January 16, 2024



Mr. Trent Jones, P.E. Chief, Waste Division Mississippi Department of Environmental Quality PO Box 2261 Jackson, MS 39225

Re: Notification of Availability of 2023 Annual CCR Report

Choctaw Generation Limited Partnership, L.L.L.P.

Ackerman, Mississippi (Choctaw County)

Agency Interest No. 677

Dear Mr. Jones:

In accordance with the requirements of 40 CFR 257.106(h)(1), Choctaw Generation Limited Partnership, L.L.L.P. (Choctaw Generation) is hereby notifying the Mississippi Department of Environmental Quality that the Coal Combustion Residuals (CCR) Groundwater Monitoring and Corrective Action Annual Report for calendar year 2023 has been placed in the facility's Operating Record and is available for review on the publicly accessible internet site.

Should you have any questions regarding this notification, please contact Jim Ward of Choctaw Generation at (662) 387-5758 or myself at (662) 840-5945.

Sincerely,

Brian Ketchum, PE

Principal, Senior Engineer

Cc: Jim Ward, PG, Environmental Compliance, Choctaw Generation (via email)

Rob Watson, VP, Asset Management, Choctaw Generation (via email) Shane McCray, Compliance Manager, Choctaw Generation (via email)

Kirk Shelton, ECS (via email) Caleb James, ECS (via email)

# COAL COMBUSTION RESIDUALS (CCR) GROUNDWATER MONITORING AND CORRECTIVE ACTION ANNUAL REPORT









CHOCTAW GENERATION LIMITED PARTNERSHIP, L.L.P. 2391 PENSACOLA ROAD ACKERMAN, MS 39735 (662) 387-5758

**JANUARY 16, 2023** 

### **TABLE OF CONTENTS**

1.0	INTR	ODUCTION	1
	1.1 1.2 1.3	Site Description and Regulatory Applicability  Annual Report Requirements  Professional Engineer Certification	2
2.0	OVE	RVIEW: DETECTION AND ASSESSMENT MONITORING	5
	2.1 2.2	Detection Monitoring Program Assessment Monitoring Program	
3.0	GRO	UNDWATER MONITORING SYSTEM	8
	3.1 3.2 3.3	Current Groundwater Monitoring System	9
4.0	GRO	UNDWATER MONITORING DATA	11
	4.1 4.2 4.3	Sample Requirements	12
5.0	ADDI	ITIONAL INFORMATION	17
	5.1 5.2 5.3	Alternative Monitoring Frequency  Demonstration of Invalid Statistically Significant Increase  Time Extension for Corrective Measures Assessment	17
6.0	CON	CLUSION	19
	6.1 6.2	Summary of Key Actions Completed	

#### FIGURES:

Figure 1: Site Location Map Figure 2: Facility Diagram

#### **APPENDICES:**

Appendix A: Potentiometric Surface Maps

Appendix B: Analytical Results and Chain-of-Custody Forms

Appendix C: Field Sampling Data

Appendix D: 2023 Groundwater Monitoring Summary

#### 1.0 INTRODUCTION

#### 1.1 SITE DESCRIPTION AND REGULATORY APPLICABILITY

Choctaw Generation Limited Partnership, L.L.L.P. (Choctaw Generation) is located near the City of Ackerman in Choctaw County, Mississippi. Choctaw Generation is in north central Mississippi on a 170-acre site. Choctaw Generation is bounded on the south by Pensacola Road and is located ½ mile west of US Highway 9. Figure 1 shows the location of the site. Choctaw Generation operates a single unit electrical generation facility designed to generate electricity for dispatch to the Tennessee Valley Authority (TVA) electrical system. The primary boiler fuel is lignite coal. As a result of combusting lignite coal, ash is created and must be disposed of or re-purposed. Choctaw Generation owns and operates an existing Ash Management Unit (AMU) for the placement and disposal of ash. The AMU (or CCR unit) is located in the northeastern portion of the property and consists of three (3) cells, as shown in Figure 2. The CCR unit encompasses approximately 64 acres of the Choctaw Generation site.

The site is currently regulated by the Mississippi Department of Environmental Quality (MDEQ) Solid Waste Regulations and Solid Waste Permit No. SW0100040462. The site is also required to comply with the Groundwater Monitoring and Corrective Action requirements of 40 CFR Part 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments. As an existing CCR landfill, the site was required to be in compliance with the following groundwater monitoring requirements by October 17, 2017:

_	install a groundwater monitoring system as required by §257.91,
	Develop a groundwater sampling and analysis program to include selection of the statistical procedures to be used for evaluating groundwater monitoring data as required by §257.93;
	Initiate the detection monitoring program to include obtaining a minimum of eight (8 independent samples for each background and downgradient well as required by §257.94(b) and
	Evaluate groundwater monitoring data for statistically significant increases over background levels for the constituents listed in Appendix III of Subpart D as required by §257.94.

The Choctaw Generation groundwater monitoring system was completed in accordance with the groundwater monitoring performance standards of §257.91 by June 2016. The initial Choctaw Generation CCR unit groundwater monitoring system consisted of three (3) background or upgradient wells and eight (8) downgradient wells. A Groundwater Monitoring Plan was developed in August 2016 in accordance with the groundwater sampling and analysis program requirements of §257.93. The Groundwater Monitoring Plan was updated in January 2019 to address an additional well installed at the site. The current Groundwater Monitoring Plan is available in the Choctaw Generation Operating Record and CCR Website. Sampling of the groundwater wells is conducted in accordance with the most current version of the

Groundwater Monitoring Plan. Eight (8) independent samples were collected and analyzed prior to October 17, 2017, initiating the groundwater monitoring program at the site.

Over time, wells have been replaced, added, and removed due to compromised well integrity as well as change in monitoring requirements. These changes are discussed further in Section 3.0. The current Choctaw Generation CCR unit groundwater monitoring system consists of three (3) background or upgradient wells and seven (7) downgradient wells which ensure complete coverage of the CCR unit. A facility diagram showing the monitoring well locations is included as Figure 2.

#### 1.2 ANNUAL REPORT REQUIREMENTS

Choctaw Generation is required to prepare an annual groundwater monitoring and corrective action report (the Annual Report) no later than January 31, 2018, and annually thereafter, and place the report in the Operating Record. The Annual Report is also made available on the CCR Website within 30 days of filing the report in the Operating Record. The Annual Report must be maintained in the Operating Record and on the CCR Website for at least five (5) years.

Per §257.90(e), the Annual Report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. At a minimum, the Annual Report must contain the following information, to the extent available:

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;
Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;
In addition to all the monitoring data obtained under §§257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and
Other information required to be included in the annual report as specified in §§257.90 through 257.98.

- ☐ A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:
  - At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;
  - At the end of the current annual reporting period whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;
  - If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III to the part pursuant to §257.94(e);
    - Identify those constituents listed in Appendix III to this part and the names
      of the monitoring wells associated with such an increase; and
    - Provide the date when the assessment monitoring program was initiated for the CCR unit.
  - If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to §257.95(g) include all of the following:
    - Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase;
    - Provide the date when the assessment of corrective measures was initiated for the CCR unit;
    - Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and
    - Provide the date when the assessment of corrective measures was completed for the CCR unit.
  - Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of the remedy selection; and
  - Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.

To comply with the requirements above, a map of the CCR unit and all upgradient and downgradient monitoring wells that are part of the current groundwater monitoring system are shown on Figure 2. Section 2 contains an overview and discussion of the status and any transition between monitoring programs (i.e., detection monitoring versus assessment monitoring) and the reason such monitoring program is in place. A discussion of the current monitoring well system and any monitoring wells installed or decommissioned is provided in Section 3.0. A summary of the monitoring data obtained during the annual reporting period is provided in Section 4.0. Section 5.0 presents additional information required by §§257.90 through 257.98 to be included in the Annual Report and which is not already addressed in the prior sections. Finally, Section 6.0 summarized actions completed during the reporting year and projects key activities planned for the following reporting year.

#### 1.3 PROFESSIONAL ENGINEER CERTIFICATION

The undersigned Registered Professional Engineer is familiar with the requirements of 40 CFR Part 257, Subpart D and certifies that the Groundwater Monitoring and Corrective Action Annual Report was prepared under his/her direct supervision, in accordance with the requirements of 40 CFR 257.90 through 257.98. The undersigned Registered Professional Engineer certifies under penalty of the law that all information and statements provided in this report (including attachments), based on information and belief formed after reasonable inquiry, are true, accurate, and complete.

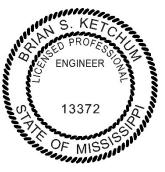
Brian S. Ketchum, PE

Registration Number: 13372

State of Mississippi

1/16/2024

Date Signed



#### 2.0 OVERVIEW: DETECTION AND ASSESSMENT MONITORING

Choctaw Generation began the reporting year and is currently subject to the Assessment Monitoring Program requirements of §257.95, and groundwater monitoring as required by this program is discussed in Section 4.0. It was previously determined that there was a statistically significant increase over background for more than one constituent listed in Appendix III (e.g., chloride, sulfate, and TDS). A description of both the Detection Monitoring Program and Assessment Monitoring Program is provided below and includes a history of the monitoring as well any changes that occurred during the previous calendar year. It was determined in 2018 that there was a statistically significant level above the groundwater protection standard (GWPS) for lithium in monitoring wells CCR-3 and MW-9, cobalt in monitoring wells MW-9, MW-12, and MW-15, and later beryllium in MW-9. A review of the monitoring data suggested that the detection of lithium, cobalt, and beryllium above the GWPS could have been from an alternate source rather than a potential release of the CCR unit resulting in an Alternate Source Demonstration (ASD) being completed in December 2019. Therefore, the site continues in assessment monitoring.

#### 2.1 DETECTION MONITORING PROGRAM

For existing CCR landfills, including the Choctaw Generation AMU, a minimum of eight (8) independent samples from each background and downgradient well must be collected and analyzed for the constituents listed in Appendix III and Appendix IV of 40 CFR 257, Subpart D by no later than October 17, 2017. These constituents are listed in Tables 4-1 and 4-2. After the eight (8) initial sampling events are completed to develop background data, the detection monitoring must be performed on a semiannual basis during the active life of the CCR unit and the post-closure period unless assessment monitoring is triggered.

In accordance with the requirements of the Detection Monitoring Program in §257.94(b), one (1) sample from each background (or upgradient) and downgradient well was analyzed for the seven (7) parameters in Appendix III on February 6-7, 2018. An evaluation of these results indicated statistically significant increases (SSI) above the prediction limits established during background monitoring for the following parameters in the associated wells: chloride (MW-9, MW-12, and MW-16), fluoride (MW-9 and OW-2), sulfate (CCR-3, MW-9, MW-12, MW-16, and OW-2), and TDS (CCR-3, MW-9, and MW-16). Therefore, the requirements of the Assessment Monitoring Program were triggered.

#### 2.2 ASSESSMENT MONITORING PROGRAM

Due to SSI exceedances determined during the initial detection monitoring event on February 6-7, 2018, Choctaw Generation triggered the Assessment Monitoring Program under §257.95.

☐ On May 15-16, 2018, Choctaw Generation conducted the initial annual assessment monitoring event for all Appendix IV constituents. Choctaw Generation then conducted the first semiannual

assessment monitoring event on September 10-11, 2018, and the subsequent semiannual assessment monitoring event on March 19-20, 2019, for all Appendix III constituents and the ten (10) Appendix IV constituents previously detected during the annual Appendix IV monitoring event. ☐ On May 29-30, 2019, the annual monitoring event for all Appendix IV constituents was conducted. Based on the sampling results, twelve (12) Appendix IV constituents were detected, adding selenium and molybdenum to the Appendix IV constituents to be monitored during semiannual assessment monitoring events. The next two (2) semiannual assessment monitoring events were conducted on September 10-11, 2019, and March 25-26, 2020. These events included sampling for all Appendix III constituents and those Appendix IV constituents detected during the 2018 and 2019 annual monitoring events. On May 18, 2020, the annual monitoring event for all Appendix IV constituents was conducted. No new Appendix IV constituents were detected requiring no new constituents to be sampled in subsequent semiannual assessment monitoring events. The next two (2) semiannual assessment monitoring events were conducted on September 28, 2020, and March 15-16, 2021. These events included sampling for all Appendix III constituents and those Appendix IV constituents detected during previous annual monitoring events. On May 26, 2021, the annual monitoring event for all Appendix IV constituents was conducted. No new Appendix IV constituents were detected requiring no new constituents to be sampled in subsequent semiannual assessment monitoring events. The semiannual assessment monitoring events occurred on September 8, 2021, and March 23-24, 2022. Although the 2021 annual monitoring event is required to include Appendix IV constituents only, the laboratory analyzed the samples for boron and calcium (Appendix III) in addition to all Appendix IV constituents. Therefore, these results were included as part of the 2021 annual report. On May 31, 2022, the annual monitoring event for all Appendix IV constituents was conducted. No new Appendix IV constituents were detected requiring no new constituents to be monitored during subsequent semiannual monitoring events. The next two (2) semiannual assessment monitoring events were conducted on September 12-13, 2022, and March 13, 2023. These events included sampling for all Appendix III constituents and those Appendix IV constituents detected during previous annual monitoring events. On May 10, 2023, the annual monitoring event for all Appendix IV constituents was conducted. No new Appendix IV constituents were detected requiring no new constituents to be sampled in subsequent semiannual assessment monitoring events. The next semiannual event occurred on September 13, 2023, and the follow up semiannual event is planned for March 2024.

GWPS for all constituents detected during the initial and subsequent assessment monitoring events were established per the procedures in §257.95(h). All current Appendix IV constituents that are sampled during the semiannual assessment monitoring events are listed in Section 4.3.

The Appendix III and Appendix IV results from the sampling conducted during the reporting period, the background concentrations (or "prediction limits") established under §257.94(b), and the GWPS established under §257.95(d)(2) are included in Appendix D of the Annual Report.

Due to a verified statistically significant increase (SSI) of Appendix IV constituents above the GWPS (lithium in monitoring wells CCR-3 and MW-9 and cobalt in monitoring wells MW-9, MW-12, and MW-15), Choctaw Generation initiated an assessment of corrective measures on January 30, 2019. The Assessment of Corrective Measures (ACM) Report was completed on June 29, 2019, after a 60-day extension.

