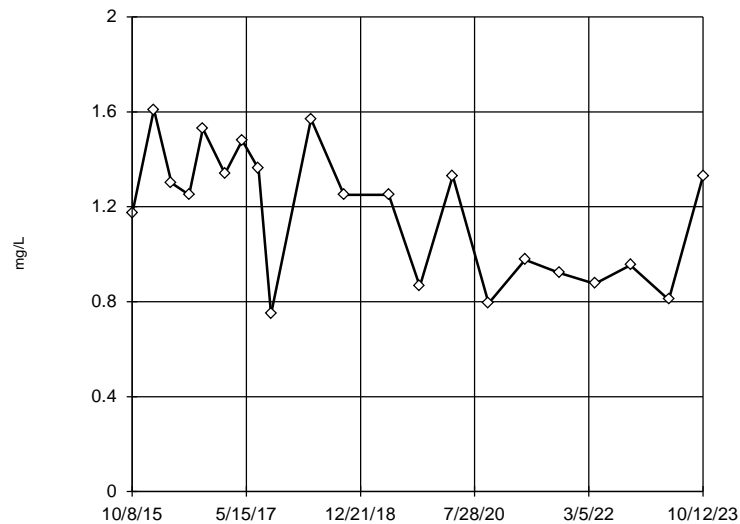
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 1.278, std. dev. 0.5807, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9495  
 Critical = 0.92 (after natural log transformation)  
 The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-117



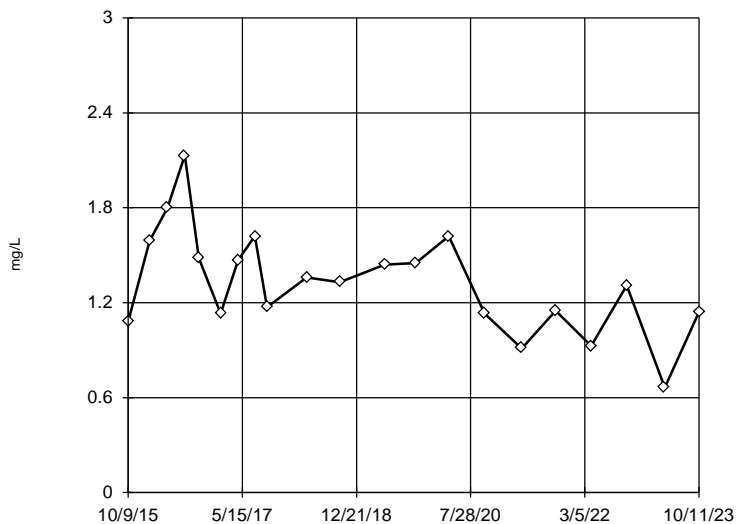
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 1.177, std. dev. 0.2748, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9285  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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



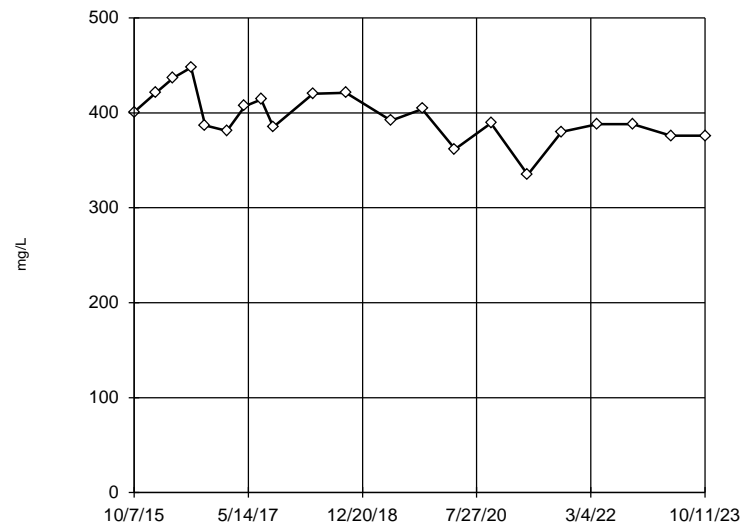
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 1.329, std. dev. 0.3307, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9777  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-101



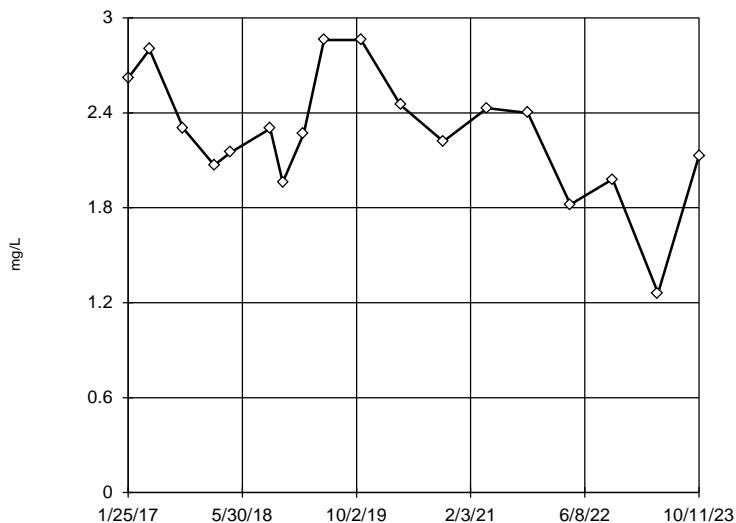
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 395.8, std. dev. 25.78, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9707  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-119



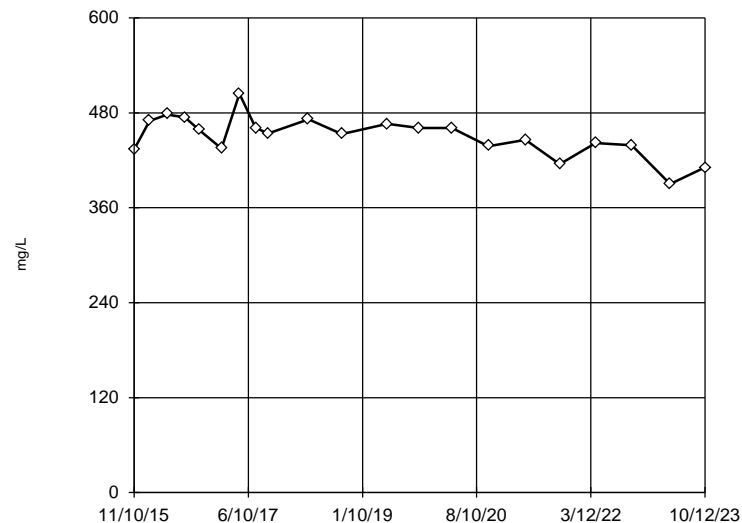
n = 18  
 No statistical outliers.  
 Testing for 1 low outlier.  
 Mean = 2.271.  
 Std. Dev. = 0.3952.  
 1.26 \* c = 0.4545  
 tabl = 0.475.  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9505  
 Critical = 0.91  
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 12/21/2023 12:44 PM View: 2023-2H 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-102



n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 450.6, std. dev. 25.53, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.969  
 Critical = 0.923  
 The distribution was found to be normally distributed.

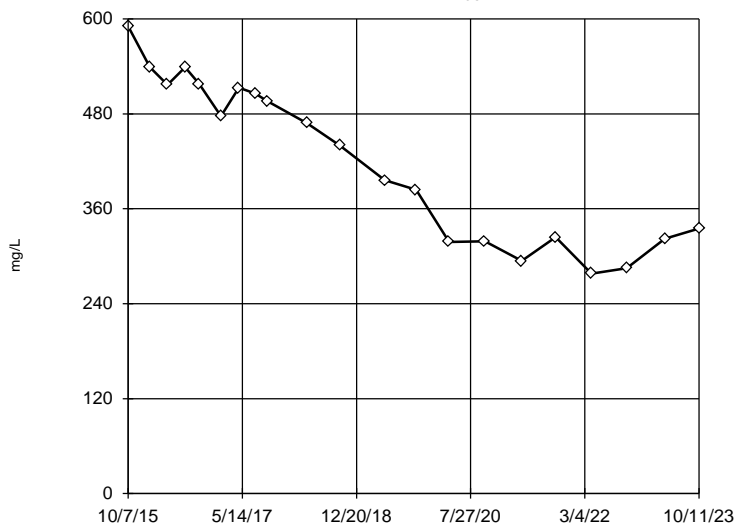
Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



### Tukey's Outlier Screening

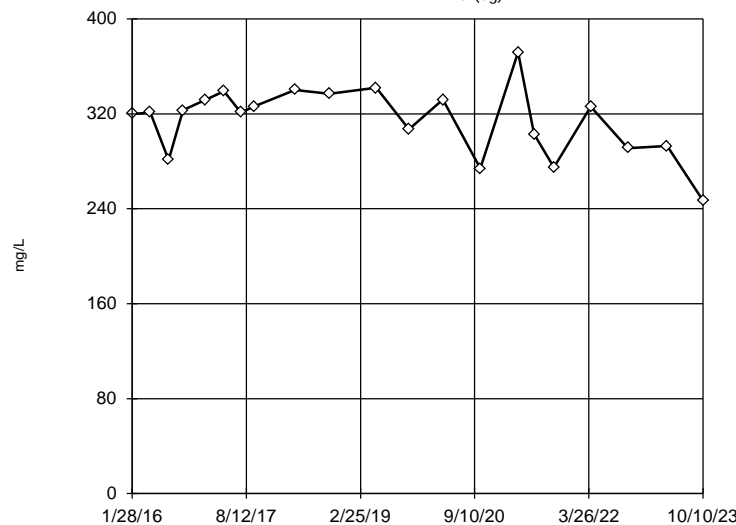
MW-103



n = 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 square transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 867.6, low cutoff = -620.3, based on IQR multiplier of 3.

### 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 314.4, std. dev. 29.12, critical Tn 2.58  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9545 Critical = 0.923 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

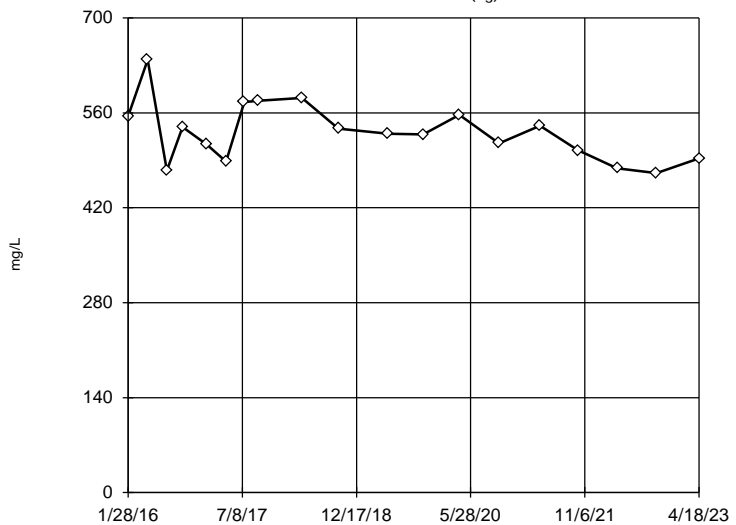
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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)

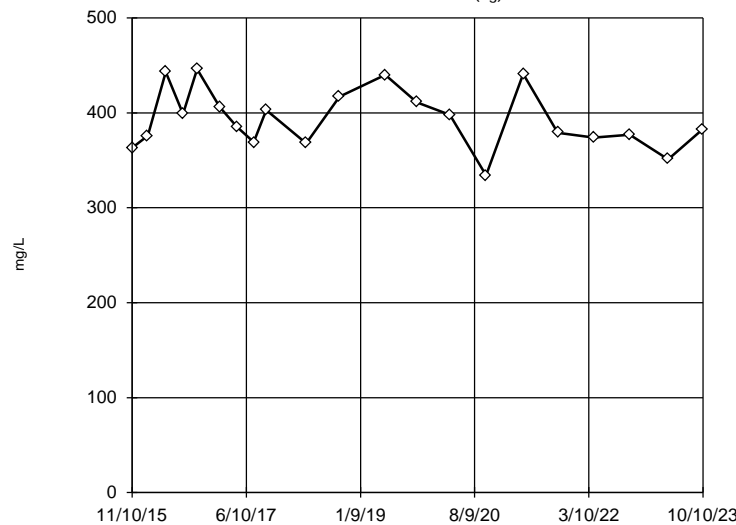
MW-108 (bg)



n = 19  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 531.5, std. dev. 43.36, critical Tn 2.532  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9555 Critical = 0.917 The distribution was found to be normally distributed.

### 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 393.5, std. dev. 31.35, critical Tn 2.58  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9547 Critical = 0.923 The distribution was found to be normally distributed.

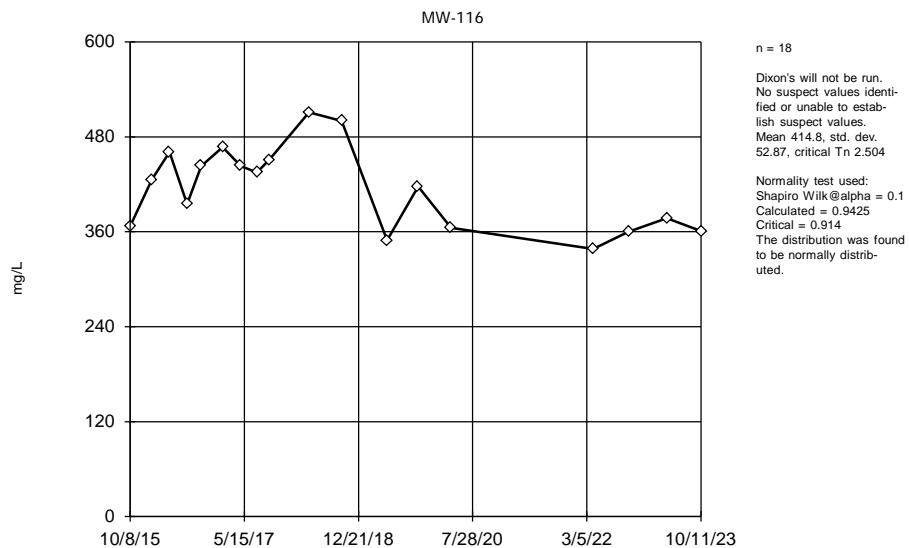
Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

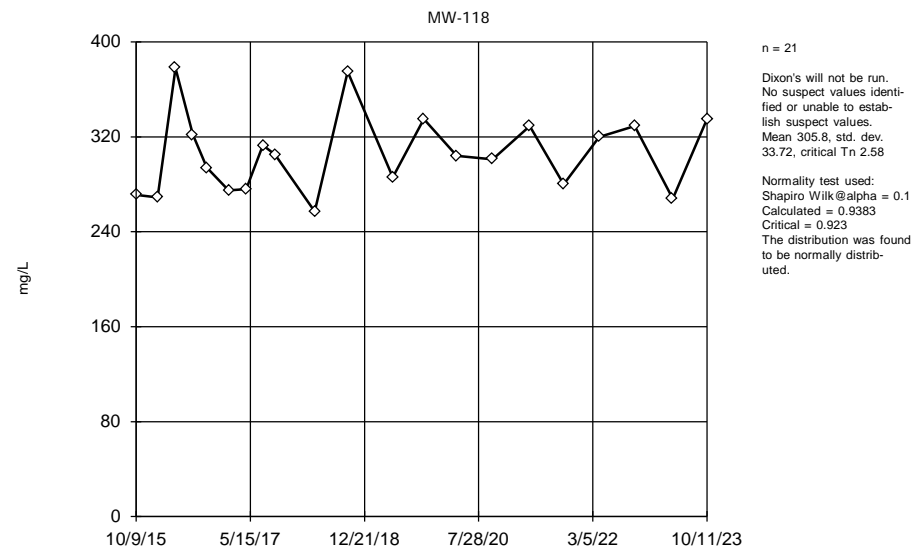
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)



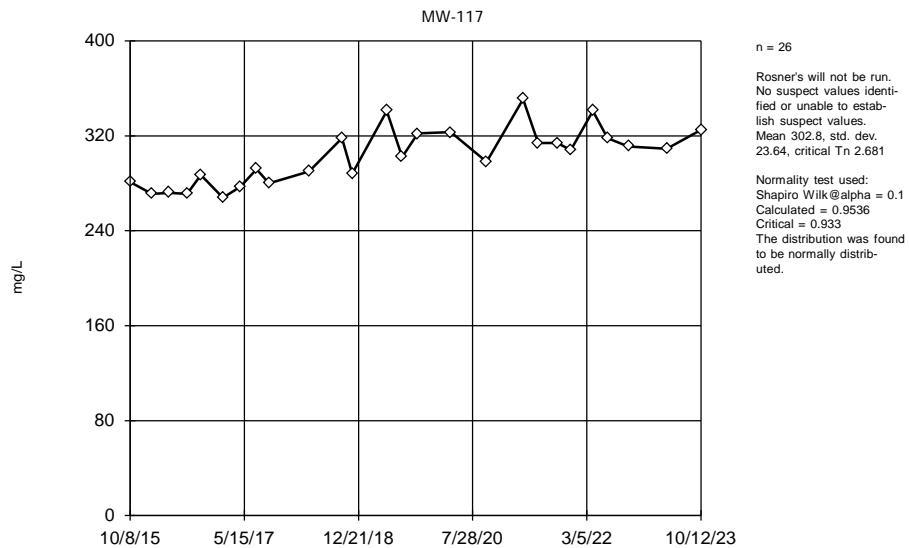
Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H all  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)



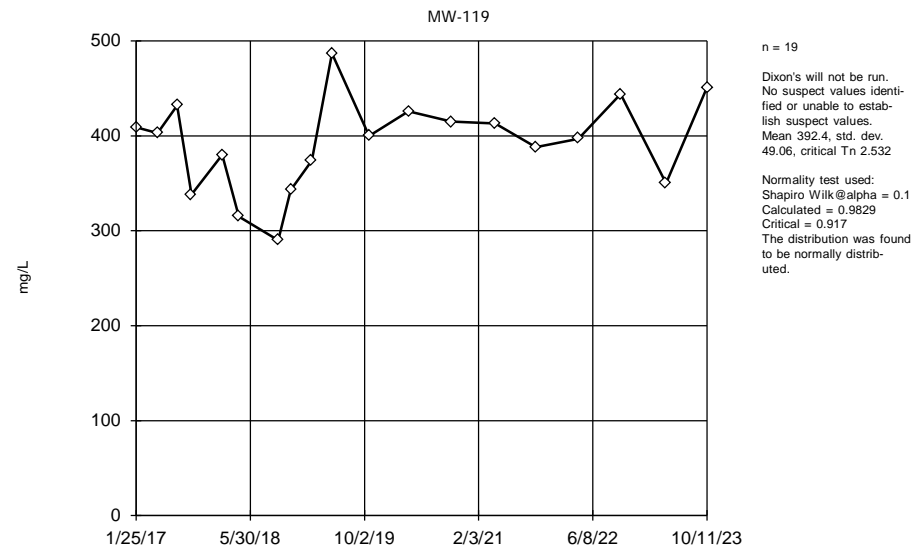
Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H all  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Rosner's Test)



Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H all  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

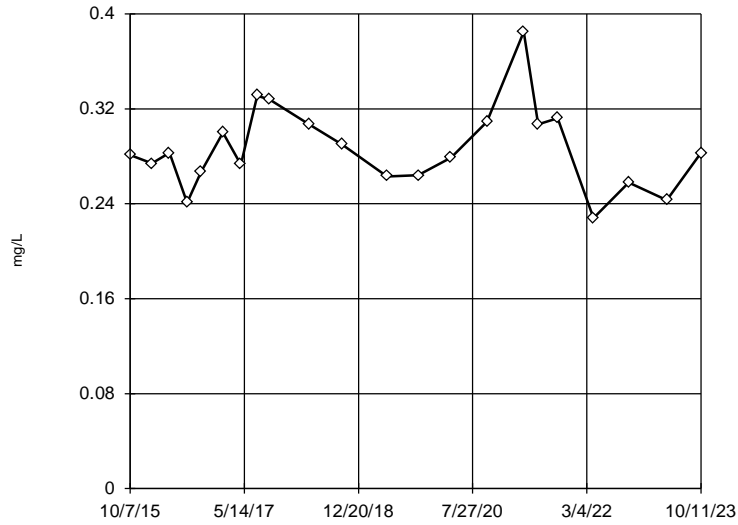
EPA Screening (suspected outliers for Dixon's Test)



Constituent: Dissolved Solids Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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)

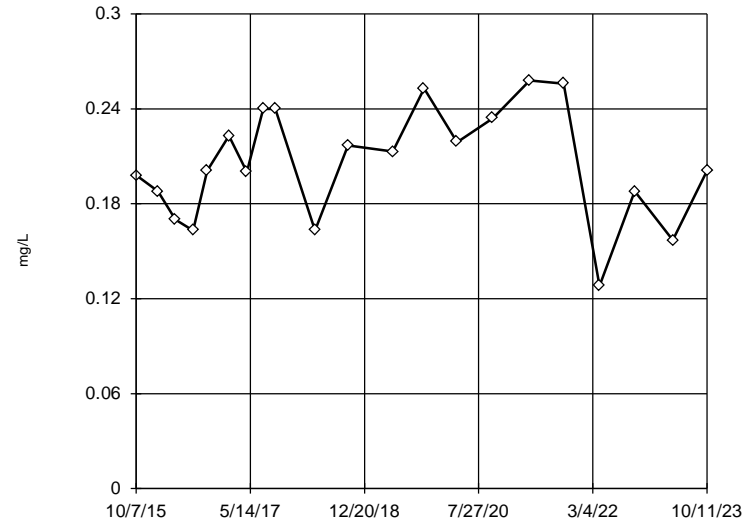
MW-101



n = 22  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.2866, std. dev. 0.03497, critical Tn 2.603  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.951  
 Critical = 0.926  
 The distribution was found to be normally distributed.

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 0.2052, std. dev. 0.03564, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9669  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

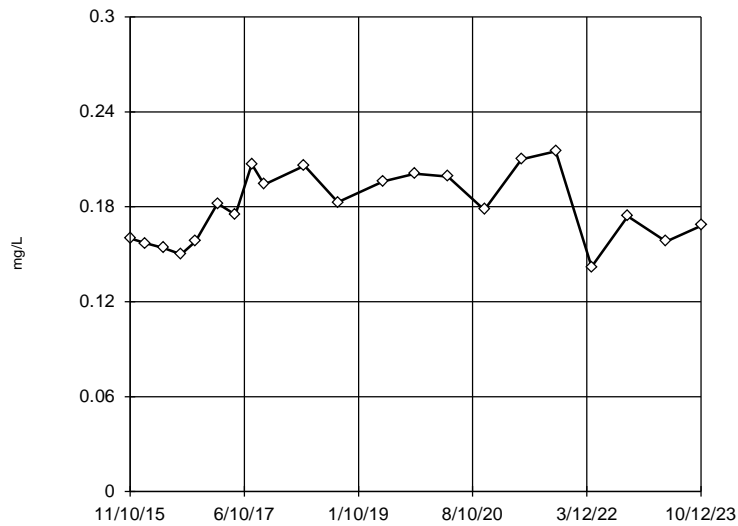
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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)

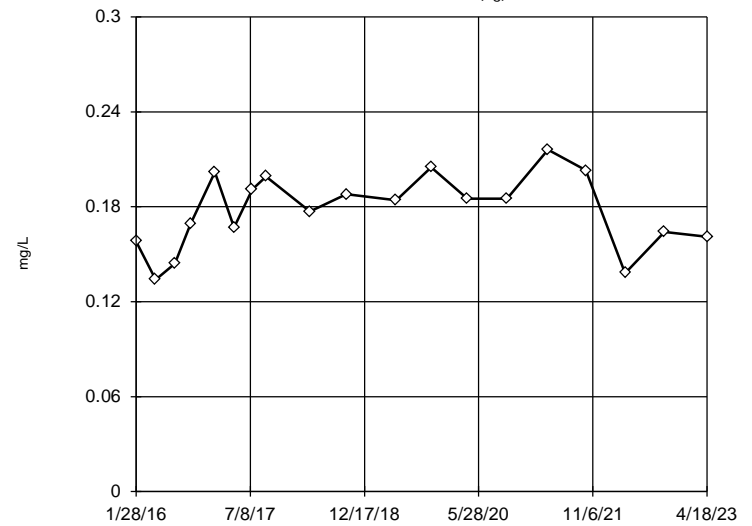
MW-102



n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.1794, std. dev. 0.02227, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9477  
 Critical = 0.923  
 The distribution was found to be normally distributed.

EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.1774, std. dev. 0.02356, critical Tn 2.532  
 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 12/21/2023 12:45 PM View: 2023-2H all

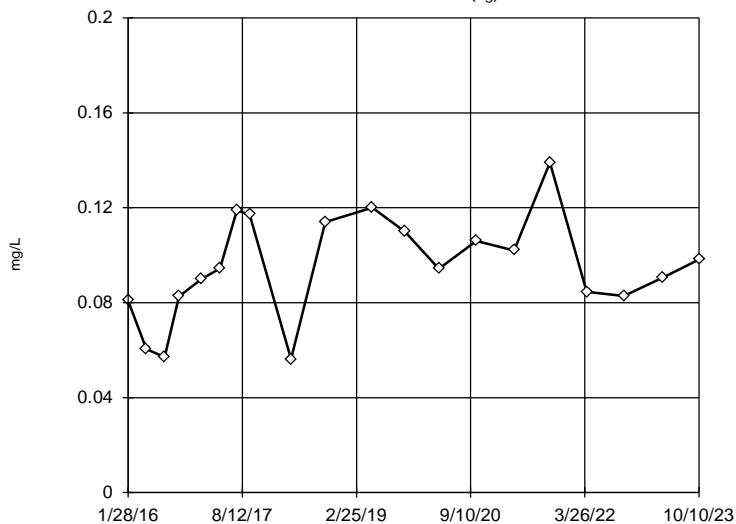
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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)



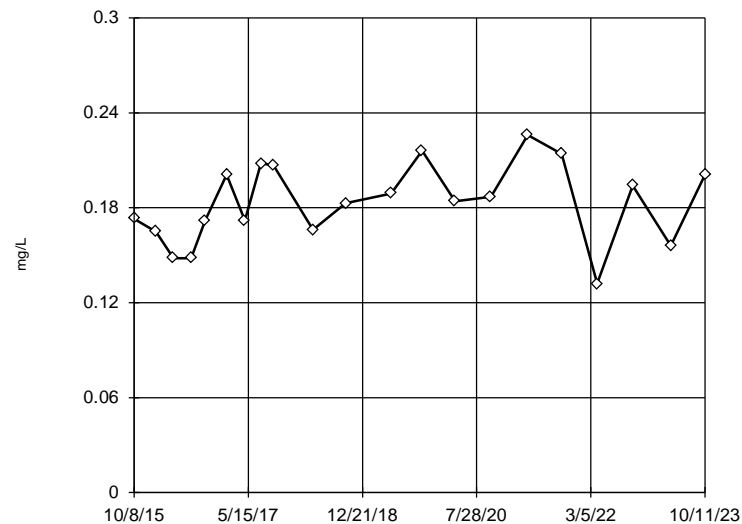
n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.09496, std. dev. 0.02199, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9668  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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



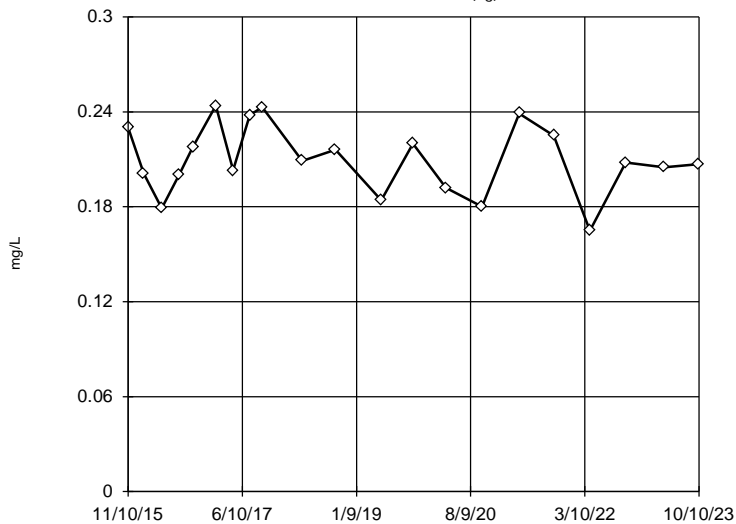
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.183, std. dev. 0.02516, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9807  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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-115 (bg)



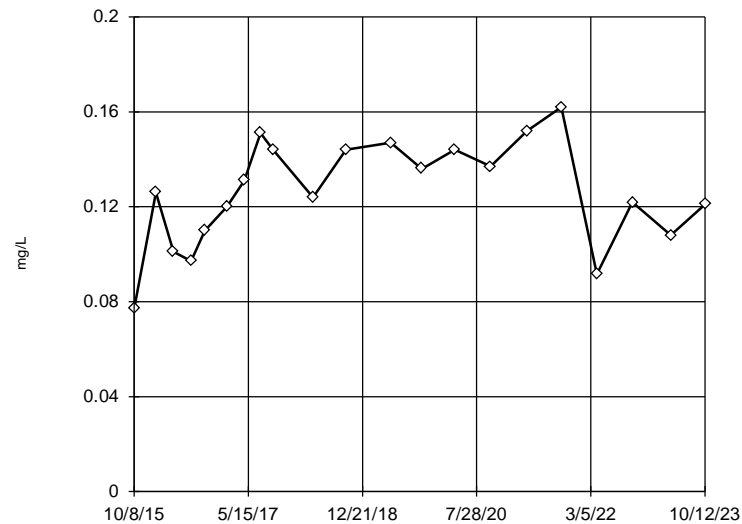
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.2098, std. dev. 0.02219, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9697  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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-117



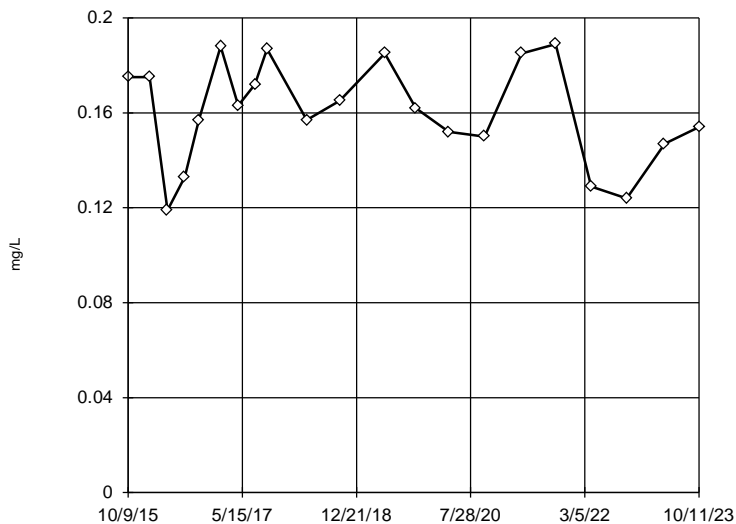
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.126, std. dev. 0.02232, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9678  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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



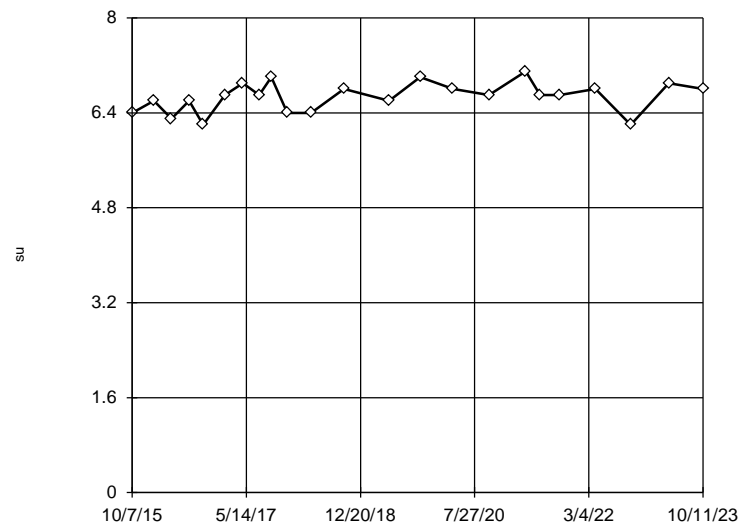
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.1604, std. dev. 0.02155, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9412  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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



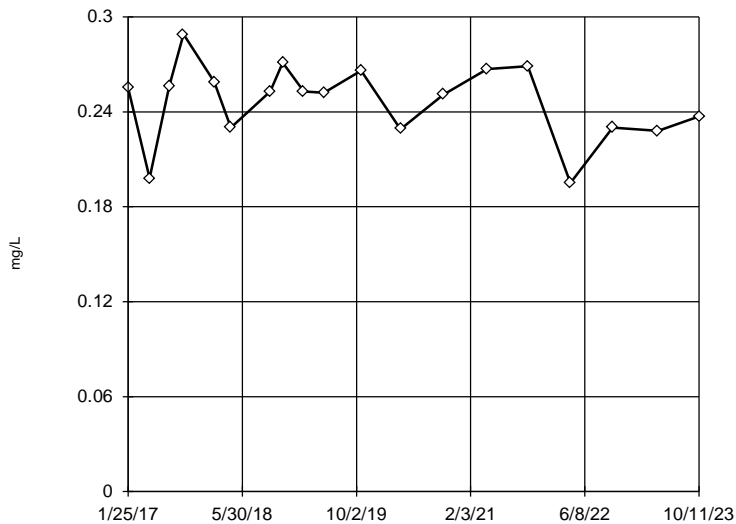
n = 23  
 Rosner's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 6.665, std. dev. 0.2516, critical Tn 2.624  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9508  
 Critical = 0.928  
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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-119



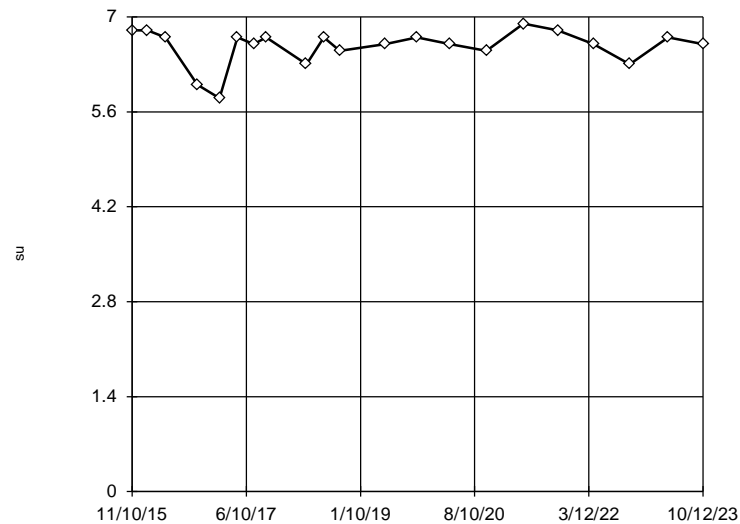
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 0.2467, std. dev. 0.0241, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9329  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-102



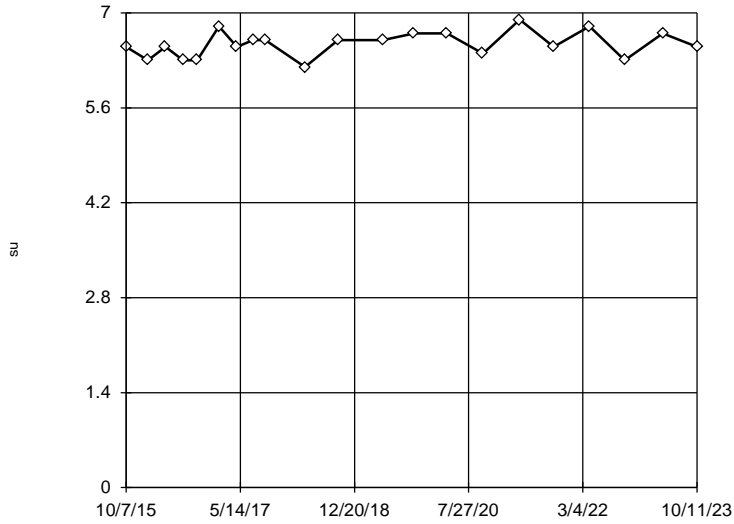
n = 21  
 No outliers found.  
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were x^6 transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 7.167, low cutoff = 5.584, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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



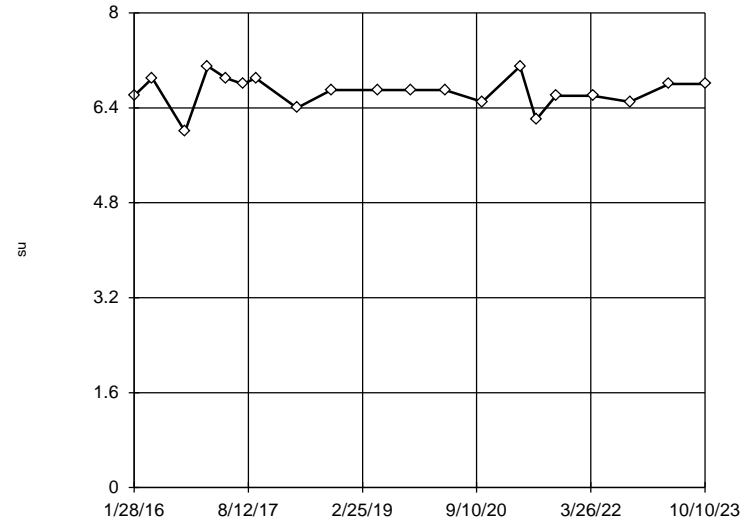
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean = 6.538, std. dev. = 0.191, critical Tn = 2.58  
 Normality test used:  
 Shapiro Wilk @ alpha = 0.1  
 Calculated = 0.9585  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-113 (bg)



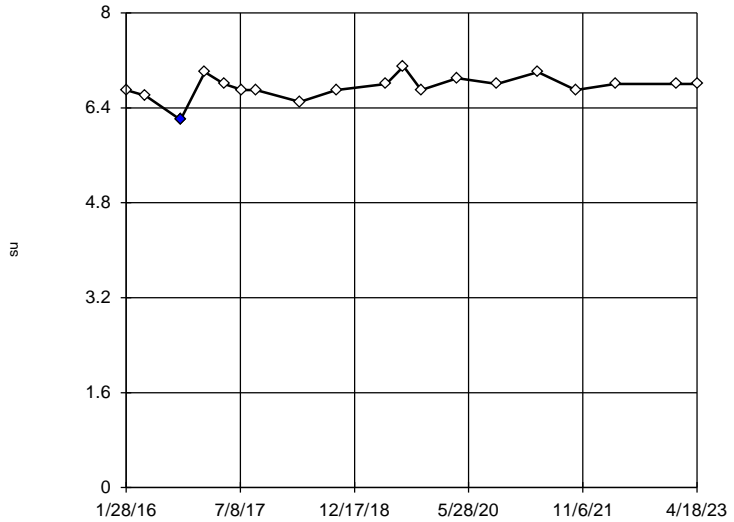
n = 20  
 No statistical outliers.  
 Testing for 1 low outlier.  
 Mean = 6.675,  
 Std. Dev. = 0.2712,  
 6: c = 0.4444  
 tab1 = 0.45,  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk @ alpha = 0.1  
 Calculated = 0.9691  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-108 (bg)



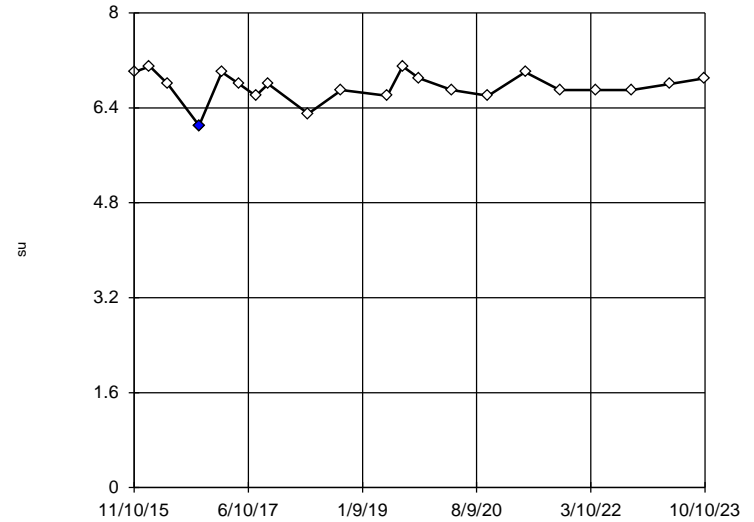
n = 19  
 Statistical outlier is drawn as solid.  
 Testing for 1 low outlier.  
 Mean = 6.753,  
 Std. Dev. = 0.1954,  
 6.2: c = 0.5  
 tab1 = 0.462,  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk @ alpha = 0.1  
 Calculated = 0.9267  
 Critical = 0.914  
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-115 (bg)



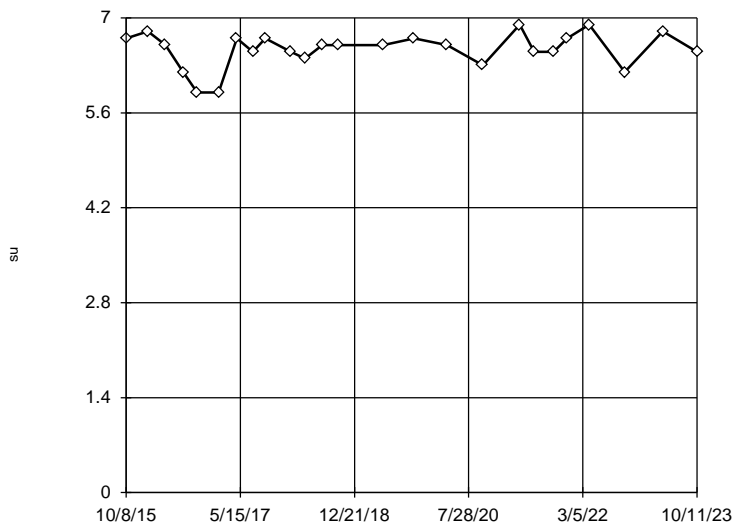
n = 21  
 Statistical outlier is drawn as solid.  
 Testing for 1 low outlier.  
 Mean = 6.757,  
 Std. Dev. = 0.2441,  
 6.1: c = 0.5556  
 tab1 = 0.44,  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk @ alpha = 0.1  
 Calculated = 0.9428  
 Critical = 0.92  
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-116



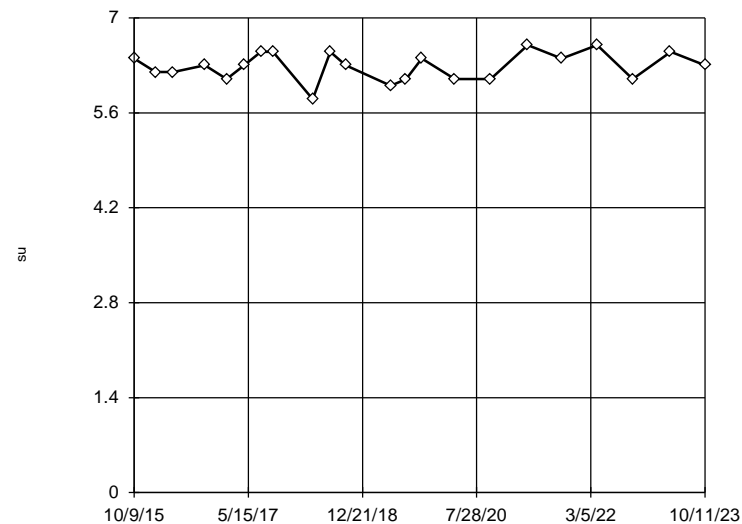
n = 25  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were x\*6 transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 7.253, low cutoff = 5.066, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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



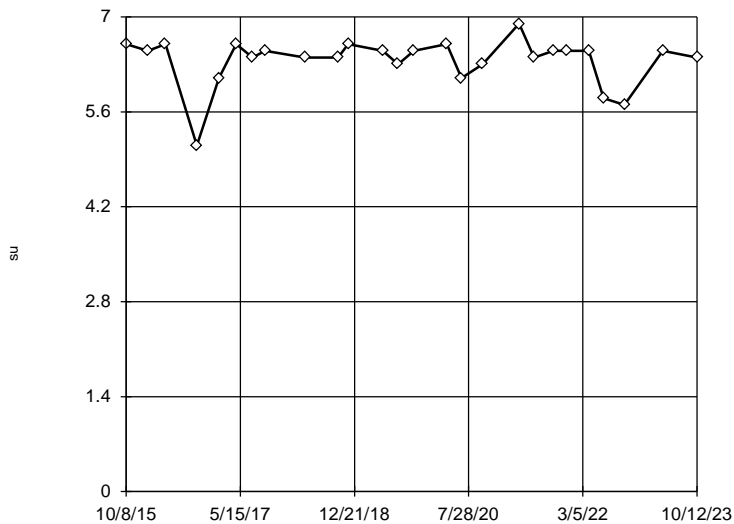
n = 22  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 6.286, std. dev. 0.21, critical Tn 2.603  
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9489 Critical = 0.926 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-117



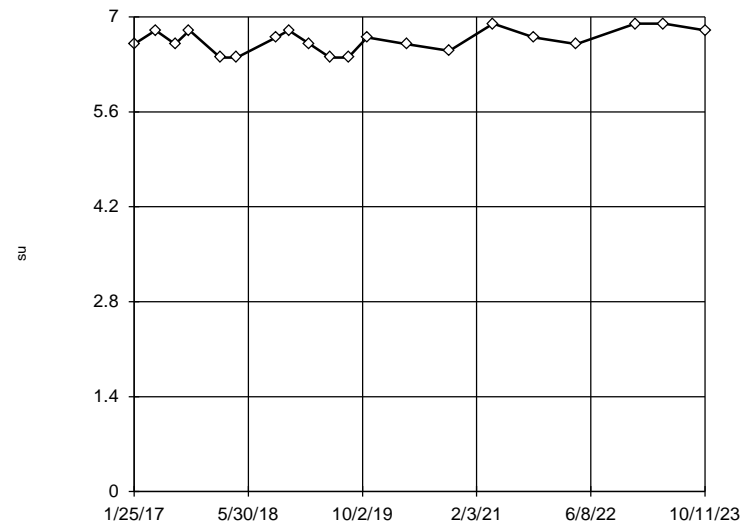
n = 26  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were x\*6 transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 7.104, low cutoff = 4.848, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-119



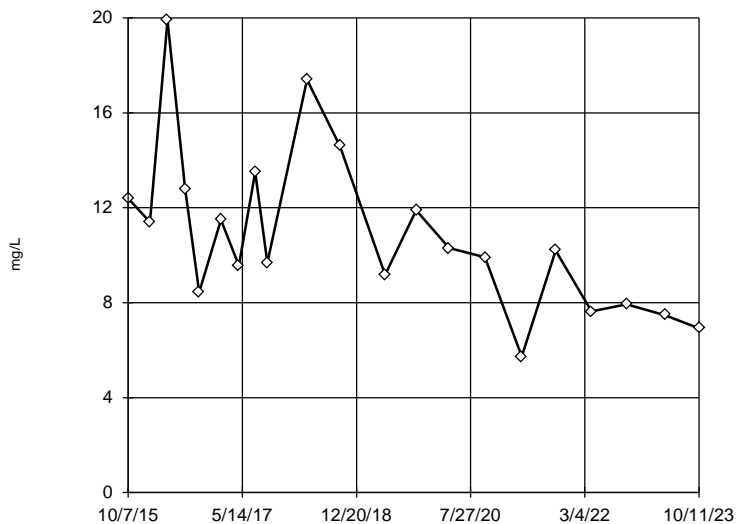
n = 20  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were x\*6 transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 7.355, low cutoff = 5.19, based on IQR multiplier of 3.