After review of the monitoring analytical data from the 2019 period, trends in groundwater concentration led to the prospect that the detection of lithium, cobalt, beryllium (not verified), and molybdenum (not verified) at a SSL above the GWPS could have been from an alternate source rather than a potential release of the CCR unit or associated AMU basin. As discussed in Section 5.2, An ASD was then successfully completed on December 17, 2019, providing an evidential conclusion that cobalt and lithium detected at SSLs were a result of an alternate source. Due to the successful ASD, Choctaw Generation immediately ceased and discontinued corrective measure activities and continued assessment monitoring. Beryllium was then detected at a SSL above the GWPS in MW-9 during the 2020 annual assessment monitoring event and verified in the second semiannual assessment monitoring event on September 28, 2020. After research and review of analytical data, the ASD was then revised on August 20, 2020, to successfully address beryllium. Therefore, Choctaw Generation has continued in assessment monitoring.

#### 3.0 GROUNDWATER MONITORING SYSTEM

#### 3.1 CURRENT GROUNDWATER MONITORING SYSTEM

The owner or operator of a CCR unit must install a groundwater monitoring system that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer. The system should accurately represent the quality of background groundwater that has not been affected by leakage from a CCR unit (i.e., upgradient wells). In addition, the system should accurately represent the quality of groundwater passing the waste boundary of the CCR unit (i.e., downgradient wells). The downgradient wells should be installed at the waste boundary to ensure detection of groundwater contamination in the uppermost aquifer. The number, spacing, and depths of groundwater monitoring wells within the system were determined based upon site-specific technical information that included an assessment of items such as:

	Aquifer	thickness	and	groundwater	flow	direction;	and
--	---------	-----------	-----	-------------	------	------------	-----

□ Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

The groundwater monitoring system must include a minimum number of monitoring wells necessary to meet the performance standards and information specified above. The direction of groundwater flow through the CCR unit is to the northwest, which has been consistently determined through ongoing solid waste permit groundwater monitoring events. The locations for the monitoring wells were based upon the known direction of groundwater movement. The monitoring wells screen the uppermost laterally continuous aquifer below the base of ash fill. The base of ash fill is at an approximate elevation of 480 feet mean sea level (msl). The zone is screened and monitored at an approximate elevation of 470 feet msl, but varies across the site and through the unit.

The system must contain a minimum of at least one (1) upgradient and three (3) downgradient monitoring wells. The initial Choctaw Generation CCR unit groundwater monitoring system consisted of three (3) background or upgradient wells and eight (8) downgradient wells to ensure complete coverage of the CCR unit, which consists of three (3) ash disposal cells covering approximately 64 acres. Additional downgradient wells CCR5 (2018) and CCR-6, CCR-7, and CCR-8 (2019) were added to the groundwater monitoring system. The integrity of downgradient well, MW-16, was compromised and was replaced by downgradient well, MW-17 (2019). Downgradient wells, MW-15 and MW-17 were also compromised (2020) and were abandoned and removed from the groundwater monitoring system. In addition, downgradient wells CCR-6, CCR-7, and CCR-8 that are located on the mine property were removed from the current groundwater system as they are no longer needed for delineation in response to corrective measure

requirements. As a result, the current CCR unit groundwater monitoring system consists of three (3) background or upgradient wells (i.e., MW-7, MS-13, and MW-14) and seven (7) downgradient wells (i.e., MW-9, MW-12, OW-2, CCR-2, CCR-3, CCR-4, and CCR-5). A map showing the monitoring well locations is included as Figure 2, and a summary of the current monitoring wells is included as Table 3-1 below. Monitoring wells were installed according to the guidelines established in the 1994 USEPA Region IV RCRA Subtitle D Training Manual (SDTM, 1994), or other generally accepted guidelines, and are believed to meet the requirements of 40 CFR Part 257, Subpart D. For more detailed procedures related to the installation of the current groundwater monitoring system, refer to the CCR Groundwater Monitoring Plan available in the facility Operating Record and CCR Website.

**Table 3-1: Groundwater Monitoring Wells** 

Well No.	Background or Downgradient	Elevation <sup>(1)</sup> (ft)	Well Depth (ft)	Well Dia. (inches)
CCR-2	Downgradient	542.50	84.50	4
CCR-3	Downgradient	504.78	53.00	4
CCR-4	Downgradient	505.68	53.00	4
CCR-5	Downgradient	470.46	34.55	4
MW-7	Background (Upgradient)	571.76	56.92	4
MW-9	Downgradient	480.04	21.74	4
MW-12	Downgradient	474.19	19.09	4
MW-13	Background (Upgradient)	584.48	106.00	4
MW-14	Background (Upgradient)	593.84	60.97	4
OW-2	Downgradient	489.40	27.05	4

Elevations were re-surveyed on November 14, 2019. Updated elevations will be used to determine groundwater elevation in subsequent monitoring events.

Sections 3.2 and 3.3 discuss changes to the groundwater monitoring system that took place during the reporting period.

#### 3.2 MONITORING WELL INSTALLATION

There were no new wells installed in 2023.

#### 3.3 MONITORING WELL DECOMMISSIONING

Monitoring wells must be maintained and appropriately cased in a manner that maintains the integrity of the monitoring well borehole throughout the life of the monitoring program. As noted in Section 3.1, the integrity of downgradient wells MW-15 and MW-17 were compromised during the 2020 period. The monitoring well plug and abandonment project for these wells was then conducted on August 26, 2021, in accordance with the Mississippi water well plugging guidelines, and the well abandonment/

decommissioning f		submitted	to	MDEQ	on	August	30,	2021.	No	monitoring	wells	were

#### 4.0 GROUNDWATER MONITORING DATA

#### 4.1 SAMPLING REQUIREMENTS

The monitoring well samples collected for laboratory analysis along with the duplicate samples and field blanks were submitted to Micro-Methods Laboratories in Ocean Springs, Mississippi. Sampling was conducted in accordance with the CCR Groundwater Monitoring Plan. The samples were analyzed for constituents listed in Appendix III and/or Appendix IV of 40 CFR 257, Subpart D (depending on the type of monitoring event) as listed in Tables 4-1 and 4-2 below. Metals were analyzed as total recoverable metals from unfiltered samples.

**Table 4-1: Appendix III Constituents** 

40 CFR 257, Subpar	40 CFR 257, Subpart D, Appendix III										
Parameter	Analytical Method	С	ontainer	Preservative	Holding Time						
Boron	EPA 200.7	Р	500mL	NA	6 months						
Calcium	EPA 200.7	Р	500mL	NA	6 months						
Chloride (1)	ASTM D512-12	Р	1000mL	NA	28 days						
Fluoride	SM 4500-F C	Р	1000mL	NA	28 days						
pН		Meas	ured and monitor	red in the field.							
Sulfate	SM 4500-SO42	Р	1000mL	NA	28 days						
TDS	SM 2540 C	Р	1000mL	NA	7 days						

<sup>(1)</sup> The lab contracted for this analysis normally uses SM 4110 B 2011 method for chloride but due to their main IC instrument failing, they use method ASTM D512-12, another approved method.

**Table 4-2: Appendix IV Constituents** 

40 CFR 257, Subpart	40 CFR 257, Subpart D, Appendix IV										
Parameter	Analytical Method	Co	ntainer	Preservative	Holding Time						
Antimony	EPA 200.8	Р	500mL	NA	6 months						
Arsenic	EPA 200.8	Р	500mL	NA	6 months						
Barium	EPA 200.7 or 200.8	Р	500mL	NA	6 months						
Beryllium	EPA 200.8	Р	500mL	NA	6 months						
Cadmium	EPA 200.8	Р	500mL	NA	6 months						
Chromium	EPA 200.8	Р	500mL	NA	6 months						
Cobalt	EPA 200.8	Р	500mL	NA	6 months						
Fluoride	SM 4500-F C	Р	1000mL	NA	28 days						
Lead	EPA 200.8	Р	500mL	NA	6 months						
Lithium	EPA 200.7	Р	500mL	NA	6 months						
Mercury	EPA 245.1	Р	500mL	NA	28 days						

<sup>(2)</sup> T = Teflon, P = Plastic, G = Glass, NA = Not Applicable

40 CFR 257, Subpart	40 CFR 257, Subpart D, Appendix IV											
Parameter	Analytical Method	Co	ntainer	Preservative	Holding Time							
Molybdenum	EPA 200.8	Р	500mL	NA	6 months							
Selenium	EPA 200.8	Р	500mL	NA	6 months							
Thallium	EPA 200.8	Р	500mL	NA	6 months							
Radium 226/228	Р	1000mL	NA	NA								

(1) T = Teflon, P = Plastic, G = Glass, NA = Not Applicable

#### 4.2 GROUNDWATER ELEVATION AND FLOW

Groundwater elevation is measured in each monitoring well immediately prior to purging each time groundwater is sampled. Table 4-3 provides a summary of the groundwater elevation recorded for each well during each of the monitoring events. A potentiometric surface map was developed for each monitoring event based on the measured static water levels and the top-of-case (TOC) elevations. Also, the rate of groundwater flow is determined for each event and the direction of flow is summarized in the table and provided on the potentiometric surface maps included in Appendix A. Groundwater flow velocity (v) is estimated using the hydraulic conductivity (K) of the groundwater zone, the effective porosity  $(\eta_e)$ , and the hydraulic gradient (dh/dl). The groundwater flow velocity in feet/year is estimated using the following

equation: 
$$v = \frac{K}{\eta_e} \left(\frac{dh}{dl}\right)$$
.

Conductivity and porosity are dependent on the soil type in the saturated zone. Based on boring logs, the soils in the screened saturated zone are predominantly silt, clay, and silty-clay units. These Clayey Wilcox sediments were investigated and found to have hydraulic conductivities generally less than 1.0 x 10<sup>-6</sup> cm/sec, and in many cases 1.0 x 10<sup>-8</sup> cm/sec or less, as noted in the Special/Industrial Waste Permit Application prepared by Malcolm Pirnie (March 1998). As a conservative measure of groundwater flow the highest permeability measured at the site of 2.0 x 10<sup>-5</sup> cm/sec has been used. An effective porosity of 0.44 was used based on a mix of silty clay and clay of varying plasticity found in the saturated zone. Previously, the hydraulic gradient was determined for each monitoring event using the difference in groundwater elevations at upgradient monitoring well, MW-14, and downgradient monitoring well, MW-15, which are approximately 3,025 feet apart. Since the integrity of the downgradient well, MW-15, was compromised, the hydraulic gradient is now determined for each monitoring event using an average of the difference in groundwater elevations at upgradient well, MW-14, and downgradient monitoring well, CCR-2, which are approximately 1,800 feet apart, and of the difference in groundwater elevations at upgradient well, MW-13, and downgradient monitoring well, CCR-4, which are approximately 1,860 feet apart.

As noted in Table 4-3 and from the potentiometric surface maps (provided in Appendix A), groundwater in the vicinity of the CCR unit flows northwest. Also, as noted during the background sampling period, groundwater elevation changed very little in each monitoring well sampled during the 2023 reporting period, indicating that seasonal variability does not significantly impact groundwater at the site. Groundwater flow is relatively slow due to the low hydraulic conductivity of the soils and was calculated to be 1.5 feet per year based on the 2023 data. This is consistent with the flows calculated for previous monitoring events, as shown in Table 4-3.

#### 4.3 GROUNDWATER SAMPLING RESULTS

The analytical results from the collected samples, the chain-of-custody, and the laboratory quality assurance and quality control (QA/QC) information are provided in Appendix B. In addition to the groundwater samples taken from each of the monitoring wells, a duplicate sample and field blank were collected and analyzed for the required constituents. Temperature, pH, conductivity, turbidity, purge volume, and elapsed purge time were monitored while purging each well. The field data collected while purging and sampling each well using the low stress purging and sampling methodology is included in Appendix C. The data includes monitored field parameters (pH, temperature, turbidity, conductivity), water levels, well depth, drawdown, purge rate, purge volume, and purge time. The EPA Laboratory Services & Applied Science Division (LSASD) Groundwater Sampling Operating Procedure that was updated April 22, 2023, states that measured groundwater temperature during purging is subject to changes related to surface ambient conditions, pumping rates and pump temperature. Therefore, its usefulness is subject to question for the purpose of determining parameter stability. As such, it has been removed from LSASD's list of parameters used for stability determination. Even though temperature is not used to determine stability, it is still advisable to record the temperature of purge water.

The summary of results for sampling conducted during the reporting year is available in Appendix D. For those constituents not detected during a given monitoring event, the value is indicated as "less than" (or <) the minimum reporting level (MRL). Results from the upgradient wells were used to establish the background groundwater quality for each constituent, which is the interwell prediction limit determined using the approved statistical procedures. Because statistically significant increases (SSI) of constituents were verified during the initial detection monitoring event in 2018, GWPS were established per the requirements of §257.95(d)(2) for Appendix IV constituents and are compared to current and future sampling results.

Semiannual assessment monitoring was conducted on March 13, 2023. During this event, all Appendix III constituents and those Appendix IV constituents previously detected were analyzed. The following Appendix IV constituents exceeded the GWPS at the well locations noted below for this monitoring event:

Cobalt: CCR-2, CCR-3, CCR-5, MW-9, and MW-12

Lithium: CCR-3

The annual monitoring event for all Appendix IV constituents, required by §257.95(b), was conducted May 10, 2023. The following Appendix IV constituents will be monitored during the next two semiannual assessment monitoring events:

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Chromium
- Cobalt
- Fluoride
- Lead
- Lithium
- Molybdenum
- Selenium
- Radium 226 and 228 combined

Additionally, the results from this annual event were compared to the GWPS. The following Appendix IV constituents exceeded the GWPS at the well locations noted below for this monitoring event:

Beryllium: MW-9

Cobalt: CCR-3, CCR-5, MW-9, and MW-12

Lithium: CCR-3

The next semiannual assessment monitoring event was conducted on September 13, 2023. The following Appendix IV constituents exceeded the GWPS at the well locations noted below for this monitoring event:

Cobalt: CCR-3 and MW-9

• Lithium: CCR-3

Although antimony, arsenic, cadmium, chromium, lead, molybdenum, and selenium were not detected in the 2023 annual monitoring event, these Appendix IV constituents will still be monitored during the semiannual events since they were detected in a previous assessment monitoring event. Lithium, cobalt, and beryllium were determined to be from an alternate source rather than a potential release of the AMU basin. The ASD is discussed in Section 5.2, and Choctaw Generation has continued assessment monitoring. A summary of the results from each monitoring event (annual and semiannual) is provided in Appendix D, and the full laboratory analytical reports are provided as Appendix B.

Table 4-3: Groundwater Elevation (feet) and Flow Rate (feet/yr)

Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2	Flow Rate	Flow Direction
								Backg	round Mo	nitoring								
7/26-27/16	488.60	473.59	478.46					538.60	471.49	466.92	499.10	564.91	477.50	480.26		476.80	1.4	NW
8/22-23/16	488.63	473.33	478.41					538.03	471.74	466.97	498.85	563.94	477.19	480.49		476.50	1.3	NW
9/12-13/16	488.22	472.96	478.36					538.02	470.97	466.09	498.82	563.12	476.74	480.15		476.20	1.3	NW
10/17-18/16	488.05	472.69	478.61					537.93	471.17	465.56	498.48	560.56	476.19	479.24		476.00	1.3	NW
11/9-10/16	487.69	472.41	478.16					537.52	471.32	465.45	497.83	559.08	475.78	479.10		475.50	1.3	NW
11/28-29/16	487.55	472.38	478.17					536.13	471.47	465.97	497.60	560.51	476.16	479.61		475.64	1.3	NW
2/8-9/17	488.17	474.06	478.95					537.95	473.34	471.27	498.21	563.49	478.87	481.70		477.60	1.3	NW
3/29-30/17	488.36	474.82	478.81					537.74	472.44	470.17	498.58	565.88	478.83	486.60		477.40	1.4	NW
								Detec	ction Mon	itoring						'		
2/6-7/18	489.83	475.11	478.84					537.58	473.60	471.47	499.40	562.15	478.92	481.87		477.49	1.3	NW
								Asses	sment Mo	nitoring						1		
5/15-16/18	489.73	476.19	478.98					538.66	472.82	468.07	501.08	566.41	478.93	481.36		478.19	1.4	NW
9/10-11/18	488.34	473.95	478.28	460.73				537.84	472.98	468.60	499.16	562.19	477.16	480.72		476.59	1.3	NW
3/19-20/19 <sup>(1)</sup>	491.92	479.69	481.38	463.41				538.06	482.28	470.24	521.24	565.69	480.70	NS		478.80	1.3	NW
5/29-30/19(1)	491.62	478.76	480.84	462.75	459.91	487.14	462.79	538.47	471.56	466.67	521.42	565.63	480.20	NS	478.65	478.98	1.3	NW
9/10-11/19 <sup>(1)</sup>	491.28	479.91	480.43	462.02	458.71	487.01	462.04	538.35	470.61	466.33	521.15	565.16	478.83	NS	477.73	477.57	1.3	NW
3/25-26/20(2)	493.83	479.8	481.27	463.93	NS	NS	NS	541.78	472.53	470.5	525.6	565.94	NS	NS	479.84	479.48	1.5	NW
5/18/20(2)	491.75	477.25	480.78	463.05	NS	NS	NS	538.71	471.23	468.88	526.48	565.59	NS	NS	480.64	479.36	1.5	NW
9/28/20(2)	493.95	478	480.41	463.57	NS	NS	NS	537.85	471.24	468.51	525.58	565.01	NS	NS	NS	478.59	1.5	NW
3/15-16/21 <sup>(2)</sup>	494.5	479.93	480.78	463.1	NS	NS	NS	537.61	471.54	469.19	525.68	565.52	NS	NS	NS	479.05	1.5	NW
5/26/21(2)	494.45	479.28	479.9	462.75	NS	NS	NS	537.56	471.32	467.29	526.34	565.12	NS	NS	NS	478.94	1.5	NW
9/8/21(2)	494.35	479.58	480.83	464.45	NS	NS	NS	536.84	472.46	468.89	525.55	565.33	NS	NS	NS	478.9	1.5	NW
3/23-24/22(2)	493.62	480.36	480.95	463.71	NS	NS	NS	537.71	473.15	470.49	523.34	565.22	NS	NS	NS	479.51	1.5	NW
5/31-6/1/22(2)	493.24	478.74	480.15	462.73	NS	NS	NS	537.68	471.39	466.44	523.40	564.88	NS	NS	NS	478.72	1.5	NW
9/12-13/22(2)	492.25	477.81	480.12	463.15	NS	NS	NS	537.18	472.05	469.51	521.78	563.38	NS	NS	NS	478.43	1.5	NW
3/13/23(2)	492.56	480.1	480.81	463.81	NS	NS	NS	537.5	472.94	470.62	521.19	565.24	NS	NS	NS	478.82	1.5	NW

Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2	Flow Rate	Flow Direction
5/10/23 <sup>(2)</sup>	492.14	479.26	480.55	462.98	NS	NS	NS	537.96	471.65	468.2	521.79	565.43	NS	NS	NS	478.47	1.5	NW
9/13/23 <sup>(2)</sup>	491.13	477.39	480.02	462.52	NS	NS	NS	537.51	470.62	465.3	520.54	564.59	NS	NS	NS	477.14	1.5	NW

<sup>(1)</sup> TOC elevations were resurveyed on November 14, 2019, and groundwater elevations were revised using the correct TOC elevations.(2) Flow rate is calculated using an average hydraulic gradient between MW-14 and CCR-2 as well as MW-13 and CCR-4.

#### 5.0 ADDITIONAL INFORMATION

#### 5.1 ALTERNATIVE MONITORING FREQUENCY

Based on the availability of groundwater, an alternative monitoring frequency may be proposed under both the detection monitoring program and the assessment monitoring program per §§257.94(d) and 257.95(c), respectively. In lieu of semiannual sampling, sampling may be conducted less frequently but no less than annually. Choctaw Generation must obtain a certification from a qualified professional engineer stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of §§257.94(d) or 257.95(c). Choctaw Generation must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer in the Annual Report. With this Annual Report, Choctaw Generation is not making an alternative monitoring frequency demonstration.

#### 5.2 DEMONSTRATION OF INVALID STATISTICALLY SIGNIFICANT INCREASE

Within 90 days of finding that any of the Appendix III or IV constituents have been detected at a statistically significant level, Choctaw Generation may demonstrate that a source other than the CCR unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Such demonstration is allowed by both the detection monitoring program and assessment monitoring program per §257.94(e)(2) and §257.95(g)(3), respectively. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer. If a successful demonstration is made, Choctaw Generation must continue monitoring in accordance with the detection or assessment monitoring program, as applicable. Choctaw Generation must also include the demonstration in the Annual Report, as well as the certification by a qualified professional engineer. With this Annual Report, Choctaw Generation is not demonstrating that any additional constituents were detected at a SSL above the GWPS as a result from an alternate source. A history of the ASD is provided below.

Sampling to evaluate the composition of the natural soil at the site was conducted on October 29, 2019, which included drilling soil borings in three (3) locations at the Choctaw Generation site. The samples were collected at a variety of depths ranging from four (4) to twenty (20) feet to capture the natural, differing geologies in the soil and material near and within the monitored aquifer. Based on review of the analytical results, the initial ASD was developed and certified on December 17, 2019, demonstrating that elevated lithium and cobalt concentrations above each GWPS were a result of natural variation in the groundwater quality as a result of the aquifer material rather than a potential release from the CCR unit. Beryllium was then detected above the GWPS in March 2020 and then verified in the following event in May of 2020. In response, the ASD was revised and certified on August 20, 2020, demonstrating that the elevated beryllium

concentration detected above the GWPS was a result of natural variation in the groundwater quality as a result of the aquifer material rather than a potential release from the CCR unit. The initial and revised ASD were submitted with each respective annual report and can be found in the Choctaw Generation Operating Record and on the CCR Website.

It should be noted, the molybdenum exceedance was never confirmed or verified upon resampling events; therefore, molybdenum is not believed to have exceeded the GWPS. As a result of the successful revised ASD, Choctaw Generation has continued in assessment monitoring.

#### 5.3 TIME EXTENSION FOR CORRECTIVE MEASURES ASSESSMENT

An assessment of corrective measures must be completed within 90 days of finding any Appendix IV constituent has been detected at a statistically significant level exceeding the GWPS. A demonstration of the need for up to an additional 60 days to complete this assessment may be made as a result of site-specific conditions or circumstances. Certification from a qualified professional engineer attesting that this demonstration is accurate must be provided, and both the demonstration and certification must be included in the Annual Report. With this Annual Report, Choctaw Generation is not requesting additional time to assess corrective measures, since such assessment was not required during the period covered by the report.

#### 6.0 CONCLUSION

#### 6.1 SUMMARY OF KEY ACTIONS COMPLETED

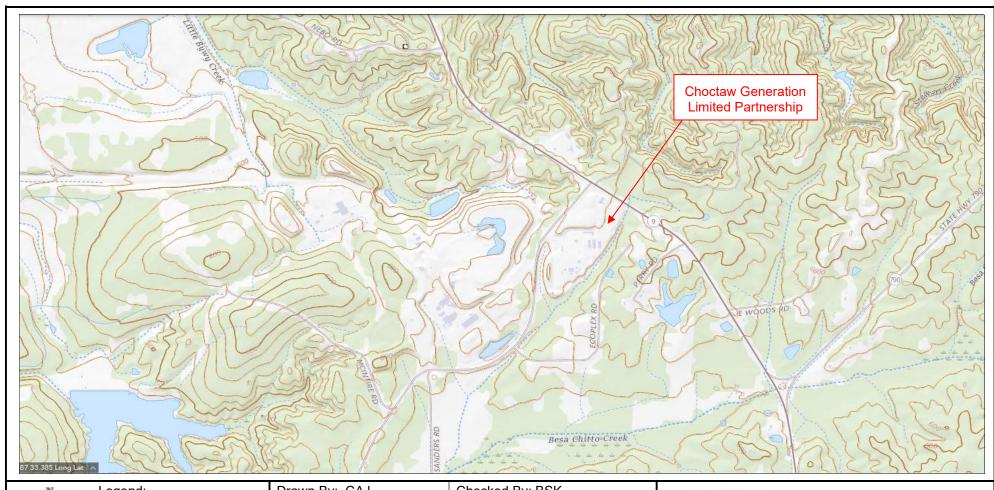
During the reporting period, two semiannual assessment monitoring events were conducted, revealing continued exceedances of the GWPS for cobalt, lithium, and beryllium. These constituent exceedances are detailed in the ASD. There were no new exceedances of the GWPS; therefore, assessment monitoring was continued.

#### 6.2 KEY ACTIVITIES FOR UPCOMING YEAR

During calendar year 2024, Choctaw Generation anticipates conducting at least two (2) semiannual monitoring events and an annual Appendix IV monitoring event in accordance with the assessment monitoring program as outlined by §257.95(g). If any constituent, other than those addressed by the revised ASD, is detected at an SSL above the GWPS, the ASD will be amended or corrective measures will be initiated to address the constituents of concern.

## FIGURE 1

SITE LOCATION MAP





Legend:

Source: USGS US Topo (April 2023)

Drawn By: CAJ	Checked By: BSK
Date: 1/12/2024	Scale: 1:24,000
Project No.:	Drawing No: N/A