Constituent: pH Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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-101



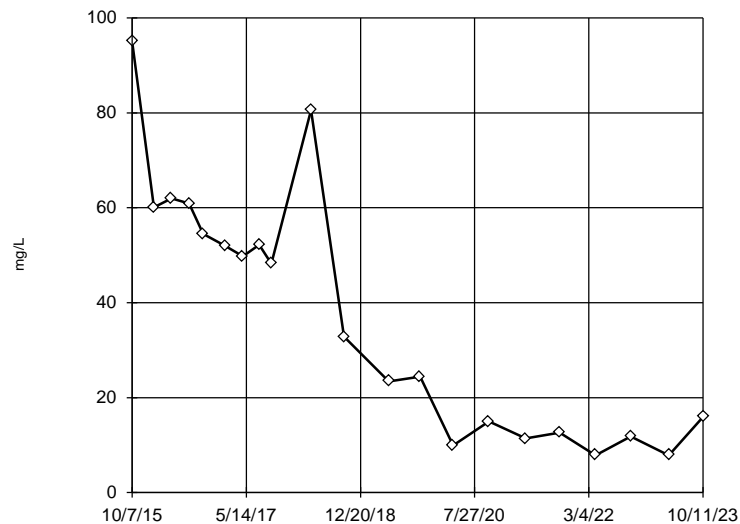
n = 21  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Mean 10.87, std. dev. 3.457, critical Tn 2.58  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.935  
 Critical = 0.923  
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-103



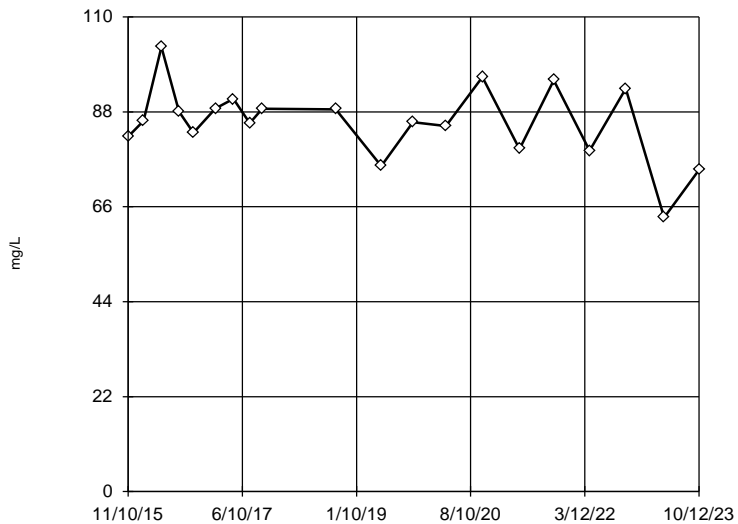
n = 21  
 No outliers found.  
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were square root transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 391.7, low cutoff = -76.26, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-102



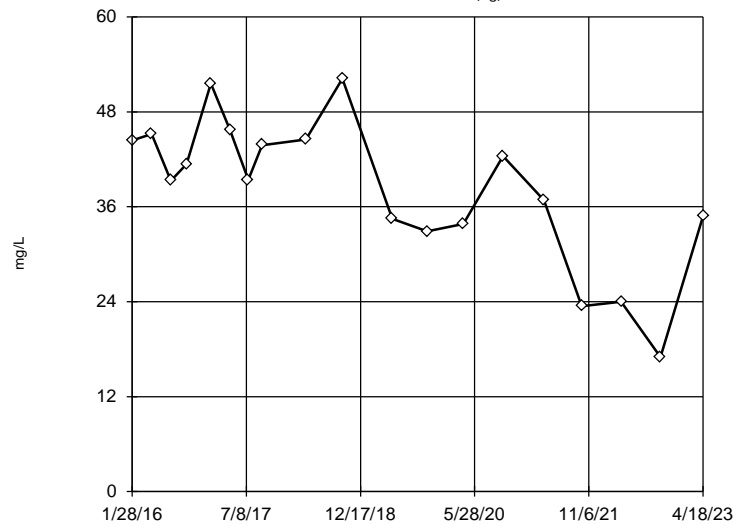
n = 20  
 No statistical outliers.  
 Testing for 1 low outlier.  
 Mean = 85.6,  
 Std. Dev. = 8.722,  
 63.5: c = 0.3742  
 tab1 = 0.45,  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9786  
 Critical = 0.917  
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-108 (bg)



n = 19  
 No statistical outliers.  
 Testing for 1 low outlier.  
 Mean = 38.27,  
 Std. Dev. = 9.326,  
 17: c = 0.2439  
 tab1 = 0.462,  
 Alpha = 0.05.  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9492  
 Critical = 0.914  
 The distribution was found to be normally distributed.

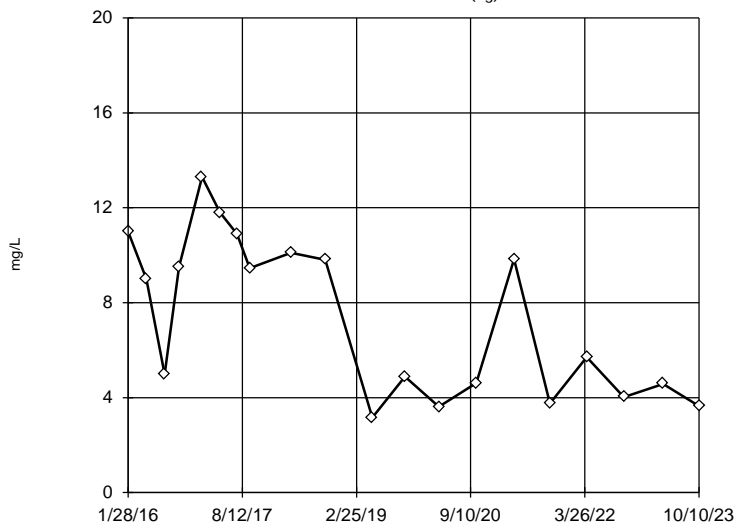
Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



### Tukey's Outlier Screening

MW-113 (bg)



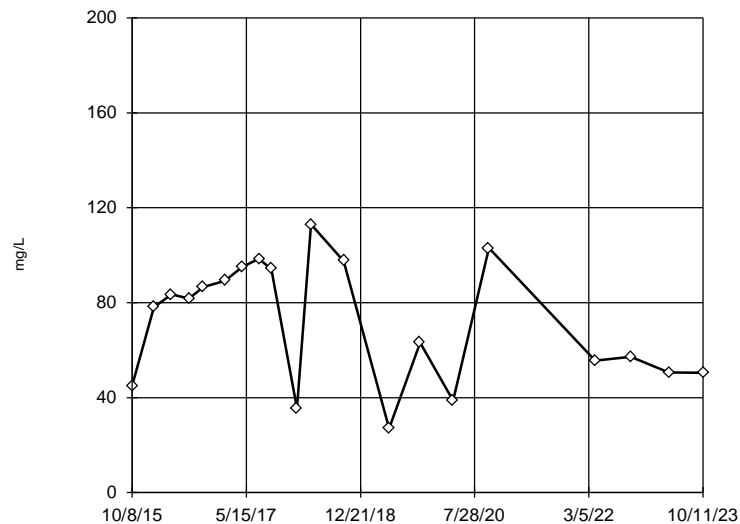
n = 20  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were square root transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 41.12, low cutoff = -1.403, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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



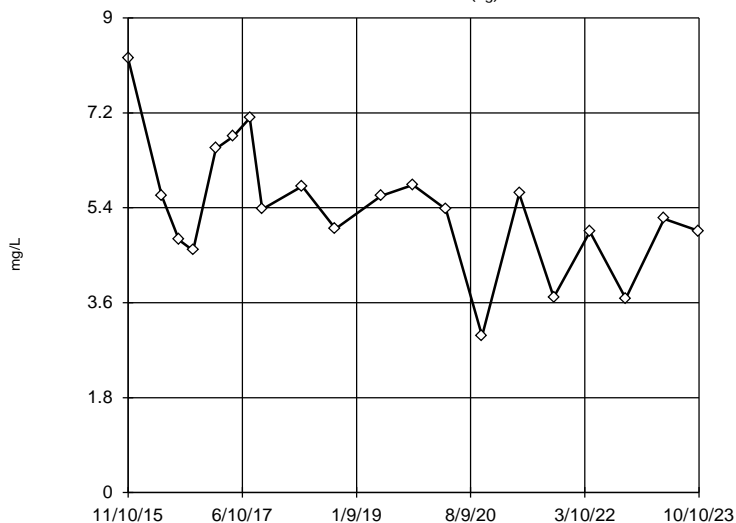
n = 20  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 72.17, std. dev. 25.62, critical Tn 2.557  
 Normality test used: Shapiro Wilk @ alpha = 0.1 Calculated = 0.942 Critical = 0.92 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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-115 (bg)



n = 20  
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 5.387, std. dev. 1.212, critical Tn 2.557  
 Normality test used: Shapiro Wilk @ alpha = 0.1 Calculated = 0.969 Critical = 0.92 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Tukey's Outlier Screening

MW-117



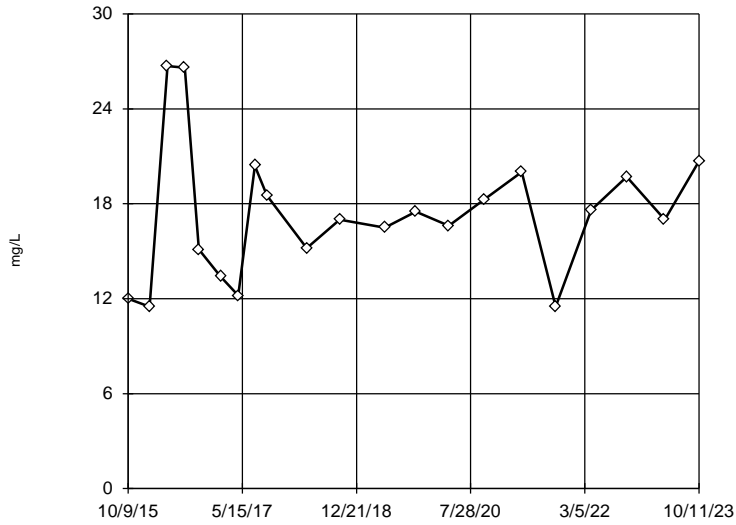
n = 23  
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were natural log transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 27.05, low cutoff = 2.124, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H 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 = 21

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 17.33, std. dev. 4.235, critical Tn 2.58

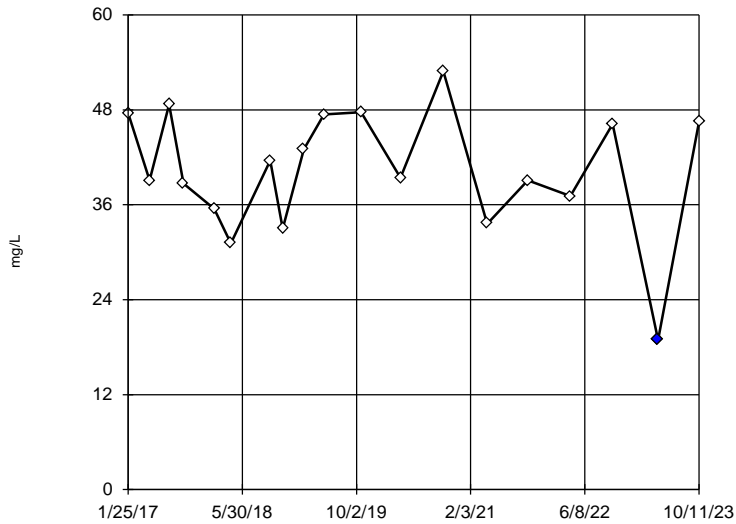
Normality test used:  
Shapiro Wilk @alpha = 0.1  
Calculated = 0.9241  
Critical = 0.923  
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 12/21/2023 12:45 PM View: 2023-2H all

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Dixon's Outlier Test

MW-119



# **APPENDIX G**

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## **Statistical Evaluation Results**

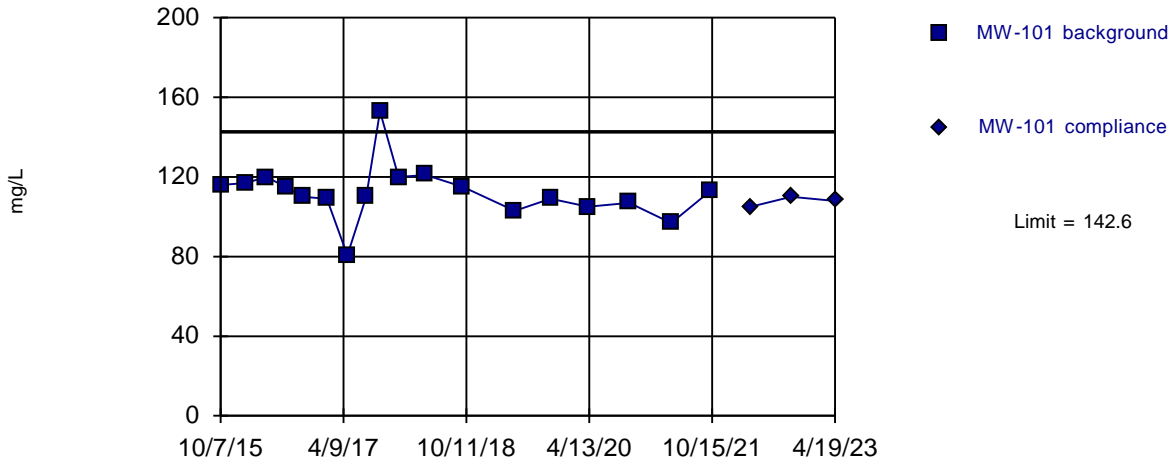
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**Prediction Limits, First Half 2023 Monitoring Event**

Within Limit

### Prediction Limit

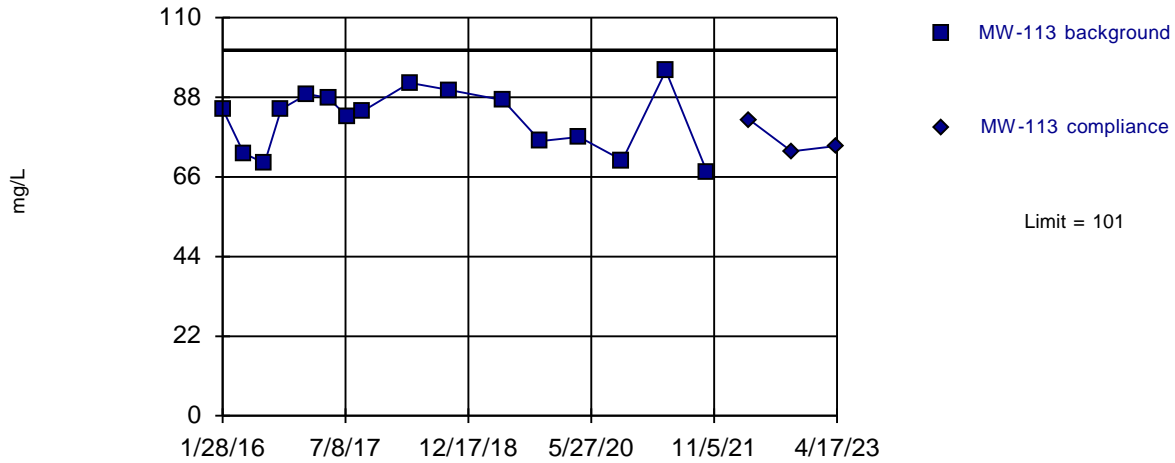
Intrawell Parametric



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.

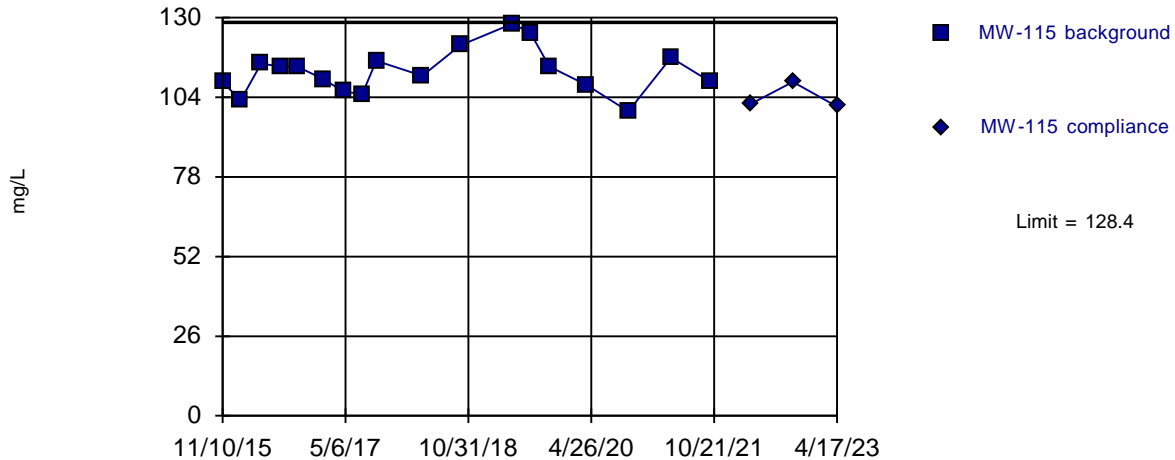
Constituent: Calcium Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=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.

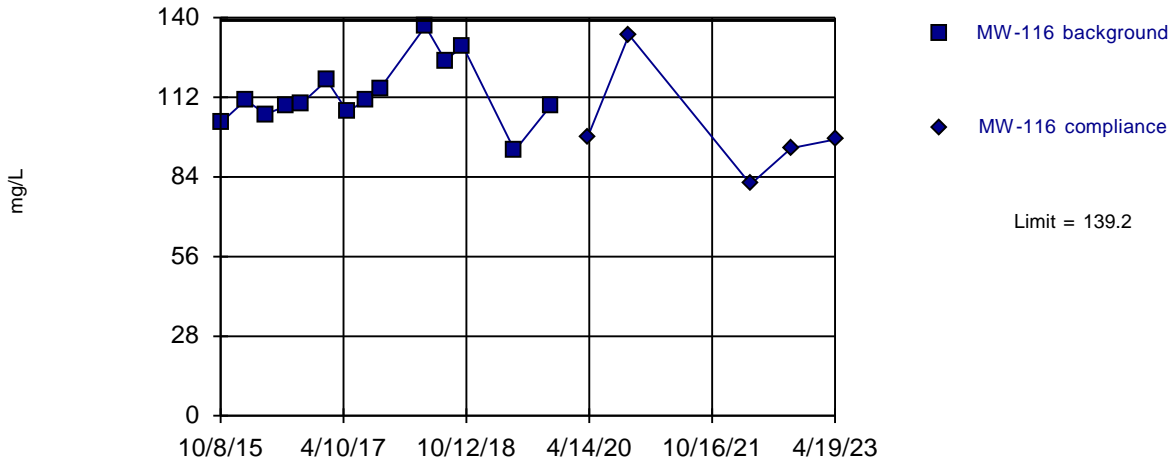
Constituent: Calcium Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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.

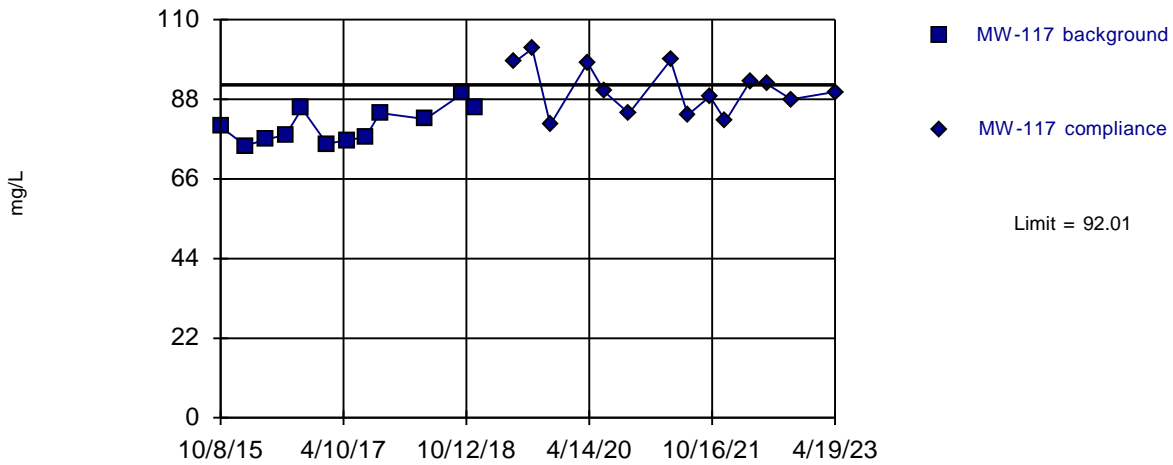
Constituent: Calcium Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=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.

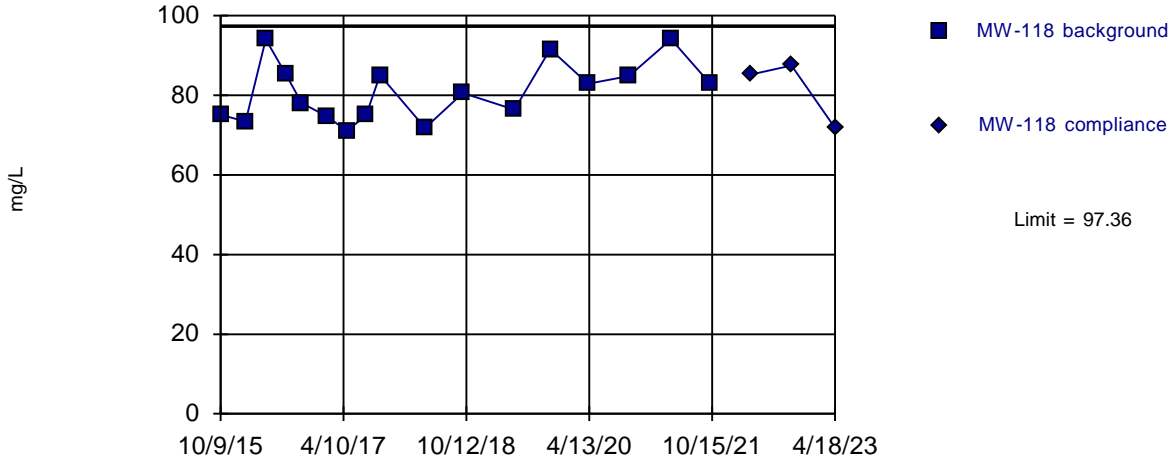
Constituent: Calcium Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=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.

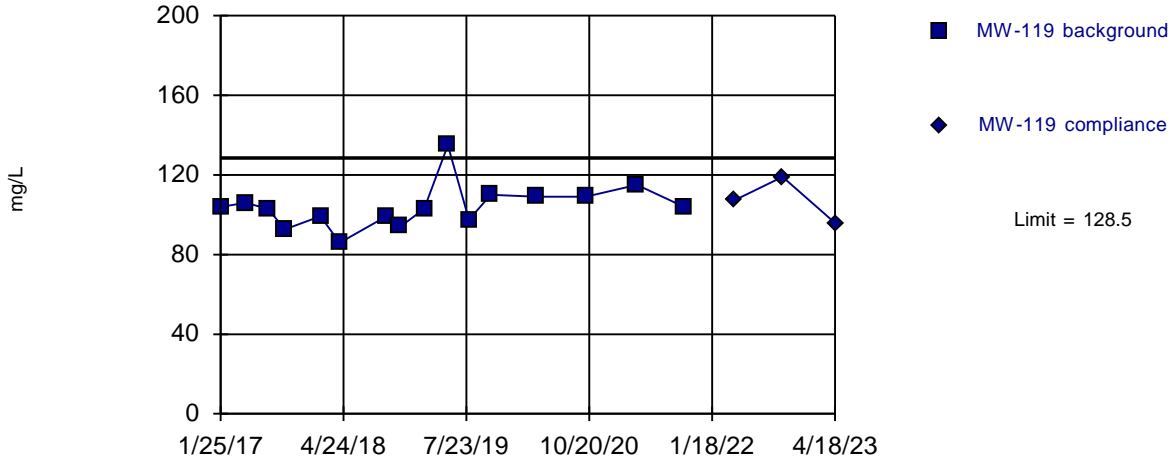
Constituent: Calcium Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=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 5/2/2023 3:01 PM View: 2023-1H PL

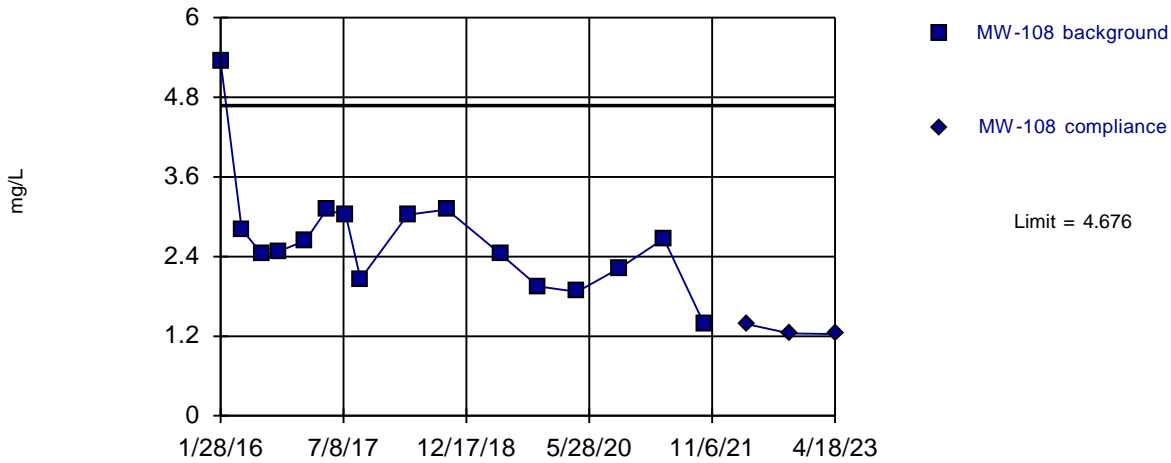
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=1.613, 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.

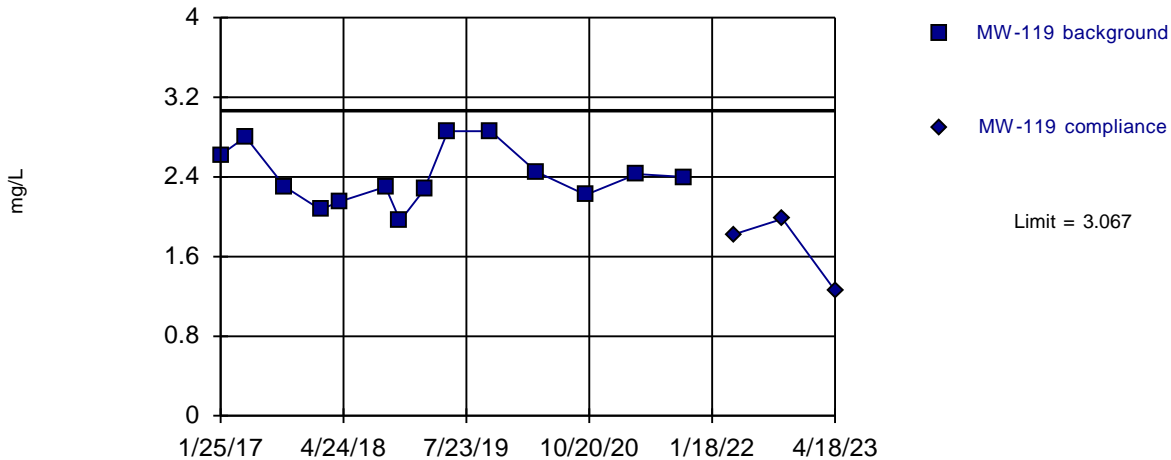
Constituent: Chloride Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=2.406, 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.

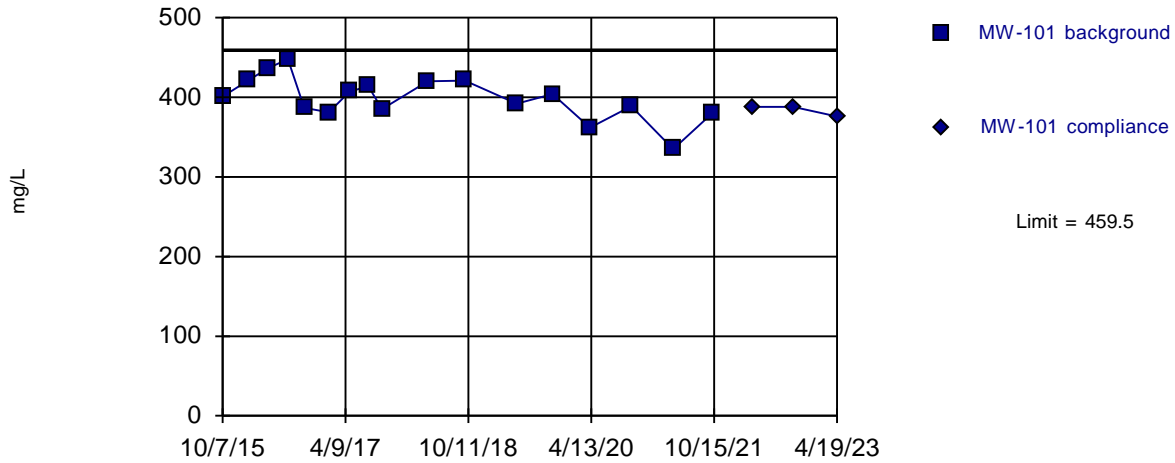
Constituent: Chloride Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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.

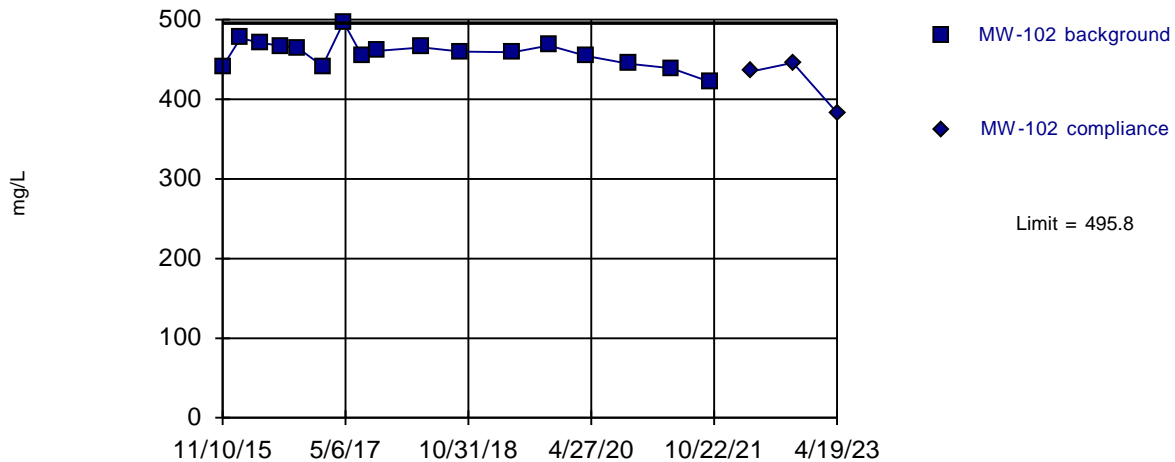
Constituent: Dissolved Solids Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

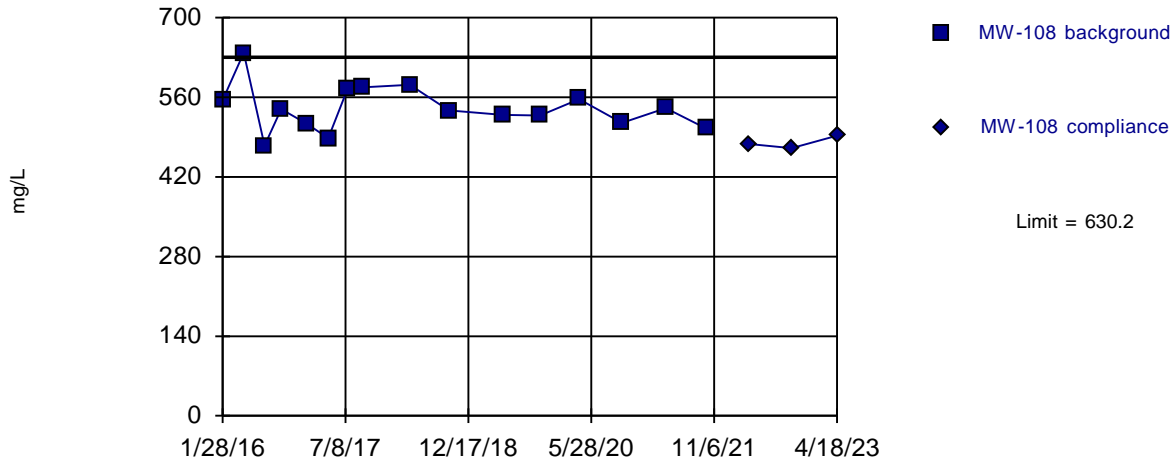
Intrawell Parametric



Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=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.

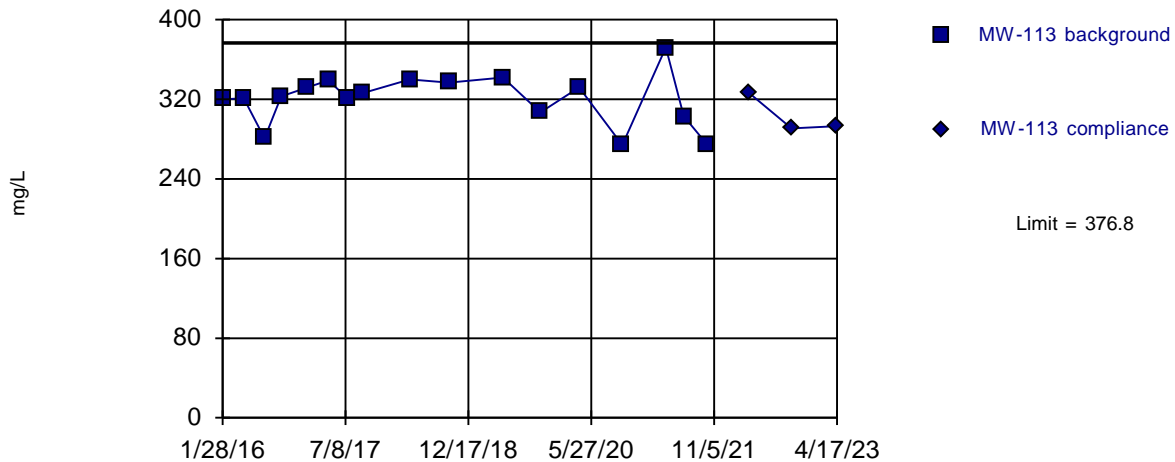
Constituent: Dissolved Solids Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=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.

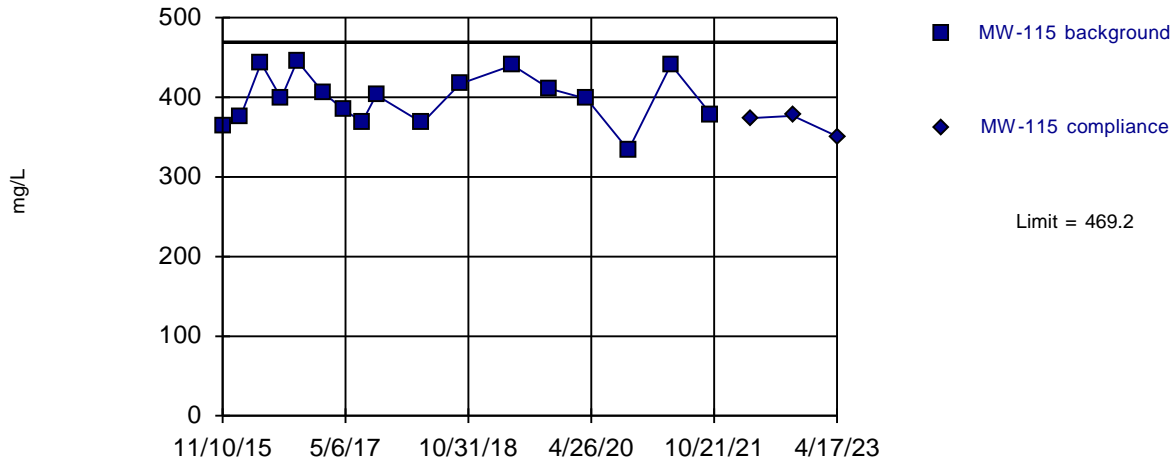
Constituent: Dissolved Solids Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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.

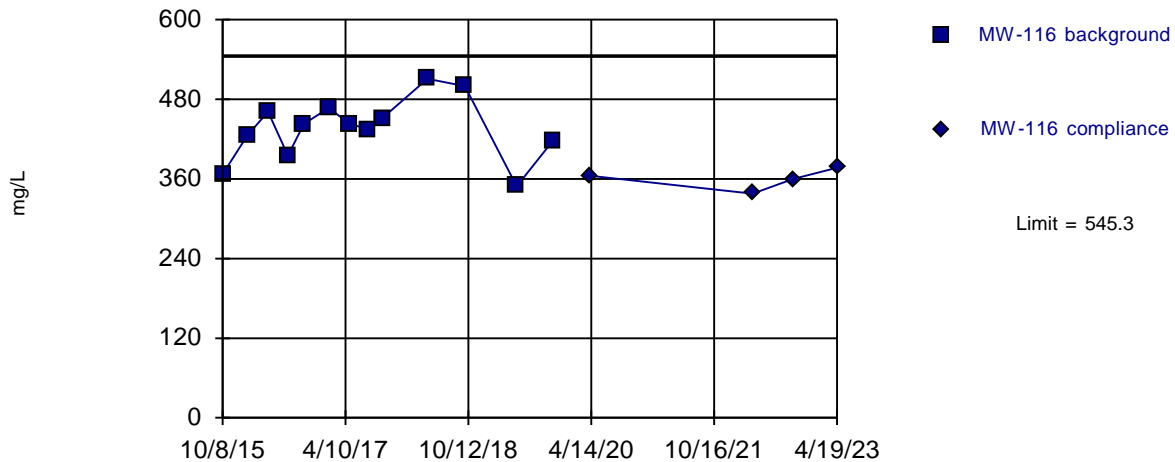
Constituent: Dissolved Solids Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=435.8, Std. Dev.=46.64, n=13. 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.