**Choctaw Generation Limited Partnership** 2391 Pensacola Road Ackerman, Mississippi

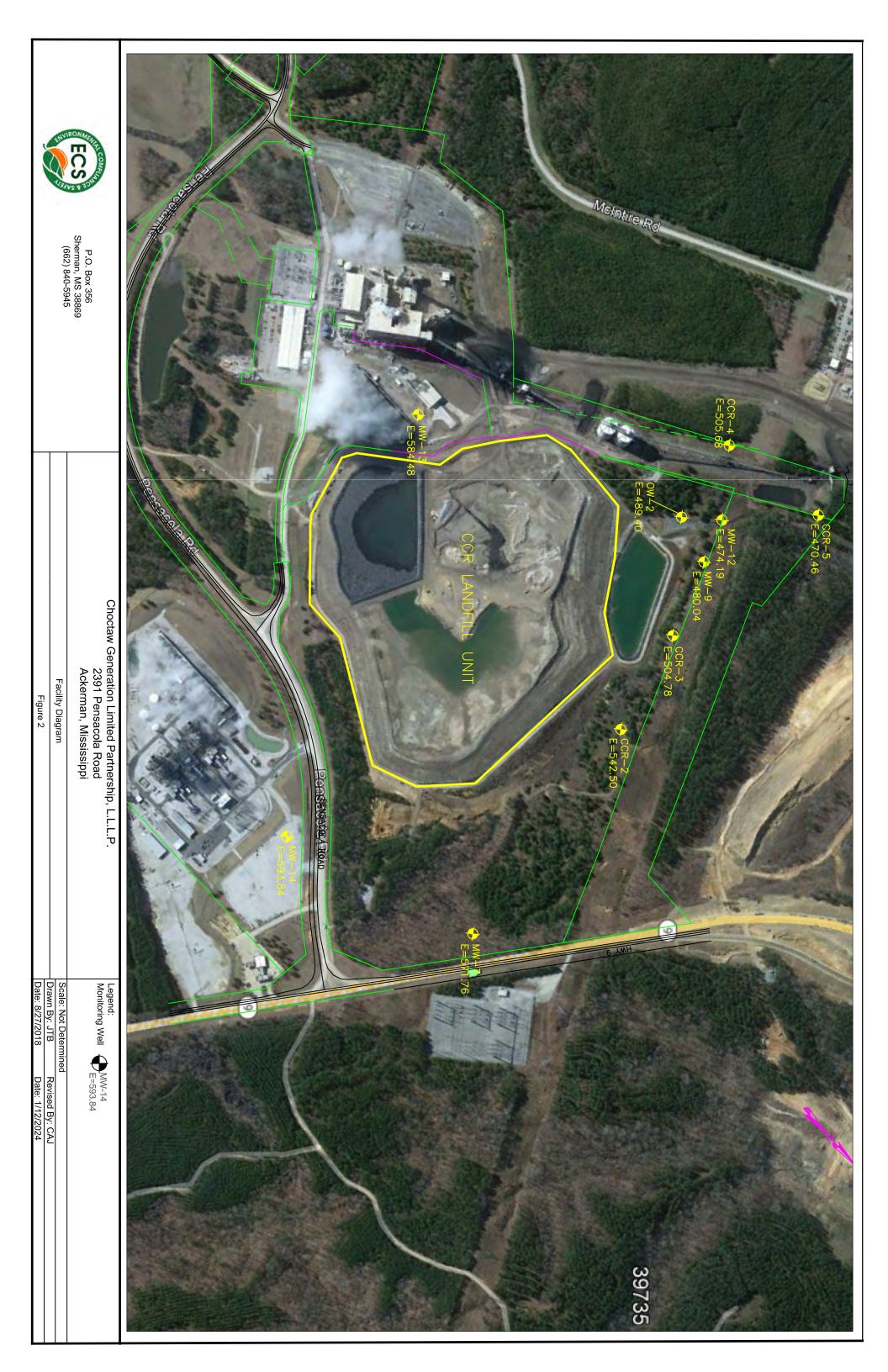


P.O. Box 356 Sherman, Mississippi 38869 (662) 840-5945

Figure 1: Site Location Map

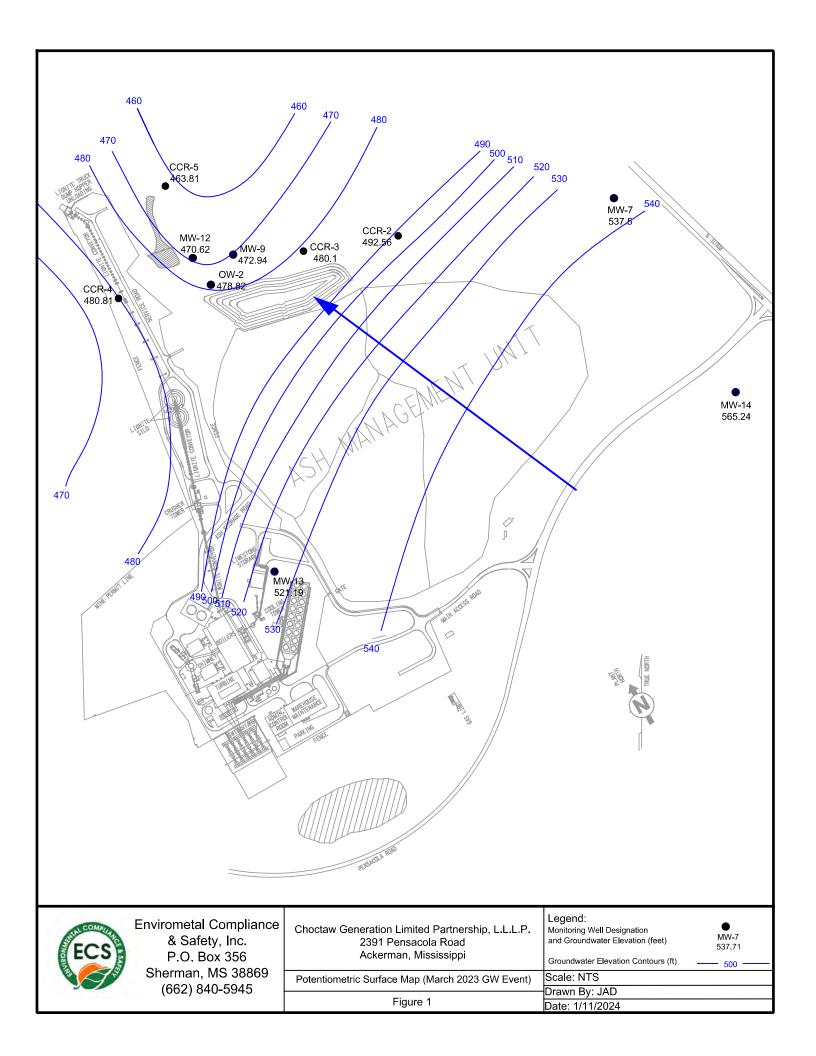
## FIGURE 2

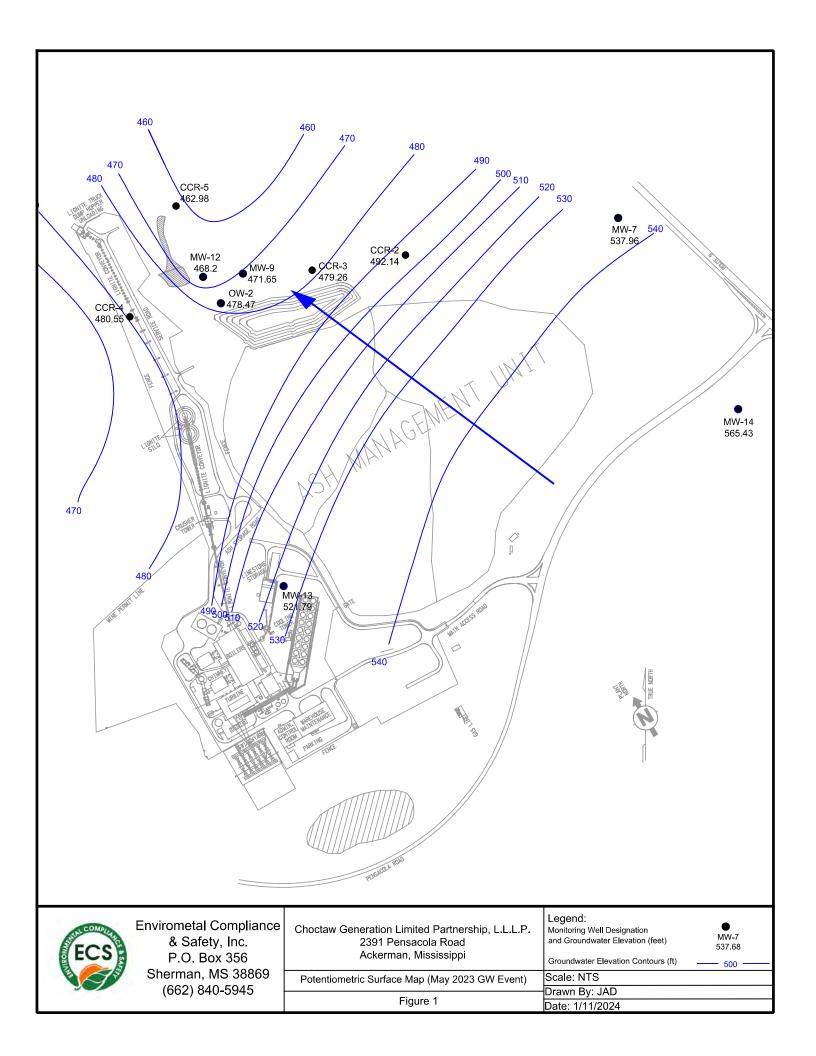
**FACILITY DIAGRAM** 

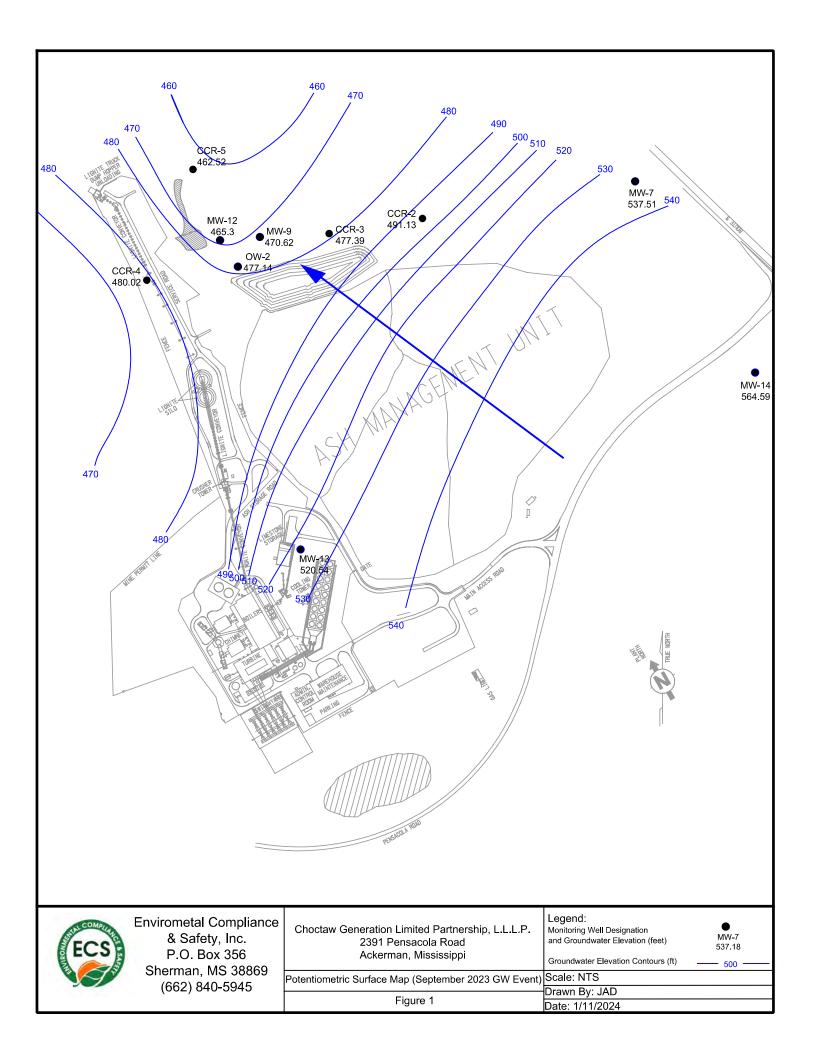


### **APPENDIX A**

POTENTIOMETRIC SURFACE MAPS







### **APPENDIX B**

ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY FORMS



Mailing Address: PO Box 1410 Ocean Springs, MS 39566-1410 6500 Sunplex Drive Ocean Springs, MS 39564 228.875.6420 Phone 228.875.6423 Fax

March 31, 2023

Jim Ward Work Order #: 2303235

Choctaw Generation LP

Purchase Order #: RDH17816 - Yr 2023

2391 Pensacola Rd.

Ackerman, MS 39735

RE: CGLP CCR Semi Annual

Enclosed are Micro-Methods Laboratory, Inc. results of analyses performed on samples received 03/15/2023 08:45. If you have any questions concerning this report, please feel free to contact the office.

Sincerely,

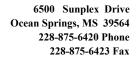
Mitch Spicer

Lab Director *Micro-Methods Laboratory, Inc.* 



#### DISCLAIMER

The results only relate to the items or the sample and/or samples received by the laboratory. This report shall not be reproduced except in full, without the approval of the laboratory. All NELAP certified test methods performed meet the requirements of NELAC 2009 Standards. Any variances and/or deviations specific to this analytical report are referenced in the lab report using qualifiers and detailed explanations found in the case narrative.





Choctaw Generation LP 2391 Pensacola Rd. Ackerman MS, 39735 Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

#### **ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date/Time Sampled	Sampled by	Date/Time Received
MW-9	2303235-01	Water	03/13/2023 10:05	Ethan Easterling	03/15/2023 08:45
OW-2	2303235-02	Water	03/13/2023 11:50	Ethan Easterling	03/15/2023 08:45
MW-13	2303235-03	Water	03/13/2023 10:06	Ethan Easterling	03/15/2023 08:45
MW-7	2303235-04	Water	03/13/2023 11:17	Ethan Easterling	03/15/2023 08:45
MW-14	2303235-05	Water	03/13/2023 14:41	Ethan Easterling	03/15/2023 08:45
Field Blank	2303235-06	Water	03/13/2023 12:05	Ethan Easterling	03/15/2023 08:45
Duplicate	2303235-07	Water	03/13/2023 00:00	Ethan Easterling	03/15/2023 08:45
MW-12	2303235-08	Water	03/13/2023 11:00	Ethan Easterling	03/15/2023 08:45
CCR-2	2303235-09	Water	03/13/2023 15:50	Ethan Easterling	03/15/2023 08:45
CCR-3	2303235-10	Water	03/13/2023 14:30	Ethan Easterling	03/15/2023 08:45
CCR-4	2303235-11	Water	03/13/2023 16:44	Ethan Easterling	03/15/2023 08:45
CCR-5	2303235-12	Water	03/13/2023 16:20	Ethan Easterling	03/15/2023 08:45





Choctaw Generation LP Project: CGLP CCR Semi Annual

 2391 Pensacola Rd.
 Project Number: [none]
 Reported:

 Ackerman MS, 39735
 Project Manager: Jim Ward
 03/31/2023 14:02

**Sample Receipt Conditions** 

Date/Time Received: 3/15/2023 8:45:00AM Shipped by: Fed Ex

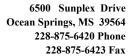
Received by: Sarah E. Tomek Submitted by: Ethan Easterling

Date/Time Logged: 3/15/2023 9:20:00AM Logged by: Sarah E. Tomek

Cooler ID: client cooler #1 Receipt Temperature: 0.3 °C

Yes Cooler Custody Seals Present Yes Received on Ice but Not Frozen Containers Intact Yes No Ice, Short Trip No COC/Labels Agree Yes **Obvious Contamination** No Labels Complete Rush to meet HT Yes No COC Complete Yes Received within HT Yes Volatile Vial Headspace >6mm Proper Containers for Analysis No Yes Field Sheet/Instructions Included Correct Preservation No Yes Samples Rejected/Documented in Log No Adequate Sample for Analysis Yes Temp Taken From Temp Blank Yes Sample Custody Seals Present Yes Temp Taken From Sample Container Samples Missing from COC/Cooler No No

Temp Taken From Cooler No
COC meets acceptance criteria Yes

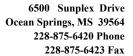




Choctaw Generation LP Project: CGLP CCR Semi Annual

2391 Pensacola Rd.Project Number: [none]Reported:Ackerman MS, 39735Project Manager: Jim Ward03/31/2023 14:02

Cooler ID: client cooler #2	_	Receipt Temperature: 1.9 °C	
Cooler Custody Seals Present	Yes	Received on Ice but Not Frozen	Yes
Containers Intact	Yes	No Ice, Short Trip	No
COC/Labels Agree	Yes	Obvious Contamination	No
Labels Complete	Yes	Rush to meet HT	No
COC Complete	Yes	Received within HT	
Volatile Vial Headspace >6mm	No	Proper Containers for Analysis	
Field Sheet/Instructions Included	No	Correct Preservation	
Samples Rejected/Documented in Log	No	Adequate Sample for Analysis	
Temp Taken From Temp Blank	Yes	Sample Custody Seals Present	Yes
Temp Taken From Sample Container	No	Samples Missing from COC/Cooler	No
Temp Taken From Cooler	No		
COC meets acceptance criteria	Yes		





Choctaw Generation LP Project: CGLP CCR Semi Annual

2391 Pensacola Rd. Project Number: [none] Reported:
Ackerman MS, 39735 Project Manager: Jim Ward 03/31/2023 14:02

Cooler ID: client cooler #3	_	Receipt Temperature: 2.0 °C	
Cooler Custody Seals Present	Yes	Received on Ice but Not Frozen	Yes
Containers Intact	Yes	No Ice, Short Trip	No
COC/Labels Agree	Yes	Obvious Contamination	No
Labels Complete	Yes	Rush to meet HT	No
COC Complete	Yes	Received within HT	
Volatile Vial Headspace >6mm	No	Proper Containers for Analysis	
Field Sheet/Instructions Included	No	Correct Preservation	
Samples Rejected/Documented in Log	No	Adequate Sample for Analysis	
Temp Taken From Temp Blank	Yes	Sample Custody Seals Present	
Temp Taken From Sample Container	No	Samples Missing from COC/Cooler	
Temp Taken From Cooler	No		
COC meets acceptance criteria	Yes		



6500 Sunplex Drive Ocean Springs, MS 39564 228-875-6420 Phone 228-875-6423 Fax

Choctaw Generation LP 2391 Pensacola Rd. Ackerman MS, 39735

Project: CGLP CCR Semi Annual

Project Number: [none] Project Manager: Jim Ward

Reported:

03/31/2023 14:02

## **CASE NARRATIVE SUMMARY**

All reported results are within Micro-Methods Laboratory, Inc. defined laboratory quality control objectives unless detailed in narrative summary or identified as qualifications. NOTE: All results listed on this report are calculated on a wet weight basis (as received by the laboratory) unless otherwise noted in the analysis qualification sections.

#### **Summary Comments:**

See attached results from Sub-Contract Laboratory

Qualifiers: No Data Qualification

Analyte & Samples(s) Qualified: None





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## MW-9

## 2303235-01 (Water)

							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameter</b>	s									
Chloride	354	20.0	mg/L	4.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	0.39	0.22	"	1.0	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	96.7	20.0	u	4.0	3C15042	ASC	03/15/2023 09:31	03/15/2023 14:07	SM 4500-SO42 E 2011	
Total Dissolved Solids	887	1	u	1.0	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Meth	ods ICP-AES									
Barium 455.403 [Radial]	0.080	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 09:49	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	II .	CLV			"	
Calcium 315.887 [Radial]	43.3	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	u u	"	"	CLV			"	
Metals by EPA 200 Series Meth	ods ICP-MS [	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 12:55	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	u u	"	"	GWG			"	
Beryllium [He]	0.00395	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	n n	GWG			"	
Cobalt [He]	0.0157	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG				
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	u	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# OW-2

## 2303235-02 (Water)

				00 02 (110						
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameter</b>	s									
Chloride	92.5	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	99.2	10.0	u	2.0	3C15042	ASC	03/15/2023 09:31	03/15/2023 14:07	SM 4500-SO42 E 2011	
Total Dissolved Solids	358	1	"	1.0	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Meth	ods ICP-AES	<u> </u>								
Barium 455.403 [Radial]	0.034	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:00	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	u u	"	CLV				
Calcium 315.887 [Radial]	41.1	0.050	"	u u	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV		"	"	
Metals by EPA 200 Series Meth	ods ICP-MS	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG		03/21/2023 13:01	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG		"	"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG				
Chromium [He]	ND	0.00100	"		"	GWG			"	
Cobalt [He]	ND	0.00100	"		"	GWG			"	
Lead [He]	ND	0.00100	u	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	u	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# MW-13

## 2303235-03 (Water)

			23032	35-03 (88	ater,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
Classical Chemistry Parame	eters					,	<u> </u>	<u> </u>		
Chloride	ND	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	5.04	5.00	"	"	3C15042	ASC	03/15/2023 09:31	03/15/2023 14:07	SM 4500-SO42 E 2011	
Total Dissolved Solids	142	1	"	"	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Me	ethods ICP-AES	}								
Barium 455.403 [Radial]	0.169	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:04	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV	*		"	
Calcium 315.887 [Radial]	20.4	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Me	ethods ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 13:08	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100		"	"	GWG			n n	
Molybdenum [He]	ND	0.00100		"	"	GWG			n n	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## MW-7

## 2303235-04 (Water)

			20002	33-04 (AA	ater,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
Classical Chemistry Parame	eters									
Chloride	ND	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	40.5	5.00	"	"	3C15042	ASC	03/15/2023 09:31	03/15/2023 14:07	SM 4500-SO42 E 2011	
Total Dissolved Solids	149	1	"	"	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series M	ethods ICP-AES	3								
Barium 455.403 [Radial]	0.064	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:07	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV		"	"	
Calcium 315.887 [Radial]	25.9	0.050	"	"	"	CLV		"	"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series M	ethods ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 13:14	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"			GWG			"	
Cobalt [He]	ND	0.00100	"			GWG			"	
Lead [He]	ND	0.00100	"	"	n	GWG			"	
Molybdenum [He]	ND	0.00100	"			GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## MW-14

## 2303235-05 (Water)

			23032	35-05 (88	ater,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
Classical Chemistry Parame						7	· ·		Would	Quamoro
Chloride	11.6	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	17.0	5.00	"	"	3C15042	ASC	03/15/2023 09:31	03/15/2023 14:07	SM 4500-SO42 E 2011	
Total Dissolved Solids	87	1	"	"	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Me	ethods ICP-AES	}								
Barium 455.403 [Radial]	0.012	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:11	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	0.608	0.050	"	"	"	CLV		"	"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			•	
Metals by EPA 200 Series Me	ethods ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 13:20	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG		"	"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			•	
Cadmium [He]	ND	0.00100	"	"	"	GWG				
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## Field Blank

## 2303235-06 (Water)

			20002	33-00 (44)	ater,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
Classical Chemistry Parame	eters									
Chloride	ND	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	9.93	5.00	"	"	3C15042	ASC	03/15/2023 09:31	03/15/2023 15:01	SM 4500-SO42 E 2011	
Total Dissolved Solids	30	1	"	"	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series M	ethods ICP-AES	3								
Barium 455.403 [Radial]	ND	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:15	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	0.235	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	ND	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV		"	"	
Metals by EPA 200 Series M	ethods ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 13:26	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"		"	GWG			u u	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

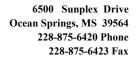
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# **Duplicate**

# 2303235-07 (Water)

				00 01 (110	,					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>										
Chloride	11.5	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	u	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	15.2	5.00	"	"	3C15042	ASC	03/15/2023 09:31	03/15/2023 15:01	SM 4500-SO42 E 2011	
Total Dissolved Solids	84	1	u	u	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Method	s ICP-AES	3								
Barium 455.403 [Radial]	0.012	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:18	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	u u	"	CLV	"	•	"	
Calcium 315.887 [Radial]	0.607	0.050	"	"	"	CLV		•	"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV	"		"	
Metals by EPA 200 Series Method	s ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 13:33	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	u u	"	GWG		•	"	
Beryllium [He]	ND	0.00100	"	"	"	GWG	"		"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"		"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"		"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG	"	"	"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## MW-12

#### 2303235-08 (Water)

			20002	33-00 (446	ater,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
Classical Chemistry Parame					241011	7	· ·		Would	Quamoro
Chloride	61.4	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	66.7	10.0	"	2.0	3C15042	ASC	03/15/2023 09:31	03/15/2023 15:01	SM 4500-SO42 E 2011	
Total Dissolved Solids	243	1	"	1.0	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series M	ethods ICP-AES	}								
Barium 455.403 [Radial]	0.203	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:22	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV	*		"	
Calcium 315.887 [Radial]	30.7	0.050	"	"	"	CLV		"	"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series M	ethods ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 13:39	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG		"	•	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG	*		"	
Cobalt [He]	0.0190	0.00100	"	"	"	GWG				
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## CCR-2

## 2303235-09 (Water)

				33-03 (44	,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
Classical Chemistry Parame	eters									
Chloride	ND	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	10.6	5.00	"	"	3C15042	ASC	03/15/2023 09:31	03/15/2023 15:01	SM 4500-SO42 E 2011	
Total Dissolved Solids	70	1	"	"	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Me	ethods ICP-AES									
Barium 455.403 [Radial]	0.131	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:25	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	15.7	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Me	ethods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 14:03	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			u u	
Chromium [He]	ND	0.00100	"	"	"	GWG			п	
Cobalt [He]	0.00228	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"		"	GWG			II	
Selenium [NG]	ND	0.00500	"	"	m m	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## CCR-3

## 2303235-10 (Water)

			20002	33-10 (44	uto.,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
					Baton	7 tridiyot	'		Wictiod	Qualificis
Classical Chemistry Paramete	rs									
Chloride	ND	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	242	50.0	"	10.0	3C15042	ASC	03/15/2023 09:31	03/15/2023 15:01	SM 4500-SO42 E 2011	
Total Dissolved Solids	435	1	"	1.0	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Metals	hods ICP-AES									
Barium 455.403 [Radial]	0.071	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:29	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV		•	"	
Calcium 315.887 [Radial]	35.4	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	0.088	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Metals	hods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 14:09	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG	"		"	
Beryllium [He]	0.00114	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	n n	GWG			"	
Cobalt [He]	0.0236	0.00100	"	"	"	GWG	"			
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	n n	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			n	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## CCR-4

## 2303235-11 (Water)

				.00-11 (110	,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
•		IVIIXL	Office	Dii	Daton	Analyst		,, 200	Welliou	Qualifiers
Classical Chemistry Parameters										
Chloride	ND	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	27.9	5.00	"	"	3C15042	ASC	03/15/2023 09:31	03/15/2023 15:01	SM 4500-SO42 E 2011	
Total Dissolved Solids	170	1	"	"	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Metho	ds ICP-AES									
Barium 455.403 [Radial]	0.146	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 10:58	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	23.7	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Metho	ds ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 14:16	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	n n	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG			n .	
Cobalt [He]	0.00418	0.00100	"	"	"	GWG				
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			п	
Selenium [NG]	ND	0.00500	"	"	"	GWG			п	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## CCR-5

## 2303235-12 (Water)

				.00 12 (110	,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
Classical Chemistry Parameters	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				24.0.1		<u>'</u>		Modified	<u> </u>
Chloride	ND	5.00	mg/L	1.0	3C20052	DLW	03/20/2023 11:45	03/20/2023 14:21	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3C20058	CRG	03/20/2023 14:00	03/20/2023 16:00	SM 4500-F C 2011	
Sulfate as SO4	422	50.0	"	10.0	3C15042	ASC	03/15/2023 09:31	03/15/2023 15:01	SM 4500-SO42 E 2011	
Total Dissolved Solids	758	2	"	1.0	3C15052	DLW	03/15/2023 15:10	03/17/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Method	s ICP-AES	3								
Barium 455.403 [Radial]	0.087	0.010	mg/L	1.0	3C17020	CLV	03/17/2023 09:30	03/21/2023 11:09	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	0.058	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	104	0.250	"	5.0	"	CLV		03/21/2023 11:20	n .	
Lithium 610.362 [Axial]	ND	0.040	"	1.0	u	CLV		03/21/2023 11:09	n	
Metals by EPA 200 Series Method	s ICP-MS	[Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3C17022	GWG	"	03/21/2023 14:22	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	0.0106	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	u.	"	GWG			"	



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# Classical Chemistry Parameters - Quality Control

					Spike	Source		%REC		RPD	
Analyte	Analyzed	Result	MRL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch 3C15042 - Default Prep Gen	Chem										
Blank (3C15042-BLK1)											
Sulfate as SO4	3/15/23 9:45	ND	5.00	mg/L							
LCS (3C15042-BS1)											
Sulfate as SO4	3/15/23 9:45	29.5	5.00	mg/L	30.0		98.4	88-108			
LCS Dup (3C15042-BSD1)											
Sulfate as SO4	3/15/23 9:45	32.1	5.00	mg/L	30.0		107	88-108	8.47	20	
Duplicate (3C15042-DUP1)			Source: 23032	235-03							
Sulfate as SO4	3/15/23 9:45	4.76	5.00	mg/L		5.04			5.66	20	
Duplicate (3C15042-DUP2)			Source: 23032	235-09							
Sulfate as SO4	3/15/23 15:01	10.5	5.00	mg/L		10.6			0.853	20	
Matrix Spike (3C15042-MS1)			Source: 23032	235-03							
Sulfate as SO4	3/15/23 14:07	41.1	5.00	mg/L	30.0	5.04	120	74.1-129			
Matrix Spike (3C15042-MS2)			Source: 23032	235-09							
Sulfate as SO4	3/15/23 15:01	43.3	5.00	mg/L	30.0	10.6	109	74.1-129			
Matrix Spike Dup (3C15042-MSD1)	)		Source: 23032	235-03							
Sulfate as SO4	3/15/23 14:07	41.3	5.00	mg/L	30.0	5.04	121	74.1-129	0.466	20	
Matrix Spike Dup (3C15042-MSD2)	)		Source: 23032	235-09							
Sulfate as SO4	3/15/23 15:01	46.3	5.00	mg/L	30.0	10.6	119	74.1-129	6.78	20	
Batch 3C15052 - Default Prep Gen	Chem										
Blank (3C15052-BLK1)											
Total Dissolved Solids	3/17/23 0:00	ND	1	mg/L							



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# Classical Chemistry Parameters - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3C15052 - Default Prep Ge	nChem										
LCS (3C15052-BS1)											
Total Dissolved Solids	3/17/23 0:00	85	1	mg/L	101		84.2	60.3-100			
LCS Dup (3C15052-BSD1)											
Total Dissolved Solids	3/17/23 0:00	80	1	mg/L	101		79.2	60.3-100	6.06	10	
Duplicate (3C15052-DUP1)			Source: 23032	35-07							
Total Dissolved Solids	3/17/23 0:00	85	1	mg/L		84			1.18	10	
Duplicate (3C15052-DUP2)	Source: 2303235-11										
Total Dissolved Solids	3/17/23 0:00	174	1	mg/L		170			2.33	10	
Blank (3C20052-BLK1)											
Chloride	3/20/23 14:21	ND	5.00								
LCS (3C20052-BS1)			5.00	mg/L							
			5.00	mg/L							
Chloride	3/20/23 14:21	24.1	5.00	mg/L mg/L	25.0		96.4	85-115			
Chloride LCS Dup (3C20052-BSD1)	3/20/23 14:21				25.0		96.4	85-115			
	3/20/23 14:21 3/20/23 14:21				25.0 25.0		96.4	85-115 85-115	1.25	30	
LCS Dup (3C20052-BSD1) Chloride		24.1	5.00	mg/L mg/L					1.25	30	
LCS Dup (3C20052-BSD1)		24.1	5.00	mg/L mg/L		1.83			1.25	30	
LCS Dup (3C20052-BSD1)  Chloride  Duplicate (3C20052-DUP1)	3/20/23 14:21	24.1	5.00 5.00 Source: 23032	mg/L mg/L 35-06 mg/L		1.83					