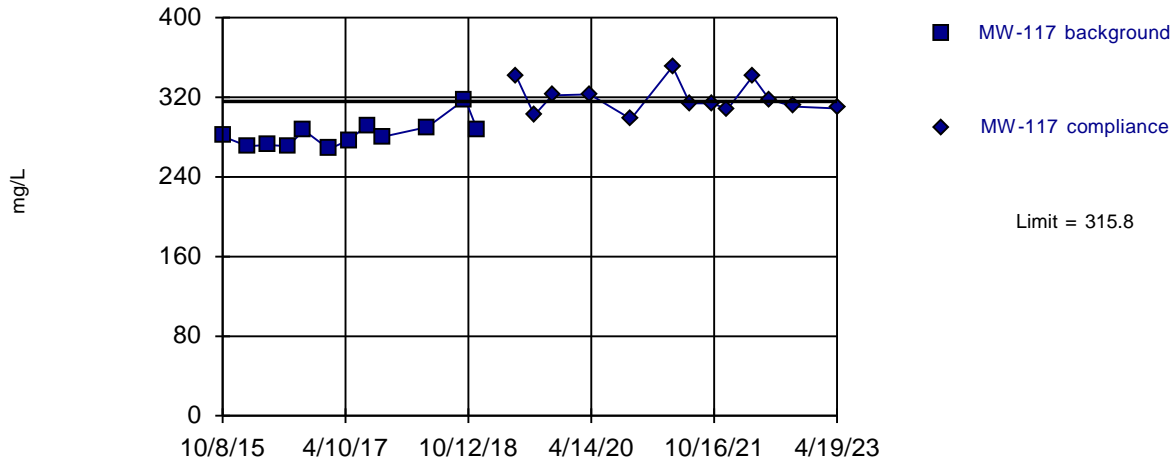
Constituent: Dissolved Solids Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=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.

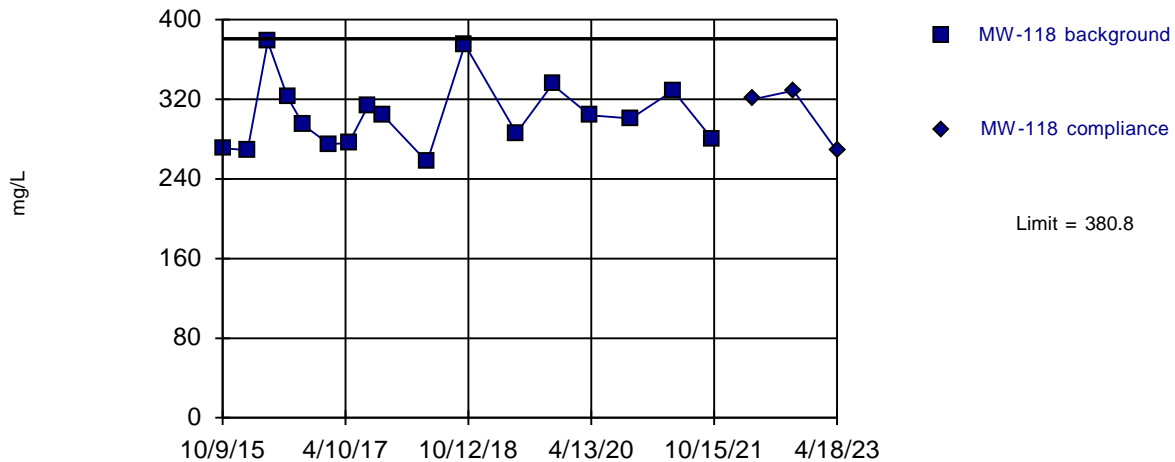
Constituent: Dissolved Solids Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

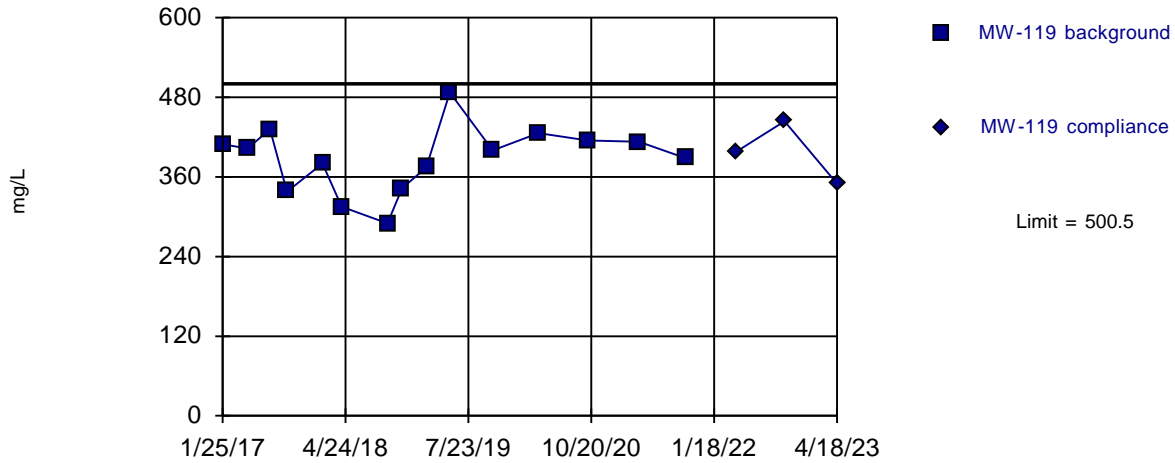
Intrawell Parametric



Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=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.

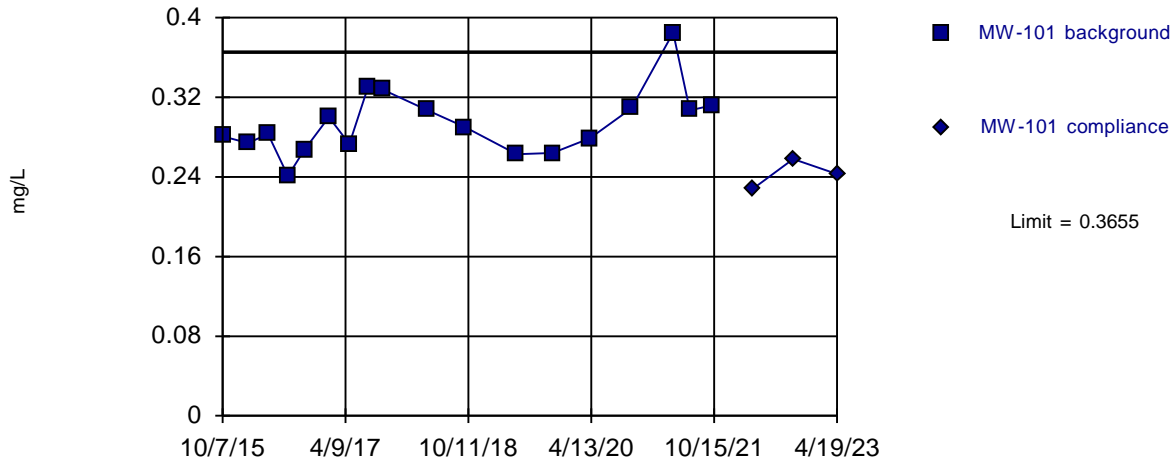
Constituent: Dissolved Solids Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2941, 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.

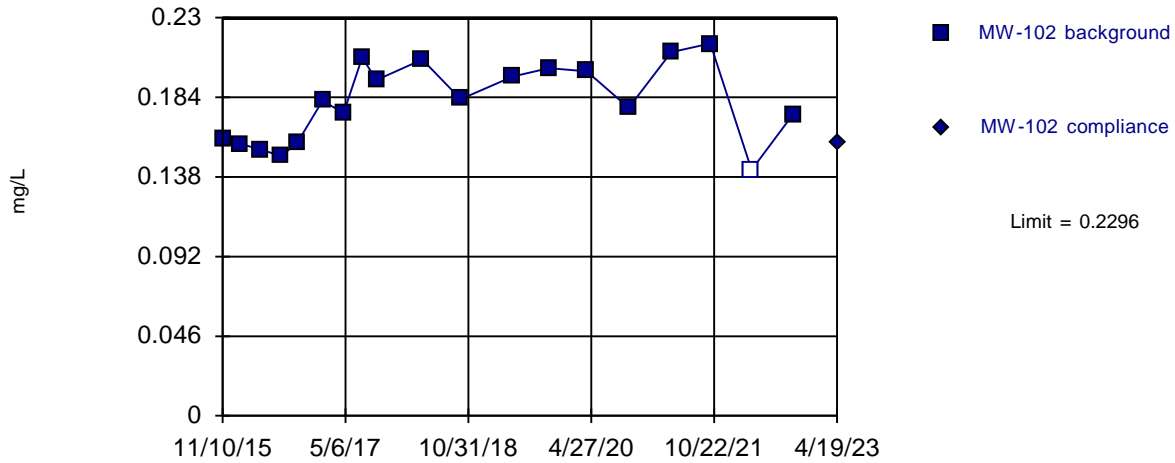
Constituent: Fluoride Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1811, 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.

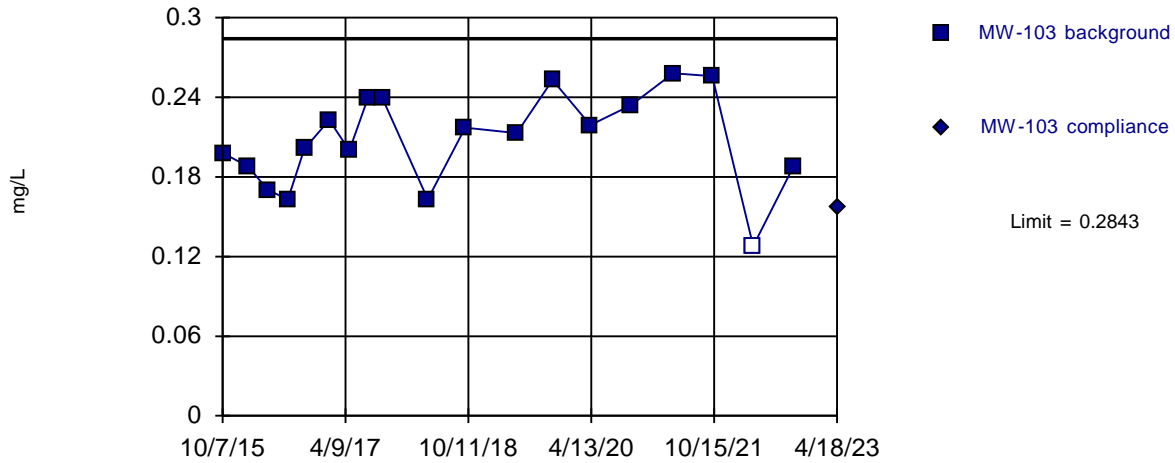
Constituent: Fluoride Analysis Run 5/3/2023 1:06 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.208, Std. Dev.=0.03568, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9609, critical = 0.863. Kappa = 2.139 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

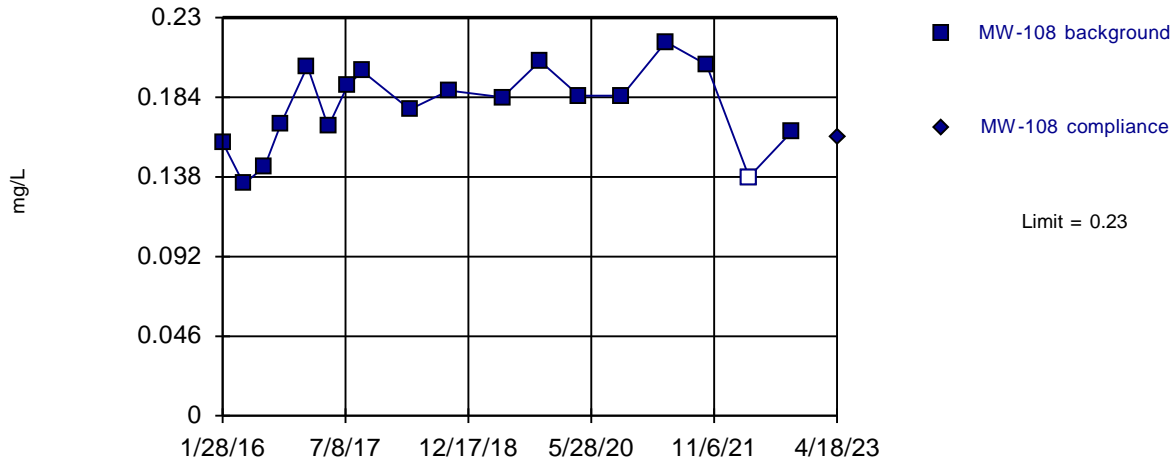
Constituent: Fluoride Analysis Run 5/3/2023 1:06 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1783, Std. Dev.=0.0239, n=18. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9548, critical = 0.858. Kappa = 2.163 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

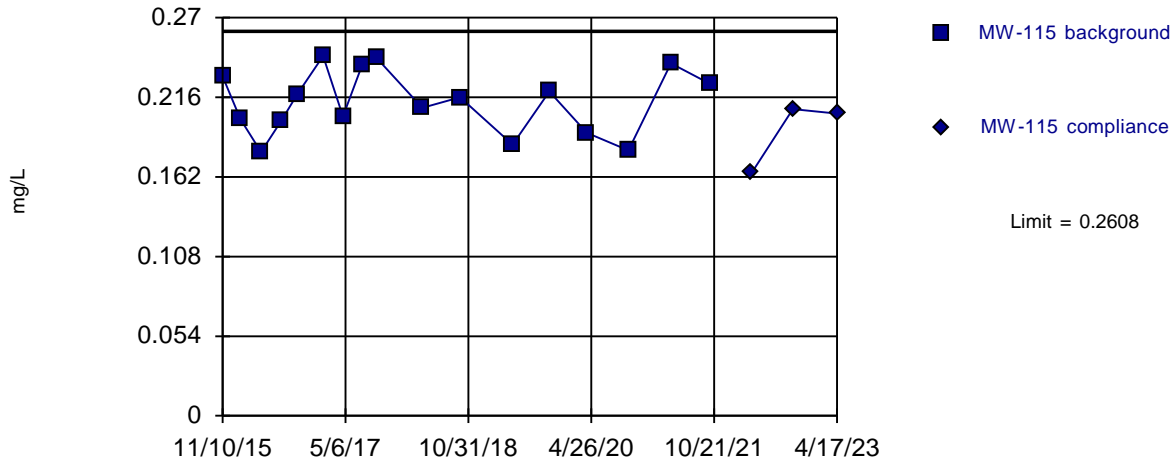
Constituent: Fluoride Analysis Run 5/3/2023 1:06 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.213, 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 5/2/2023 3:01 PM View: 2023-1H PL

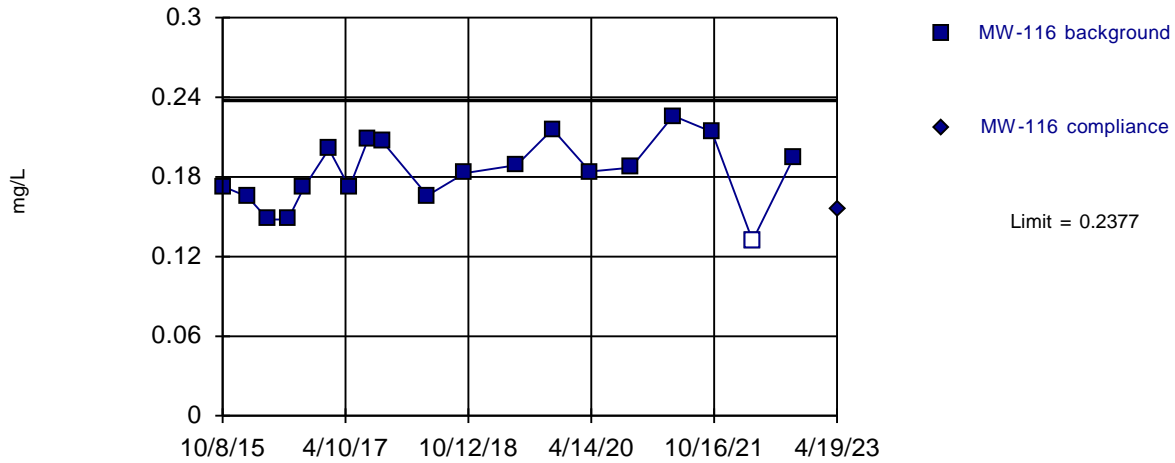
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1834, 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.

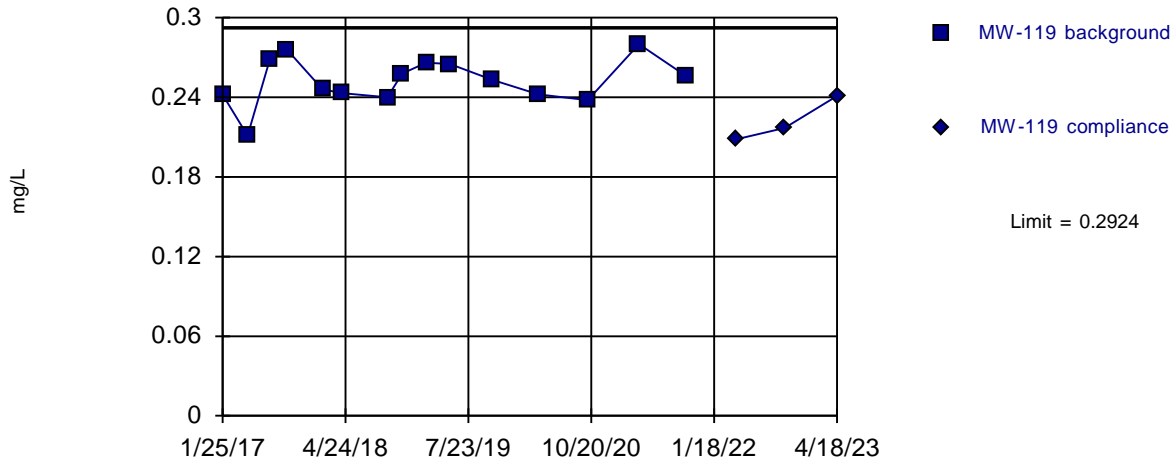
Constituent: Fluoride Analysis Run 5/5/2023 7:38 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

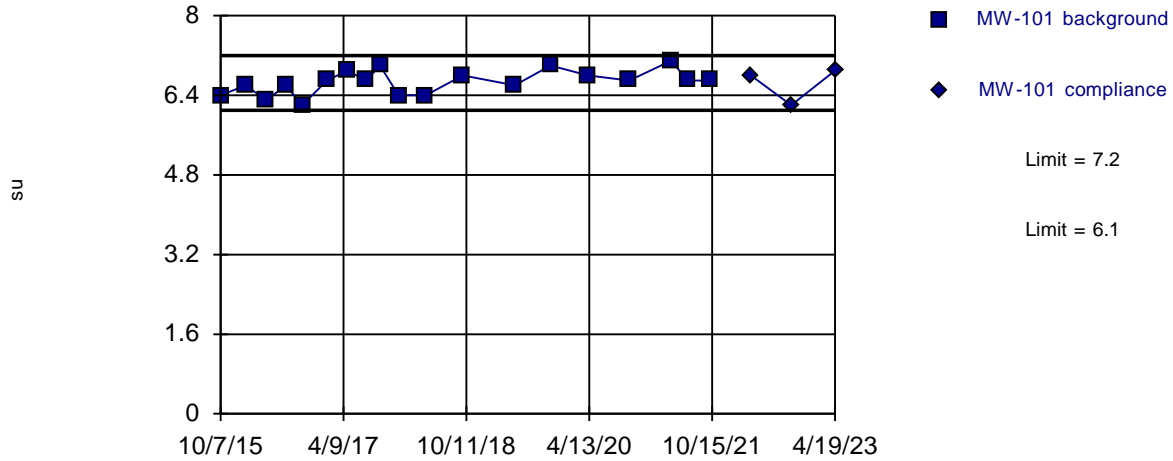
Intrawell Parametric



Within Limits

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.663, 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 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

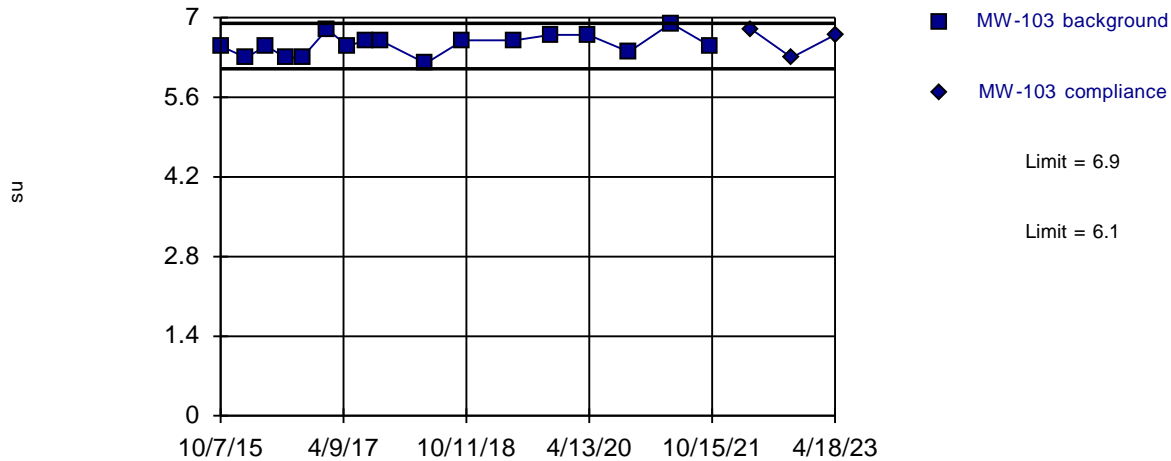
### Prediction Limit

Intrawell

Within Limits

### Prediction Limit

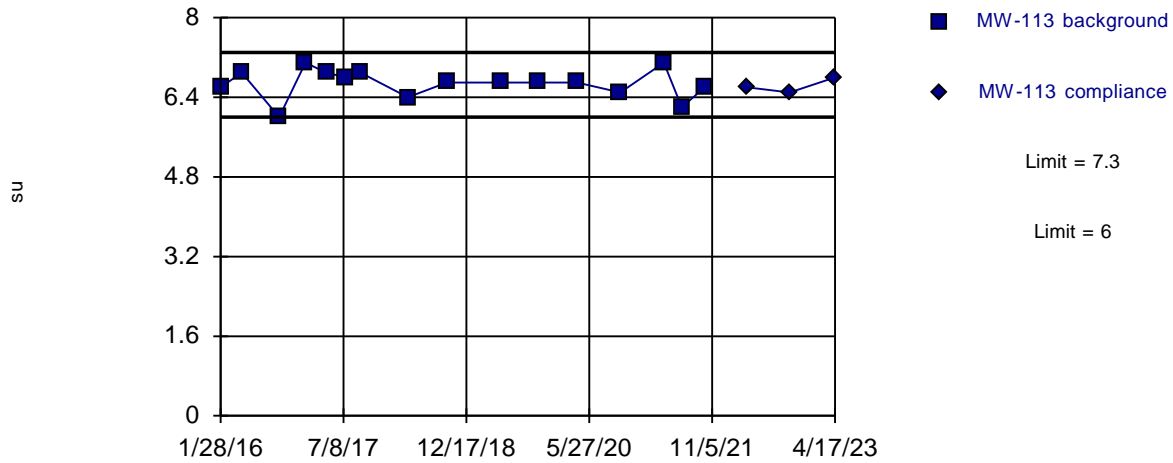
Intrawell Parametric



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.

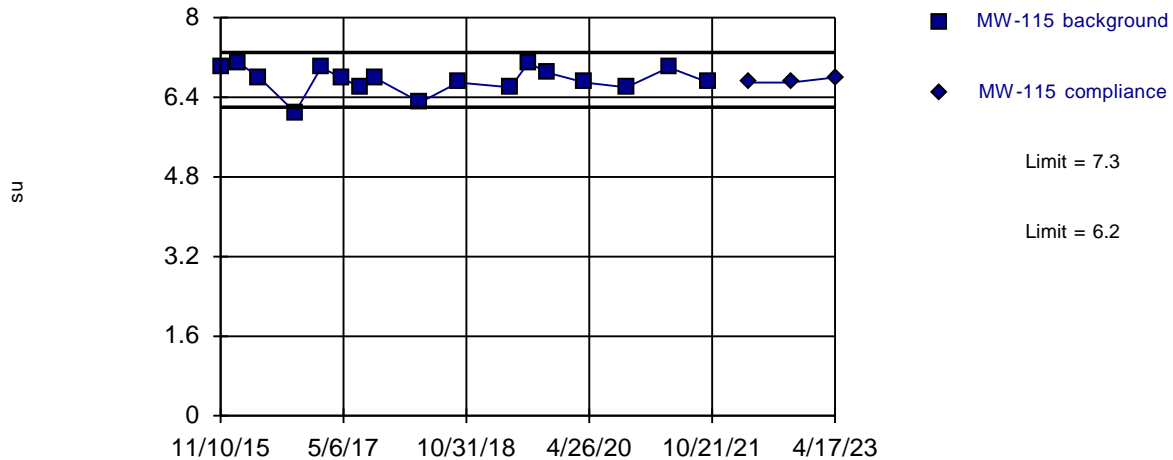
Constituent: pH Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=6.753, 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.

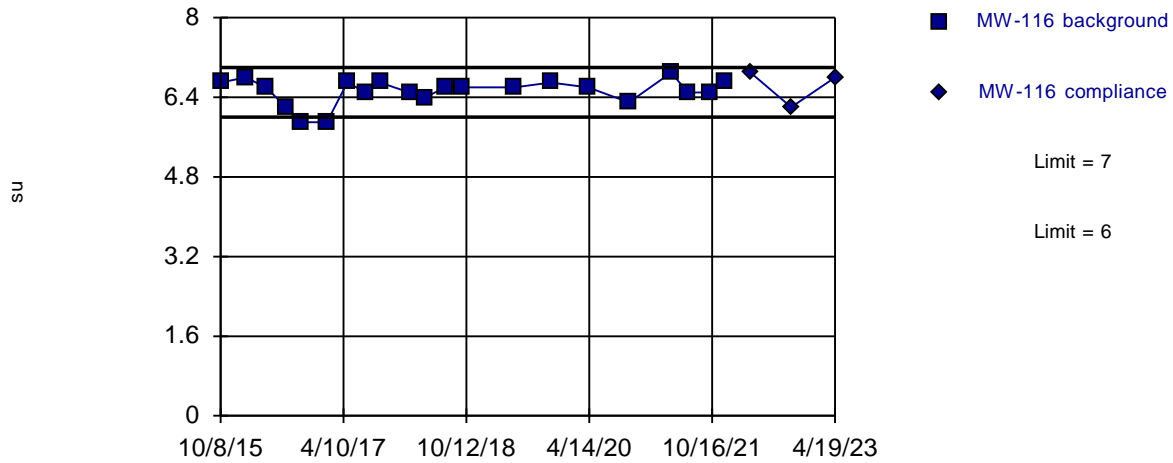
Constituent: pH Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

### Prediction Limit

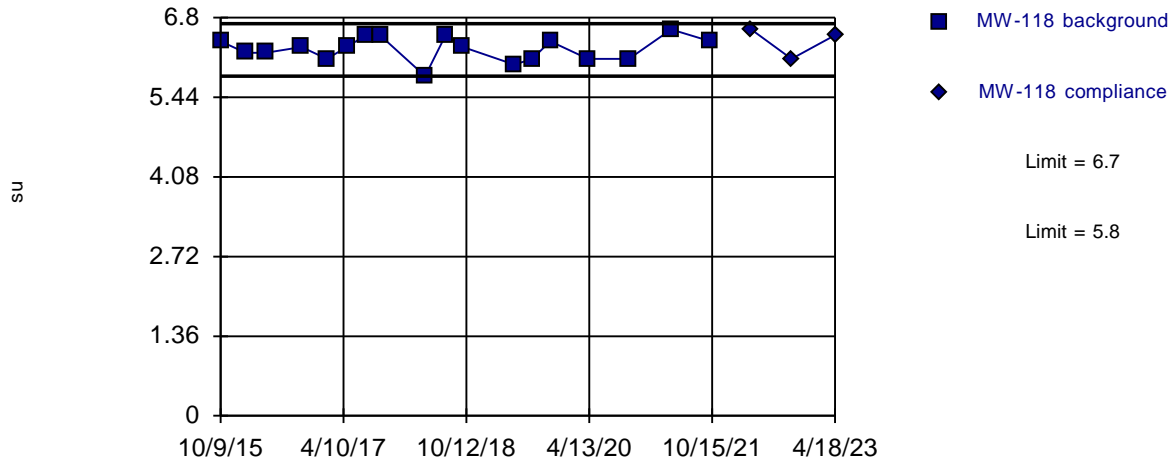
Intrawell Parametric



Within Limits

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=6.267, 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.

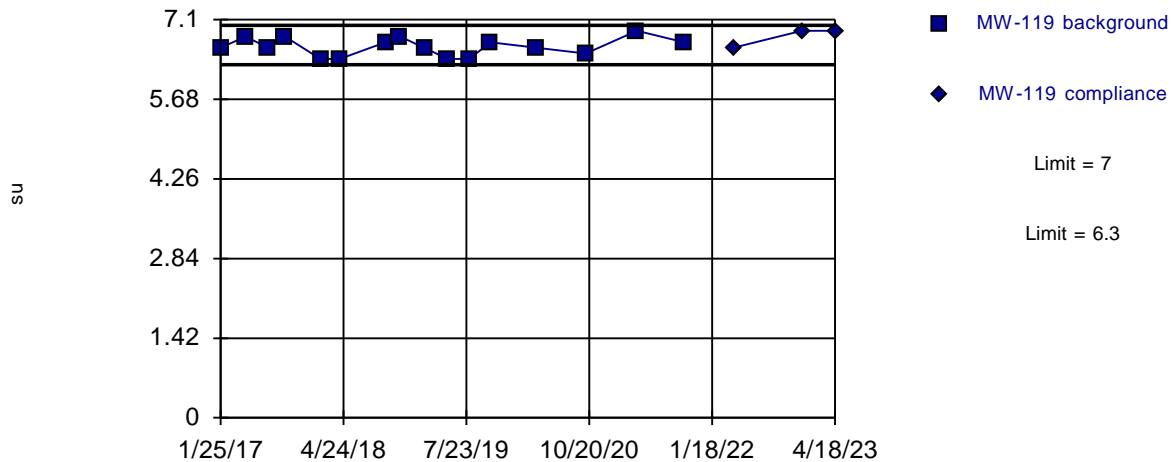
Constituent: pH Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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.

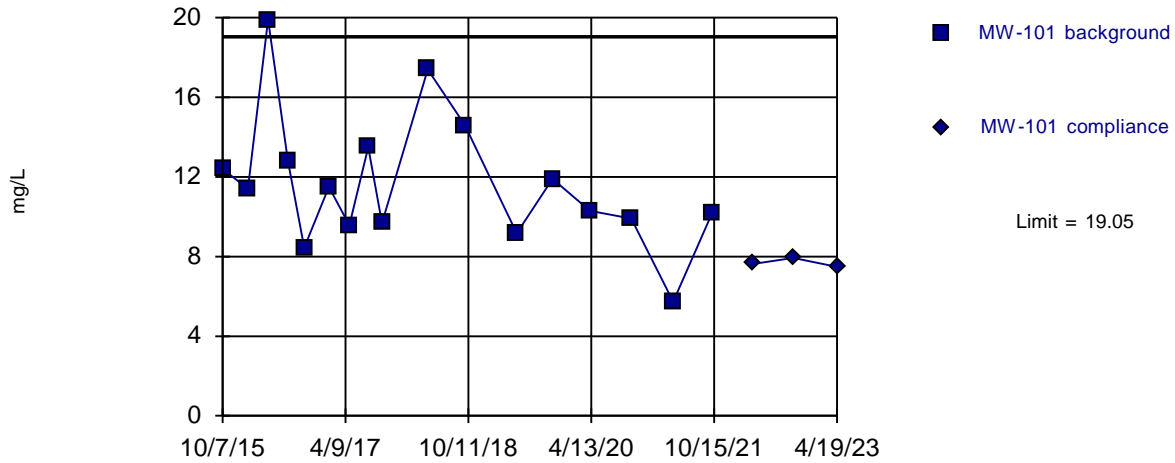
Constituent: pH Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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.

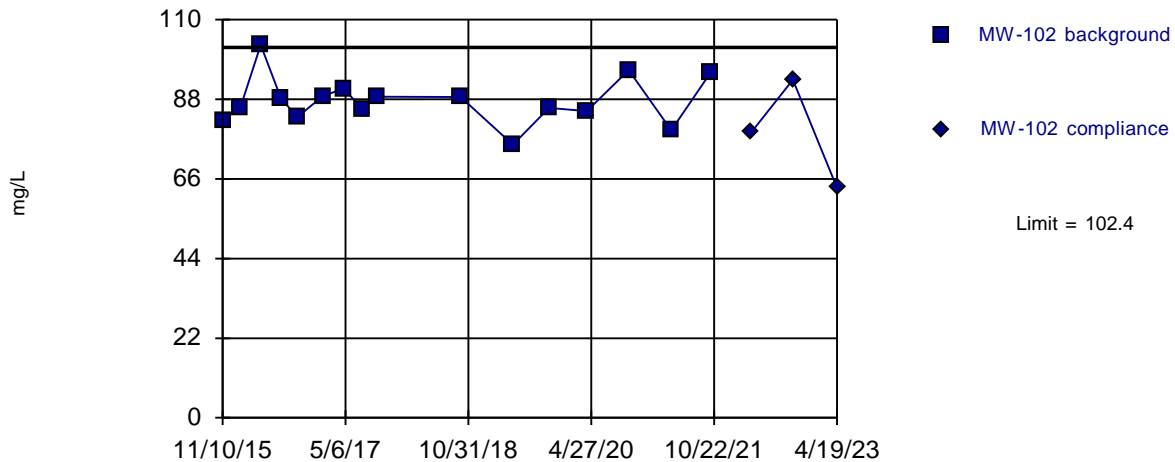
Constituent: Sulfate Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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.

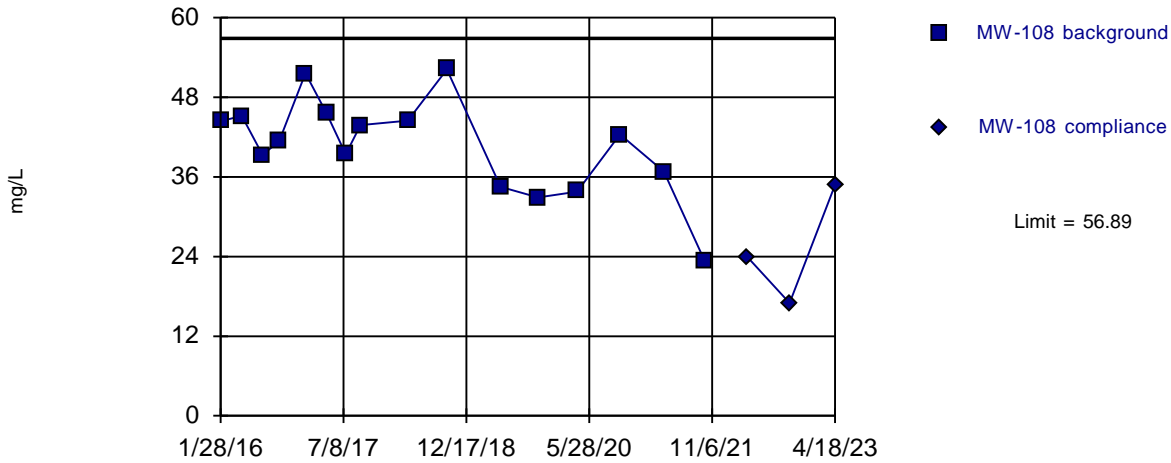
Constituent: Sulfate Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=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.

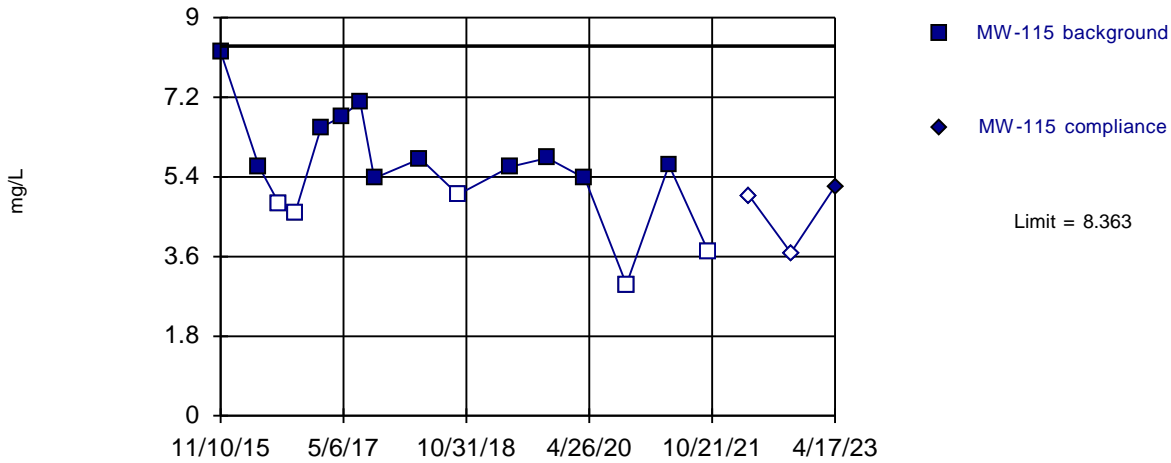
Constituent: Sulfate Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=5.56, Std. Dev.=1.267, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9728, 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 5/2/2023 3:01 PM View: 2023-1H PL

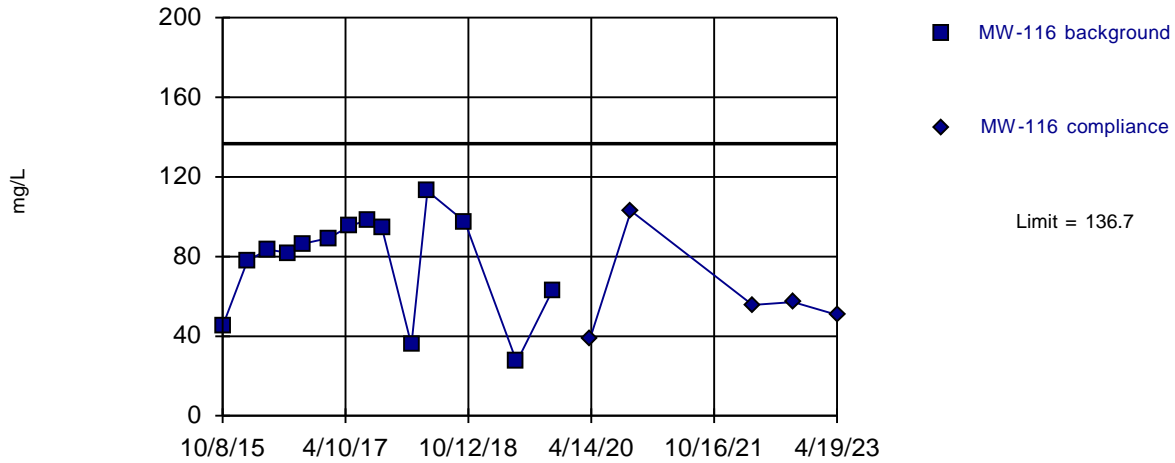
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=77.71, Std. Dev.=25.62, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8937, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

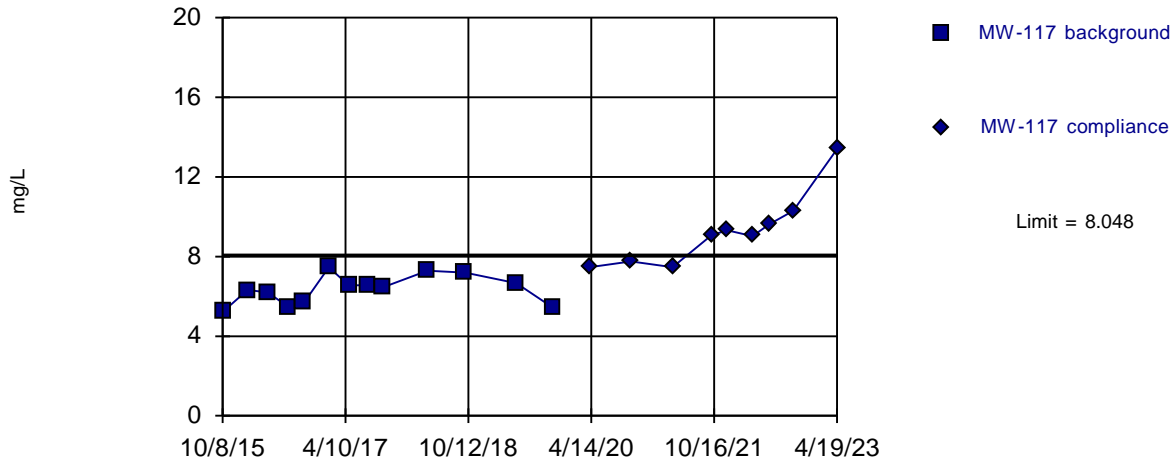
Constituent: Sulfate Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=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.

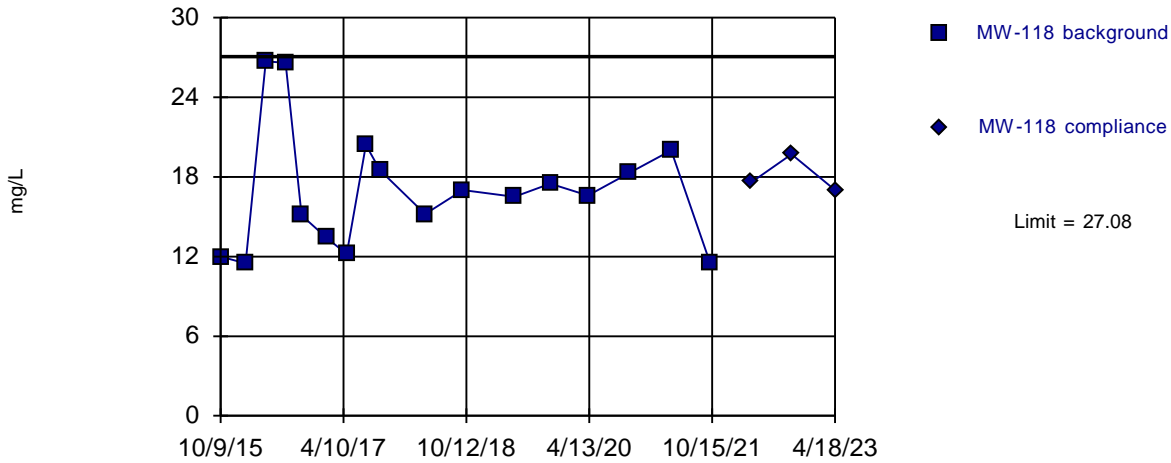
Constituent: Sulfate Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=17, 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.

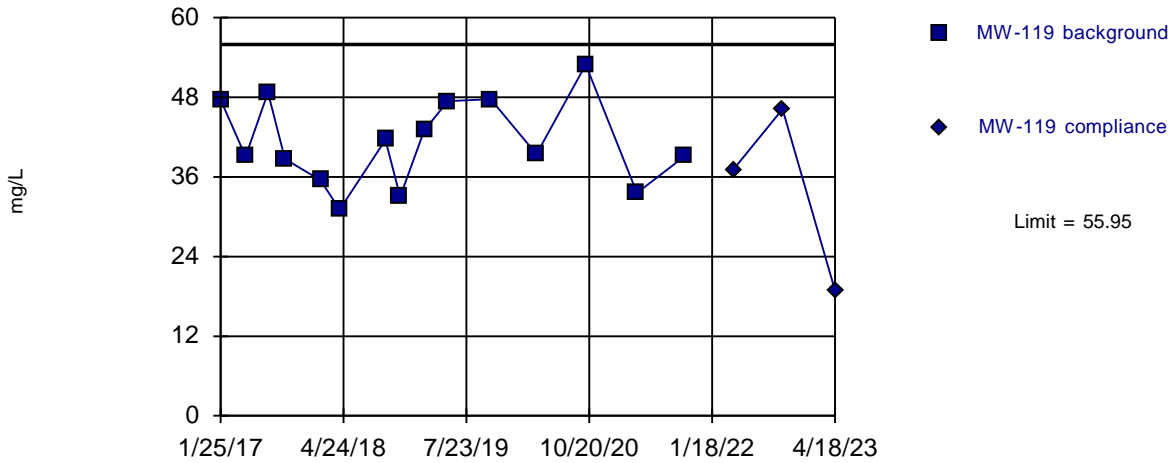
Constituent: Sulfate Analysis Run 5/2/2023 3:01 PM View: 2023-1H PL

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=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 5/2/2023 3:01 PM View: 2023-1H PL

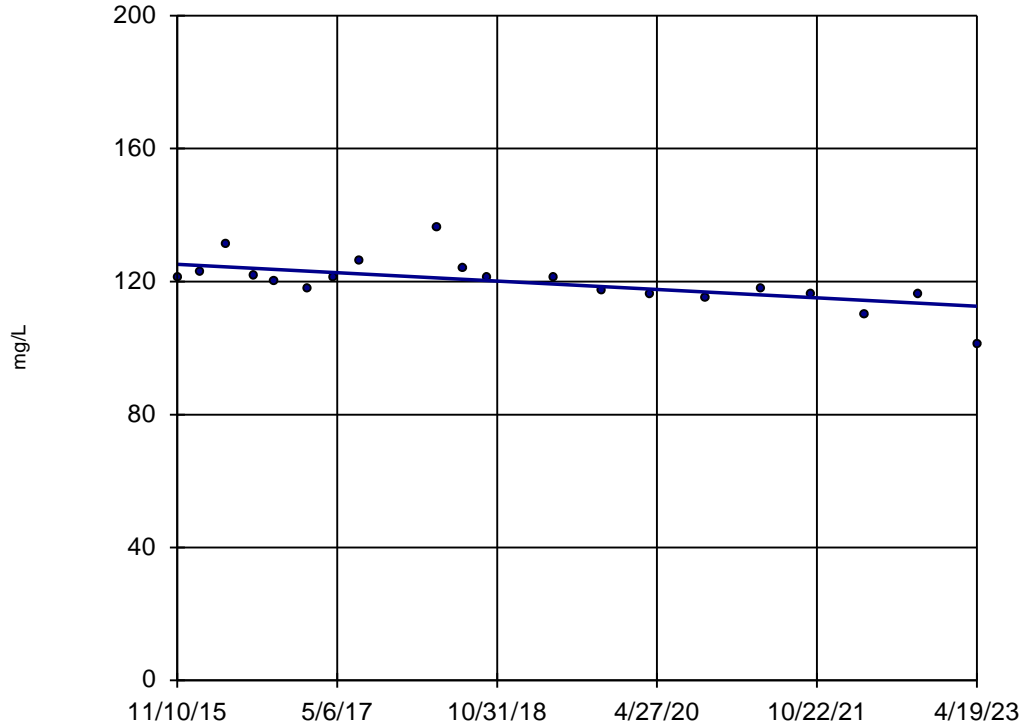
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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**Trend Tests, First Half 2023 Monitoring Event**

### Sen's Slope Estimator

MW-102



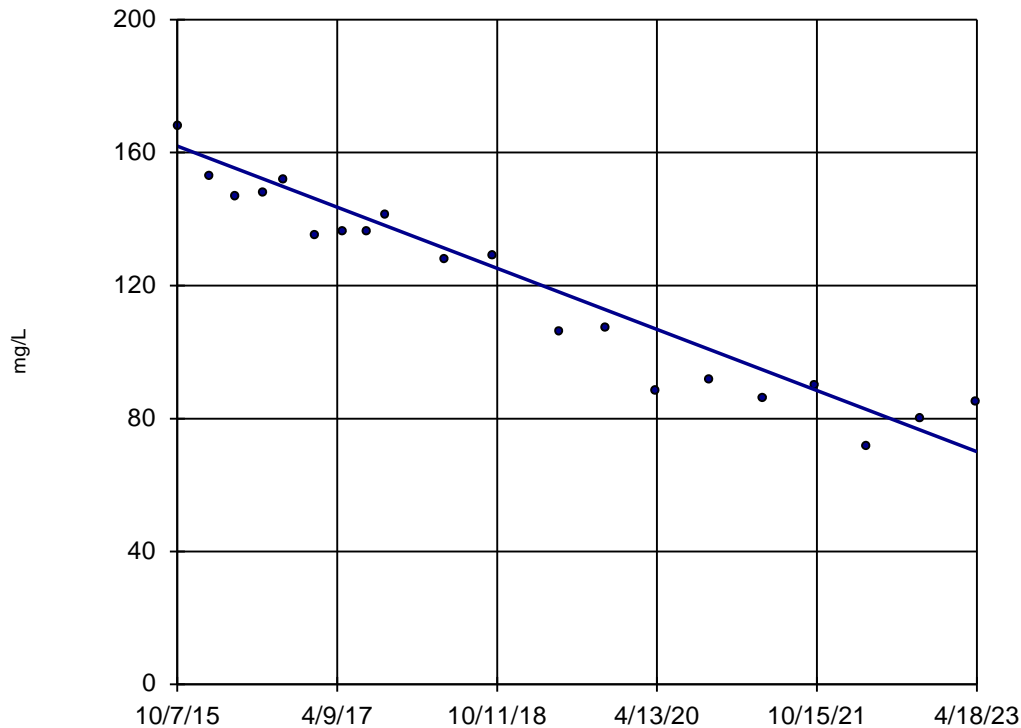
n = 20  
Slope = -1.699 units per year.  
Mann-Kendall statistic = -108  
critical = -73  
Decreasing trend significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Calcium Analysis Run 5/2/2023 3:04 PM View: 2023-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-103



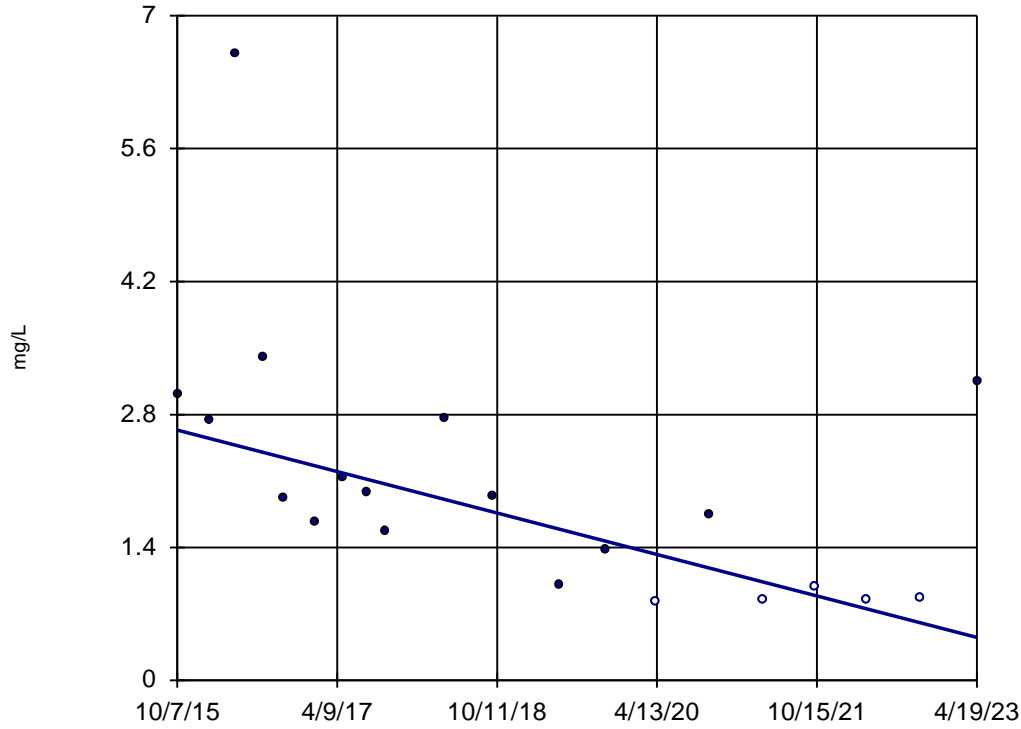
n = 20  
Slope = -12.21 units per year.  
Mann-Kendall statistic = -157  
critical = -73  
Decreasing trend significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Calcium Analysis Run 5/2/2023 3:04 PM View: 2023-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-101



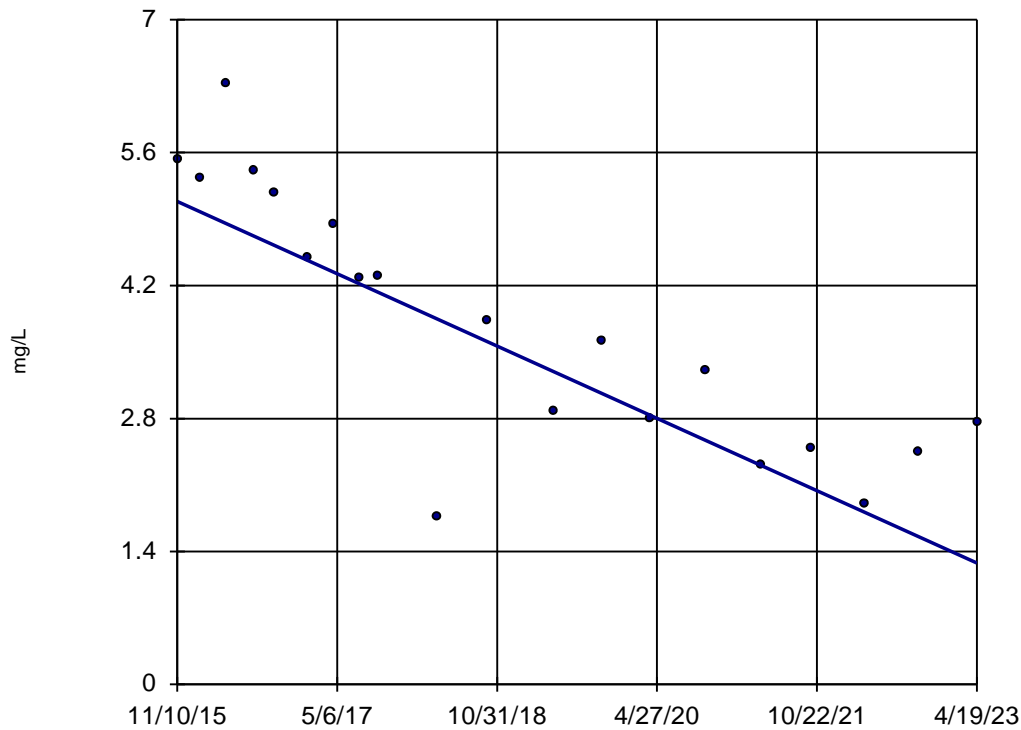
n = 20  
Slope = -0.2897  
units per year.  
Mann-Kendall  
statistic = -96  
critical = -73  
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 5/2/2023 3:04 PM View: 2023-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-102



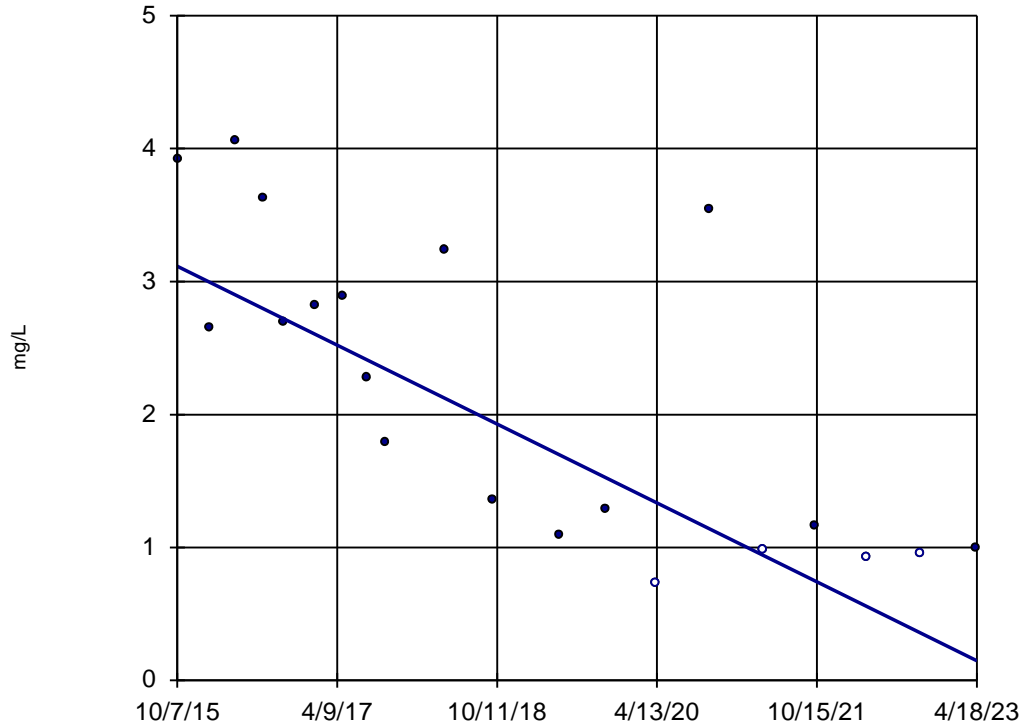
n = 20  
Slope = -0.5117  
units per year.  
Mann-Kendall  
statistic = -140  
critical = -73  
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 5/2/2023 3:04 PM View: 2023-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-103



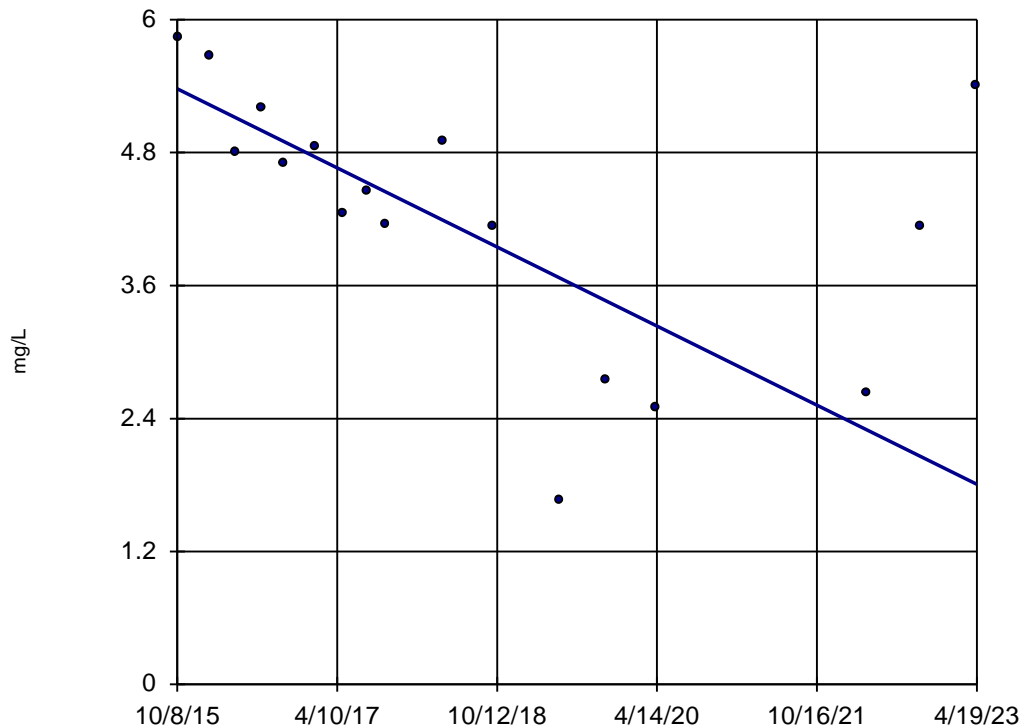
n = 20  
Slope = -0.3938  
units per year.  
Mann-Kendall  
statistic = -114  
critical = -73  
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 5/2/2023 3:04 PM View: 2023-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-116



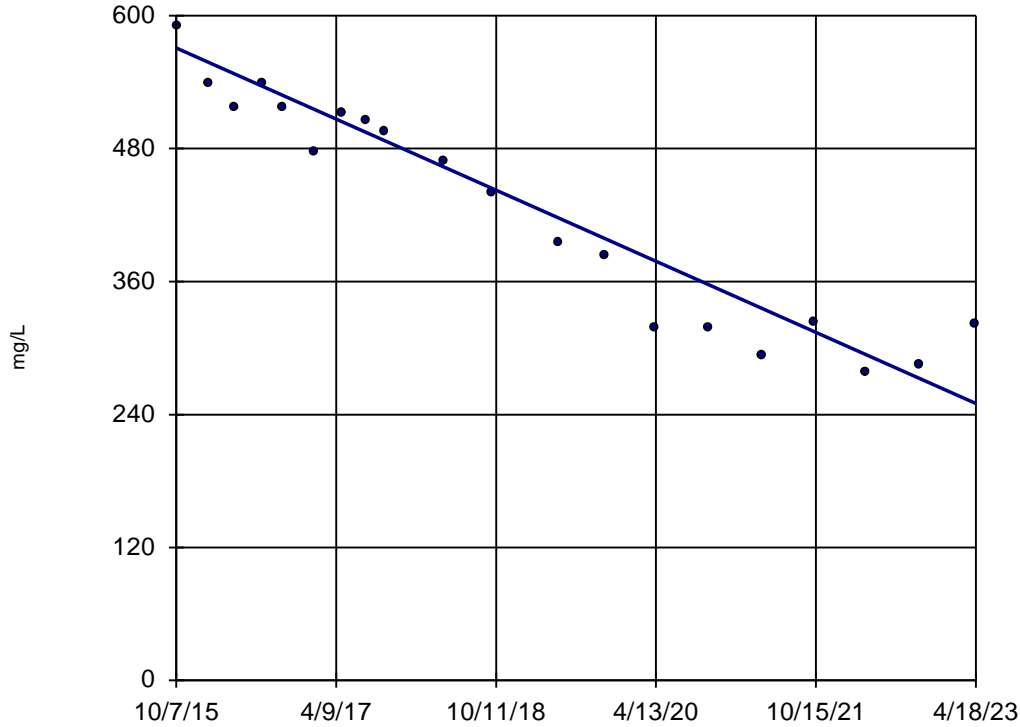
n = 17  
Slope = -0.4737  
units per year.  
Mann-Kendall  
statistic = -70  
critical = -58  
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 5/2/2023 3:04 PM View: 2023-1H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-103

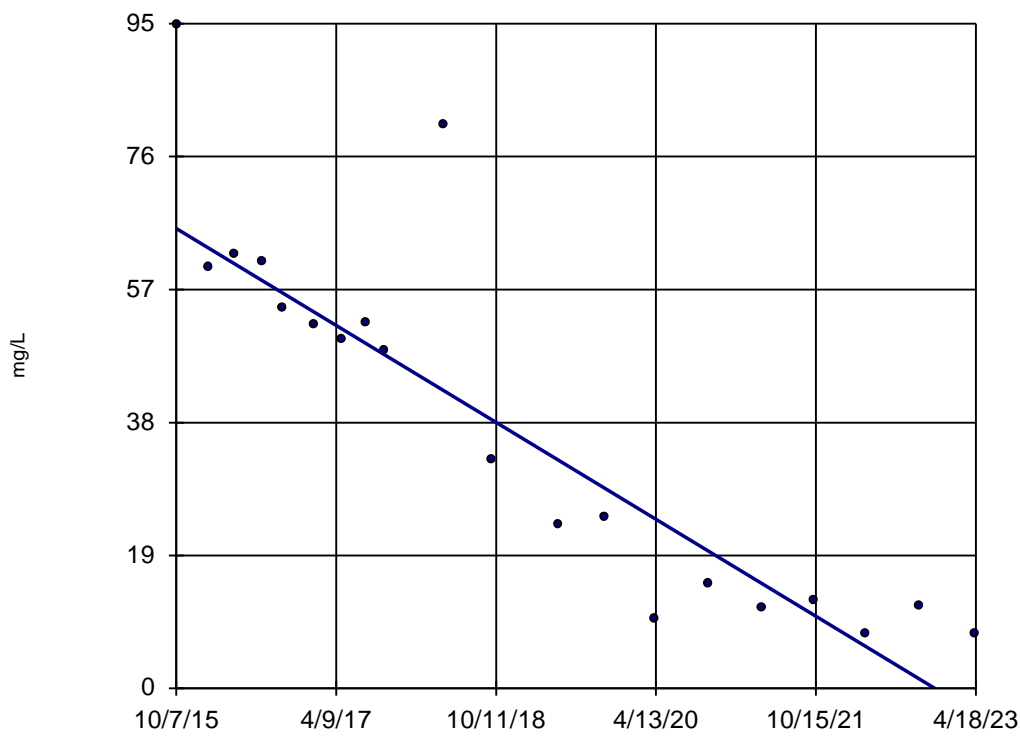


n = 20  
Slope = -42.59 units per year.  
Mann-Kendall statistic = -159  
critical = -73  
Decreasing trend significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Dissolved Solids Analysis Run 5/2/2023 3:04 PM View: 2023-1H trend  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-103



n = 20  
Slope = -9.195 units per year.  
Mann-Kendall statistic = -150  
critical = -73  
Decreasing trend significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Sulfate Analysis Run 5/2/2023 3:04 PM View: 2023-1H trend  
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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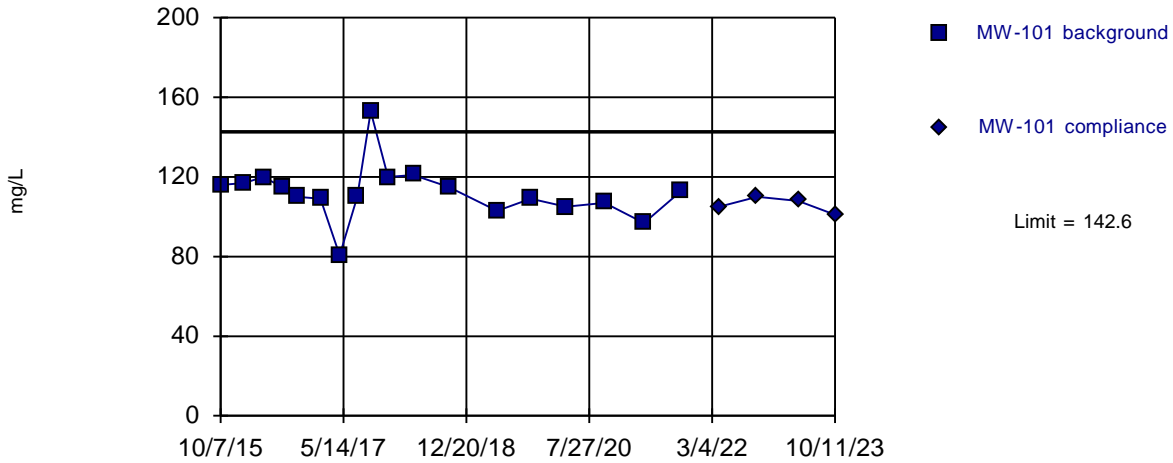
**Prediction Limits, Second Half 2023 Monitoring Event**



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.

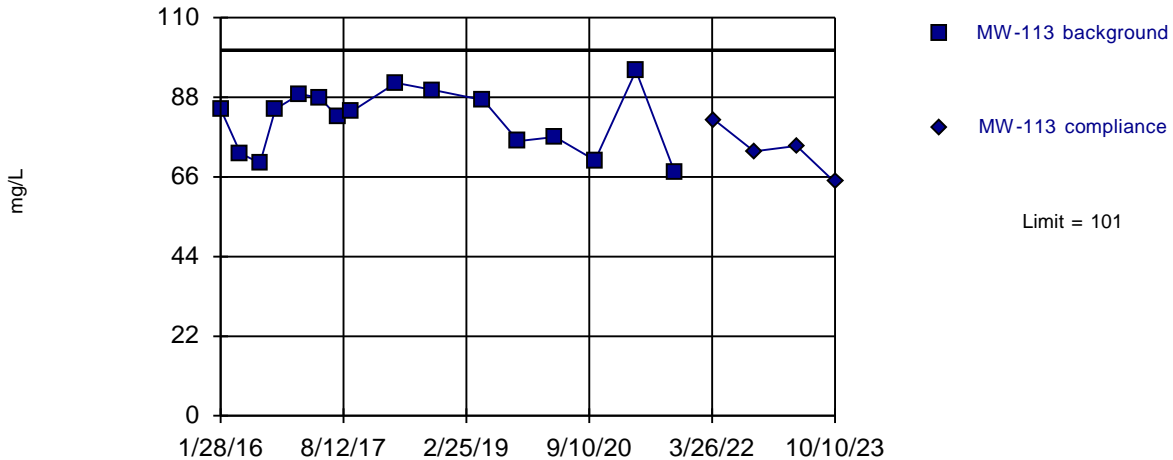
Constituent: Calcium Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

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=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.

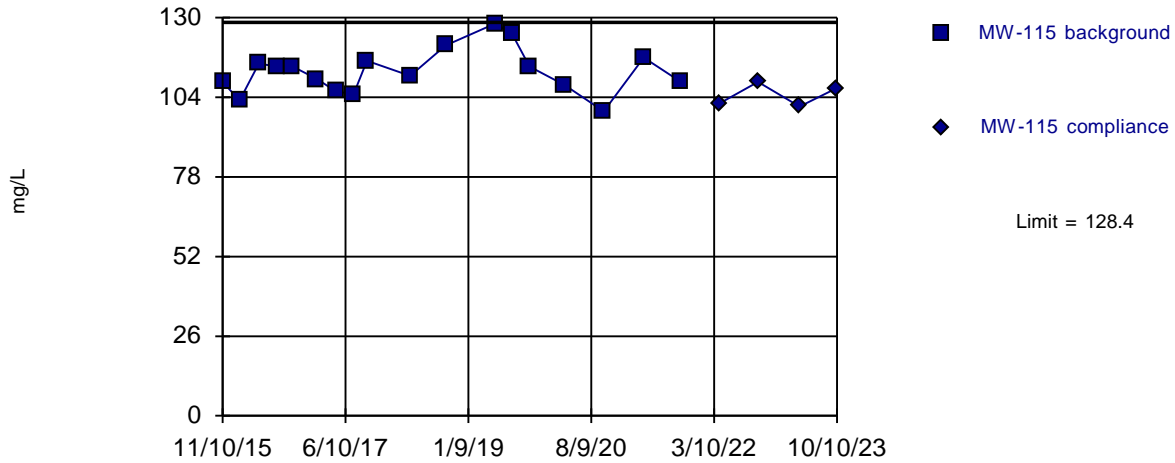
Constituent: Calcium Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

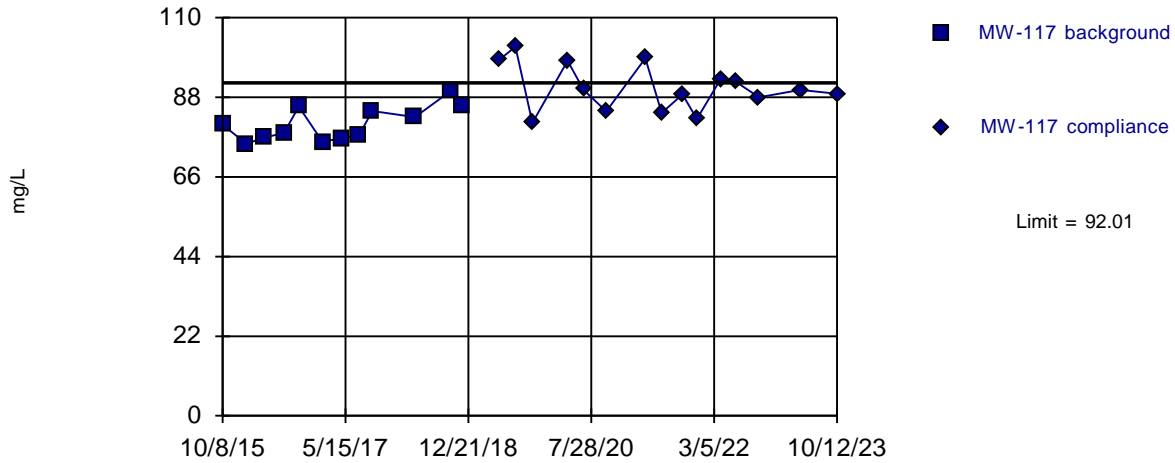
Intrawell Parametric



Within 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.

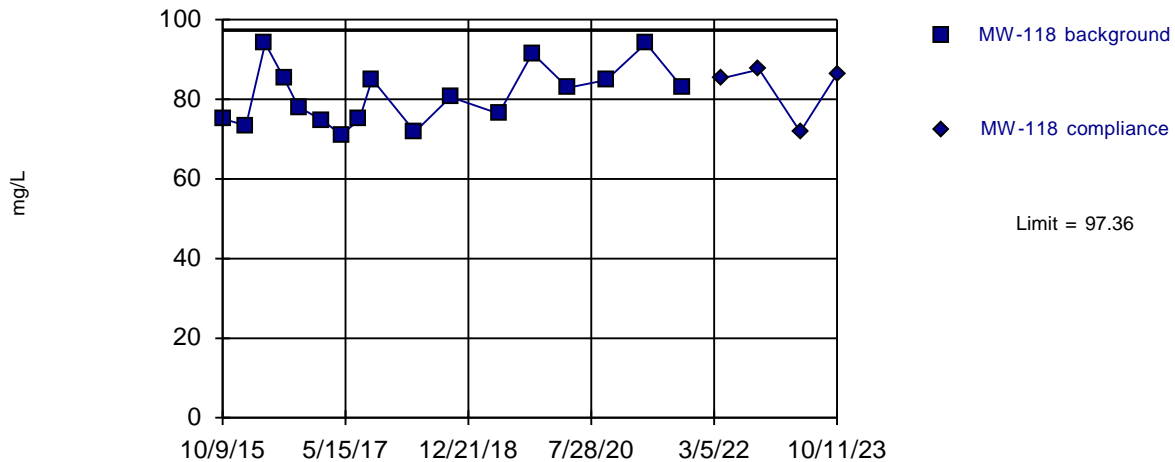
Constituent: Calcium Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

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=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.

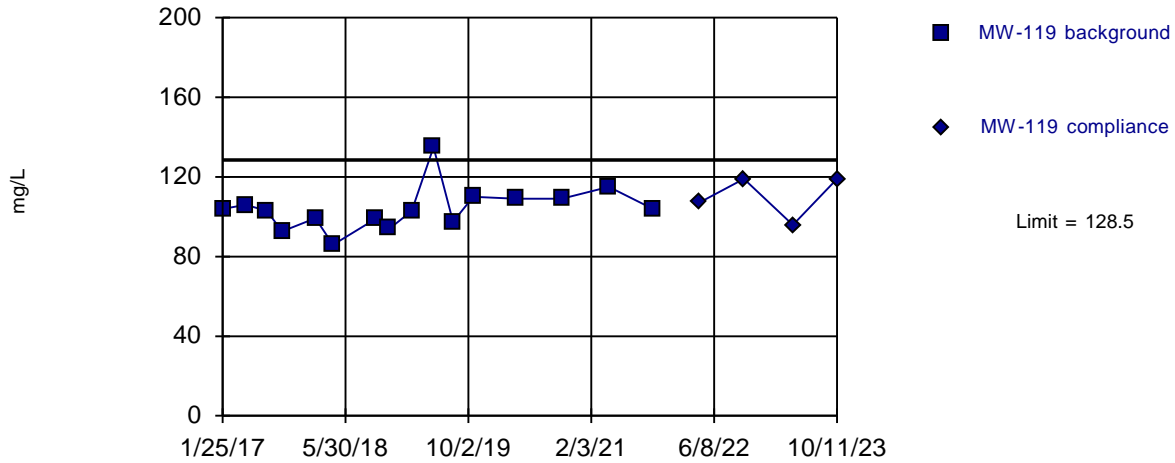
Constituent: Calcium Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

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=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.

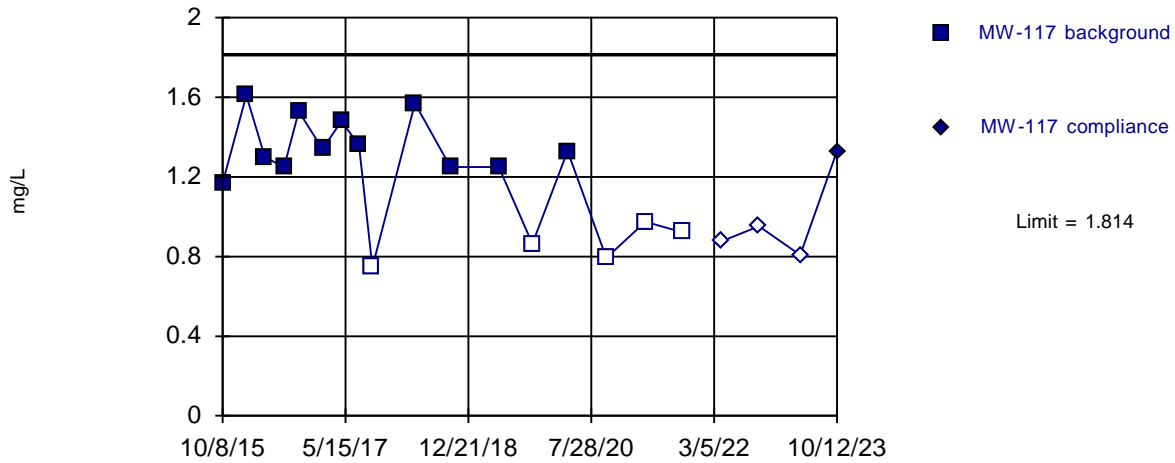
Constituent: Calcium Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

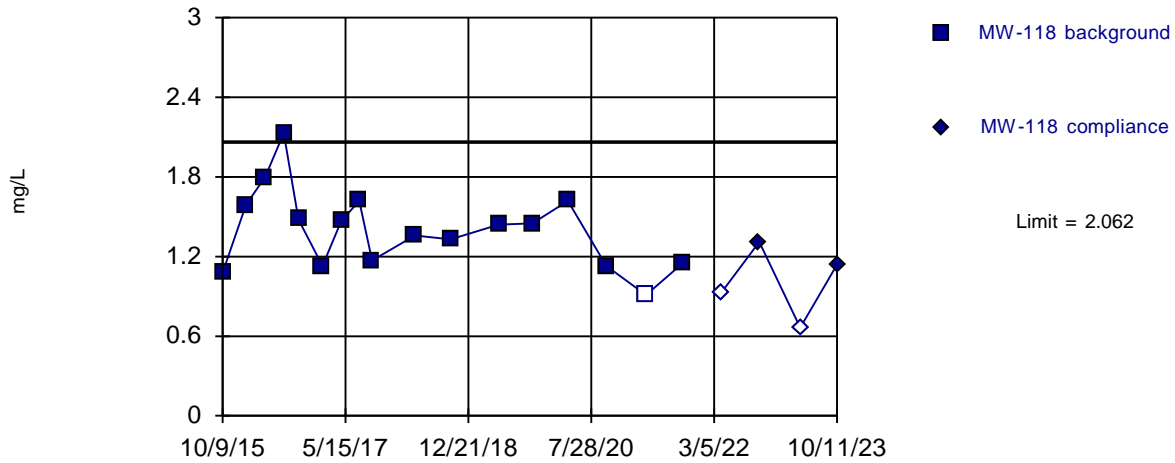
Intrawell Parametric



Within Limit

### Prediction Limit

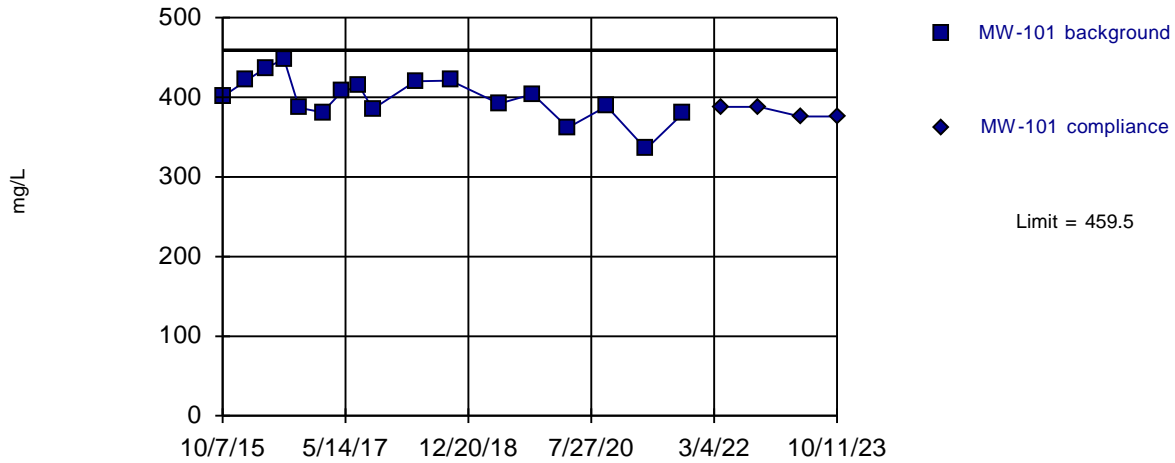
Intrawell Parametric



Within Limit

### Prediction Limit

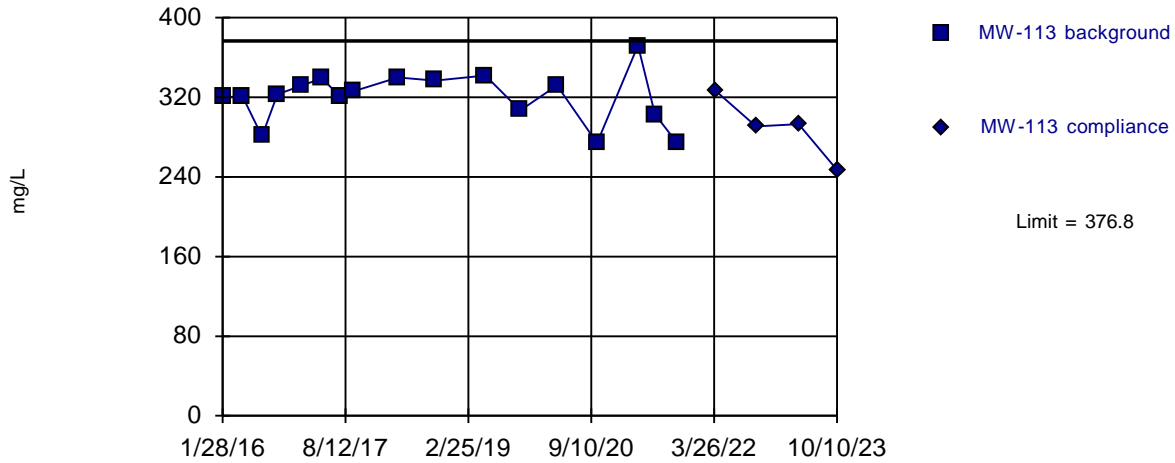
Intrawell Parametric



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.

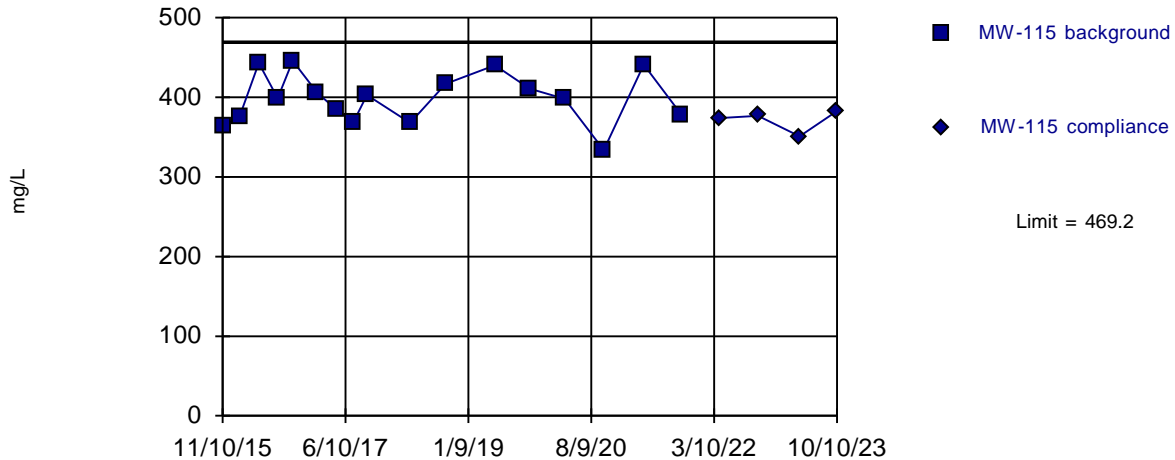
Constituent: Dissolved Solids Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

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=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.