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# Classical Chemistry Parameters - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3C20052 - Default Prep GenC	Chem										
Matrix Spike (3C20052-MS1)			Source: 23032	235-06							
Chloride	3/20/23 14:21	9.81	5.00	mg/L	10.0	1.83	79.8	70-130			
Matrix Spike Dup (3C20052-MSD1)			Source: 23032	235-06							
Chloride	3/20/23 14:21	10.1	5.00	mg/L	10.0	1.83	82.7	70-130	2.91	20	
Batch 3C20058 - Default Prep GenC	Chem										
Blank (3C20058-BLK1)											
Fluoride	3/20/23 16:00	ND	0.22	mg/L							
LCS (3C20058-BS1)											
Fluoride	3/20/23 16:00	1.98	0.22	mg/L	2.00		99.0	87.8-113			
LCS Dup (3C20058-BSD1)											
Fluoride	3/20/23 16:00	1.99	0.22	mg/L	2.00		99.5	87.8-113	0.504	30	
Matrix Spike (3C20058-MS1)			Source: 23032	235-06							
Fluoride	3/20/23 16:00	1.00	0.22	mg/L	1.00	ND	100	70.2-127			
Matrix Spike Dup (3C20058-MSD1)			Source: 23032	235-06							
Fluoride	3/20/23 16:00	1.06	0.22	mg/L	1.00	ND	106	70.2-127	5.05	30	



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# Metals by EPA 200 Series Methods ICP-AES - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3C17020 - EPA 200.2 DCN 10	17 Rev 10								·		
Blank (3C17020-BLK1)											
Barium 455.403 [Radial]	3/21/23 9:39	ND	0.010	mg/L							
Boron 249.773 [Radial]	3/21/23 9:39	ND	0.050								
Calcium 315.887 [Radial]	3/21/23 9:39	ND	0.050								
Lithium 610.362 [Axial]	3/21/23 9:39	ND	0.040								
LCS (3C17020-BS1)											
Barium 455.403 [Radial]	3/21/23 9:42	0.203	0.010	mg/L	0.200		102	85-115			
Boron 249.773 [Radial]	3/21/23 9:42	0.207	0.050		0.200		104	85-115			
Calcium 315.887 [Radial]	3/21/23 9:42	0.211	0.050		0.200		106	85-115			
Lithium 610.362 [Axial]	3/21/23 9:42	0.194	0.040		0.200		96.9	85-115			
LCS Dup (3C17020-BSD1)											
Barium 455.403 [Radial]	3/21/23 9:46	0.208	0.010	mg/L	0.200		104	85-115	2.16	20	
Boron 249.773 [Radial]	3/21/23 9:46	0.210	0.050		0.200		105	85-115	1.21	20	
Calcium 315.887 [Radial]	3/21/23 9:46	0.214	0.050		0.200		107	85-115	1.48	20	
Lithium 610.362 [Axial]	3/21/23 9:46	0.192	0.040		0.200		95.8	85-115	1.09	20	
Duplicate (3C17020-DUP1)			Source: 23032	35-01							
Calcium 315.887 [Radial]	3/21/23 9:53	43.9	0.050	mg/L		43.3			1.42	20	
Duplicate (3C17020-DUP2)			Source: 23032	35-11							
Calcium 315.887 [Radial]	3/21/23 11:02	24.7	0.050	mg/L		23.7			4.20	20	
Matrix Spike (3C17020-MS1)			Source: 23032	35-01							
Barium 455.403 [Radial]	3/21/23 9:53	0.278	0.010	mg/L	0.200	0.080	99.5	70-130			
Boron 249.773 [Radial]	3/21/23 9:53	0.205	0.050		0.200	ND	103	70-130			
Lithium 610.362 [Axial]	3/21/23 9:53	0.218	0.040		0.200	0.033	92.3	70-130			



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# Metals by EPA 200 Series Methods ICP-AES - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3C17020 - EPA 200.2 DCN 10	017 Rev 10										
Matrix Spike (3C17020-MS2)			Source: 23032	35-11							
Barium 455.403 [Radial]	3/21/23 11:02	0.352	0.010	mg/L	0.200	0.146	103	70-130			
Boron 249.773 [Radial]	3/21/23 11:02	0.236	0.050		0.200	0.030	103	70-130			
Lithium 610.362 [Axial]	3/21/23 11:02	0.221	0.040		0.200	0.014	103	70-130			
Matrix Spike Dup (3C17020-MSD1)			Source: 23032	35-01							
Barium 455.403 [Radial]	3/21/23 9:57	0.279	0.010	mg/L	0.200	0.080	99.6	70-130	0.109	20	
Boron 249.773 [Radial]	3/21/23 9:57	0.206	0.050		0.200	ND	103	70-130	0.272	20	
Lithium 610.362 [Axial]	3/21/23 9:57	0.217	0.040		0.200	0.033	92.1	70-130	0.269	20	
Matrix Spike Dup (3C17020-MSD2)			Source: 23032	35-11							
Barium 455.403 [Radial]	3/21/23 11:05	0.355	0.010	mg/L	0.200	0.146	105	70-130	0.983	20	
Boron 249.773 [Radial]	3/21/23 11:05	0.238	0.050		0.200	0.030	104	70-130	0.762	20	
Lithium 610.362 [Axial]	3/21/23 11:05	0.221	0.040		0.200	0.014	104	70-130	0.248	20	



Project: CGLP CCR Semi Annual

Project Number: [none] Reported:
Project Manager: Jim Ward 03/31/2023 14:02

# Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3C17022 - EPA 200.2 DCN	1017 Rev 10		_								
Blank (3C17022-BLK1)											
Antimony [He]	3/21/23 12:00	ND	0.00200	mg/L							
Arsenic [He]	3/21/23 12:00	ND	0.00200								
Arsenic [NG]	3/21/23 12:00	ND	0.00200								
Beryllium [He]	3/21/23 12:00	ND	0.00100								
Cadmium [He]	3/21/23 12:00	ND	0.00100								
Chromium [He]	3/21/23 12:00	ND	0.00100								
Cobalt [He]	3/21/23 12:00	ND	0.00100								
Lead [He]	3/21/23 12:00	ND	0.00100								
Molybdenum [He]	3/21/23 12:00	ND	0.00100								
Selenium [NG]	3/21/23 12:00	ND	0.00500								
Selenium [He]	3/21/23 12:00	ND	0.00100								
.CS (3C17022-BS1)											
Intimony [He]	3/21/23 12:06	0.097	0.00200	mg/L	0.100		97.4	85-115			
rsenic [He]	3/21/23 12:06	0.101	0.00200		0.100		101	85-115			
rsenic [NG]	3/21/23 12:06	0.099	0.00200		0.100		98.5	85-115			
Beryllium [He]	3/21/23 12:06	0.098	0.00100		0.100		97.9	85-115			
Cadmium [He]	3/21/23 12:06	0.096	0.00100		0.100		96.3	85-115			
Chromium [He]	3/21/23 12:06	0.101	0.00100		0.100		101	85-115			
Cobalt [He]	3/21/23 12:06	0.101	0.00100		0.100		101	85-115			
ead [He]	3/21/23 12:06	0.101	0.00100		0.100		101	85-115			
Nolybdenum [He]	3/21/23 12:06	0.101	0.00100		0.100		101	85-115			
Selenium [NG]	3/21/23 12:06	0.102	0.00500		0.100		102	85-115			
Selenium [He]	3/21/23 12:06	0.102	0.00100		0.100		102	85-115			
-CS Dup (3C17022-BSD1)											
Antimony [He]	3/21/23 12:12	0.097	0.00200	mg/L	0.100		97.0	85-115	0.387	20	
Arsenic [He]	3/21/23 12:12	0.100	0.00200		0.100		100	85-115	1.20	20	
Arsenic [NG]	3/21/23 12:12	0.097	0.00200		0.100		97.3	85-115	1.29	20	
Beryllium [He]	3/21/23 12:12	0.099	0.00100		0.100		98.8	85-115	0.944	20	
Cadmium [He]	3/21/23 12:12	0.096	0.00100		0.100		95.8	85-115	0.530	20	
Chromium [He]	3/21/23 12:12	0.100	0.00100		0.100		99.7	85-115	1.12	20	
Cobalt [He]	3/21/23 12:12	0.100	0.00100		0.100		100	85-115	1.00	20	
ead [He]	3/21/23 12:12	0.101	0.00100		0.100		101	85-115	0.131	20	
Nolybdenum [He]	3/21/23 12:12	0.100	0.00100		0.100		100	85-115	0.588	20	
Selenium [He]	3/21/23 12:12	0.101	0.00100		0.100		101	85-115	1.34	20	
Selenium [NG]	3/21/23 12:12	0.101	0.00500		0.100		101	85-115	1.33	20	

Reported:

03/31/2023 14:02



Choctaw Generation LP 2391 Pensacola Rd. Ackerman MS, 39735 Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

# Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3C17022 - EPA 200.2 DCN 101	7 Rev 10										
Matrix Spike (3C17022-MS1)			Source: 23032	65-02							
Antimony [He]	3/21/23 12:24	0.537	0.0100	mg/L	0.500	ND	107	70-130			
Arsenic [NG]	3/21/23 12:24	0.478	0.0100		0.500	ND	95.6	70-130			
Arsenic [He]	3/21/23 12:24	0.542	0.0100		0.500	ND	108	70-130			
Beryllium [He]	3/21/23 12:24	0.528	0.00500		0.500	ND	106	70-130			
Cadmium [He]	3/21/23 12:24	0.508	0.00500		0.500	ND	102	70-130			
Chromium [He]	3/21/23 12:24	0.531	0.00500		0.500	0.004	105	70-130			
Cobalt [He]	3/21/23 12:24	0.517	0.00500		0.500	0.002	103	70-130			
Lead [He]	3/21/23 12:24	0.547	0.00500		0.500	ND	109	70-130			
Molybdenum [He]	3/21/23 12:24	0.594	0.00500		0.500	0.007	117	70-130			
Selenium [NG]	3/21/23 12:24	0.472	0.0250		0.500	ND	94.4	70-130			
Selenium [He]	3/21/23 12:24	0.530	0.00500		0.500	ND	106	70-130			
Matrix Spike (3C17022-MS2)			Source: 23032	83-01							
Antimony [He]	3/21/23 12:43	0.100	0.00200	mg/L	0.100	0.0005	99.6	70-130			
Arsenic [NG]	3/21/23 12:43	0.148	0.00200		0.100	0.043	105	70-130			
Arsenic [He]	3/21/23 12:43	0.151	0.00200		0.100	0.045	106	70-130			
Beryllium [He]	3/21/23 12:43	0.096	0.00100		0.100	ND	96.0	70-130			
Cadmium [He]	3/21/23 12:43	0.098	0.00100		0.100	0.005	92.7	70-130			
Chromium [He]	3/21/23 12:43	0.099	0.00100		0.100	0.003	95.7	70-130			
Cobalt [He]	3/21/23 12:43	0.092	0.00100		0.100	0.002	90.2	70-130			
Lead [He]	3/21/23 12:43	0.106	0.00100		0.100	0.0002	106	70-130			
Molybdenum [He]	3/21/23 12:43	0.119	0.00100		0.100	0.003	116	70-130			
Selenium [NG]	3/21/23 12:43	0.104	0.00500		0.100	0.004	100	70-130			
Selenium [He]	3/21/23 12:43	0.107	0.00100		0.100	0.002	105	70-130			
Matrix Spike Dup (3C17022-MSD1)			Source: 23032	65-02							
Antimony [He]	3/21/23 12:30	0.506	0.0100	mg/L	0.500	ND	101	70-130	6.13	20	
Arsenic [NG]	3/21/23 12:30	0.486	0.0100		0.500	ND	97.2	70-130	1.74	20	
Arsenic [He]	3/21/23 12:30	0.516	0.0100		0.500	ND	103	70-130	4.98	20	
Beryllium [He]	3/21/23 12:30	0.487	0.00500		0.500	ND	97.4	70-130	8.02	20	
Cadmium [He]	3/21/23 12:30	0.479	0.00500		0.500	ND	95.8	70-130	5.92	20	
Chromium [He]	3/21/23 12:30	0.497	0.00500		0.500	0.004	98.7	70-130	6.64	20	
Cobalt [He]	3/21/23 12:30	0.483	0.00500		0.500	0.002	96.3	70-130	6.73	20	
Lead [He]	3/21/23 12:30	0.519	0.00500		0.500	ND	104	70-130	5.19	20	
Molybdenum [He]	3/21/23 12:30	0.564	0.00500		0.500	0.007	111	70-130	5.31	20	
Selenium [He]	3/21/23 12:30	0.500	0.00500		0.500	ND	100	70-130	5.83	20	
Selenium [NG]	3/21/23 12:30	0.483	0.0250		0.500	ND	96.5	70-130	2.18	20	

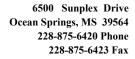


Project: CGLP CCR Semi Annual

Project Number: [none] Reported:
Project Manager: Jim Ward 03/31/2023 14:02

# Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3C17022 - EPA 200.2 DCN 1017	' Rev 10										
Matrix Spike Dup (3C17022-MSD2)			Source: 23032	33-01							
Antimony [He]	3/21/23 12:49	0.098	0.00200	mg/L	0.100	0.0005	97.0	70-130	2.58	20	
Arsenic [NG]	3/21/23 12:49	0.147	0.00200		0.100	0.043	105	70-130	0.278	20	
Arsenic [He]	3/21/23 12:49	0.147	0.00200		0.100	0.045	102	70-130	2.86	20	
Beryllium [He]	3/21/23 12:49	0.094	0.00100		0.100	ND	94.3	70-130	1.84	20	
Cadmium [He]	3/21/23 12:49	0.095	0.00100		0.100	0.005	89.8	70-130	2.94	20	
Chromium [He]	3/21/23 12:49	0.094	0.00100		0.100	0.003	91.2	70-130	4.63	20	
Cobalt [He]	3/21/23 12:49	0.089	0.00100		0.100	0.002	87.0	70-130	3.57	20	
Lead [He]	3/21/23 12:49	0.103	0.00100		0.100	0.0002	103	70-130	2.60	20	
Molybdenum [He]	3/21/23 12:49	0.117	0.00100		0.100	0.003	114	70-130	1.93	20	
Selenium [NG]	3/21/23 12:49	0.103	0.00500		0.100	0.004	99.5	70-130	0.517	20	
Selenium [He]	3/21/23 12:49	0.102	0.00100		0.100	0.002	100	70-130	4.73	20	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