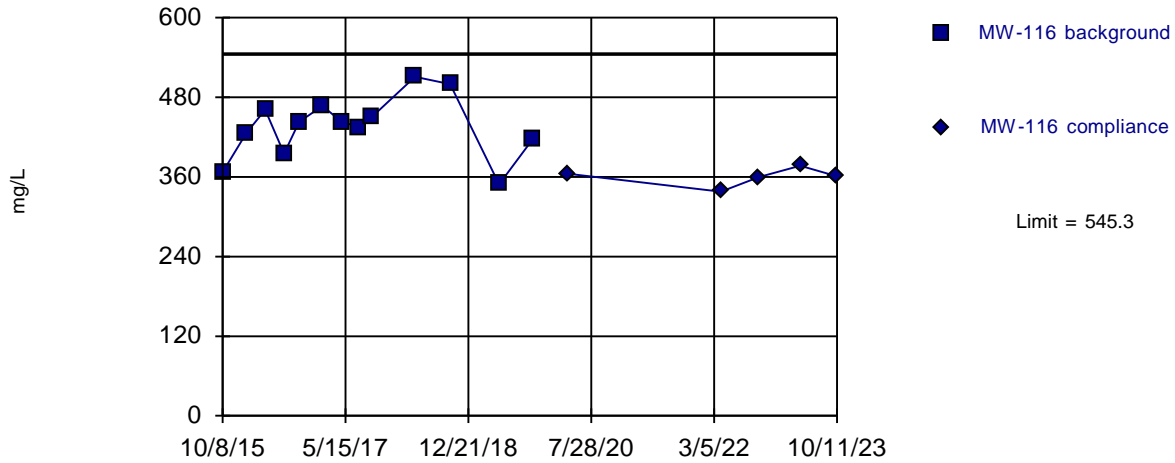
Constituent: Dissolved Solids Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

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=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.

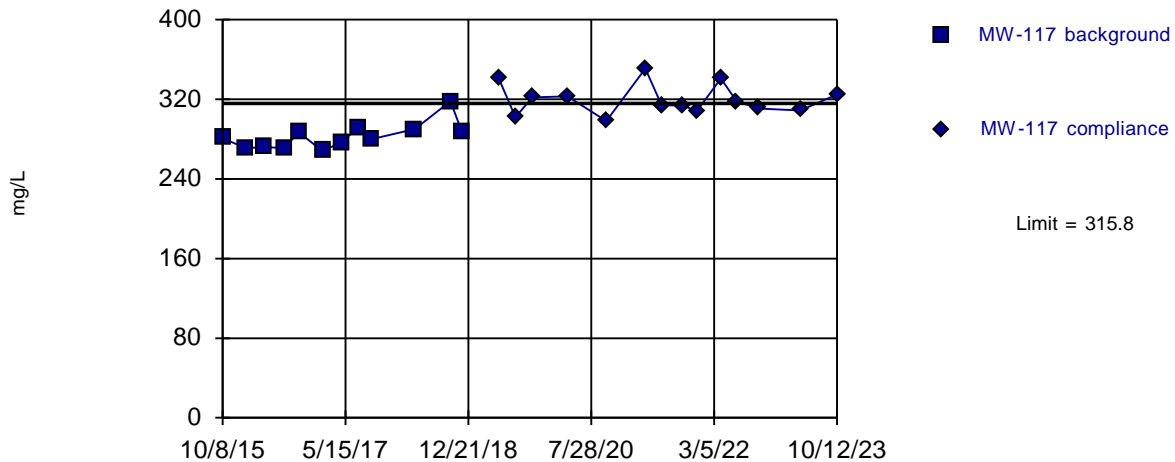
Constituent: Dissolved Solids Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

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=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 10/24/2023 6:08 PM View: 2023-2H PL

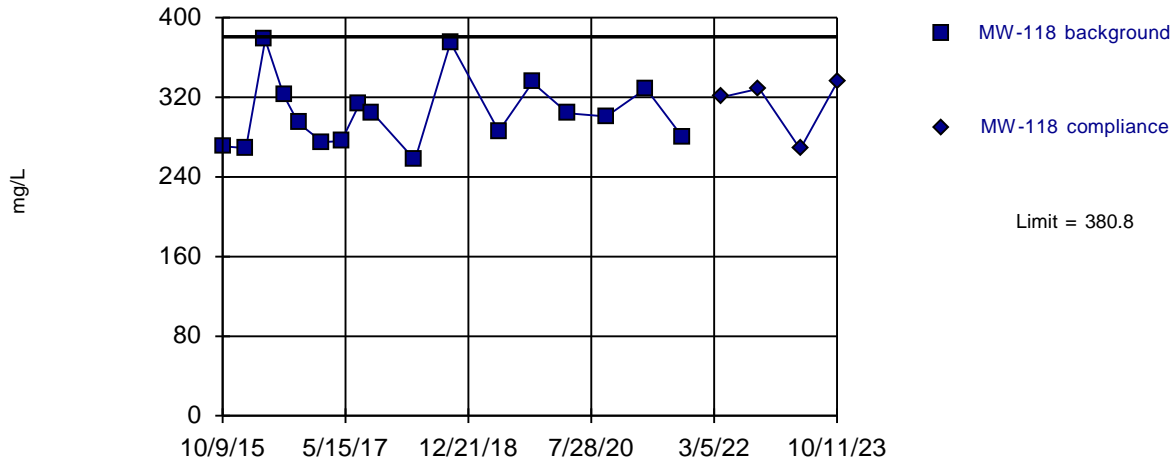
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=304.1, 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.

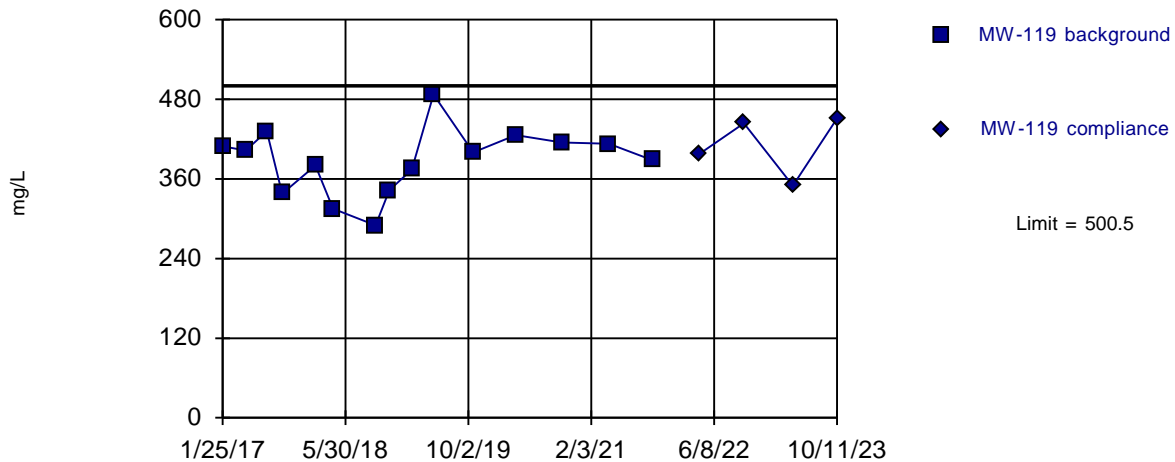
Constituent: Dissolved Solids Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

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=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.

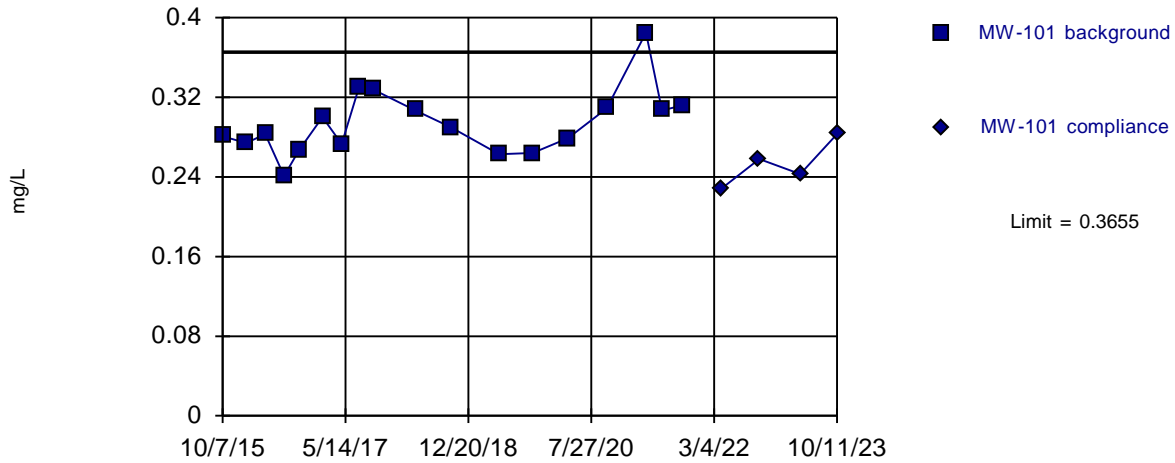
Constituent: Dissolved Solids Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.2941, 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.

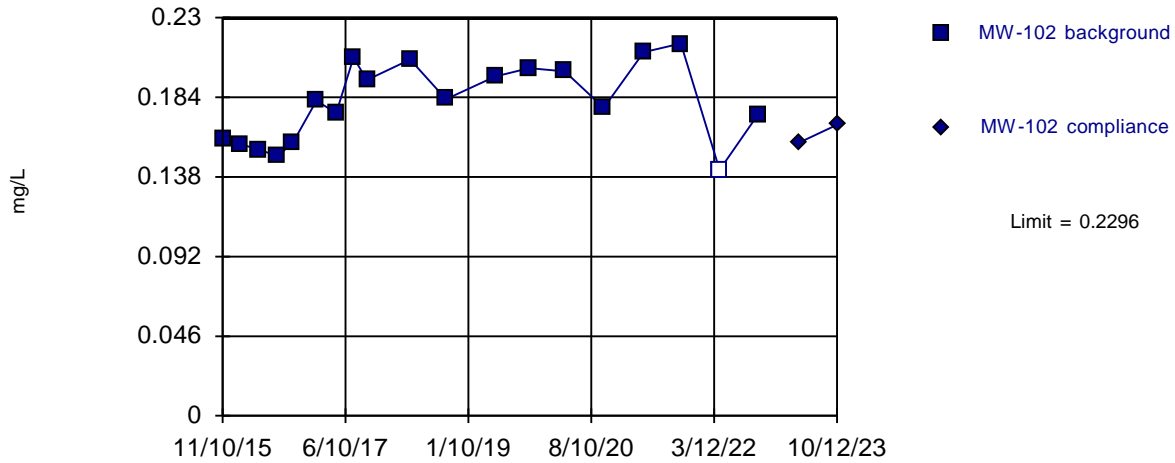
Constituent: Fluoride Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1811, 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.

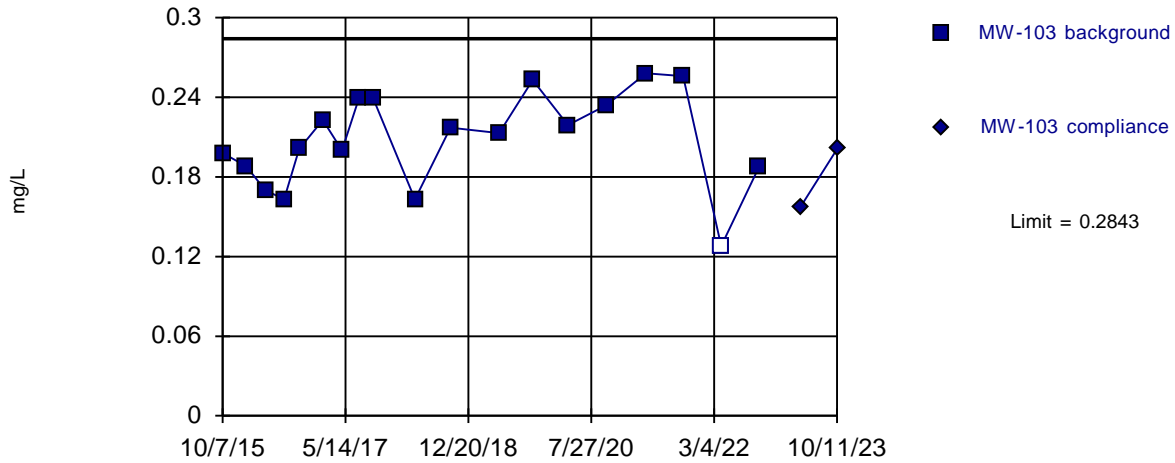
Constituent: Fluoride Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.208, Std. Dev.=0.03568, n=19. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9609, critical = 0.863. Kappa = 2.139 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

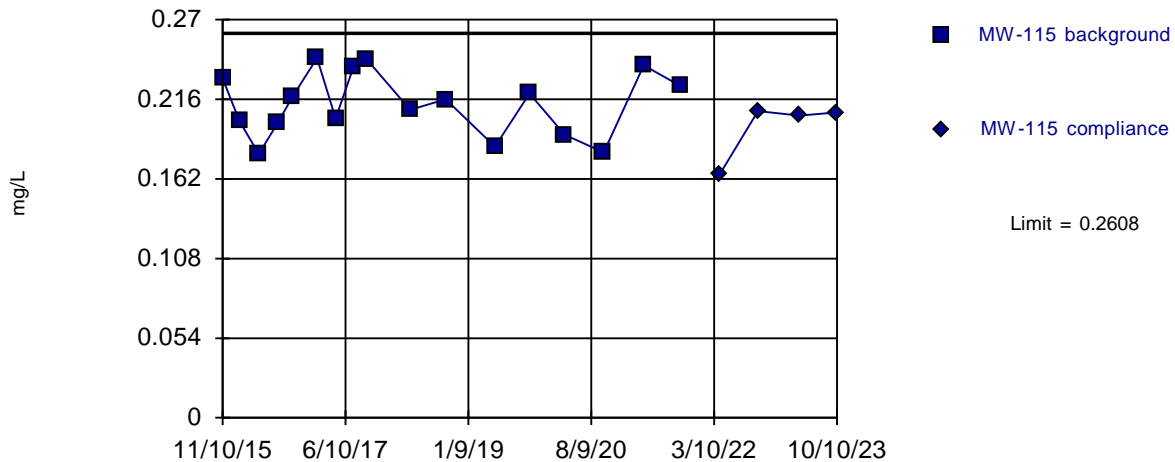
Constituent: Fluoride Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.213, 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.

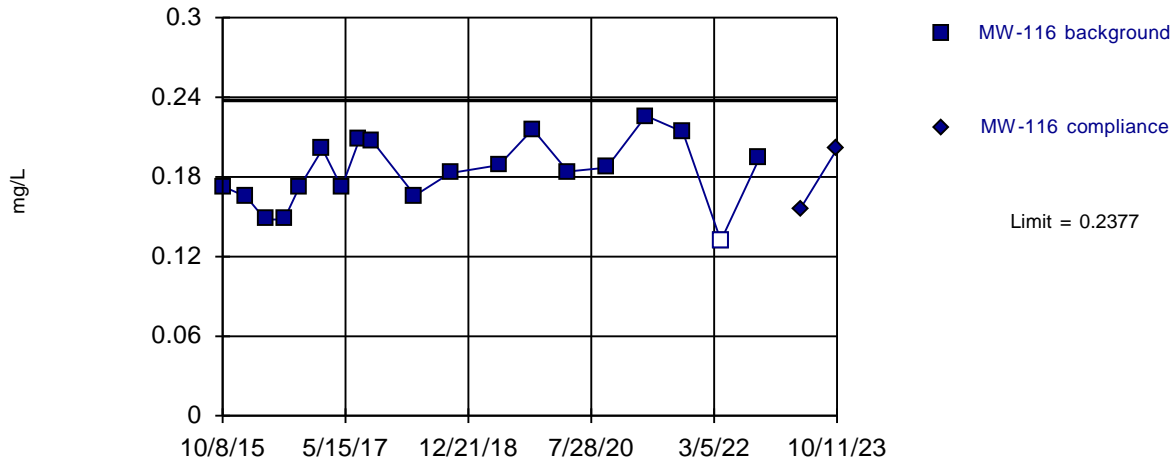
Constituent: Fluoride Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1834, 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.

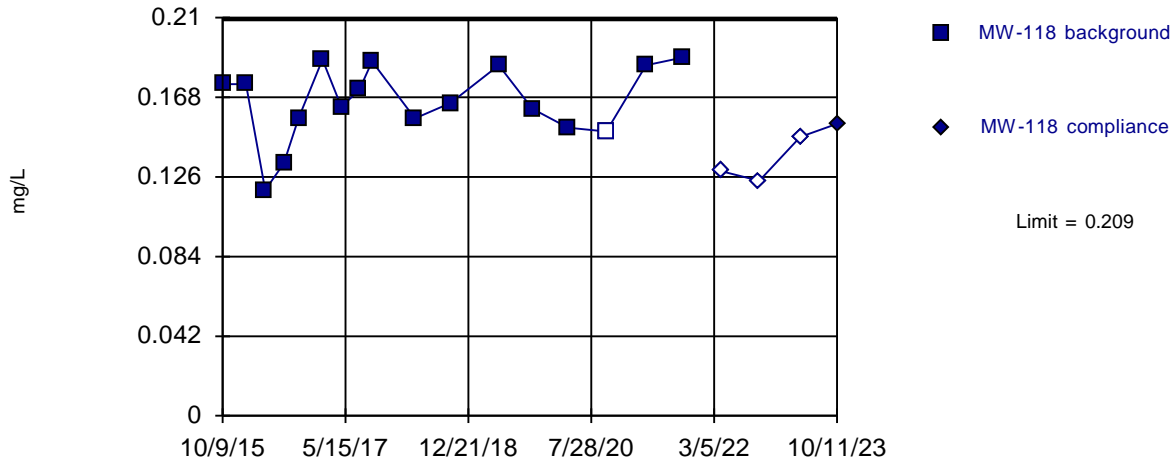
Constituent: Fluoride Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1655, 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.

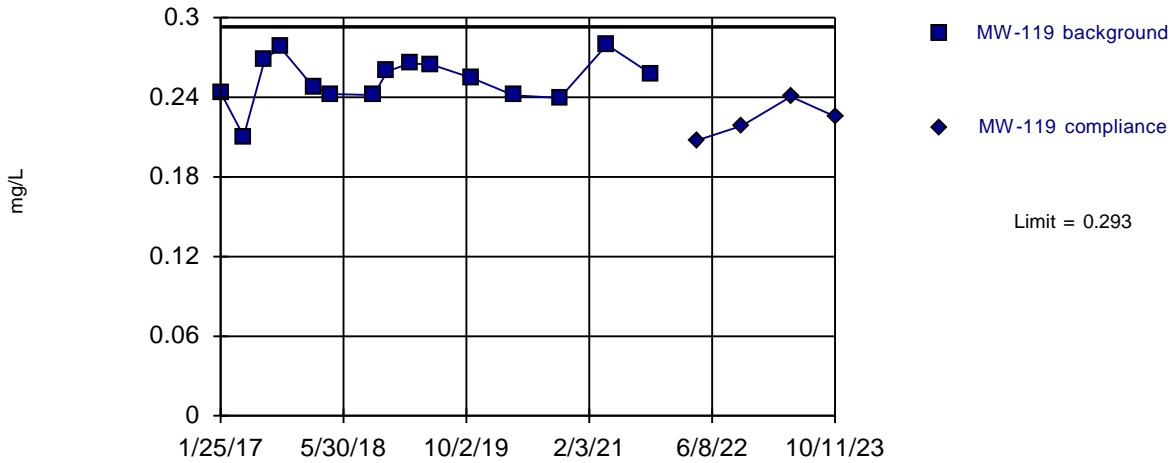
Constituent: Fluoride Analysis Run 10/24/2023 6:08 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

### Prediction Limit

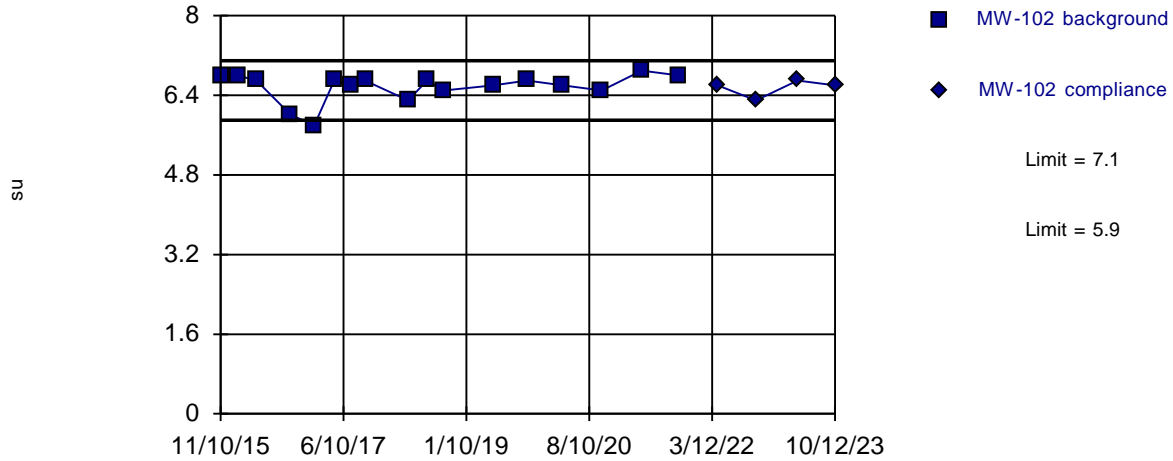
Intrawell Parametric



Within Limits

### Prediction Limit

Intrawell Parametric



Background Data Summary (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.

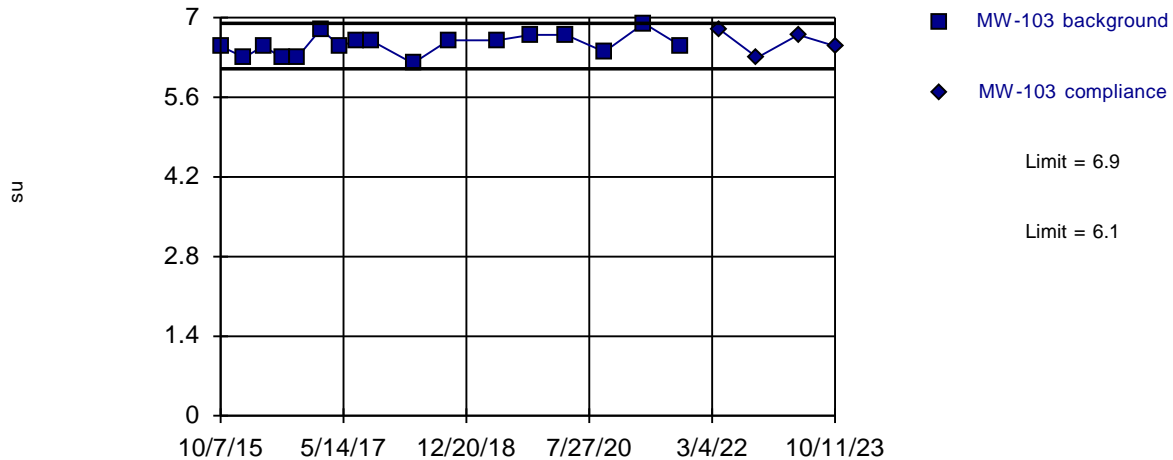
Constituent: pH Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

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=6.529, 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.

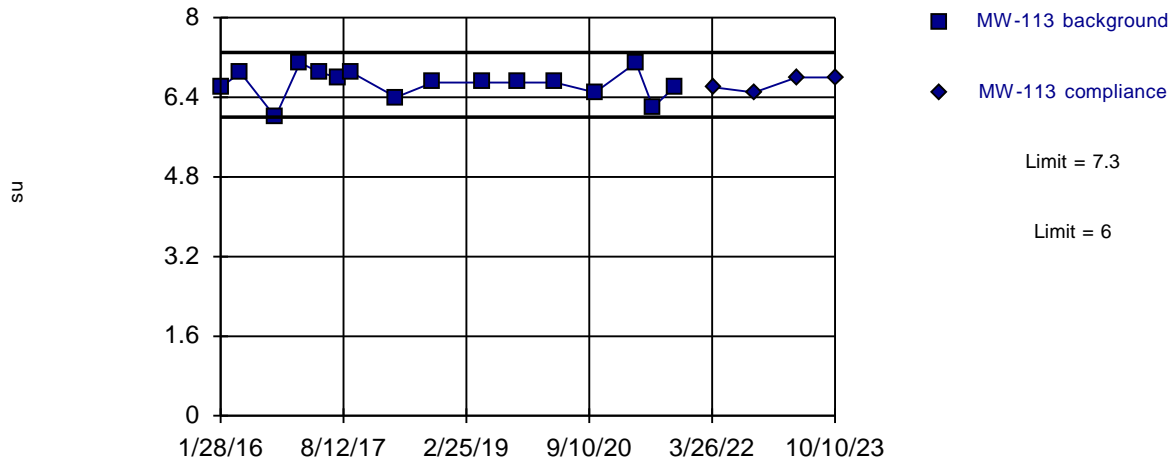
Constituent: pH Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

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=6.675, 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.

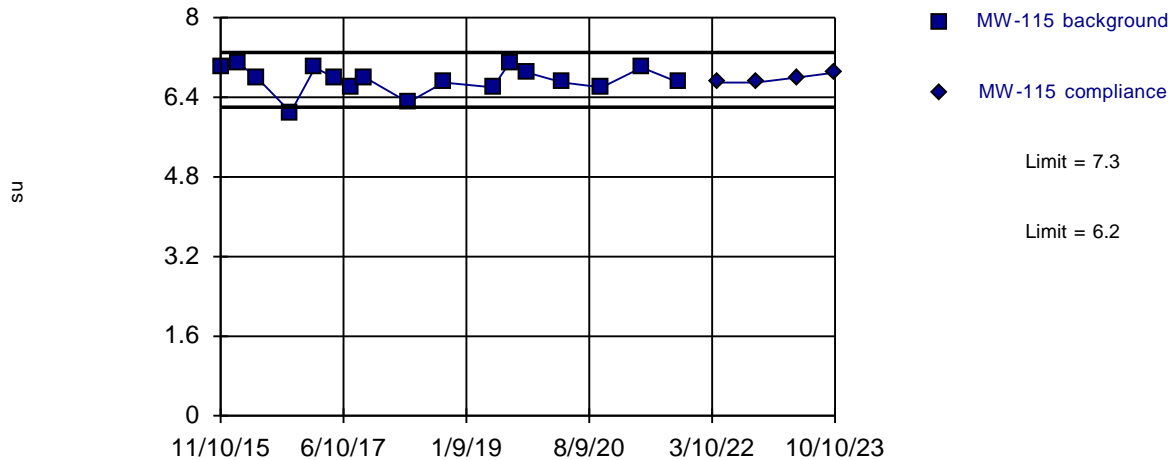
Constituent: pH Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

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=6.753, 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.

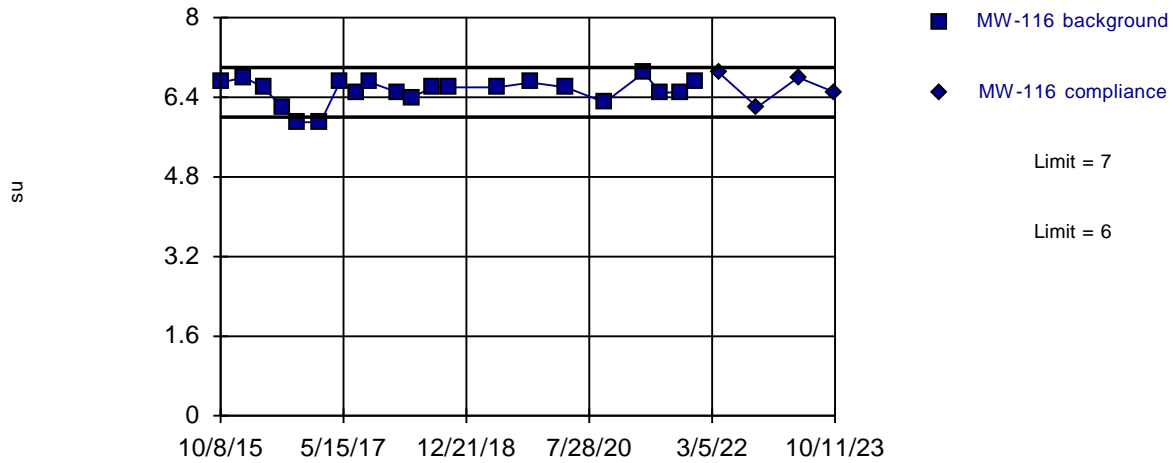
Constituent: pH Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

### Prediction Limit

Intrawell Parametric



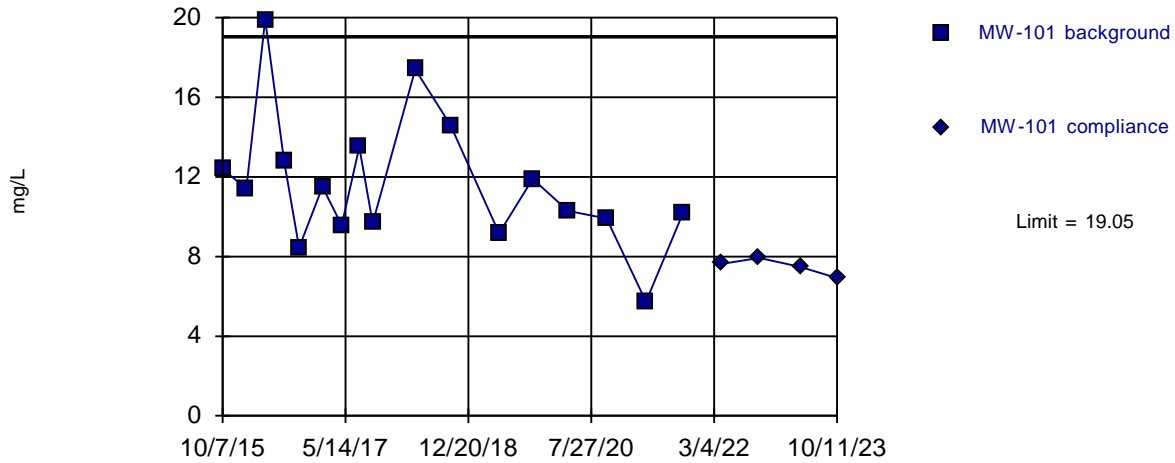




Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=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.

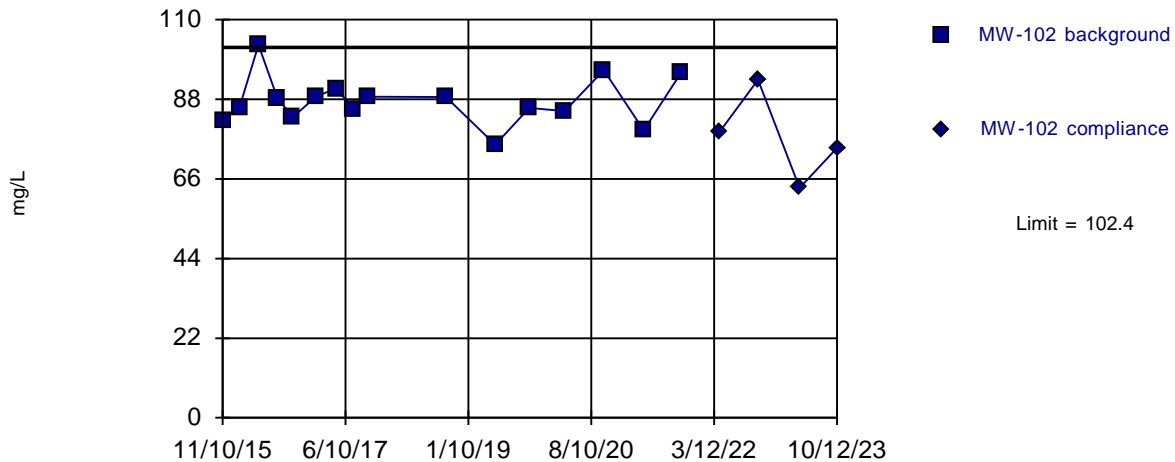
Constituent: Sulfate Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

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=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.

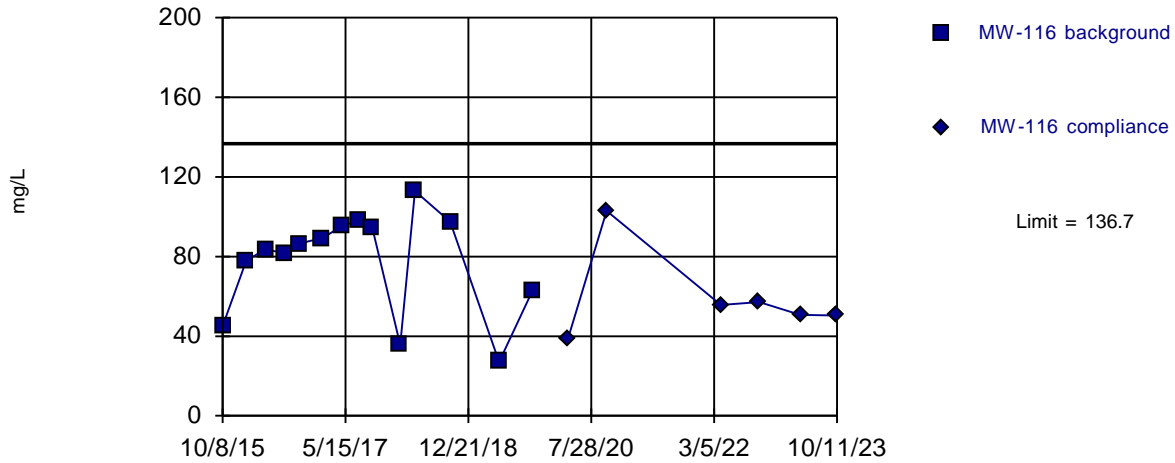
Constituent: Sulfate Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

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=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.

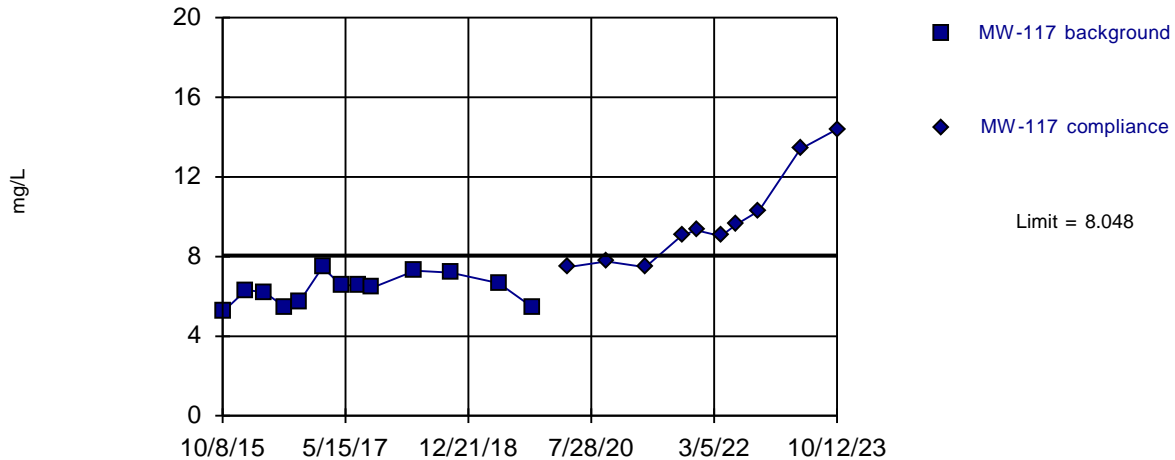
Constituent: Sulfate Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

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 = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

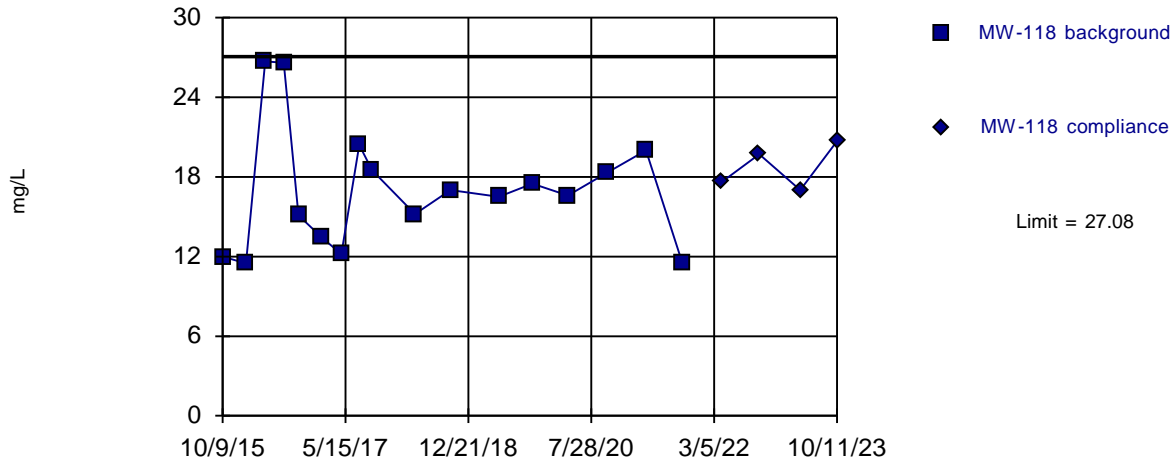
Constituent: Sulfate Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

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, 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.

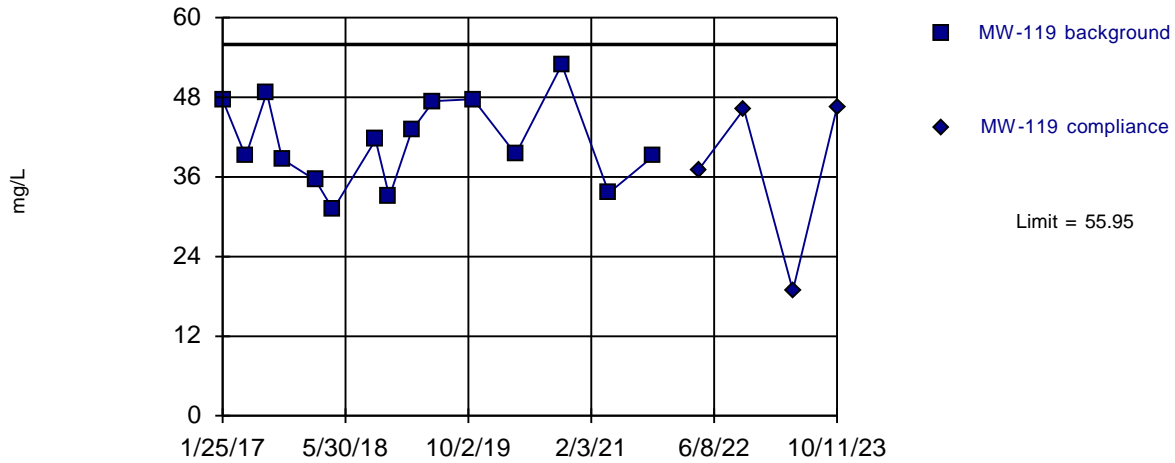
Constituent: Sulfate Analysis Run 10/24/2023 6:09 PM View: 2023-2H PL

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=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 10/24/2023 6:09 PM View: 2023-2H PL

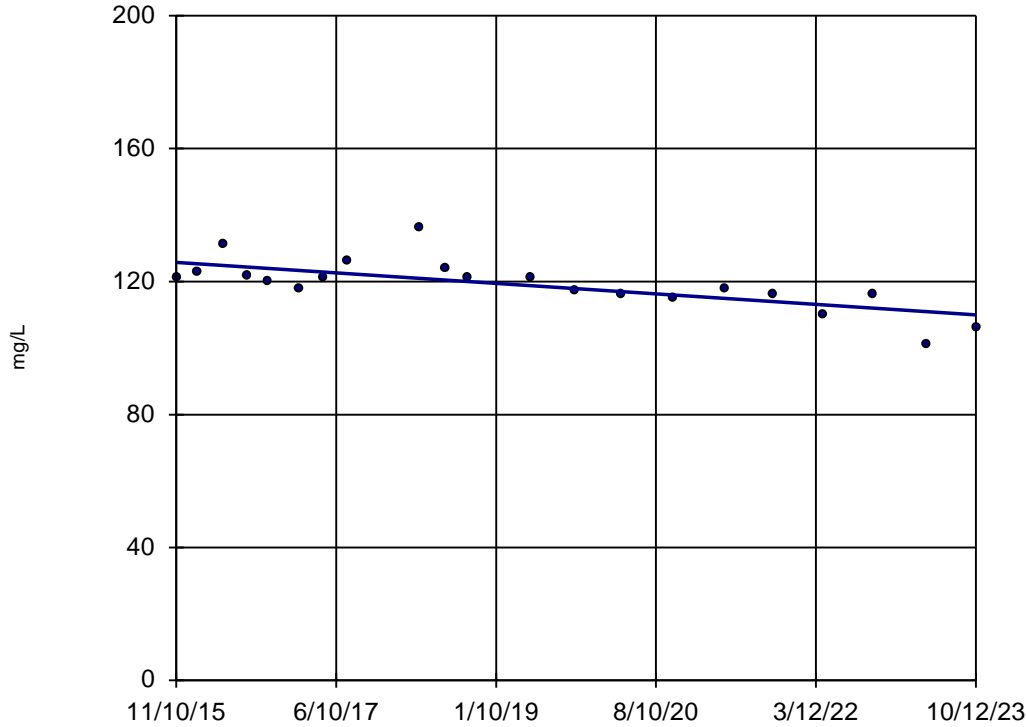
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

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**Trend Tests, Second Half 2023 Monitoring Event**

### Sen's Slope Estimator

MW-102



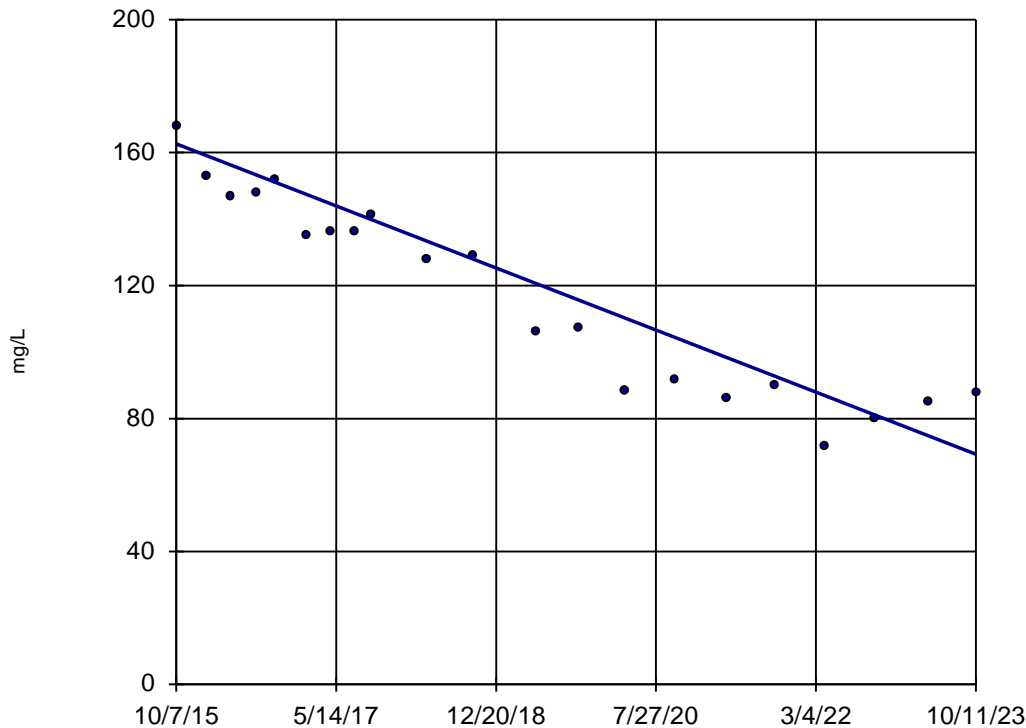
n = 21  
Slope = -1.984 units per year.  
Mann-Kendall statistic = -126 critical = -78  
Decreasing trend significant at 98% confidence level ( $\alpha = 0.01$  per tail).

Constituent: Calcium Analysis Run 10/24/2023 6:11 PM View: 2023-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-103



n = 21  
Slope = -11.64 units per year.  
Mann-Kendall statistic = -169 critical = -78  
Decreasing trend significant at 98% confidence level ( $\alpha = 0.01$  per tail).

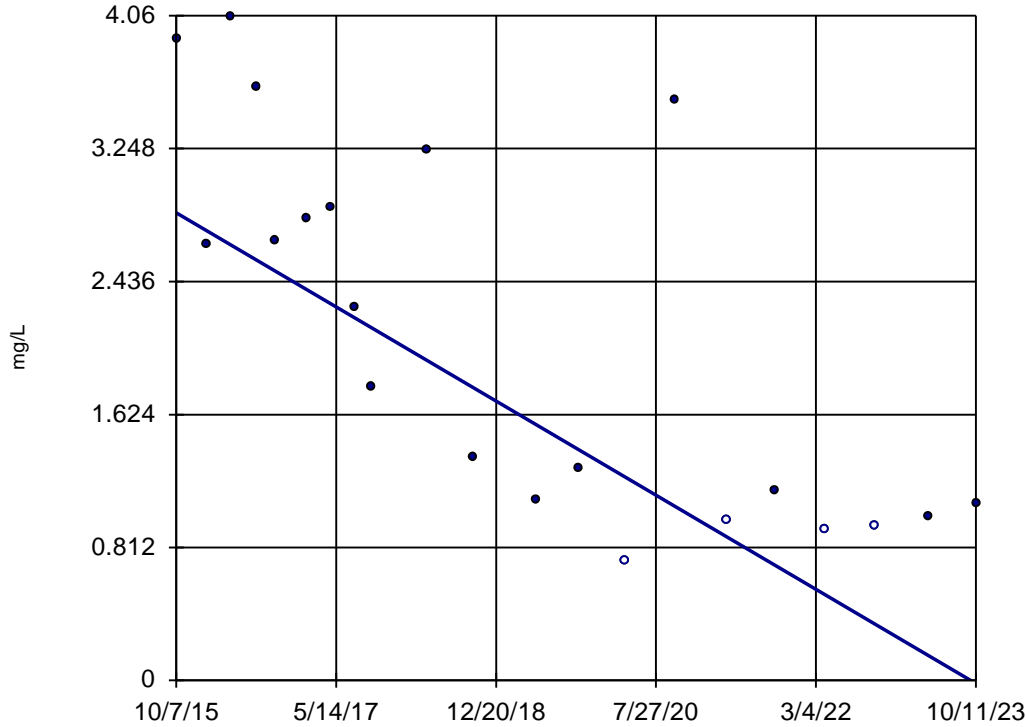
Constituent: Calcium Analysis Run 10/24/2023 6:11 PM View: 2023-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



### Sen's Slope Estimator

MW-103



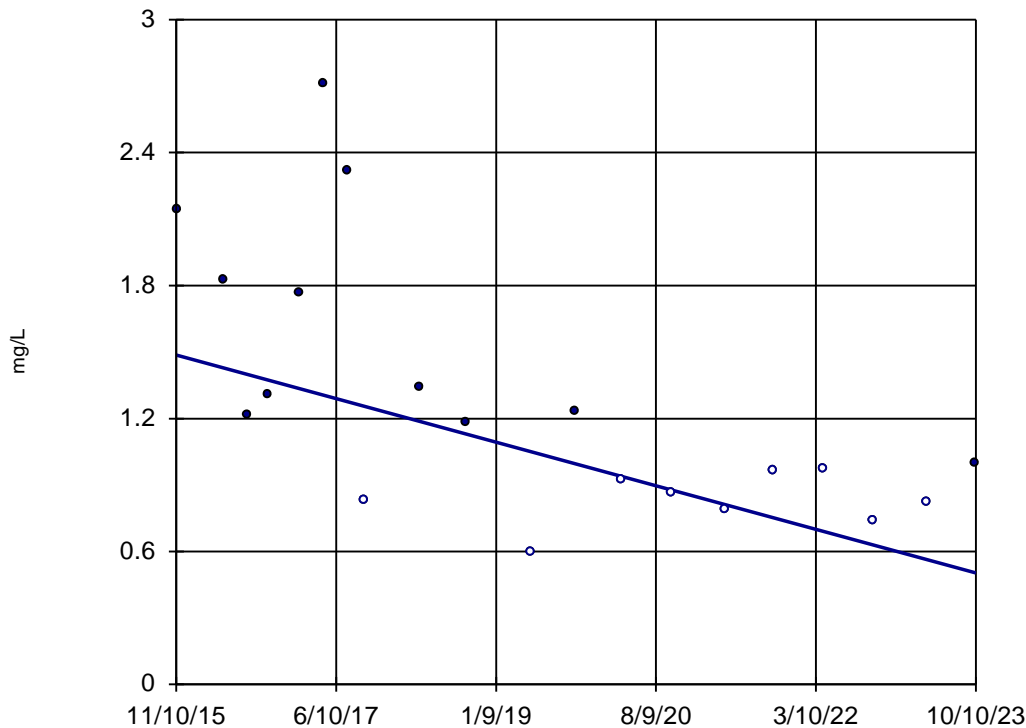
n = 21  
Slope = -0.3589  
units per year.  
Mann-Kendall  
statistic = -124  
critical = -78  
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 10/24/2023 6:11 PM View: 2023-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

### Sen's Slope Estimator

MW-115 (bg)



n = 20  
Slope = -0.1242  
units per year.  
Mann-Kendall  
statistic = -90  
critical = -73  
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Chloride Analysis Run 10/24/2023 6:11 PM View: 2023-2H trend

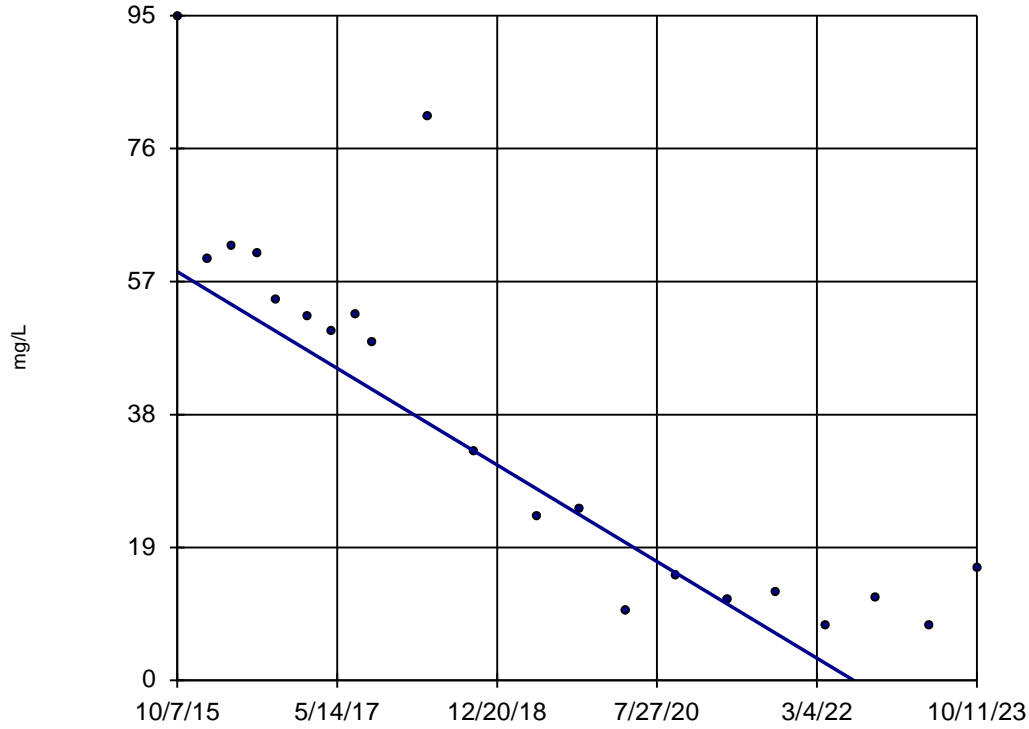
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database





# Sen's Slope Estimator

MW-103



n = 21  
Slope = -8.621  
units per year.  
Mann-Kendall  
statistic = -156  
critical = -78  
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

Constituent: Sulfate Analysis Run 10/24/2023 6:11 PM View: 2023-2H trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

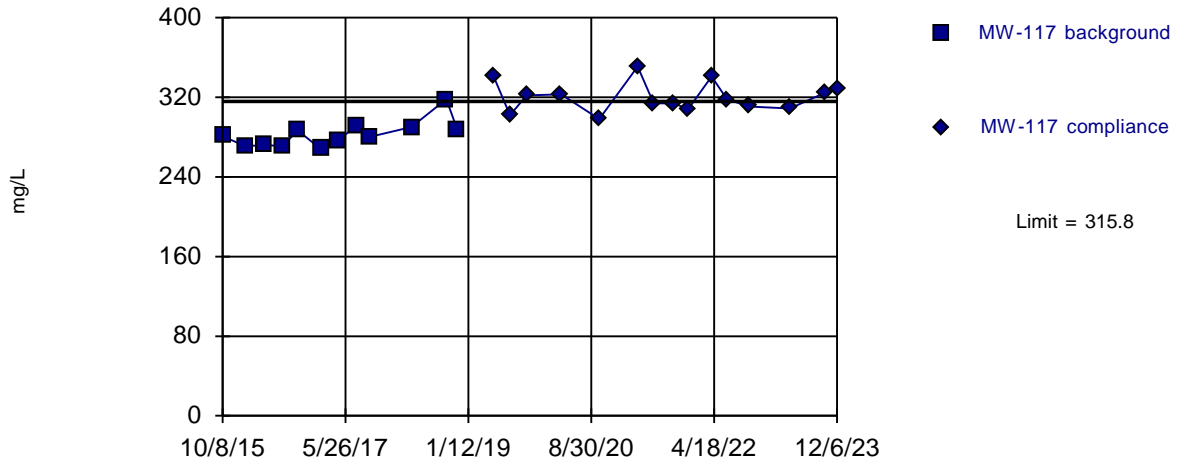
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**Prediction Limits, Second Half 2023 Verification Sampling Event**

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 12/18/2023 5:59 PM View: 2023-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

# **APPENDIX H**

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## **Alternate Source Demonstrations**

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**Alternate Source Demonstration for  
First Half 2023 Statistically Significant Results**



## TECHNICAL MEMORANDUM

**DATE:** October 12, 2023

**TO:** **Matt Gray**  
Plum Point Services Company, LLC

**FROM:** **Dana Derrington, PE, PG**   
FTN Associates, Ltd.

**SUBJECT:** Alternate Source Demonstration for Statistically Significant Increases  
First Half of 2023 Monitoring Period, Plum Point Energy Station Landfill  
FTN No. R14590-3037-001

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FTN Associates, Ltd. (FTN), has prepared this technical memorandum for the Plum Point Services Company, LLC (PPSC), coal combustion residuals (CCR) landfill, which is regulated by the Environmental Protection Agency (EPA) Coal Combustion Residuals Rule, promulgated in Title 40 of the Code of Federal Regulations (40 CFR), Part 257. The landfill is also regulated by the Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 22 and permitted by the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), under permit no. 0303-S3N-R1.

FTN was contracted to sample groundwater and to statistically evaluate the data for the first half of 2023 monitoring period. Based on statistical evaluation of the data, one confirmed statistically significant increase (SSI) over background concentrations was 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 SSI is the result of off-site influence and/or natural fluctuations in groundwater quality.

### 1.0 BACKGROUND

FTN performed groundwater sampling for the first half 2023 semiannual groundwater monitoring period during April 2023. Sample collection, preservation, shipment, analytical procedures, chain-of-custody control, and data quality control for this sampling event followed protocol outlined in the landfill's groundwater sampling and analysis plan (GWSAP) (FTN 2017b). Statistical evaluation of the data set followed the most recent EPA guidance (EPA 2009) and the landfill's statistical analysis plan (SAP) (FTN 2017c). An intrawell prediction limit evaluation identified one previously confirmed SSI for sulfate at MW-117. A site map showing the location of MW-117 relative to the CCR unit (cells 1 and 3) is included as Figure 1 (all figures are included in Attachment 1).

As shown in Table 1 (Attachment 2), the concentration for sulfate at MW-117 was above the intrawell prediction limit. Prior ASDs have been prepared for the confirmed SSI for sulfate at MW-117 (FTN 2022a, 2022b, 2023) in accordance with §257.94(e)(2). Each ASD successfully demonstrated that the SSI was not the result of influence from the CCR unit.

The laboratory report for the April sampling event is included in Attachment 3.

## 2.0 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 SSI for sulfate at compliance well MW-117 was 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 640 ft from the CCR unit as of the first half 2023 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 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 4. As is evident from these graphs and diagrams, concentrations for sulfate at MW-117 are well within the range of values measured at the onsite background wells. This comparison provides supporting evidence that the currently measured values of sulfate at MW-117 reflect natural fluctuations in groundwater quality.

## 2.3 Comparison to Published Groundwater Quality for the Aquifer

Each monitoring well is screened in the Mississippi River Valley alluvial aquifer, the uppermost aquifer in the vicinity of the landfill (FTN 2017b). The United States Geological Survey published a study of groundwater quality of the aquifer, specifically with respect to that of Holocene alluvium and Pleistocene valley train deposits, which are two of the major hydrogeologic units within the aquifer (Gonthier 2003). The landfill is located in Holocene alluvium, as shown on Figure 2 (Attachment 1). According to this study, wells screened in Holocene alluvium had a maximum measured sulfate concentration of 120 mg/L. As shown in Table 1 (Attachment 2), 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 value for sulfate at MW-117 reflects natural fluctuations in groundwater quality.

## 2.4 Comparison to Landfill Leachate

The major ion composition of leachate and groundwater samples collected during April 2023 was evaluated using the Stiff and Piper diagrams included in Attachment 4. These data are collected on a semiannual basis for the landfill's APCEC Regulation No. 22 monitoring program, as required by permit no. 0303-S3N-R1, and are publicly available on the DEQ website<sup>1</sup>. 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 water and positioned apart from the leachate data, which is located in the sodium-chloride quadrant. If leachate was mixing with groundwater at MW-117, the data for MW-117

<sup>1</sup> [https://www.adeg.state.ar.us/sw/permits/facility\\_data.aspx](https://www.adeg.state.ar.us/sw/permits/facility_data.aspx)



Matt Gray  
October 12, 2023  
Page 4

would plot at an intermediate distance between the leachate data and the data for background wells MW-108, MW-113, and MW-115 on the Piper diagram.

The Stiff and Piper diagrams show that the relative proportions of major ions in groundwater at MW-117 are different than landfill leachate, providing a key line of evidence that the SSI for sulfate at MW-117 is not due to a release from the CCR unit.

### 3.0 CONCLUSIONS

In consideration of the information presented in this memorandum, FTN concludes that the SSI for sulfate at MW-117 is 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 SSI identified for sulfate at MW-117 is not due to a release from the CCR unit. Therefore, no further action is required and the landfill will remain in detection monitoring.

If you have questions or comments regarding this memorandum, please do not hesitate to call Dana Derrington, PE, PG, at (314) 786-5855 or Heather Ferguson at (501) 225-7779.

DLD/hlf

Attachments

U:\WP\_FILES\14590-3037-001\2023-10-12 FTN TO PPES - 1H2023 EPA ASD\2023-10-12 FTN TO PPES - EPA ASD FOR 1H2023 SSIS.DOCX *Hlf*



## REFERENCES

- EPA [US Environmental Protection Agency]. 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* [EPA 530-R-09-007]. Washington, DC: Office of Resource Conservation and Recovery, Program Implementation and Information Division, US Environmental Protection Agency. March 2009.
- FTN [FTN Associates, Ltd.]. 2017a. *Groundwater Monitoring Network Evaluation, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2017b. *Groundwater Sampling and Analysis Plan, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2017c. *Statistical Analysis Plan, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2022a. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2022 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. September 27, 2022.
- . 2022b. *Alternate Source Demonstration for Statistically Significant Increases, Second Half of 2021 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. April 4, 2022.
- . 2023. *Alternate Source Demonstration for Statistically Significant Increases, Second Half of 2022 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. January 25, 2023.
- 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.

**PROFESSIONAL ENGINEER'S CERTIFICATION**

With this certification, I certify that I, as a professional engineer in the state of Arkansas, am a qualified professional engineer as defined in §257.53 of Title 40 of the Code of Federal Regulations (CFR), Part 257, that this technical memorandum has been prepared under my direction in accordance with generally accepted good engineering practices, that the findings are accurate to the best of my knowledge, and that the alternate source demonstration described herein meets the requirements of §257.94(e)(2) of 40 CFR Part 257.



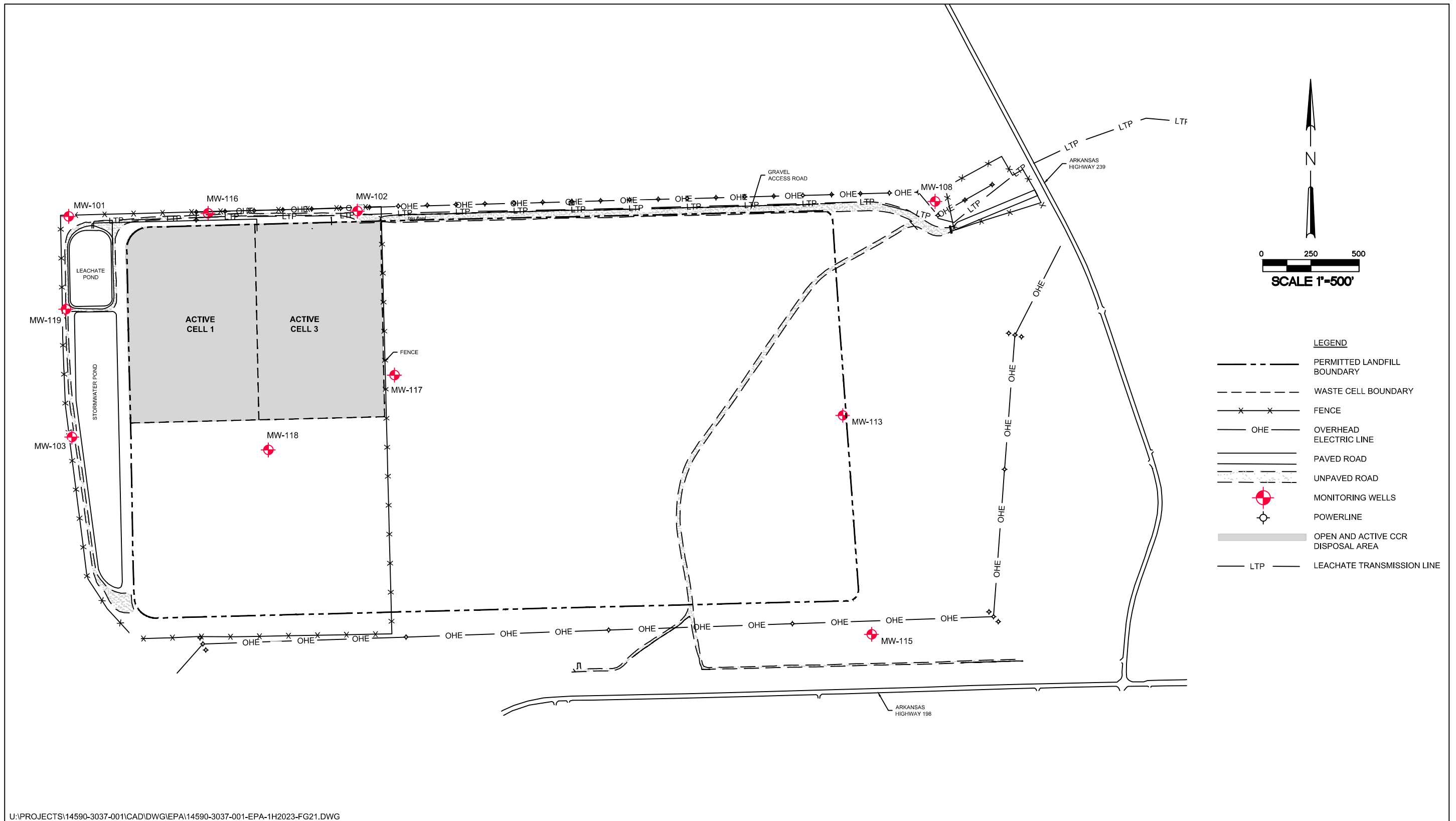
\_\_\_\_\_  
Dana L. Derrington, Arkansas PE #16372

10/12/2023  
\_\_\_\_\_  
Date

# **ATTACHMENT 1**

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**Figures**



U:\PROJECTS\14590-3037-001\CAD\DWG\EPA\14590-3037-001-EPA-1H2023-FG21.DWG

Figure 1. Monitoring well location map.

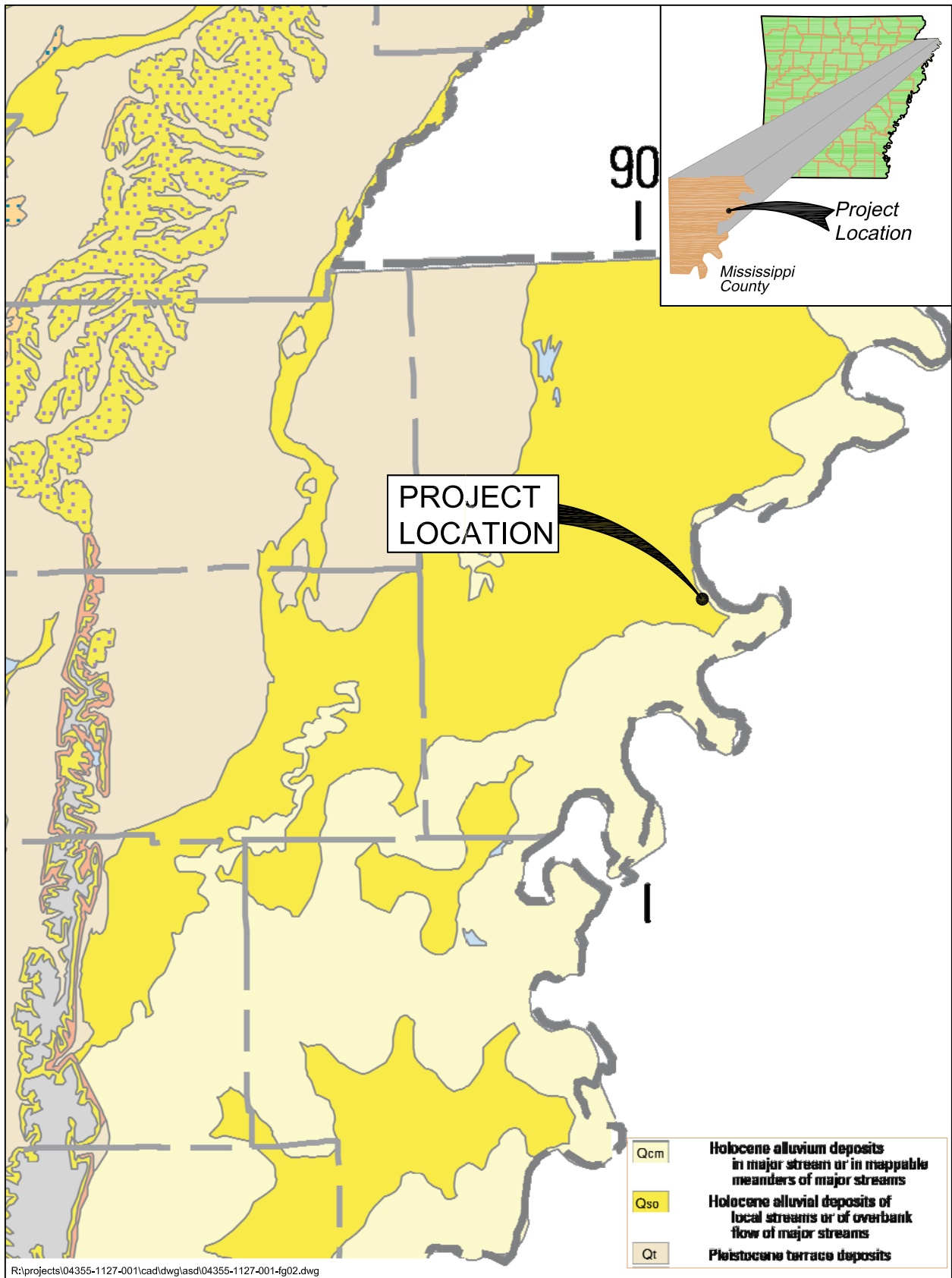


Figure 2. Surface geology of Mississippi County, Arkansas (adapted from Kresse et al. 2014).

# **ATTACHMENT 2**

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## **Summary Table**



Table 1. Summary of statistically significant results and maximum background and published levels.

Well ID	Parameter	Prediction Limit (mg/L)	April 2023 Result (mg/L)	SSI Confirmed?	Maximum Background Level <sup>(a)</sup> (mg/L)	Maximum Published Level <sup>(b)</sup> (mg/L)
MW-117	Sulfate	8.048	13.4	Yes <sup>(c)</sup>	52.2 (MW-108, 9/2018)	120

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.

## REFERENCES

Gonthier, G.J. 2003. *Quality of Groundwater in Pleistocene and Holocene Subunits of the Mississippi River Alluvial Aquifer, 1998* [Water-Resources Investigations Report 03-4202]. Jackson, MS: US Geological Survey, National Water-Quality Assessment Program.

# **ATTACHMENT 3**

---

**Laboratory Reports**

## Plum Point Services Co., LLC

Sample Delivery Group: L1607560  
Samples Received: 04/20/2023  
Project Number: R14590-3037-001  
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

# TABLE OF CONTENTS

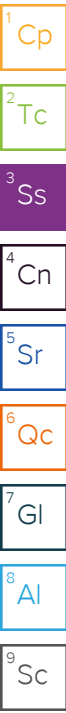
<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>5</b>	
<b>Sr: Sample Results</b>	<b>6</b>	
MW-101 L1607560-01	6	
MW-102 L1607560-02	7	
MW-103 L1607560-03	8	
MW-108 L1607560-04	9	
MW-113 L1607560-05	10	
MW-115 L1607560-06	11	
MW-116 L1607560-07	12	
MW-117 L1607560-08	13	
MW-118 L1607560-09	14	
MW-119 L1607560-10	15	
MW-116 DUP L1607560-11	16	
EPA EB L1607560-12	17	
<b>Qc: Quality Control Summary</b>	<b>18</b>	
Gravimetric Analysis by Method 2540 C-2011	18	
Wet Chemistry by Method 9056A	21	
Metals (ICP) by Method 6010B	27	
<b>Gl: Glossary of Terms</b>	<b>28</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>29</b>	
<b>Sc: Sample Chain of Custody</b>	<b>30</b>	

# SAMPLE SUMMARY

## MW-101 L1607560-01 GW

Collected by Michael Clayton    Collected date/time 04/19/23 11:10    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 21:58	04/26/23 21:58	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 09:55	ABL	Mt. Juliet, TN



## MW-102 L1607560-02 GW

Collected by Michael Clayton    Collected date/time 04/19/23 12:55    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 23:17	04/26/23 23:17	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 09:58	ABL	Mt. Juliet, TN

## MW-103 L1607560-03 GW

Collected by Michael Clayton    Collected date/time 04/18/23 16:20    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047253	1	04/23/23 16:09	04/23/23 16:51	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 23:32	04/26/23 23:32	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:01	ABL	Mt. Juliet, TN

## MW-108 L1607560-04 GW

Collected by Michael Clayton    Collected date/time 04/18/23 11:15    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047253	1	04/23/23 16:09	04/23/23 16:51	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 23:46	04/26/23 23:46	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:03	ABL	Mt. Juliet, TN

## MW-113 L1607560-05 GW

Collected by Michael Clayton    Collected date/time 04/17/23 16:45    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047244	1	04/23/23 15:59	04/24/23 10:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/26/23 23:59	04/26/23 23:59	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:11	ABL	Mt. Juliet, TN

## MW-115 L1607560-06 GW

Collected by Michael Clayton    Collected date/time 04/17/23 15:55    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047253	1	04/23/23 16:09	04/23/23 16:51	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049412	1	04/27/23 08:14	04/27/23 08:14	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:14	ABL	Mt. Juliet, TN

# SAMPLE SUMMARY

## MW-116 L1607560-07 GW

Collected by Michael Clayton    Collected date/time 04/19/23 12:00    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 00:32	04/27/23 00:32	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:17	ABL	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## MW-117 L1607560-08 GW

Collected by Michael Clayton    Collected date/time 04/19/23 14:05    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 00:45	04/27/23 00:45	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:19	ABL	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

## MW-118 L1607560-09 GW

Collected by Michael Clayton    Collected date/time 04/18/23 15:15    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047244	1	04/23/23 15:59	04/24/23 10:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 01:00	04/27/23 01:00	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:22	ABL	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

## MW-119 L1607560-10 GW

Collected by Michael Clayton    Collected date/time 04/18/23 17:25    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2047244	1	04/23/23 15:59	04/24/23 10:10	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 01:13	04/27/23 01:13	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:25	ABL	Mt. Juliet, TN

## MW-116 DUP L1607560-11 GW

Collected by Michael Clayton    Collected date/time 04/19/23 12:05    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049427	1	04/27/23 01:54	04/27/23 01:54	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:27	ABL	Mt. Juliet, TN

## EPA EB L1607560-12 GW

Collected by Michael Clayton    Collected date/time 04/19/23 14:30    Received date/time 04/20/23 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2048217	1	04/25/23 12:59	04/26/23 15:48	AS	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049837	1	04/27/23 21:52	04/27/23 21:52	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046390	1	04/24/23 18:31	04/26/23 10:30	ABL	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	3150		379	1000	1	04/26/2023 21:58	<a href="#">WG2049427</a>
Fluoride	243		64.0	150	1	04/26/2023 21:58	<a href="#">WG2049427</a>
Sulfate	7480		594	5000	1	04/26/2023 21:58	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	60.6	J	20.0	200	1	04/26/2023 09:55	<a href="#">WG2046390</a>
Calcium	108000		79.3	1000	1	04/26/2023 09:55	<a href="#">WG2046390</a>

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



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	390000		10000	1	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	2750		379	1000	1	04/26/2023 23:17	<a href="#">WG2049427</a>
Fluoride	158		64.0	150	1	04/26/2023 23:17	<a href="#">WG2049427</a>
Sulfate	63500		594	5000	1	04/26/2023 23:17	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	88.4	J	20.0	200	1	04/26/2023 09:58	<a href="#">WG2046390</a>
Calcium	101000		79.3	1000	1	04/26/2023 09:58	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	322000		10000	1	04/23/2023 16:51	<a href="#">WG2047253</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1000		379	1000	1	04/26/2023 23:32	<a href="#">WG2049427</a>
Fluoride	157		64.0	150	1	04/26/2023 23:32	<a href="#">WG2049427</a>
Sulfate	7820		594	5000	1	04/26/2023 23:32	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	62.2	J	20.0	200	1	04/26/2023 10:01	<a href="#">WG2046390</a>
Calcium	84800		79.3	1000	1	04/26/2023 10:01	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	493000		10000	1	04/23/2023 16:51	<a href="#">WG2047253</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1230		379	1000	1	04/26/2023 23:46	<a href="#">WG2049427</a>
Fluoride	161		64.0	150	1	04/26/2023 23:46	<a href="#">WG2049427</a>
Sulfate	34800		594	5000	1	04/26/2023 23:46	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	128	J	20.0	200	1	04/26/2023 10:03	<a href="#">WG2046390</a>
Calcium	146000		79.3	1000	1	04/26/2023 10:03	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	293000		10000	1	04/24/2023 10:10	<a href="#">WG2047244</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	995	J	379	1000	1	04/26/2023 23:59	<a href="#">WG2049427</a>
Fluoride	90.7	J	64.0	150	1	04/26/2023 23:59	<a href="#">WG2049427</a>
Sulfate	4570	J	594	5000	1	04/26/2023 23:59	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	84.0	J	20.0	200	1	04/26/2023 10:11	<a href="#">WG2046390</a>
Calcium	74600		79.3	1000	1	04/26/2023 10:11	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	351000		10000	1	04/23/2023 16:51	<a href="#">WG2047253</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	819	J	379	1000	1	04/27/2023 08:14	<a href="#">WG2049412</a>
Fluoride	205		64.0	150	1	04/27/2023 08:14	<a href="#">WG2049412</a>
Sulfate	5190		594	5000	1	04/27/2023 08:14	<a href="#">WG2049412</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	41.6	J	20.0	200	1	04/26/2023 10:14	<a href="#">WG2046390</a>
Calcium	101000		79.3	1000	1	04/26/2023 10:14	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	377000		10000	1	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	5410		379	1000	1	04/27/2023 00:32	<a href="#">WG2049427</a>
Fluoride	156		64.0	150	1	04/27/2023 00:32	<a href="#">WG2049427</a>
Sulfate	50600		594	5000	1	04/27/2023 00:32	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	81.4	J	20.0	200	1	04/26/2023 10:17	<a href="#">WG2046390</a>
Calcium	97100		79.3	1000	1	04/26/2023 10:17	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	309000		10000	1	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	808	J	379	1000	1	04/27/2023 00:45	<a href="#">WG2049427</a>
Fluoride	108	J	64.0	150	1	04/27/2023 00:45	<a href="#">WG2049427</a>
Sulfate	13400		594	5000	1	04/27/2023 00:45	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	74.5	J	20.0	200	1	04/26/2023 10:19	<a href="#">WG2046390</a>
Calcium	90000		79.3	1000	1	04/26/2023 10:19	<a href="#">WG2046390</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	268000		10000	1	04/24/2023 10:10	<a href="#">WG2047244</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	663	J	379	1000	1	04/27/2023 01:00	<a href="#">WG2049427</a>
Fluoride	147	J	64.0	150	1	04/27/2023 01:00	<a href="#">WG2049427</a>
Sulfate	17000		594	5000	1	04/27/2023 01:00	<a href="#">WG2049427</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	66.4	J	20.0	200	1	04/26/2023 10:22	<a href="#">WG2046390</a>
Calcium	71800		79.3	1000	1	04/26/2023 10:22	<a href="#">WG2046390</a>

6 Qc

7 Gl

8 Al

9 Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	350000		10000	1	04/24/2023 10:10	<a href="#">WG2047244</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1260		379	1000	1	04/27/2023 01:13	<a href="#">WG2049427</a>
Fluoride	228		64.0	150	1	04/27/2023 01:13	<a href="#">WG2049427</a>
Sulfate	18900		594	5000	1	04/27/2023 01:13	<a href="#">WG2049427</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	64.2	J	20.0	200	1	04/26/2023 10:25	<a href="#">WG2046390</a>
Calcium	95800		79.3	1000	1	04/26/2023 10:25	<a href="#">WG2046390</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	369000		10000	1	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	5340		379	1000	1	04/27/2023 01:54	<a href="#">WG2049427</a>
Fluoride	154		64.0	150	1	04/27/2023 01:54	<a href="#">WG2049427</a>
Sulfate	50200		594	5000	1	04/27/2023 01:54	<a href="#">WG2049427</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	81.9	J	20.0	200	1	04/26/2023 10:27	<a href="#">WG2046390</a>
Calcium	96500		79.3	1000	1	04/26/2023 10:27	<a href="#">WG2046390</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	ND		14300	1	04/26/2023 15:48	<a href="#">WG2048217</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	U		379	1000	1	04/27/2023 21:52	<a href="#">WG2049837</a>
Fluoride	U		64.0	150	1	04/27/2023 21:52	<a href="#">WG2049837</a>
Sulfate	U		594	5000	1	04/27/2023 21:52	<a href="#">WG2049837</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	U		20.0	200	1	04/26/2023 10:30	<a href="#">WG2046390</a>
Calcium	910	J	79.3	1000	1	04/26/2023 10:30	<a href="#">WG2046390</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3917134-1 04/24/23 10:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	↓	10000	10000

1 Cp

2 Tc

3 Ss

L1606688-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1606688-01 04/24/23 10:10 • (DUP) R3917134-3 04/24/23 10:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1130000	1210000	1	6.85	J3	5

4 Cn

5 Sr

6 Qc

L1608341-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1608341-12 04/24/23 10:10 • (DUP) R3917134-4 04/24/23 10:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	657000	691000	1	4.95		5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3917134-2 04/24/23 10:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8440000	95.9	77.3-123	

Method Blank (MB)

(MB) R3917318-1 04/23/23 16:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	↓	10000	10000

1 Cp

2 Tc

3 Ss

L1606688-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1606688-03 04/23/23 16:51 • (DUP) R3917318-3 04/23/23 16:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	652000	669000	1	2.62		5

4 Cn

5 Sr

6 Qc

L1608341-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1608341-03 04/23/23 16:51 • (DUP) R3917318-4 04/23/23 16:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	914000	850000	1	7.26	↓	5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3917318-2 04/23/23 16:51

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8470000	96.3	77.3-123	

Method Blank (MB)

(MB) R3918652-1 04/26/23 15:48

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

1 Cp

2 Tc

3 Ss

L1606528-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1606528-15 04/26/23 15:48 • (DUP) R3918652-3 04/26/23 15:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	488000	499000	1	2.23		5

4 Cn

5 Sr

6 Qc

L1607441-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1607441-10 04/26/23 15:48 • (DUP) R3918652-4 04/26/23 15:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	836000	816000	1	2.42		5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3918652-2 04/26/23 15:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	9030000	103	77.3-123	

Method Blank (MB)

(MB) R3918217-1 04/26/23 23:24

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1609198-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1609198-08 04/27/23 01:06 • (DUP) R3918217-3 04/27/23 01:19

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

L1609464-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1609464-04 04/27/23 07:11 • (DUP) R3918217-6 04/27/23 07:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	21500	21400	1	0.467		15
Fluoride	196	201	1	2.67		15
Sulfate	32700	32800	1	0.365		15

Laboratory Control Sample (LCS)

(LCS) R3918217-2 04/26/23 23:38

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	40100	100	80.0-120	
Fluoride	8000	8330	104	80.0-120	
Sulfate	40000	40300	101	80.0-120	

L1609198-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1609198-08 04/27/23 01:06 • (MS) R3918217-4 04/27/23 01:33 • (MSD) R3918217-5 04/27/23 01:47

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	U	50500	50700	101	101	1	80.0-120			0.456	15
Fluoride	5000	U	5200	5230	104	105	1	80.0-120			0.508	15
Sulfate	50000	U	50100	50400	100	101	1	80.0-120			0.616	15

L1609464-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1609464-04 04/27/23 07:11 • (MS) R3918217-7 04/27/23 07:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	21500	70400	97.9	1	80.0-120	
Fluoride	5000	196	5370	103	1	80.0-120	
Sulfate	50000	32700	81800	98.1	1	80.0-120	

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



Method Blank (MB)

(MB) R3918382-1 04/26/23 20:23

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

L1607560-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1607560-01 04/26/23 21:58 • (DUP) R3918382-3 04/26/23 22:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	3150	3100	1	1.48		15
Fluoride	243	246	1	1.11		15
Sulfate	7480	7400	1	0.993		15

L1607593-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1607593-03 04/27/23 02:35 • (DUP) R3918382-6 04/27/23 02:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	24800	24500	1	1.09		15
Fluoride	196	195	1	0.307		15
Sulfate	413000	414000	1	0.447	E	15

Laboratory Control Sample (LCS)

(LCS) R3918382-2 04/26/23 20:36

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	39400	98.5	80.0-120	
Fluoride	8000	8350	104	80.0-120	
Sulfate	40000	38100	95.3	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1607560-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607560-01 04/26/23 21:58 • (MS) R3918382-4 04/26/23 22:25 • (MSD) R3918382-5 04/26/23 23:04

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	3150	52800	53500	99.2	101	1	80.0-120			1.31	15
Fluoride	5000	243	5330	5410	102	103	1	80.0-120			1.39	15
Sulfate	50000	7480	55600	56400	96.3	97.9	1	80.0-120			1.40	15

L1607593-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1607593-03 04/27/23 02:35 • (MS) R3918382-7 04/27/23 03:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50000	24800	73600	97.6	1	80.0-120	
Fluoride	5000	196	5140	98.8	1	80.0-120	
Sulfate	50000	413000	464000	103	1	80.0-120	E

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3918526-1 04/27/23 15:10

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

L1607533-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1607533-04 04/27/23 16:38 • (DUP) R3918526-3 04/27/23 16:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	1910000	1930000	10	0.896		15
Fluoride	8340	8500	10	1.97		15
Sulfate	1450000	1460000	10	0.891		15

L1607533-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1607533-09 04/27/23 22:59 • (DUP) R3918526-6 04/27/23 23:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	7290000	7320000	10	0.405	FF	15
Fluoride	666	643	10	3.48	U	15
Sulfate	1340000	1340000	10	0.436		15

Laboratory Control Sample (LCS)

(LCS) R3918526-2 04/27/23 15:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	40400	101	80.0-120	
Fluoride	8000	8310	104	80.0-120	
Sulfate	40000	40400	101	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1607533-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607533-04 04/27/23 16:38 • (MS) R3918526-4 04/27/23 17:05 • (MSD) R3918526-5 04/27/23 17:19

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 %
Chloride	50000	1910000	1870000	1870000	0.000	0.000	10	80.0-120	<u>V</u>	<u>V</u>	0.227	15
Fluoride	5000	8340	12900	13100	91.8	95.1	10	80.0-120			1.26	15
Sulfate	50000	1450000	1430000	1430000	0.000	0.000	10	80.0-120	<u>V</u>	<u>V</u>	0.239	15

L1607533-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607533-09 04/27/23 22:59 • (MS) R3918526-7 04/27/23 23:53 • (MSD) R3918526-8 04/28/23 00:06