# **Certified Analyses Included in this Report**

Analyte	Certification Code
ASTM D 512-12 in Water	
Chloride	C01,C02
EPA 200.7 Rev 4.4 in Water	
Aluminum 394.401 [Radial]	C01,C02
Aluminum 396.152 [Radial]	C01,C02
Antimony 206.833 [Axial]	C01,C02
Arsenic 193.759 [Axial]	C01,C02
Barium 455.403 [Radial]	C01,C02
Barium 493.409 [Radial]	C01,C02
Beryllium 313.042 [Axial]	C01,C02
Boron 249.773 [Radial]	C01,C02
Cadmium 228.802 [Axial]	C01,C02
Calcium 315.887 [Radial]	C01,C02
Chromium 283.563 [Axial]	C01,C02
Cobalt 228.616 [Axial]	C01,C02
Copper 324.754 [Axial]	C01,C02
Iron 259.940 [Axial]	C01,C02
Iron 259.940 [Radial]	C01,C02
Lead 220.353 [Axial]	C01,C02
Lithium 610.362 [Axial]	C01,C02
Magnesium 285.213 [Radial]	C01,C02
Manganese 257.610 [Axial]	C01,C02
Molybdenum 202.030 [Axial]	C01,C02
Nickel 231.604 [Axial]	C01,C02
Potassium 766.490 [Radial]	C01,C02
Phosphorus 178.284 [Axial]	C01,C02
Phosphorus 178.284 [Radial]	C01,C02
Selenium 196.090 [Axial]	C01,C02
Silver 328.068 [Axial]	C01,C02
Sodium 589.592 [Axial]	C01,C02
Sodium 589.592 [Radial]	C01,C02
Strontium 346.446 [Radial]	C01,C02
Strontium 421.552 [Radial]	C01,C02
Thallium 190.856 [Axial]	C01,C02
Vanadium 309.311 [Axial]	C01,C02
Zinc 213.856 [Axial]	C01,C02
EPA 200.8 Rev 5.4 in Water	
Aluminum [He]	C01,C02
Antimony [He]	C01,C02
Antimony [HHe]	C01,C02
Antimony [NG]	C01,C02





Choctaw Generation LP 2391 Pensacola Rd. Ackerman MS, 39735		Project: CGLP CCR Semi Annual Project Number: [none] Project Manager: Jim Ward	<b>Reported:</b> 03/31/2023 14:02
Arsenic [He]	C01,C02		
Arsenic [HHe]	C01,C02		

Arsenic [HHe]	C01,C02
Arsenic [NG]	C01,C02
Barium [He]	C01,C02
Beryllium [He]	C01,C02
Boron [NG]	C01,C02
Cadmium [He]	C01,C02
Cadmium [HHe]	C01,C02
Cadmium [NG]	C01,C02
Chromium [He]	C01,C02
Cobalt [He]	C01,C02
Copper [He]	C01,C02
Copper [NG]	C01,C02
Iron [He]	C01,C02
Lead [He]	C01,C02
Lead [NG]	C01,C02
Manganese [He]	C01,C02
Molybdenum [He]	C01,C02
Nickel [He]	C01,C02
Selenium [He]	C01,C02
Selenium [HHe]	C01,C02
Selenium [NG]	C01,C02
Silver [He]	C01,C02
Silver [NG]	C01,C02
Strontium [He]	C01,C02
Thallium [He]	C01,C02
Vanadium [He]	C01,C02
Zinc [He]	C01,C02

## SM 4500-SO42 E 2011 in Water

Sulfate as SO4 C01,C02

<sup>\*\*</sup>Only compounds included in this list are associated with accredited analyses\*\*





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 03/31/2023 14:02

## Laboratory Accreditations/Certifications

Code	Description	Number	Expires
C01	LA Environmental Lab Accreditation Program	01960	06/30/2023
C02	The NELAC Institute (NELAP)	TNI01397	06/30/2023
C03	Ms Dept of Health (Drinking Water Microbiology)	MS00021	12/31/2023
C04	Ms Dept of Health (Drinking Water Chemistry)	MS00021	12/31/2023
C05	Ms DEQ Lead Firm Certification	PBF-00000028	03/31/2024
C06	MsDEQ Asbestos Inspector : C.D. Bingham	ABI-00001348	02/09/2024
C07	MsDEQ Air Monitor : C.D. Bingham	AM-011572	02/10/2024
C08	MsDEQ Asbestos Inspector: C. W. Meins	ABI-00001821	09/09/2022
C09	MsDEQ Air Monitor: C.W. Meins	AM-011189	02/10/2024
C14	MsDEQ Lead Paint Inspector : C.D. Bingham	PBI-00003690	02/07/2024
C15	MsDEQ Lead Paint Inspector : C.W. Meins	PBI-00001740	02/07/2024

# **Report Definitions**

DET Analyte DETECTED  ND Analyte NOT DETECTED at or above the minimum reporting limit  NR Not Reported  RPD Relative Percent Difference	
NR Not Reported RPD Relative Percent Difference	
RPD Relative Percent Difference	
IOV	
ICV Initial Calibration Verfiication	
CCV Continuing Calibration Verification Standard	
SSV Secondary Source Verfication Standard	
LCS Lab Control Spike - Lab matrix prepared with known concentration of analyte/s of interest analyzed by method.	
MS Matrix Spike - Sample prepared with known concentration of analyte/s of interest analyzed by method.	
MSD Matrix Spike Duplicate - Duplicate sample prepared with known concentration of analyte/s of interest analyzed by method	l.
MRL Minimum Reporting Limit	
%REC Percentage Recovery of known concentration added to matrix	
Batch Group of samples prepared for analysis not to exceed 20 samples.	
Matrix Material containing analyte/s of interest	
Surrogate Analyte added to sample to determine extraction efficiency of method.	





Choctaw Generation LP Project: CGLP CCR Semi Annual

2391 Pensacola Rd. Project Number: [none] Reported:
Ackerman MS, 39735 Project Manager: Jim Ward 03/31/2023 14:02

# **Analyst Initials Key**

<u>FullName</u>	<u>Initials</u>
Alexandria S Calloway	ASC
Charles L Vorhoff	CLV
Christa R Gray	CRG
Dortha L. Wells	DLW
Garrett Givhan	GWG
Sarah E. Tomek	SET
Teresa Meins	TKM
Tina Tomek	TPT

PO Box 1410, Ocean Springs, MS 39566-1410 (228) 875-6420 FAX (228) 875-6423

www.micromethodslab.com

# Chain of Custody Record

Lab ID# MS00021 LELAP ID # 01960 TNI ID # TNI01397

Print Form

MM Lab 2303235

Company Name: Choctaw Generation Limited Partnership LLLP Project Manager:	imited Partnership LLL	.p Projec	t Manag	jer:		ے	Jim Ward	8	ard			Turn	Turn Around Time & Reporting	Reporting
Address: 2391 Pensacola	la Rd.	Purcha	Purchase Order#	er#								Our normalNormal	Our normal turn around time is 10 working days al *All rush orderPh	0 working daysPhone
City: Ackerman State: MS	<sup>Zip:</sup> 39735	Email	Email Address	-	mward@southernco.c	(0) D	SOI	탉	ern	000	CON	Next Day*	requests must be	eMail Fax
Phone: 662-387-5758		Sampl	Sampler Name	e Printed:	_	THAN	0	7	ETHAN CASTERLANG	20	`	_Other*_	bildi approved.	Email
Fax:		Sampl	Sampler Name Signed:	e Signe		1	N	n	1			QC Level: Level 1	Level 2	evel 3
				_	List Analyses Requested	alyse	s Re	us4	ed			Field	Field Testing	
Project Name: CGLF	CGLP CCR	Preservative:	ative:	+	ate	on		Ш	+	١,	m		ID# ID# ID# ID# ID# Field Test   Field Test   Field Test	Matrix: est W=Water
Project #: Semi-	Semi-Annual	ontaine	osite (C	DS loride,	de Sulf imony, senic	m, Bor	yllium, dmium	omium, .ead lcium,	obalt	hium denun	enium Radiu & 228			
Sample Identification	Sampling Matrix Date/Time Code	# of C	-	Ch	Fluorio Ant		Ca	- 1	С	Molyl	Total	ees.		SO = Soil SE = Sediment
WVV-9	3/13/23 10:05 W	4	G	X	X ×	$\times$	X	×	X	X	X			L = Liquid
OW-2	3/13/23 11:50 W	4	G	X	X	X	X	X	X	X	X			A = Air
MW-13	3/13/23 10:06 W	4	G	X	X	X	X	X	X	X	X			SL = Sludge
MW-7	3/3/23 11:17 W	4	G	X	X	X	×	X	X	X	X			
MW-14	3/13/23 14:41 W	4	G	X	X	X	X	X	X	X	$\frac{1}{2}$			
Field Blank	3/13/23 12:05 W	4	ര	X	X	X	X	X	X	X	X			Preservation:
Field Duplicate	w with	4	ഒ	X	X	X	X	X	X	X	X			2= H3PO4
MW-12	3/13/23 11:00 W	4	റ	X	X	X	X	X	X	X	X			3=NaOH
CCR-2	3/13/23 15:50 W	4	ရ	X	X	X	X	X	X	X	X			4=ZnC4H1006 5=ZnC4H1006 &
CCR-3	3/13/23 14:30 W	4	G	X	X	X	X	X	X	X	$\stackrel{\wedge}{\scriptstyle}$	_		NaOH
CCR-4	3/13/23 16:44 W	4	G	X	X	X	X	X	X	X	X			6=HNO3
Received on Ice (Y)N Thermometer#	U	#	Re	Receipt Temp Corrected(°C	Temp	Corre	cted	°C)						/=Na252O3 8=HCl
Date & Time E	By: 8T		Sai	Sample_	8	Blank	7	Cooler				**All Temps are Corrected Values**	rrected Values**	9≕NaHSO4
Printed Name	Name	Sigp	Spotture/	0		Corr	Company		Date	Tim	ne	Notes:		
Relinquished by ETHAN &	CHSTORLING 1	3	2			0	EZS	w	更	23 09	00:6	Cliont car	774	670
Received by Real Ex	2		0						1			man coolar +1		0.50
Relinquished by	X	1	1									CLIENT COL		1.9.0
Received by	Thrield DIV	Jah.	B	MON	7		M	Us	115/12	0	5486	S# NOWN FINAILY		2.0%
Relinquished by	1	0							,			2000		
Received by														

Physical Address: 6500 Sunplex Drive, Ocean Springs MS 39564

PO Box 1410, Ocean Springs, MS 39566-1410 (228) 875-6420 FAX (228) 875-6423

www.micromethodslab.com

Chain of Custody Record

Lab ID# MS00021 LELAP ID # 01960 TNI ID # TNI01397

Print Form

MAM Lab 2303235

Company Name: Choctaw Generation Limited Partnership LLLP Project Manager:	Project Manager: Jim Ward	Turn Around Time & Reporting
Address: 2391 Pensacola Rd.	,rt	Our normal turn around time is 10 working days Normal
State: MS	Email Address: jmward@southernco.com	* ¥Y
Phone: 662-387-5758	Sampler Name Printed: ETHAN EASTERLING	approximation and approximation approximatio
Fax:	N	C Level: Level 1 Level 2 Level 3
	List Analyses Requested	Field Testing
Project Name: CGLP CCR	servative:	Field Test
Project #: Semi-Annual	ontaine (G) or osite (C DS lloride, de, Sul imony, rsenic m, Bo ryllium, dmium omium ead lcium, obalt chium denum Radium	
Sampling Sampling Matrix Sample Identification Date/Time Code	Grab Comp Cr Fluori Ant A Bariu Be Ca Chr Lit Molyl Se Total	SO = Soil SO = Soil SE = Sediment
CCR-5 3/23/23 16:20 W	4	L=Liquid A = Air
		SL = Sludge
		Preservation:
		1= H2SO4 2= H3PO4
		3=NaOH 4=ZnC4H10O6
7		S=ZnC4H1006 & NaOH
Received on Ice Y N Thermometer# Cooler #	Receipt Temp Corrected(°C)	7=Na2S2O3 8=HC1
Date & Time By: XI	SampleBlank_X_Cooler	**All Temps are Corrected Values** 9=NaHSO4
Printed Name	Signature Company Date Time	Notes:
Relinquished by CTHAN COUCHLANG F	ECS 3/14/23 09:00	
Received by Fed Ex		1
Relinquished by PRUEX -		
Received by MAN TOWN BM	STATION WIN SIGNS OF STATIONS	^
Relinquished by	0	
Received by		

Page Not 2 M

DCN F316 Rev.6 MicroMethods Laboratory Issued/Revised 6/15/22



March 31, 2023

Tina Tomek Micro-Methods Lab 6500 Sunplex Drive Ocean Springs, MS 39564

RE: Project: 2303235

Pace Project No.: 30571927

#### Dear Tina Tomek:

Enclosed are the analytical results for sample(s) received by the laboratory on March 21, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

• Pace Analytical Services - Greensburg

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

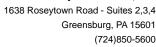
Sincerely,

David A. Pichette david.pichette@pacelabs.com (724)850-5617 Project Manager

**Enclosures** 

cc: Accounts Payable, Micro-Methods Lab







## **CERTIFICATIONS**

Project: 2303235
Pace Project No.: 30571927

#### Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

**Arkansas Certification** 

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190

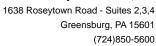
Ohio EPA Rad Approval: #41249 Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L

#### **REPORT OF LABORATORY ANALYSIS**





# **SAMPLE SUMMARY**

Project: 2303235
Pace Project No.: 30571927

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30571927001	2303235-01	Water	03/13/23 10:05	03/21/23 09:55
30571927002	2303235-02	Water	03/13/23 11:50	03/21/23 09:55
30571927003	2303235-03	Water	03/13/23 10:06	03/21/23 09:55
30571927004	2303235-04	Water	03/13/23 11:17	03/21/23 09:55
30571927005	2303235-05	Water	03/13/23 14:41	03/21/23 09:55
30571927006	2303235-06	Water	03/13/23 12:05	03/21/23 09:55
30571927007	2303235-07	Water	03/13/23 00:00	03/21/23 09:55
30571927008	2303235-08	Water	03/13/23 11:00	03/21/23 09:55
30571927009	2303235-09	Water	03/13/23 15:50	03/21/23 09:55
30571927010	2303235-10	Water	03/13/23 14:30	03/21/23 09:55
30571927011	2303235-11	Water	03/13/23 16:44	03/21/23 09:55
30571927012	2303235-12	Water	03/13/23 16:20	03/21/23 09:55