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 %
Chloride	50000	7290000	6920000	6910000	0.000	0.000	10	80.0-120	<u>E V</u>	<u>E V</u>	0.123	15
Fluoride	5000	666	5000	4990	86.7	86.5	10	80.0-120			0.248	15
Sulfate	50000	1340000	1300000	1300000	0.000	0.000	10	80.0-120	<u>V</u>	<u>V</u>	0.00525	15

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3917571-1 04/26/23 09:40

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

Laboratory Control Sample (LCS)

(LCS) R3917571-2 04/26/23 09:42

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	1000	100	80.0-120	
Calcium	10000	10200	102	80.0-120	

L1607673-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607673-01 04/26/23 09:45 • (MS) R3917571-4 04/26/23 09:50 • (MSD) R3917571-5 04/26/23 09:52

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	230	1220	1210	98.7	97.7	1	75.0-125			0.881	20
Calcium	10000	62800	71900	71700	90.6	89.0	1	75.0-125			0.221	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

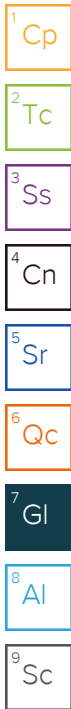
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

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



# ACCREDITATIONS & LOCATIONS

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Company Name/Address:

Plum Point Services Co., LLC

2739 SCR 623  
Osceola, AR 72370

Billing Information:

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

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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  ET

Phone: 501-920-9642

Client Project #  
R14590-3037-001

Lab Project #  
NAESOAR-PLUMPOINT

Collected by (print):  
Michael Clayton

Site/Facility ID #

P.O. #  
2023-00048

Collected by (signature):  
Michael Clayton

Rush? (Lab MUST Be Notified)

Quote #

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

Date Results Needed

Immediately  
Packed on Ice N  Y

No.  
of  
Cnts

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	CI, F, SO4 125m HDPE-NoPres	TDS 250m HDPE-NoPres	Total B, Ca 250m HDPE-HNO3	Analysis / Container / Preservative	Chain of Custody
MW-101		GW		4/19/23	1116	3	X	X	X		
MW-102		GW		4/19/23	1255	3	X	X	X		
MW-103		GW		4/18/23	1620	3	X	X	X		
MW-108		GW		4/18/23	1115	3	X	X	X		
MW-113		GW		4/17/23	1645	3	X	X	X		
MW-115		GW		4/17/23	1555	3	X	X	X		1555
MW-116		GW		4/19/23	1200	3	X	X	X		
MW-117		GW		4/19/23	1405	3	X	X	X		
MW-118		GW		4/18/23	1515	3	X	X	X		
MW-119		GW		4/18/23	1725	3	X	X	X		

SDC # 1607560  
C098

Acctnum: NAESOAR  
Template: T175308  
Prelogin: P992285  
PM: 134 - Mark W. Beasley  
PB: BF 4/12/23  
Shipped Via: FedEX Ground

Remarks | Sample # (lab only)

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

Remarks:

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist

COC Seal Present/Intact:  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

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes  No   
HCL/MeOH  
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 10.5 °C  
Bottles Received: 36

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 4-20-23  
Time: 8:00

If preservation required by Login: Date/Time

Hold: Condition: NCF /  OK

800



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 **(X) ET**

Phone: **501-920-9642**

Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

Collected by (signature):  
*[Signature]*

**Rush?** (Lab MUST Be Notified)

Quote #

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

Date Results Needed

Immediately  
 Packed on Ice N \_\_\_ Y

No.  
 of  
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CI, F, S	04	125mlHDPE-NoPres	TDS	250mlHDPE-NoPres	Total B, Ca	250mlHDPE-HNO3						
MW-116 DUP	Grab	GW		4/19/23	1205	3	X	X	X										
EPA EB	↓	GW		4/19/23	1430	3	X	X	X										
		GW				3	X	X	X										
		GW				3	X	X	X										



**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 # **1607960**

Table #

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P992285**

PM: **134 - Mark W. Beasley**

PB: **BF 4/12/23**

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

→ 11  
 → 12

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

Remarks:

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

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

Samples returned via:  
 \_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_\_\_

Tracking #

Relinquished by: (Signature)

Date: **4/19/23**

Time: **1730**

Received by: (Signature)

Trip Blank Received: Yes /  No  
 HCL/MeOH  
 TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: **NSL** °C  
**1.5**  
 Bottles Received: **36**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: **4-20-23**  
 Time: **800**

Hold:

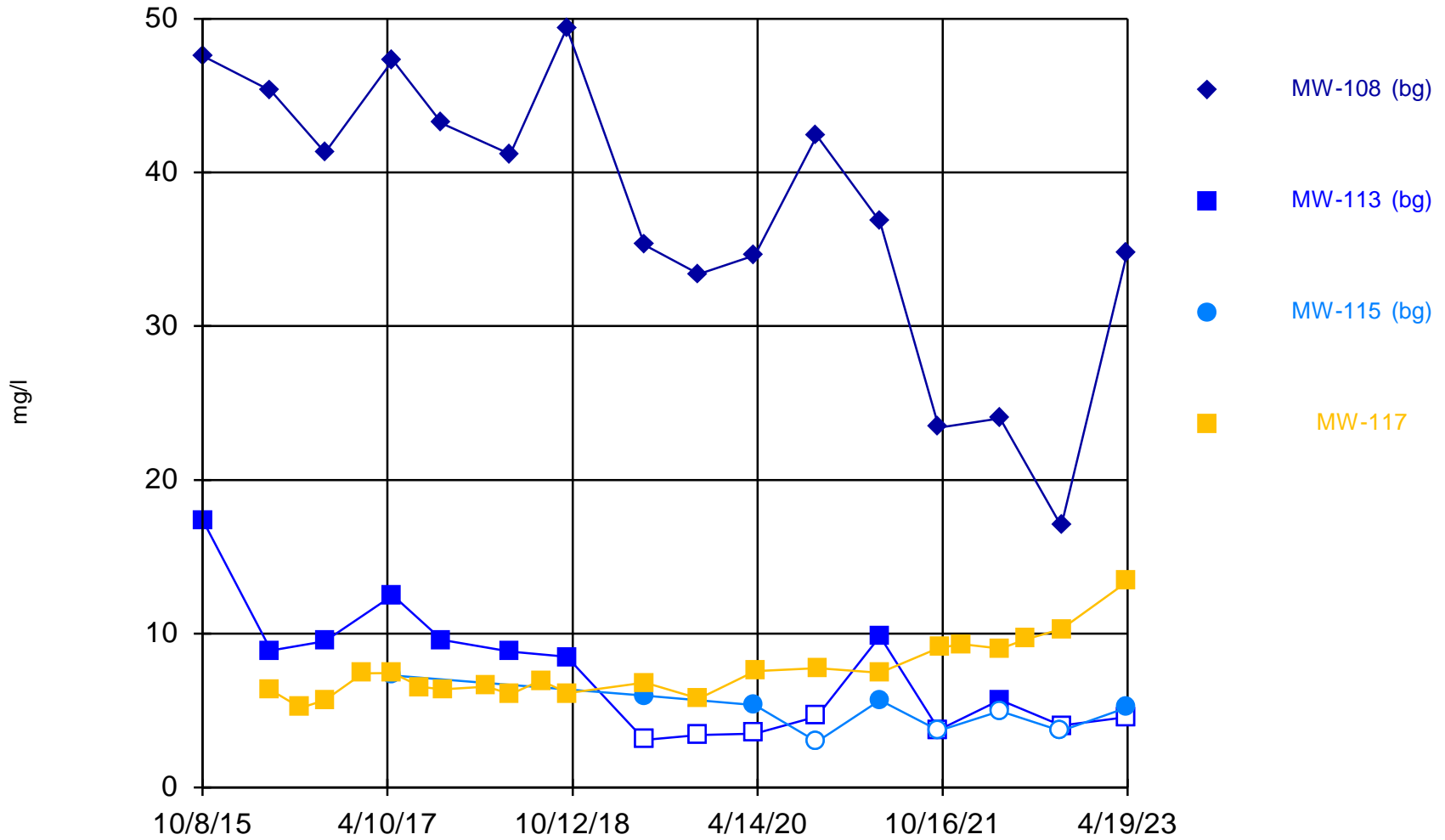
Condition:  
 NCF /  OK

# **ATTACHMENT 4**

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**Statistical Plots**

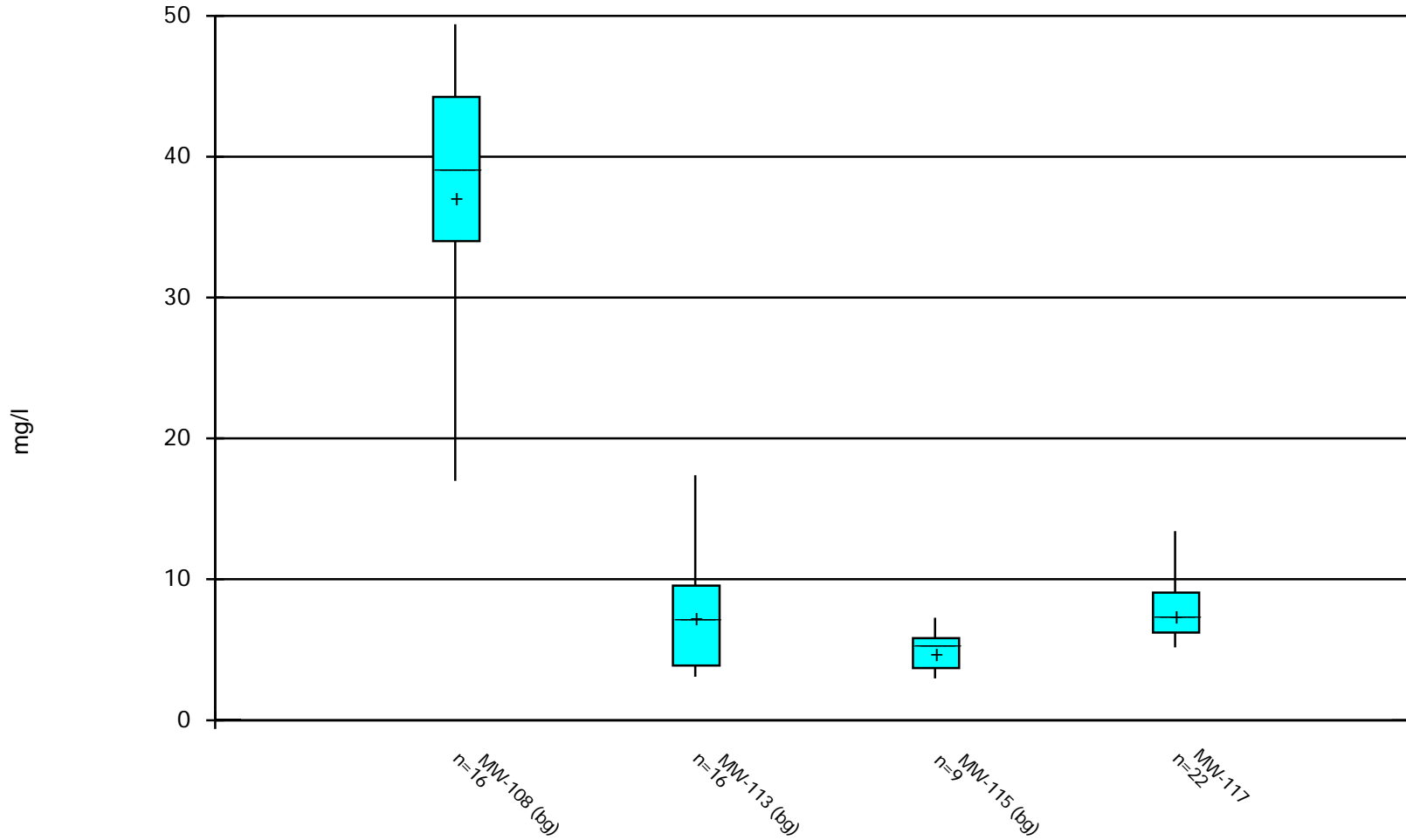
### Time Series



Constituent: Sulfate Analysis Run 7/12/2023 3:45 PM View: 2023-1H ASD

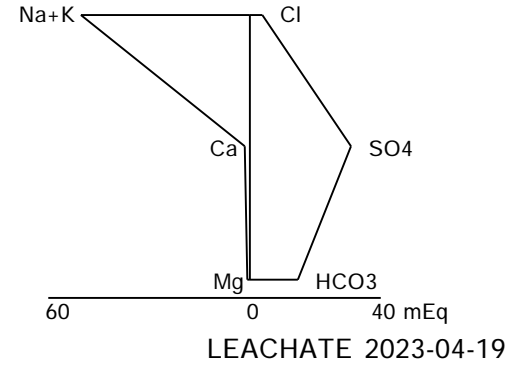
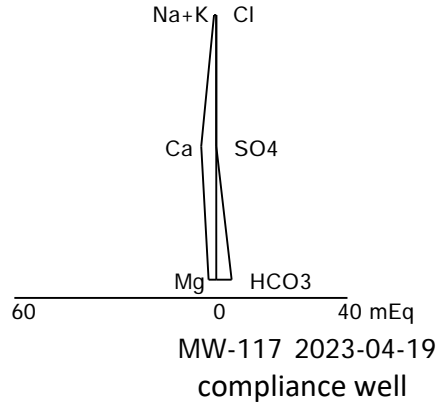
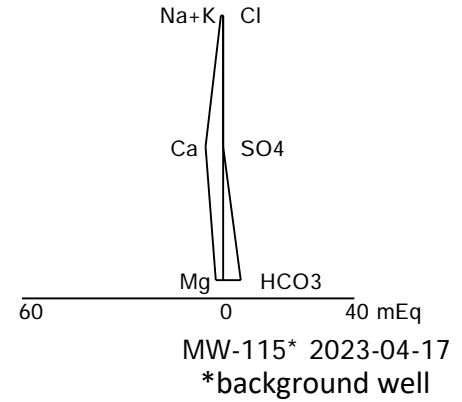
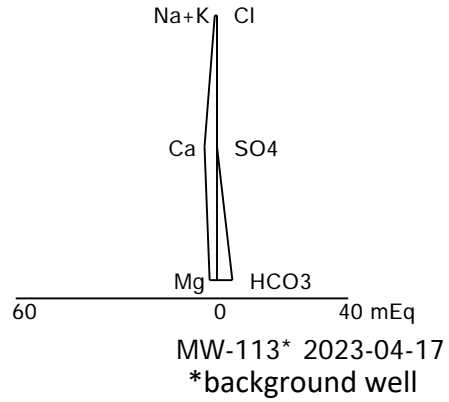
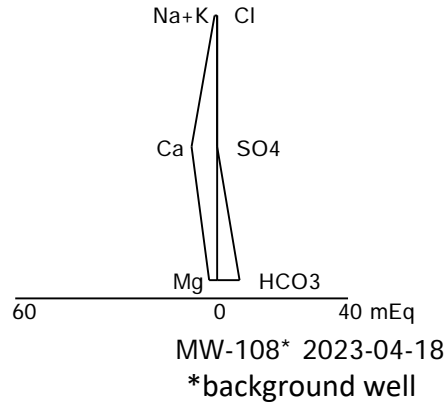
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Database (GWQ parameters)

### Box & Whiskers Plot



Constituent: Sulfate Analysis Run 7/12/2023 3:59 PM View: 2023-1H ASD

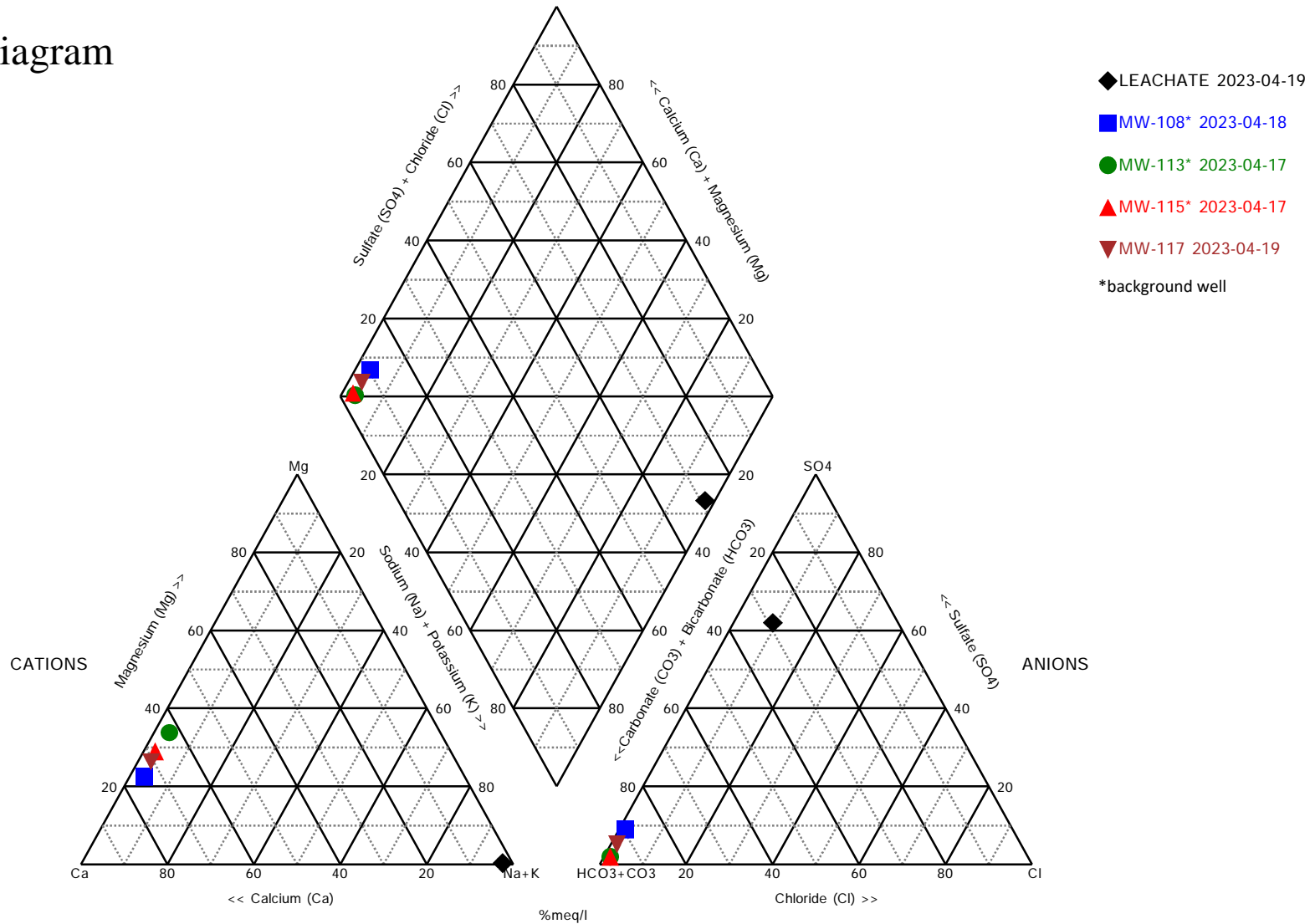
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Database (GWQ parameters)



Stiff Diagram Analysis Run 7/12/2023 3:53 PM View: 2023-1H ASD

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Database (GWQ parameters)

# Piper Diagram



Analysis Run 7/12/2023 3:53 PM View: 2023-1H ASD

Plum Point Energy Station

Client: Plum Point Services Company, LLC

Data: PPES EPA CCR Database (GWQ parameters)

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**Alternate Source Demonstration for  
Second Half 2023 Statistically Significant Results**



## TECHNICAL MEMORANDUM

**DATE:** January 31, 2024

**TO:** **Matt Gray**  
Plum Point Services Company, LLC

**FROM:** **Dana Derrington, PE, PG**   
FTN Associates, Ltd.

**SUBJECT:** Alternate Source Demonstration for Statistically Significant Increases  
Second Half of 2023 Monitoring Period, Plum Point Energy Station Landfill  
FTN No. R14590-3037-001

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FTN Associates, Ltd. (FTN), has prepared this technical memorandum for the Plum Point Services Company, LLC (PPSC), coal combustion residuals (CCR) landfill, which is regulated by the Environmental Protection Agency (EPA) Coal Combustion Residuals Rule, promulgated in Title 40 of the Code of Federal Regulations (40 CFR), Part 257. The landfill is also regulated by Arkansas Pollution Control and Ecology Commission (APCEC) Rule No. 22 and permitted by the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), under permit no. 0303-S3N-R1.

FTN was contracted to sample groundwater and to statistically evaluate the data for the second half of 2023 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.

### 1.0 BACKGROUND

FTN performed groundwater sampling for the second half 2023 semiannual groundwater monitoring period during October 2023. Sample collection, preservation, shipment, analytical procedures, chain-of-custody control, and data quality control for this sampling event followed protocol outlined in the landfill's groundwater sampling and analysis plan (GWSAP) (FTN 2017b). Statistical evaluation of the data set followed the most recent EPA guidance (EPA 2009) and the landfill's statistical analysis plan (SAP) (FTN 2017c). An intrawell prediction limit evaluation identified one previously confirmed SSI for sulfate and an unverified SSI for total dissolved solids (TDS) at compliance well MW-117. A site map showing the location of this well relative to the CCR unit (cells 1 and 3) is included as Figure 1



(all figures are included in Attachment 1). In general conformance with the landfill's SAP and EPA guidance (EPA 2009), verification sampling was performed during December 2023 for the unverified SSI for TDS at MW-117. An intrawell prediction limit plot showing the result of verification sampling for TDS at MW-117 is included in Attachment 2. As shown in Table 1 (Attachment 3), measured TDS at MW-117 remained above the intrawell prediction limit.

Prior ASDs have been prepared for the confirmed SSIs at MW-117 for sulfate (FTN 2022b, 2022a, 2023b, 2023a) and TDS (2019a, 2019b, 2020, 2021, 2022b, 2022a) in accordance with §257.94(e)(2) and based on the statistical limits at the time of each prior reporting period. Each ASD successfully demonstrated that the SSIs were not the result of influence from the CCR unit. The laboratory reports for the October sampling event and December verification event are included in Attachment 4.

## 2.0 DISCUSSION

A review of the monitoring system with respect to onsite background wells, background groundwater quality, published literature, and landfill leachate quality was performed to determine if the confirmed SSIs for sulfate and TDS at compliance well MW-117 were indicative of a release from the CCR unit. Findings from this review are discussed below.

### 2.1 Monitoring System Background Wells

As required by §257.91(c)(1), the groundwater monitoring network is required to contain a minimum of one monitoring well that is hydraulically upgradient of the CCR management area for the purpose of monitoring background water quality. However, there is not a hydraulically upgradient location at this facility because the direction of groundwater flow is seasonably variable. As allowed by §257.91(a)(1), a facility may utilize wells for background water quality that are not hydraulically upgradient of the CCR unit. For this reason, the facility incorporated monitoring wells MW-108, MW-113, and MW-115 (Figure 1) to monitor background water quality because those wells are positioned outside the potential zone of impact from the CCR unit. The rationale for this is based on the age of the landfill; the estimated maximum rate of groundwater flow; and the distance of MW-108, MW-113, and MW-115 from the CCR unit. Specifically:

- MW-108, MW-113, and MW-115 are located more than 2,300 ft from the eastern edge of cell 3;
- Groundwater at the landfill has historically exhibited a maximum flow rate of 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 670 ft from the CCR unit as of the second half 2023 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 of sulfate and TDS at MW-117 are well within the range of values measured at the onsite background wells. This comparison provides supporting evidence that the currently measured values for sulfate and TDS at MW-117 reflect natural fluctuations in groundwater quality.

## 2.3 Comparison to Published Groundwater Quality for the Aquifer

Each monitoring well is screened in the Mississippi River Valley alluvial aquifer, the uppermost aquifer in the vicinity of the landfill (FTN 2017b). The United States Geological Survey published a study of groundwater quality of the aquifer, specifically with respect to that of Holocene alluvium and Pleistocene valley train deposits, which are two of the major hydrogeologic units within the aquifer (Gonthier 2003). The landfill is located in Holocene alluvium, as shown on Figure 2. According to this study, wells screened in Holocene alluvium had a maximum measured sulfate concentration of 120 mg/L and a maximum measured TDS concentration of 728 mg/L. As shown in Table 1 (Attachment 3), the published levels of sulfate and TDS for the aquifer are well above the measured values for sulfate and TDS at MW-117 and at background wells MW-108, MW-113, and MW-115. This comparison provides supporting evidence that the currently measured values of sulfate and TDS at MW-117 reflect natural fluctuations in groundwater quality.

## 2.4 Comparison to Landfill Leachate

The major ion compositions of the leachate and groundwater samples collected during October 2023 were 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-R1, and are publicly available on the DEQ website<sup>1</sup>. If groundwater has been impacted by landfill leachate, the relative proportions of major ions in groundwater will resemble those in leachate.

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<sup>1</sup> [https://www.adeg.state.ar.us/sw/permits/facility\\_data.aspx](https://www.adeg.state.ar.us/sw/permits/facility_data.aspx)

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-113 and MW-115<sup>2</sup>. 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 points for background wells MW-113 and MW-115 and compliance well MW-117 clustered in the quadrant classified as calcium-bicarbonate-type water and positioned apart from the leachate data point, which is located in the sodium-chloride quadrant. If leachate was mixing with groundwater at MW-117, the data point for MW-117 would plot at an intermediate distance between the leachate data point and the data points for background wells MW-113 and MW-115 on the Piper diagram.

The Stiff and Piper diagrams show that the relative proportions of major ions in groundwater at MW-117 are different than landfill leachate, providing a key line of evidence that the SSIs for sulfate and TDS at MW-117 are not due to a release from the CCR unit.

### 3.0 CONCLUSIONS

In consideration of the information presented in this memorandum, FTN concludes that the SSIs for sulfate and TDS at MW-117 are the result of off-site influence and/or natural fluctuations in groundwater quality.

This memorandum serves as the ASD prepared in accordance with §257.94(e)(2) and supports the position that the confirmed SSIs for sulfate and TDS at MW-117 are not due to a release from the CCR unit. Therefore, no further action is required and the landfill will remain in detection monitoring.

If you have questions or comments regarding this memorandum, please do not hesitate to call Dana Derrington, PE, PG, at (314) 786-5855 or Heather Ferguson at (501) 225-7779.

DLD/hlf

Attachments

R:\WP\_FILES\14590-3037-001\2024-01-31 FTN TO PPES - 2H2023 ASD\2024-01-31 FTN TO PPES - EPA ASD FOR 2H2023 SSIS.DOCX

HUF

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<sup>2</sup> Background well MW-108 had an insufficient quantity of water to collect a sample during the October detection monitoring event and during a second attempt to sample the well in November, and as such, data from MW-108 are not included on these plots.

## 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.
- . 2019a. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2019 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. October 24, 2019.
- . 2019b. *Alternate Source Demonstration for Statistically Significant Increases, Second Half of 2019 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. December 17, 2019.
- . 2020. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2020 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. August 3, 2020.
- . 2021. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2021 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. October 6, 2021.
- . 2022a. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2022 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. September 27, 2022.
- . 2022b. *Alternate Source Demonstration for Statistically Significant Increases, Second Half of 2021 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. April 4, 2022.
- . 2023a. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2023 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. October 12, 2023.
- . 2023b. *Alternate Source Demonstration for Statistically Significant Increases, Second Half of 2022 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. January 25, 2023.
- 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.

Matt Gray  
January 31, 2024  
Page 6

### PROFESSIONAL ENGINEER'S CERTIFICATION

With this certification, I certify that I, as a professional engineer in the state of Arkansas, am a qualified professional engineer as defined in §257.53 of Title 40 of the Code of Federal Regulations (CFR), Part 257, that this technical memorandum has been prepared under my direction in accordance with generally accepted good engineering practices, that the findings are accurate to the best of my knowledge, and that the alternate source demonstration described herein meets the requirements of §257.94(e)(2) of 40 CFR Part 257.



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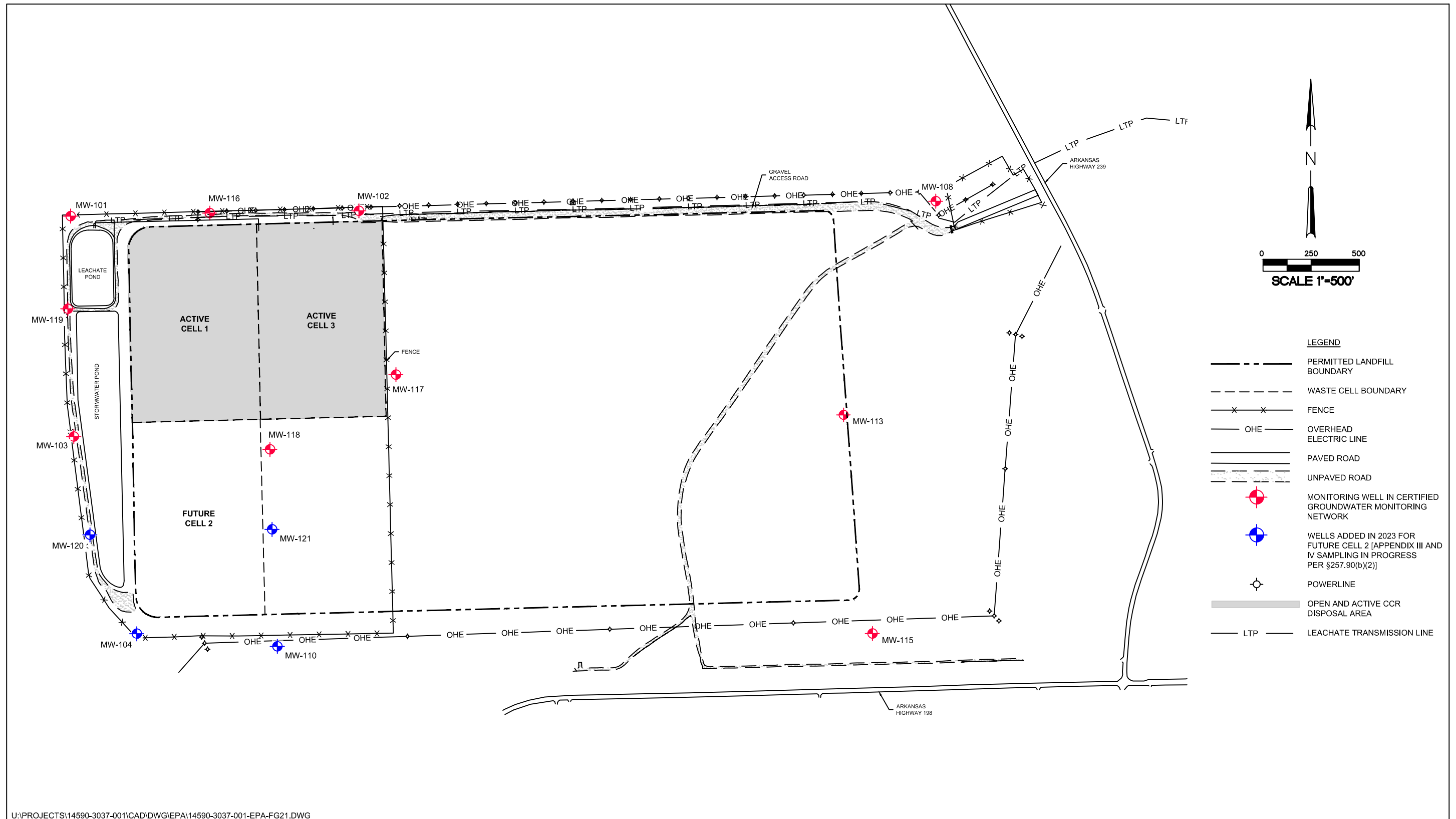
Dana L. Derrington, Arkansas PE #16372

01/31/2024  
Date

# **ATTACHMENT 1**

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**Figures**



U:\PROJECTS\14590-3037-001\CAD\DWG\EPA\14590-3037-001-EPA-FG21.DWG

Figure 1. Monitoring well location map.

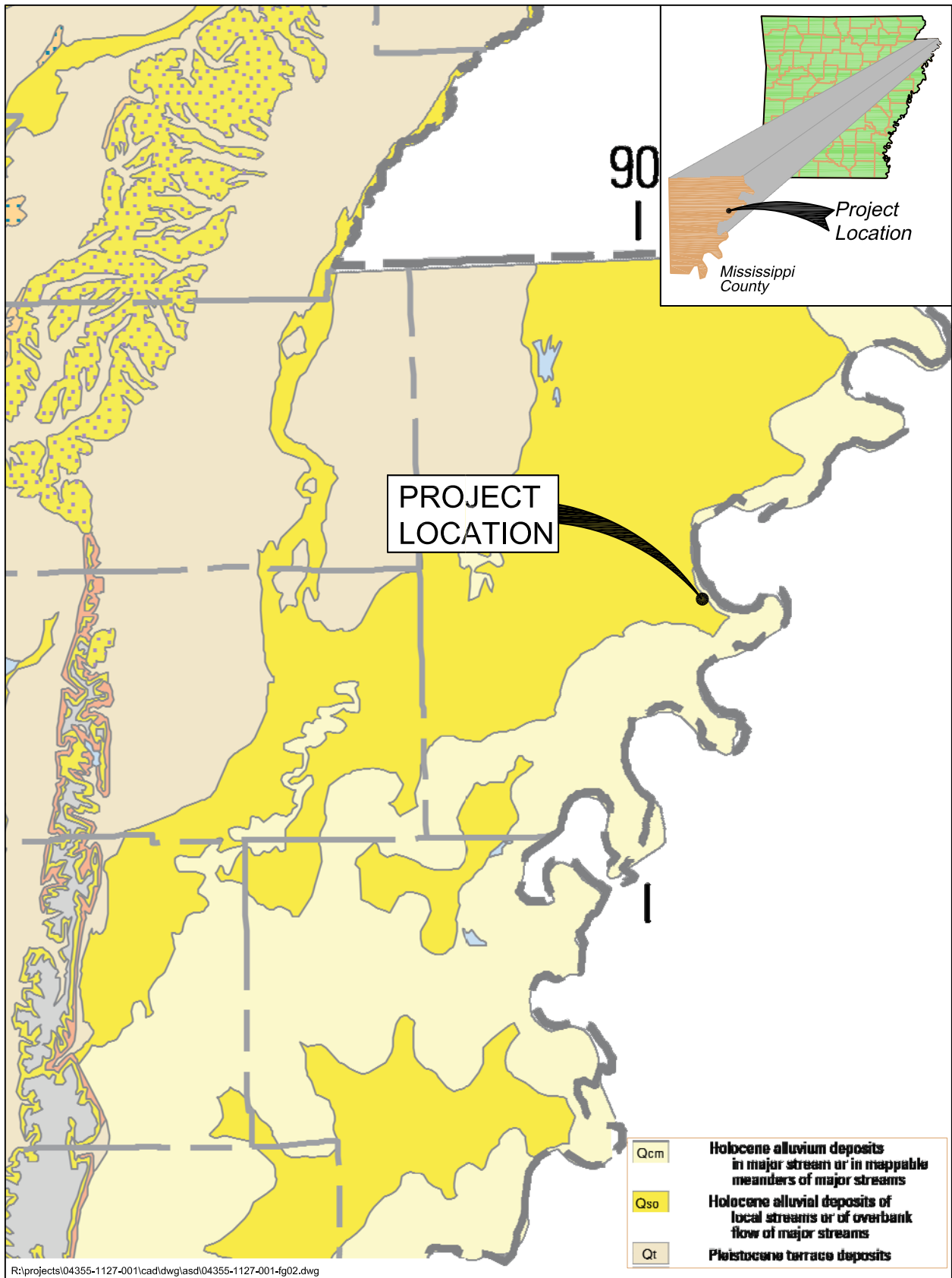


Figure 2. Surface geology of Mississippi County, Arkansas (adapted from Kresse et al. 2014).



# **ATTACHMENT 2**

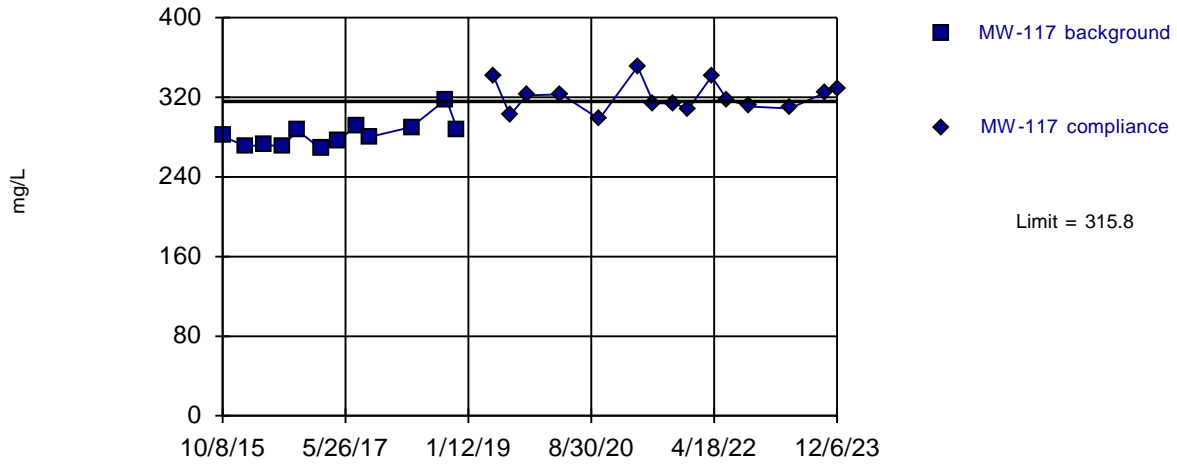
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**Statistical Plots**

Exceeds Limit

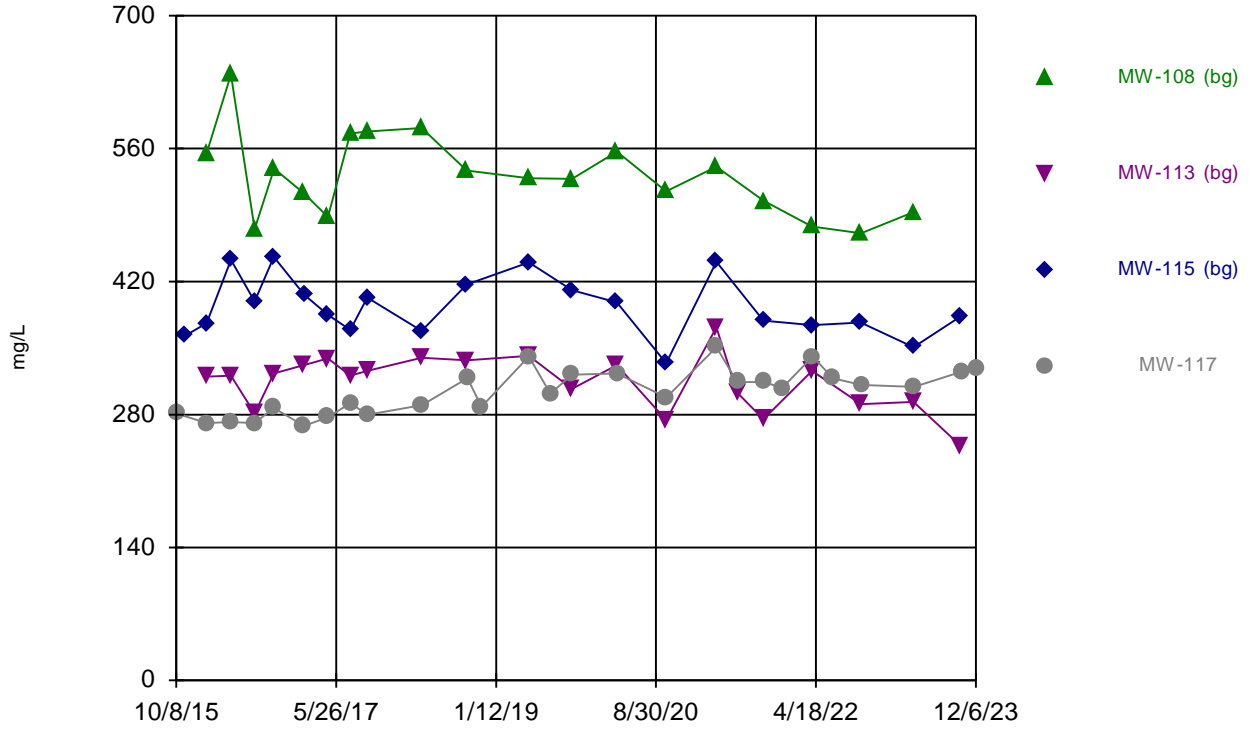
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Intrawell Parametric



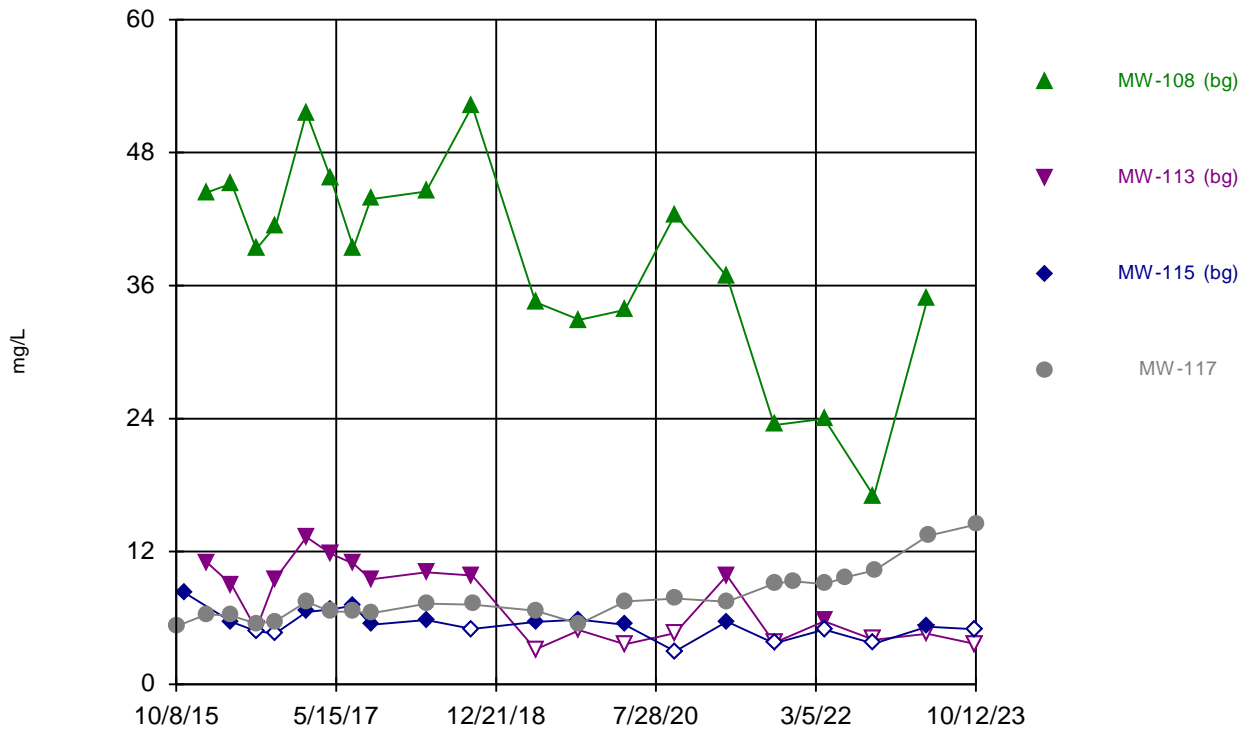
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### Time Series



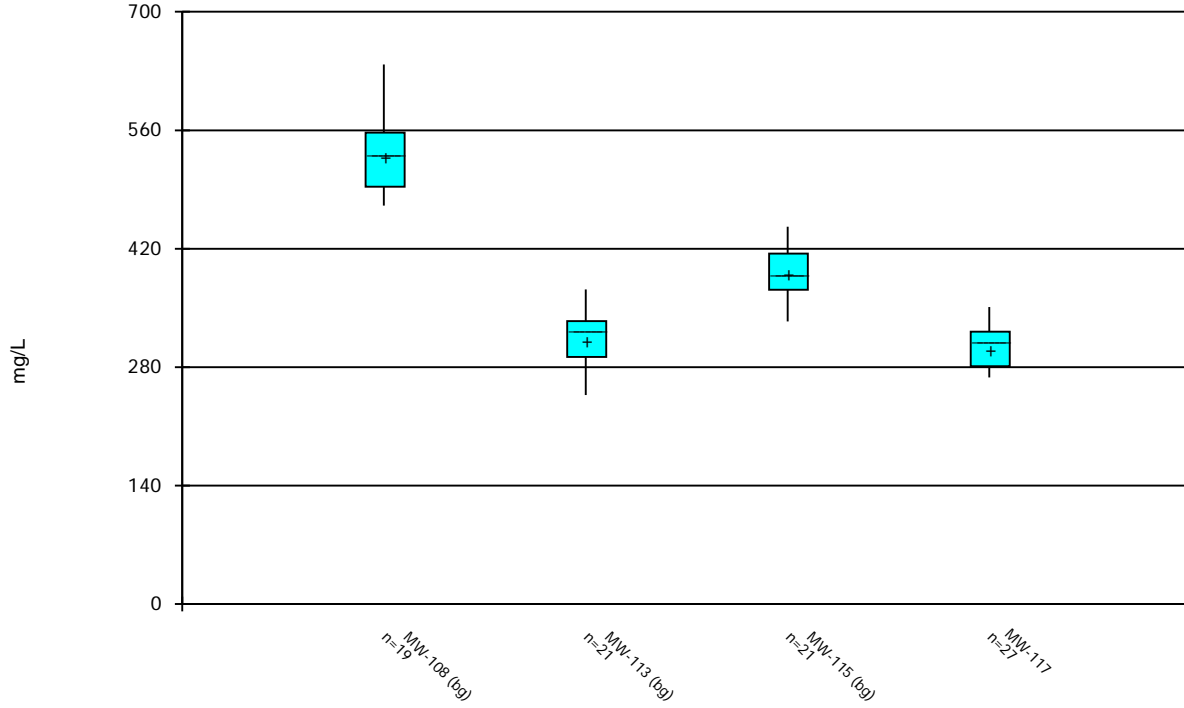
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 Plum Point Energy Station Data: PPES EPA CCR Rule Groundwater Database

### Time Series



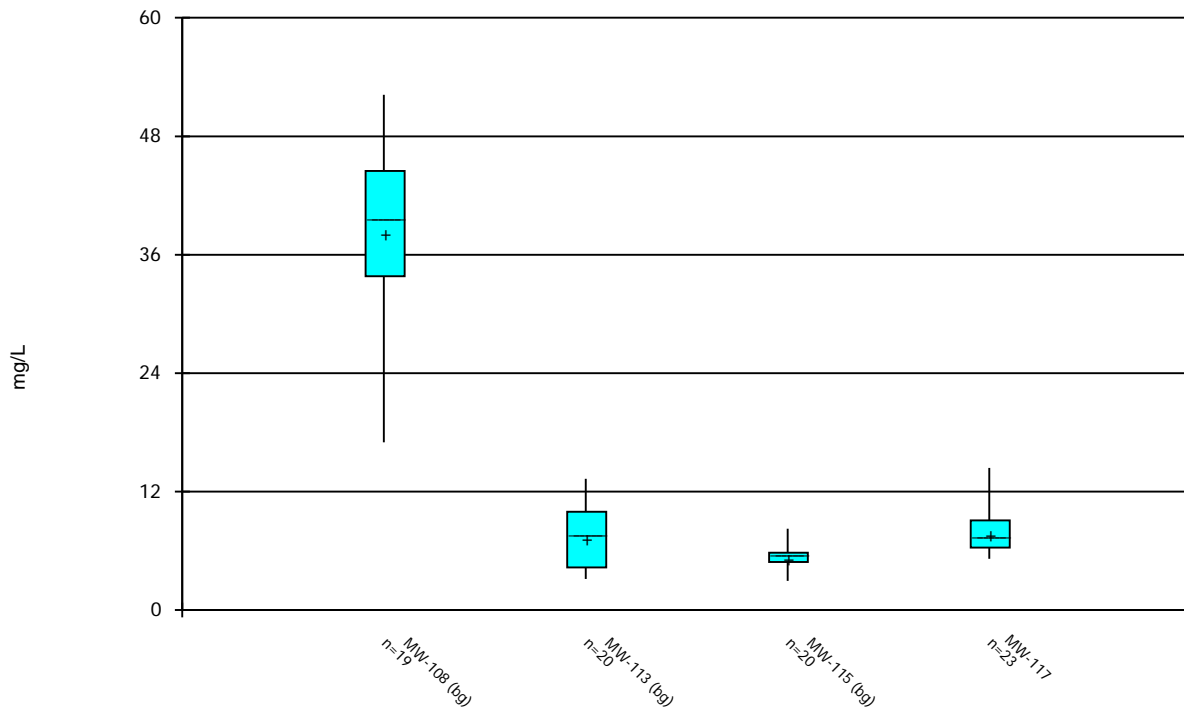
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### Box & Whiskers Plot

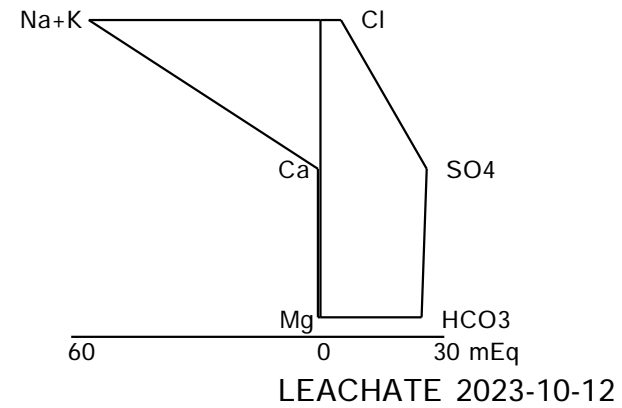
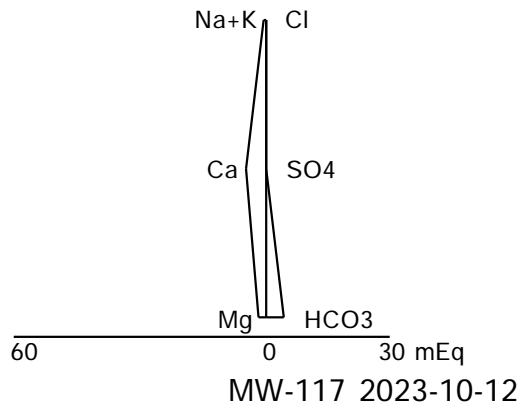
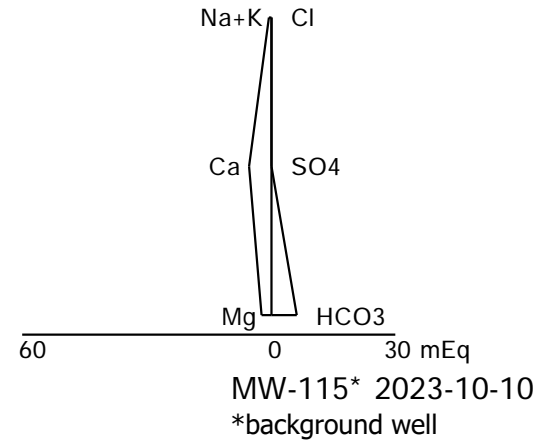
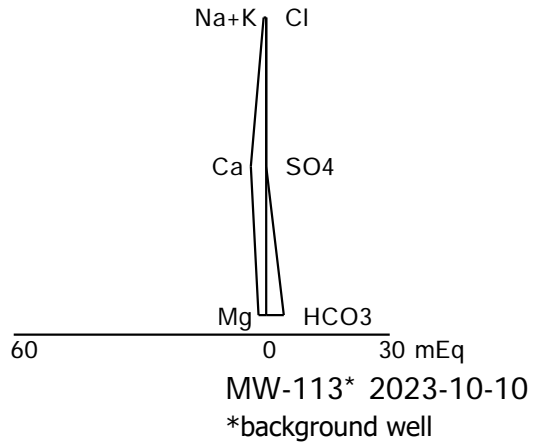


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Plum Point Energy Station    Data: PPES EPA CCR Rule Groundwater Database

### Box & Whiskers Plot

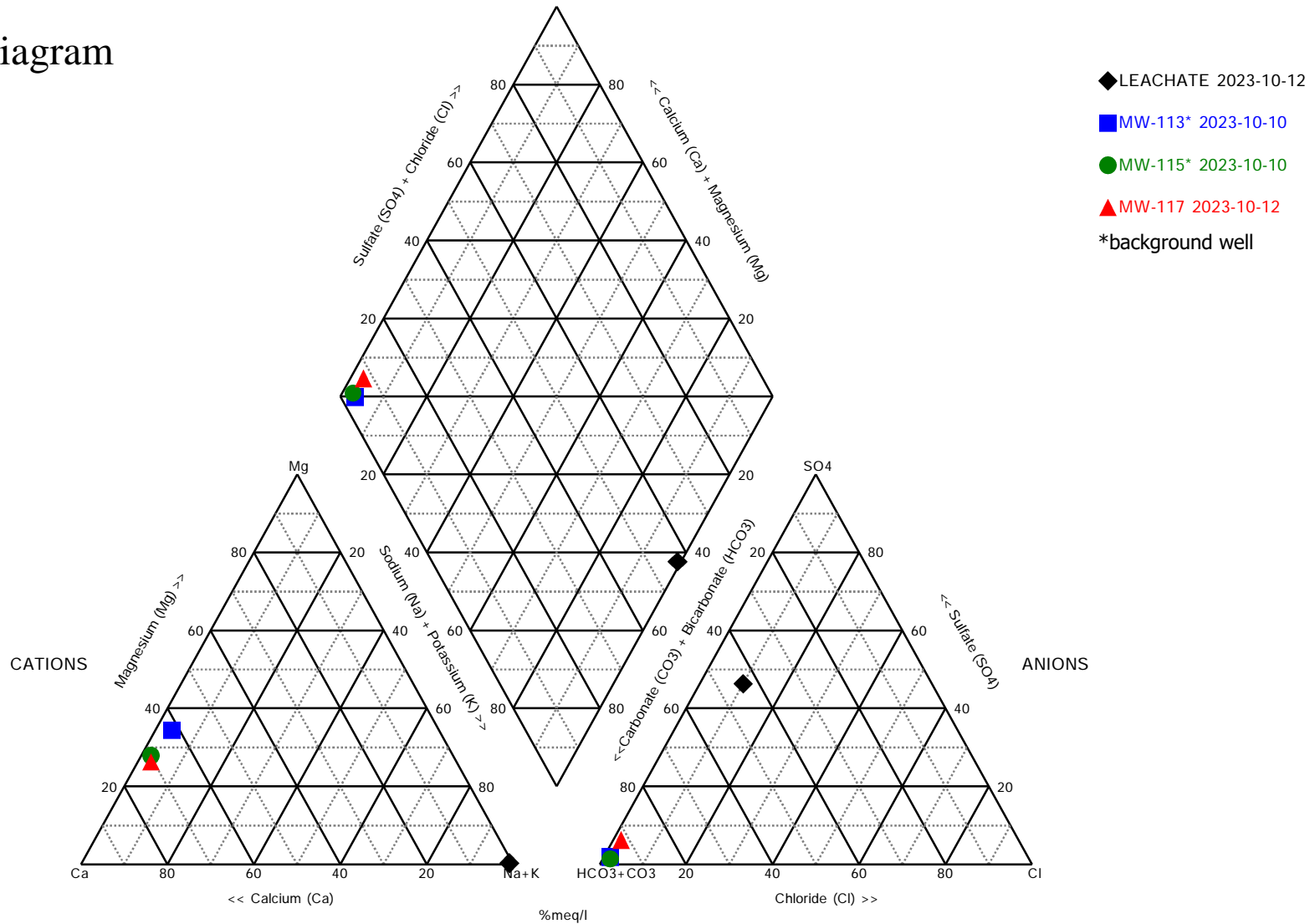


Constituent: Sulfate    Analysis Run 1/9/2024 12:10 PM    View: 2023-2H ASD  
Plum Point Energy Station    Data: PPES EPA CCR Rule Groundwater Database



Stiff Diagram Analysis Run 1/9/2024 12:13 PM View: 2023-2H ASD  
Plum Point Energy Station Data: PPES EPA CCR Database (GWQ parameters)

# Piper Diagram



Analysis Run 1/9/2024 12:14 PM View: 2023-2H ASD

Plum Point Energy Station Data: PPES EPA CCR Database (GWQ parameters)

# **ATTACHMENT 3**

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## **Summary Table**

Table 1. Summary of statistically significant results and maximum background and published levels.

Well ID	Parameter	Prediction Limit (mg/L)	October 2023 Result (mg/L)	December 2023 Verification Result (mg/L)	SSI Confirmed?	Maximum Background Level <sup>(a)</sup> (mg/L)	Maximum Published Level <sup>(b)</sup> (mg/L)
MW-117	Sulfate	8.048	14.4	NA <sup>(c)</sup>	Yes <sup>(c)</sup>	52.2 (MW-108, 9/2018)	120
MW-117	TDS	315.8	325	328	Yes	638 (MW-108, April 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. Verification sampling not performed; 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.



# **ATTACHMENT 4**

---

**Laboratory Reports**

**Plum Point Services Co., LLC**

Sample Delivery Group: L1666237  
Samples Received: 10/13/2023  
Project Number: R14590-3037-001  
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](http://www.pacenational.com)

# TABLE OF CONTENTS

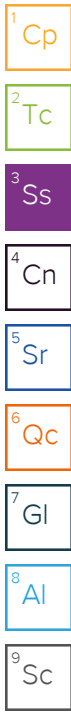
<b>Cp: Cover Page</b>	<b>1</b>	
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	
<b>Cn: Case Narrative</b>	<b>5</b>	
<b>Sr: Sample Results</b>	<b>6</b>	
MW-101 L1666237-01	6	
MW-102 L1666237-02	7	
MW-103 L1666237-03	8	
MW-113 L1666237-04	9	
MW-115 L1666237-05	10	
MW-116 L1666237-06	11	
MW-117 L1666237-07	12	
MW-118 L1666237-08	13	
MW-119 L1666237-09	14	
MW-117 DUP L1666237-10	15	
EPA EB-1 L1666237-11	16	
<b>Qc: Quality Control Summary</b>	<b>17</b>	
Gravimetric Analysis by Method 2540 C-2011	17	
Wet Chemistry by Method 9056A	22	
Metals (ICP) by Method 6010B	24	
<b>Gl: Glossary of Terms</b>	<b>25</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>26</b>	
<b>Sc: Sample Chain of Custody</b>	<b>27</b>	

# SAMPLE SUMMARY

## MW-101 L1666237-01 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 16:10  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152576	1	10/17/23 08:57	10/17/23 16:06	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 03:02	10/18/23 03:02	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:32	ZSA	Mt. Juliet, TN



## MW-102 L1666237-02 GW

Collected by Michael Clayton  
 Collected date/time 10/12/23 11:05  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2153405	1	10/18/23 09:44	10/19/23 10:08	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 04:05	10/18/23 04:05	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:34	ZSA	Mt. Juliet, TN

## MW-103 L1666237-03 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 14:15  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152576	1	10/17/23 08:57	10/17/23 16:06	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 04:21	10/18/23 04:21	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:37	ZSA	Mt. Juliet, TN

## MW-113 L1666237-04 GW

Collected by Michael Clayton  
 Collected date/time 10/10/23 10:35  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152512	1	10/17/23 08:43	10/17/23 13:25	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 04:37	10/18/23 04:37	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:40	ZSA	Mt. Juliet, TN

## MW-115 L1666237-05 GW

Collected by Michael Clayton  
 Collected date/time 10/10/23 09:35  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152512	1	10/17/23 08:43	10/17/23 13:25	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 04:53	10/18/23 04:53	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:43	ZSA	Mt. Juliet, TN

## MW-116 L1666237-06 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 17:10  
 Received date/time 10/13/23 09:00

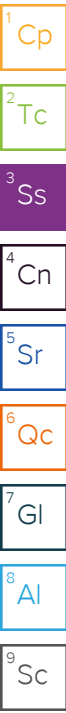
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152594	1	10/17/23 09:24	10/17/23 16:47	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 05:41	10/18/23 05:41	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:46	ZSA	Mt. Juliet, TN

# SAMPLE SUMMARY

## MW-117 L1666237-07 GW

Collected by Michael Clayton  
 Collected date/time 10/12/23 12:10  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2153450	1	10/18/23 10:59	10/19/23 12:06	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 05:57	10/18/23 05:57	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:49	ZSA	Mt. Juliet, TN



## MW-118 L1666237-08 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 13:10  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152594	1	10/17/23 09:24	10/17/23 16:47	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 06:13	10/18/23 06:13	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 12:57	ZSA	Mt. Juliet, TN

## MW-119 L1666237-09 GW

Collected by Michael Clayton  
 Collected date/time 10/11/23 15:10  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2152576	1	10/17/23 08:57	10/17/23 16:06	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 06:28	10/18/23 06:28	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 13:00	ZSA	Mt. Juliet, TN

## MW-117 DUP L1666237-10 GW

Collected by Michael Clayton  
 Collected date/time 10/12/23 12:15  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2153405	1	10/18/23 09:44	10/19/23 10:08	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 06:44	10/18/23 06:44	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 13:03	ZSA	Mt. Juliet, TN

## EPA EB-1 L1666237-11 GW

Collected by Michael Clayton  
 Collected date/time 10/12/23 12:45  
 Received date/time 10/13/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2153405	1	10/18/23 09:44	10/19/23 10:08	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2153158	1	10/18/23 07:00	10/18/23 07:00	HMM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2152498	1	10/19/23 08:58	10/22/23 13:06	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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	376000		10000	1	10/17/2023 16:06	<a href="#">WG2152576</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	8760		379	1000	1	10/18/2023 03:02	<a href="#">WG2153158</a>
Fluoride	283		64.0	150	1	10/18/2023 03:02	<a href="#">WG2153158</a>
Sulfate	6920		594	5000	1	10/18/2023 03:02	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	53.0	J	20.0	200	1	10/22/2023 12:32	<a href="#">WG2152498</a>
Calcium	101000		79.3	1000	1	10/22/2023 12:32	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	411000		10000	1	10/19/2023 10:08	<a href="#">WG2153405</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	2680		379	1000	1	10/18/2023 04:05	<a href="#">WG2153158</a>
Fluoride	168		64.0	150	1	10/18/2023 04:05	<a href="#">WG2153158</a>
Sulfate	74600		594	5000	1	10/18/2023 04:05	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	77.7	J	20.0	200	1	10/22/2023 12:34	<a href="#">WG2152498</a>
Calcium	106000		79.3	1000	1	10/22/2023 12:34	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	335000		10000	1	10/17/2023 16:06	<a href="#">WG2152576</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1080		379	1000	1	10/18/2023 04:21	<a href="#">WG2153158</a>
Fluoride	201		64.0	150	1	10/18/2023 04:21	<a href="#">WG2153158</a>
Sulfate	15900		594	5000	1	10/18/2023 04:21	<a href="#">WG2153158</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	74.3	J	20.0	200	1	10/22/2023 12:37	<a href="#">WG2152498</a>
Calcium	88000		79.3	1000	1	10/22/2023 12:37	<a href="#">WG2152498</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	247000	<u>J3</u>	10000	1	10/17/2023 13:25	<a href="#">WG2152512</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	751	<u>J</u>	379	1000	1	10/18/2023 04:37	<a href="#">WG2153158</a>
Fluoride	98.2	<u>J</u>	64.0	150	1	10/18/2023 04:37	<a href="#">WG2153158</a>
Sulfate	3640	<u>J</u>	594	5000	1	10/18/2023 04:37	<a href="#">WG2153158</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	78.2	<u>J</u>	20.0	200	1	10/22/2023 12:40	<a href="#">WG2152498</a>
Calcium	64500		79.3	1000	1	10/22/2023 12:40	<a href="#">WG2152498</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	383000		10000	1	10/17/2023 13:25	<a href="#">WG2152512</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1000		379	1000	1	10/18/2023 04:53	<a href="#">WG2153158</a>
Fluoride	207		64.0	150	1	10/18/2023 04:53	<a href="#">WG2153158</a>
Sulfate	4960	J	594	5000	1	10/18/2023 04:53	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	44.3	J	20.0	200	1	10/22/2023 12:43	<a href="#">WG2152498</a>
Calcium	107000		79.3	1000	1	10/22/2023 12:43	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	361000		10000	1	10/17/2023 16:47	<a href="#">WG2152594</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	5710		379	1000	1	10/18/2023 05:41	<a href="#">WG2153158</a>
Fluoride	201		64.0	150	1	10/18/2023 05:41	<a href="#">WG2153158</a>
Sulfate	50400		594	5000	1	10/18/2023 05:41	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	76.3	J	20.0	200	1	10/22/2023 12:46	<a href="#">WG2152498</a>
Calcium	91400		79.3	1000	1	10/22/2023 12:46	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	325000		10000	1	10/19/2023 12:06	<a href="#">WG2153450</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1330		379	1000	1	10/18/2023 05:57	<a href="#">WG2153158</a>
Fluoride	121	J	64.0	150	1	10/18/2023 05:57	<a href="#">WG2153158</a>
Sulfate	14400		594	5000	1	10/18/2023 05:57	<a href="#">WG2153158</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	73.6	J	20.0	200	1	10/22/2023 12:49	<a href="#">WG2152498</a>
Calcium	89000		79.3	1000	1	10/22/2023 12:49	<a href="#">WG2152498</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	335000		10000	1	10/17/2023 16:47	<a href="#">WG2152594</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1140		379	1000	1	10/18/2023 06:13	<a href="#">WG2153158</a>
Fluoride	154		64.0	150	1	10/18/2023 06:13	<a href="#">WG2153158</a>
Sulfate	20700		594	5000	1	10/18/2023 06:13	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	58.5	J	20.0	200	1	10/22/2023 12:57	<a href="#">WG2152498</a>
Calcium	86400		79.3	1000	1	10/22/2023 12:57	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	451000		10000	1	10/17/2023 16:06	<a href="#">WG2152576</a>

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	2130		379	1000	1	10/18/2023 06:28	<a href="#">WG2153158</a>
Fluoride	237		64.0	150	1	10/18/2023 06:28	<a href="#">WG2153158</a>
Sulfate	46500		594	5000	1	10/18/2023 06:28	<a href="#">WG2153158</a>

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	61.6	J	20.0	200	1	10/22/2023 13:00	<a href="#">WG2152498</a>
Calcium	119000		79.3	1000	1	10/22/2023 13:00	<a href="#">WG2152498</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	334000		10000	1	10/19/2023 10:08	<a href="#">WG2153405</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1330		379	1000	1	10/18/2023 06:44	<a href="#">WG2153158</a>
Fluoride	124	J	64.0	150	1	10/18/2023 06:44	<a href="#">WG2153158</a>
Sulfate	14400		594	5000	1	10/18/2023 06:44	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Boron	68.5	J	20.0	200	1	10/22/2023 13:03	<a href="#">WG2152498</a>
Calcium	88500		79.3	1000	1	10/22/2023 13:03	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Dissolved Solids	12000		10000	1	10/19/2023 10:08	<a href="#">WG2153405</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	U		379	1000	1	10/18/2023 07:00	<a href="#">WG2153158</a>
Fluoride	U		64.0	150	1	10/18/2023 07:00	<a href="#">WG2153158</a>
Sulfate	U		594	5000	1	10/18/2023 07:00	<a href="#">WG2153158</a>

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Boron	U		20.0	200	1	10/22/2023 13:06	<a href="#">WG2152498</a>
Calcium	U		79.3	1000	1	10/22/2023 13:06	<a href="#">WG2152498</a>

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3988543-1 10/17/23 13:25

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1664233-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1664233-01 10/17/23 13:25 • (DUP) R3988543-3 10/17/23 13:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2070000	2180000	1	5.19	J3	5

L1666237-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1666237-04 10/17/23 13:25 • (DUP) R3988543-4 10/17/23 13:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	247000	266000	1	7.41	J3	5

Laboratory Control Sample (LCS)

(LCS) R3988543-2 10/17/23 13:25

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8370000	95.1	77.3-123	

Method Blank (MB)

(MB) R3989032-1 10/17/23 16:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	↓	10000	10000

1 Cp

2 Tc

3 Ss

L1665890-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1665890-01 10/17/23 16:06 • (DUP) R3989032-3 10/17/23 16:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	689000	756000	1	9.23	J3	5

4 Cn

5 Sr

6 Qc

L1665890-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1665890-02 10/17/23 16:06 • (DUP) R3989032-4 10/17/23 16:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	603000	635000	1	5.17	J3	5

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3989032-2 10/17/23 16:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8820000	100	77.3-123	

Method Blank (MB)

(MB) R3989044-1 10/17/23 16:47

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1665890-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1665890-04 10/17/23 16:47 • (DUP) R3989044-3 10/17/23 16:47

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	603000	621000	1	2.94		5

<sup>4</sup>Cn

<sup>5</sup>Sr

L1665932-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1665932-01 10/17/23 16:47 • (DUP) R3989044-4 10/17/23 16:47

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1580000	1580000	1	0.000		5

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

Laboratory Control Sample (LCS)

(LCS) R3989044-2 10/17/23 16:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800000	8720000	99.1	77.3-123	

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3989316-1 10/19/23 10:08

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

1 Cp

2 Tc

3 Ss

L1666239-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1666239-09 10/19/23 10:08 • (DUP) R3989316-3 10/19/23 10:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	327000	337000	1	3.01		5

4 Cn

5 Sr

L1666465-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1666465-01 10/19/23 10:08 • (DUP) R3989316-4 10/19/23 10:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	320000	319000	1	0.313		5

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3989316-2 10/19/23 10:08

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8670000	98.5	77.3-123	

9 Sc

Method Blank (MB)

(MB) R3989915-1 10/19/23 12:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	<u>J</u>	10000	10000

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1666422-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1666422-08 10/19/23 12:06 • (DUP) R3989915-3 10/19/23 12:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	990000	1060000	1	6.45	<u>J3</u>	5

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

L1666431-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1666431-01 10/19/23 12:06 • (DUP) R3989915-4 10/19/23 12:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	212000	229000	1	7.71	<u>J3</u>	5

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R3989915-2 10/19/23 12:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8430000	95.8	77.3-123	

Method Blank (MB)

(MB) R3987755-1 10/17/23 10:32

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

L1666237-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1666237-01 10/18/23 03:02 • (DUP) R3987755-3 10/18/23 03:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	8760	8750	1	0.0297		15
Fluoride	283	282	1	0.213		15
Sulfate	6920	6920	1	0.0289		15

L1666239-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1666239-07 10/18/23 09:24 • (DUP) R3987755-6 10/18/23 09:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	751	752	1	0.173	↓	15
Fluoride	97.7	98.1	1	0.409	↓	15
Sulfate	3490	3500	1	0.218	↓	15

Laboratory Control Sample (LCS)

(LCS) R3987755-2 10/17/23 10:48

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40000	40000	100	80.0-120	
Fluoride	8000	7860	98.3	80.0-120	
Sulfate	40000	40300	101	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1666237-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666237-01 10/18/23 03:02 • (MS) R3987755-4 10/18/23 03:33 • (MSD) R3987755-5 10/18/23 03:49

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 %
Chloride	40000	8760	47300	47300	96.2	96.3	1	80.0-120			0.0874	15
Fluoride	8000	283	8440	8440	102	102	1	80.0-120			0.0735	15
Sulfate	40000	6920	45000	45000	95.1	95.2	1	80.0-120			0.130	15

L1666239-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1666239-07 10/18/23 09:24 • (MS) R3987755-7 10/18/23 09:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40000	751	40100	98.4	1	80.0-120	
Fluoride	8000	97.7	8180	101	1	80.0-120	
Sulfate	40000	3490	41800	95.7	1	80.0-120	

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



Method Blank (MB)

(MB) R3989454-1 10/22/23 11:42

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) R3989454-2 10/22/23 11:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Boron	1000	971	97.1	80.0-120	
Calcium	10000	9870	98.7	80.0-120	

L1666123-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1666123-05 10/22/23 11:48 • (MS) R3989454-4 10/22/23 11:53 • (MSD) R3989454-5 10/22/23 11:56

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	U	934	953	93.4	95.3	1	75.0-125			2.04	20
Calcium	10000	23000	32400	32800	93.6	97.6	1	75.0-125			1.22	20

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

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

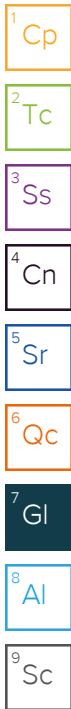
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

MDL	Method Detection Limit.
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.



# ACCREDITATIONS & LOCATIONS

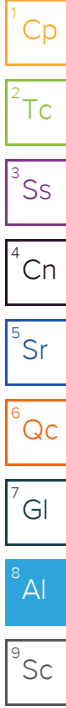
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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

Analysis / Container / Preservative  
 Pres Chk: **ll**

Chair Study Page **1** of **2**  


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 **(C)** ET

Phone: **501-920-9642**

Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CI, F, SO4 125m HDPE-NoPres	TDS 250m HDPE-NoPres	Total B, Ca 250m HDPE-HNO3
MW-101	Grab	GW		10/11/23	1610	3	X	X	X
MW-102		GW		10/12/23	1105	3	X	X	X
MW-103		GW		10/11/23	1415	3	X	X	X
MW-108		GW				3	X	X	X
MW-113		GW		10/10/23	1035	3	X	X	X
MW-115		GW		10/10/23	935	3	X	X	X
MW-116		GW		10/11/23	1710	3	X	X	X
MW-117		GW		10/12/23	1210	3	X	X	X
MW-118		GW		10/11/23	1310	3	X	X	X
MW-119		GW		10/11/23	1510	3	X	X	X

**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/hubs/pas-standard-terms.pdf>

SDG # **Uldd0237**  
**A216**

Acctnum: **NAESOAR**  
 Template: **T175308**  
 Prelogin: **P1028478**  
 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 # **7074 8790 7738**

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

Relinquished by: (Signature)  
*Michael Clayton*  
 Date: **10/12/23**  
 Time: **1600**

Date: **10/12/23**  
 Time: **1600**

Received by: (Signature)  
 Received by: (Signature)  
 Received for lab by: (Signature)  
*Mark W. Beasley*

Trip Blank Received: Yes (No)  
 HCL/MeOH  
 TBR  
 Temp: **1.330 = 1.528**  
 Bottles Received: **33**  
 Date: **10/13/23**  
 Time: **9:00**

If preservation required by Login: Date/Time  
 Hold:  
 Condition: **(C) NCF / OK**

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:  
**Dana Derrington**

Project Description:  
**Plum Point Energy Station**

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

City/State Collected: **OSCEOLA AR**

Please Circle:  
 PT MT **ET**

Phone: **501-920-9642**

Collected by (print):  
*Michael Clayton*

Client Project #  
**R14590-3037-001**

Site/Facility ID #

Lab Project #  
**NAESOAR-PLUMPOINT**

P.O. #  
**2023-00048**

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Cl, F, SO4 125m HDPE-NoPres	TDS 250m HDPE-NoPres	Total B, Ca 250m HDPE-HNO3								
MW-117 DUP	Grab	GW		10/12/23	1215	3	X	X	X								
EPA EB-1	↓	GW		10/12/23	1245	3	X	X	X								
		GW				3	X	X	X								
		GW				3	X	X	X								
		GW				3	X	X	X								

Analysis / Container / Preservative

Pres Chk *u*

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/hubs/pas-standard-terms.pdf>

SDG # *L1666237*

Table #

Acctnum: **NAESOAR**

Template: **T175308**

Prelogin: **P1028478**

PM: **134 - Mark W. Beasley**

PB:

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

\* 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 # **7074 8790 7738**

Sample Receipt Checklist

COC Seal Present/Intact:  NP  N

COC Signed/Accurate:  Y  N

Bottles arrive intact:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

If Applicable

VOA Zero HeadSpace:  Y  N

Preservation Correct/Checked:  Y  N

RAD Screen <0.5 mR/hr:  Y  N

Relinquished by: (Signature)  
*Michael Clayton*

Relinquished by: (Signature)

Relinquished by: (Signature)

Date: **10/12/23**

Time: **1600**

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)  
*Mark Kemp*

Trip Blank Received: Yes/No  
 HCL/MeOH  TBR

Temp: **1.3 ± 0.1 32.8** °C  
 Bottles Received: **33**

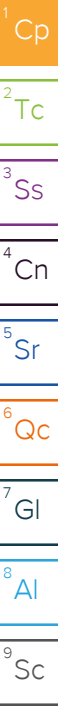
Date: **10/11/23**

Time: **9:10**

If preservation required by Login: Date/Time

Hold:

Condition: **(OK)**



## Plum Point Services Co., LLC

Sample Delivery Group: L1685565  
Samples Received: 12/07/2023  
Project Number: R14590-3037-001  
Description: PPES DEQ Program

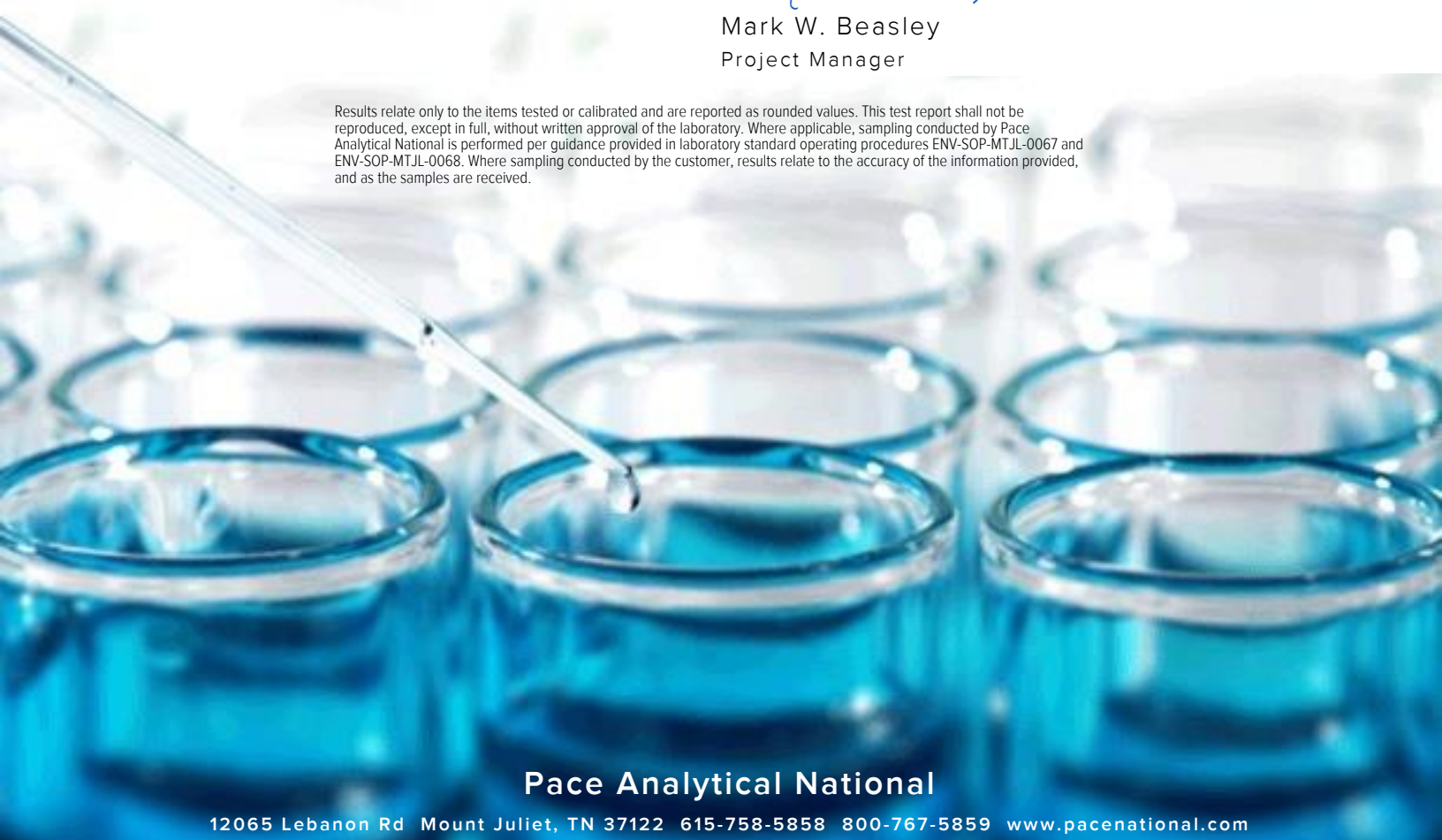
Report To: Dana Derrington  
2739 SCR 623  
Osceola, AR 72370

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

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	1	
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	
<b>Cn: Case Narrative</b>	4	
<b>Sr: Sample Results</b>	5	
MW-117 L1685565-01	5	
MW-117 DUP L1685565-02	6	
EPA EB-2 L1685565-03	7	
<b>Qc: Quality Control Summary</b>	8	
Gravimetric Analysis by Method 2540 C-2011	8	
<b>Gl: Glossary of Terms</b>	10	
<b>Al: Accreditations &amp; Locations</b>	11	
<b>Sc: Sample Chain of Custody</b>	12	
		

# SAMPLE SUMMARY

## MW-117 L1685565-01 GW

Collected by Michael Clayton  
 Collected date/time 12/06/23 13:55  
 Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187498	1	12/12/23 12:06	12/12/23 22:50	JAC	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## MW-117 DUP L1685565-02 GW

Collected by Michael Clayton  
 Collected date/time 12/06/23 14:00  
 Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187498	1	12/12/23 12:06	12/12/23 22:50	JAC	Mt. Juliet, TN

4 Cn

5 Sr

## EPA EB-2 L1685565-03 GW

Collected by Michael Clayton  
 Collected date/time 12/06/23 14:25  
 Received date/time 12/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2187494	1	12/12/23 11:36	12/13/23 09:50	JAC	Mt. Juliet, TN

6 Qc

7 Gl

8 Al

9 Sc



# 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

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	328000		10000	1	12/12/2023 22:50	<a href="#">WG2187498</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	319000		10000	1	12/12/2023 22:50	<a href="#">WG2187498</a>

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10000	1	12/13/2023 09:50	<a href="#">WG2187494</a>

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

Method Blank (MB)

(MB) R4012691-1 12/13/23 09:50

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1685249-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1685249-04 12/13/23 09:50 • (DUP) R4012691-3 12/13/23 09:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1350000	1420000	1	4.87		5

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

L1685281-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1685281-09 12/13/23 09:50 • (DUP) R4012691-4 12/13/23 09:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	660000	697000	1	5.50	J3	5

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R4012691-2 12/13/23 09:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8400000	95.5	85.0-115	

Method Blank (MB)

(MB) R4012689-1 12/12/23 22:50

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1685565-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1685565-01 12/12/23 22:50 • (DUP) R4012689-3 12/12/23 22:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	328000	334000	1	1.81		5

<sup>4</sup>Cn

<sup>5</sup>Sr

L1685565-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1685565-02 12/12/23 22:50 • (DUP) R4012689-4 12/12/23 22:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	319000	322000	1	0.936		5

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

Laboratory Control Sample (LCS)

(LCS) R4012689-2 12/12/23 22:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800000	8500000	96.6	85.0-115	

<sup>9</sup>Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

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

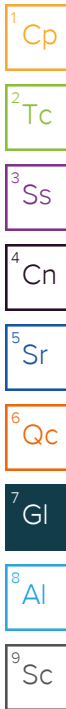
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

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

### Qualifier Description

J3	The associated batch QC was outside the established quality control range for precision.
----	--



# ACCREDITATIONS & LOCATIONS

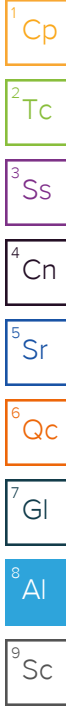
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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:  
**PPES DEQ Program**

City/State Collected: **Osceola AR**  
 Please Circle: PT MT **(A)** ET

Phone: **501-920-9642**

Client Project #  
**R14590-3037-001**

Lab Project #  
**NAESOAR-PLUMPOINT**

Collected by (print):  
*Michael Clayton*

Site/Facility ID #

P.O. #  
**2023-00048**


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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TDS	IL	HDPE	NoPres
MW-117	Grab	GW		12/6/23	1355	1				X
MW-117 DUP	↓	GW		↓	1400	1				X
EPA EB-2		GW			1425	1				X
		GW				1				X

Analysis / Container / Preservative		Chain of Custody Page ___ of ___
		 <b>MT JULIET, TN</b> 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: <a href="https://info.pacelabs.com/hubs/pas-standard-terms.pdf">https://info.pacelabs.com/hubs/pas-standard-terms.pdf</a>
		SDG # <b>11685565</b>
		<b>C179</b>
		Acctnum: <b>NAESOAR</b>
		Template: <b>T242518</b>
		Prelogin: <b>P1039069</b>
		PM: <b>134 - Mark W. Beasley</b>
		PB:
		Shipped Via: <b>FedEX Ground</b>
		Remarks      Sample # (lab only)
		-01
		-02
		-03

\* 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 # **7155 0296 8433**

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

Relinquished by: (Signature)  
*Michael Clayton*  
 Date: **12/6/23**  
 Time: **1700**

Date: **12/6/23**  
 Time: **1700**

Received by: (Signature)  
 Received by: (Signature)  
 Received for lab by: (Signature)  
*[Signature]*

Trip Blank Received: Yes    **(No)**  
 HCL / MeOH  
 TBR  
 Temp: \_\_\_\_\_ °C  
**DPA 0.5 + 0 = 0.5    3**  
 Date: **12/17/23**  
 Time: **09:00**

If preservation required by Login: Date/Time  
 Hold:  
 Condition: **(OK)**