# **REPORT OF LABORATORY ANALYSIS**

(724)850-5600



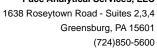
# **SAMPLE ANALYTE COUNT**

Project: 2303235
Pace Project No.: 30571927

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30571927001	2303235-01	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927002	2303235-02	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927003	2303235-03	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927004	2303235-04	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927005	2303235-05	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927006	2303235-06	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927007	2303235-07	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927008	2303235-08	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927009	2303235-09	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927010	2303235-10	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927011	2303235-11	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1
30571927012	2303235-12	EPA 903.1	GDH	1
		EPA 904.0	JGH	1
		Total Radium Calculation	JAL	1

# **REPORT OF LABORATORY ANALYSIS**

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





# **SAMPLE ANALYTE COUNT**

Project: 2303235
Pace Project No.: 30571927

Analytes

Lab ID Sample ID Method Analysts Reported

PASI-PA = Pace Analytical Services - Greensburg

# **REPORT OF LABORATORY ANALYSIS**

(724)850-5600



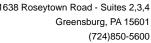
# **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 2303235
Pace Project No.: 30571927

<b>Sample: 2303235-01</b> PWS:	<b>Lab ID: 305719</b> Site ID:	<b>Collected:</b> 03/13/23 10:05 Sample Type:	Received:	03/21/23 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	ervices - Greensburg				
Radium-226	EPA 903.1	1.92 ± 0.910 (0.899) C:NA T:94%	pCi/L	03/29/23 15:54	1 13982-63-3	
	Pace Analytical S	ervices - Greensburg				
Radium-228	EPA 904.0	1.90 ± 0.652 (0.888) C:69% T:76%	pCi/L	03/29/23 13:48	3 15262-20-1	
	Pace Analytical S	ervices - Greensburg				
Total Radium	Total Radium Calculation	3.82 ± 1.56 (1.79)	pCi/L	03/31/23 12:45	5 7440-14-4	
<b>Sample: 2303235-02</b> PWS:	<b>Lab ID: 305719</b> Site ID:	227002 Collected: 03/13/23 11:50 Sample Type:	Received:	03/21/23 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	ervices - Greensburg				
Radium-226	EPA 903.1	0.265 ± 0.574 (1.06) C:NA T:90%	pCi/L	03/29/23 16:08	3 13982-63-3	
	Pace Analytical S	ervices - Greensburg				
Radium-228	EPA 904.0	0.00248 ± 0.267 (0.631) C:81% T:82%	pCi/L	03/29/23 13:48	3 15262-20-1	
	Pace Analytical S	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.267 ± 0.841 (1.69)	pCi/L	03/31/23 12:45	5 7440-14-4	
Sample: 2303235-03	Lab ID: 305719	<b>927003</b> Collected: 03/13/23 10:06	Received:	03/21/23 09:55	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	ervices - Greensburg				
Radium-226	EPA 903.1	0.771 ± 0.656 (0.922) C:NA T:94%	pCi/L	03/29/23 16:08	3 13982-63-3	
	Pace Analytical S	ervices - Greensburg				
Radium-228	EPA 904.0	0.741 ± 0.361 (0.600) C:77% T:90%	pCi/L	03/29/23 13:48	3 15262-20-1	
	Pace Analytical S	ervices - Greensburg				
Total Radium	Total Radium Calculation	1.51 ± 1.02 (1.52)	pCi/L	03/31/23 12:45	5 7440-14-4	

# **REPORT OF LABORATORY ANALYSIS**

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



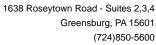


# **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 2303235 Pace Project No.: 30571927

<b>Sample: 2303235-04</b> PWS:	<b>Lab ID: 305719</b> Site ID:	27004 Collected: 03/13/23 11:17 Sample Type:	Received:	03/21/23 09:55 N	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 903.1	0.0825 ± 0.485 (0.991) C:NA T:93%	pCi/L	03/29/23 16:08	13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 904.0	0.0398 ± 0.283 (0.654) C:80% T:86%	pCi/L	03/29/23 13:49	15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.122 ± 0.768 (1.65)	pCi/L	03/31/23 12:45	7440-14-4	
<b>Sample: 2303235-05</b> PWS:	<b>Lab ID: 305719</b> Site ID:	<b>27005</b> Collected: 03/13/23 14:41 Sample Type:	Received:	03/21/23 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 903.1	-0.0767 ± 0.499 (1.08) C:NA T:95%	pCi/L	03/29/23 16:08	13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 904.0	0.855 ± 0.460 (0.843) C:82% T:83%	pCi/L	03/29/23 13:49	15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.855 ± 0.959 (1.92)	pCi/L	03/31/23 12:45	7440-14-4	
<b>Sample: 2303235-06</b> PWS:	<b>Lab ID: 305719</b> Site ID:	<b>27006</b> Collected: 03/13/23 12:05 Sample Type:	Received:	03/21/23 09:55 N	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 903.1	0.0892 ± 0.463 (0.960) C:NA T:93%	pCi/L	03/29/23 16:08	13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 904.0	0.418 ± 0.371 (0.754) C:77% T:88%	pCi/L	03/29/23 13:49	15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.507 ± 0.834 (1.71)	pCi/L	03/31/23 12:45	7440-14-4	

# **REPORT OF LABORATORY ANALYSIS**





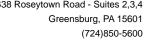
# **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 2303235 Pace Project No.: 30571927

<b>Sample: 2303235-07</b> PWS:	<b>Lab ID: 3057192</b> Site ID:	77007 Collected: 03/13/23 00:00 Sample Type:	Received:	03/21/23 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	vices - Greensburg				
Radium-226	EPA 903.1	0.383 ± 0.500 (0.824) C:NA T:97%	pCi/L	03/29/23 16:08	3 13982-63-3	
	Pace Analytical Se	vices - Greensburg				
Radium-228	EPA 904.0	0.524 ± 0.451 (0.917) C:72% T:86%	pCi/L	03/29/23 13:52	2 15262-20-1	
	Pace Analytical Se	vices - Greensburg				
Total Radium	Total Radium Calculation	0.907 ± 0.951 (1.74)	pCi/L	03/31/23 12:45	5 7440-14-4	
<b>Sample: 2303235-08</b> PWS:	<b>Lab ID: 3057192</b> Site ID:	77008 Collected: 03/13/23 11:00 Sample Type:	Received:	03/21/23 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	vices - Greensburg				
Radium-226	EPA 903.1	0.764 ± 0.692 (1.02) C:NA T:90%	pCi/L	03/29/23 16:08	3 13982-63-3	
	Pace Analytical Se	vices - Greensburg				
Radium-228	EPA 904.0	0.901 ± 0.509 (0.950) C:77% T:83%	pCi/L	03/29/23 13:50	15262-20-1	
	Pace Analytical Se	vices - Greensburg				
Total Radium	Total Radium Calculation	1.67 ± 1.20 (1.97)	pCi/L	03/31/23 12:45	5 7440-14-4	
Sample: 2303235-09	Lab ID: 3057192		Received:	03/21/23 09:55	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	vices - Greensburg				
Radium-226	EPA 903.1	0.405 ± 0.529 (0.873) C:NA T:98%	pCi/L	03/29/23 16:08	3 13982-63-3	
	Pace Analytical Se	vices - Greensburg				
Radium-228	EPA 904.0	0.730 ± 0.416 (0.759) C:75% T:84%	pCi/L	03/29/23 13:50	15262-20-1	
	Pace Analytical Se	vices - Greensburg				
Total Radium	Total Radium Calculation	1.14 ± 0.945 (1.63)	pCi/L	03/31/23 12:45	5 7440-14-4	

# **REPORT OF LABORATORY ANALYSIS**

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



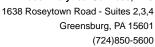


# **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 2303235
Pace Project No.: 30571927

<b>Sample: 2303235-10</b> PWS:	<b>Lab ID: 305719</b> Site ID:	<b>27010</b> Collected: 03/13/23 14:30 Sample Type:	Received:	03/21/23 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 903.1	0.596 ± 0.447 (0.231) C:NA T:92%	pCi/L	03/29/23 16:21	13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 904.0	0.546 ± 0.327 (0.590) C:77% T:92%	pCi/L	03/29/23 13:50	15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	1.14 ± 0.774 (0.821)	pCi/L	03/31/23 12:45	5 7440-14-4	
<b>Sample: 2303235-11</b> PWS:	<b>Lab ID: 305719</b> Site ID:	<b>27011</b> Collected: 03/13/23 16:44 Sample Type:	Received:	03/21/23 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 903.1	0.648 ± 0.606 (0.859) C:NA T:93%	pCi/L	03/29/23 16:21	13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 904.0	0.624 ± 0.339 (0.600) C:84% T:90%	pCi/L	03/29/23 13:50	15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	1.27 ± 0.945 (1.46)	pCi/L	03/31/23 12:45	5 7440-14-4	
Sample: 2303235-12	Lab ID: 305719	<b>27012</b> Collected: 03/13/23 16:20	Received:	03/21/23 09:55	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg		•		`
Radium-226	EPA 903.1	0.905 ± 0.662 (0.740) C:NA T:89%	pCi/L	03/29/23 16:21	13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 904.0	1.02 ± 0.454 (0.744) C:76% T:85%	pCi/L	03/29/23 13:50	15262-20-1	
	•	ervices - Greensburg				
Total Radium	Total Radium Calculation	1.93 ± 1.12 (1.48)	pCi/L	03/31/23 12:45	5 7440-14-4	

# **REPORT OF LABORATORY ANALYSIS**





#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2303235
Pace Project No.: 30571927

QC Batch: 576005 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30571927001, 30571927002, 30571927003, 30571927004, 30571927005, 30571927006, 30571927007,

30571927008, 30571927009, 30571927010, 30571927011, 30571927012

METHOD BLANK: 2797073 Matrix: Water

Associated Lab Samples: 30571927001, 30571927002, 30571927003, 30571927004, 30571927005, 30571927006, 30571927007,

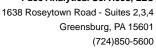
30571927008, 30571927009, 30571927010, 30571927011, 30571927012

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.168 ± 0.277 (0.601) C:78% T:89%
 pCi/L
 03/29/23 13:47

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

#### **REPORT OF LABORATORY ANALYSIS**





#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2303235
Pace Project No.: 30571927

QC Batch: 576004 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30571927001, 30571927002, 30571927003, 30571927004, 30571927005, 30571927006, 30571927007,

30571927008, 30571927009, 30571927010, 30571927011, 30571927012

METHOD BLANK: 2797071 Matrix: Water

Associated Lab Samples: 30571927001, 30571927002, 30571927003, 30571927004, 30571927005, 30571927006, 30571927007,

30571927008, 30571927009, 30571927010, 30571927011, 30571927012

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.000 ± 0.358 (0.775) C:NA T:94%
 pCi/L
 03/29/23 15:54

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

#### **REPORT OF LABORATORY ANALYSIS**



#### **QUALIFIERS**

Project: 2303235
Pace Project No.: 30571927

#### **DEFINITIONS**

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Date: 03/31/2023 12:51 PM

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.



Due

# SUBCONTRACT **ORDER**

### **Sending Laboratory:**

Micro-Methods Laboratory, Inc.

6500 Sunplex Drive

Ocean Springs, MS 39564 Phone: 228.875.6420

Fax: 228.875.6423

Project Manager: Teresa Meins

#### **Subcontracted Laboratory:**

Pace Analytical-7

Comments

1638 Roseytown Rd. Suites 2, 3, 4

Greensburg, PA 15601

Phone: (724) 850-5600

Fax: -

WO#: 30571927

Work Order: 2303235

Analysis

Sample ID: 2303235-01	Water S	ampled: 03)	/13/2023	10:05	Sample Name:	MW-9		_00[
Radium, Total 226 & 228 by EPA	903.1 & 90	03/23/2023	04/10/2	023 10:05		¥		0,1
Containers Supplied: 1000mL Plastic w/HNO3 (A) 10	00mL Plastic พ	//HNO3 (B)						
Sample ID: 2303235-02	Water S	ampled: 03)	/13/2023	11:50	Sample Name:	OW-2		002
Radium, Total 226 & 228 by EP/	903.1 & 90	03/23/2023	04/10/2	023 11:50				
Containers Supplied: 1000mL Plastic w/HNO3 (A) 10	00mL Plastic w	//HNO3 (B)						
Sample ID: 2303235-03	Water S	Sampled: 03)	/13/2023	10:06	Sample Name:	MW-13		003
Radium, Total 226 & 228 by EP/	903.1 & 90	03/23/2023	04/10/2	023 10:06	i			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 10	00mL Plastic w	//HNO3 (B)						
Sample ID: 2303235-04	Water S	Sampled: 03)	/13/2023	11:17	Sample Name:	MW-7		004
Radium, Total 226 & 228 by EP/	903.1 & 90	03/23/2023	04/10/2	023 11:17				
Containers Supplied: 1000mL Plastic w/HNO3 (A) 10	00mL Plastic w	//HNO3 (B)						
Sample ID: 2303235-05	Water S	Sampled: 03)	/13/2023	14:41	Sample Name:	MW-14		005
Radium,Total 226 & 228 by EP/	903.1 & 90	03/23/2023	04/10/2	023 14:4 <b>1</b>				
Exeleased By	3/14/230	/ <u>(/3/)</u> Date		Recei	UPS ved By	3/16/230 3/16/230	// 30 Date	
UYS		 Date		Dansi	Jan Sur ved By	JAII	<u> </u>	
Released By		Date		iÿecei.	ved by		Date	
Released By		Date		Recei	ved By		Date	
Released By		 Date		Recei	ved By		Date	
Released By		Date		Receiv	ed By		Date	*
			Pan	a 1 of 3				

**Expires** 



# SUBCONTRACT ORDER

(Continued)

Work Order: 2303235 (Continued)

Analysis	Due	Expires	Comments		
Containers Supplied:					
1000mL Plastic w/HNO3 (A) 1000mL Plastic w/l	HNO3 (B)				
Sample ID: 2303235-06 Water Sa	mpled: 03/13	/2023 12:05	Sample Name:	Field Blank	<i>006</i>
Radium, Total 226 & 228 by EPA 903.1 & 90	03/23/2023	04/10/2023 12:05			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic w/H	INO3 (B)				
Sample ID: 2303235-07 Water Sa	mpled: 03/13	//2023 00:00	Sample Name:	Duplicate	<i>6</i> 07_
Radium, Total 226 & 228 by EPA 903.1 & 90	03/23/2023	04/10/2023 00:00			•
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic w/H	INO3 (B)				
Sample ID: 2303235-08 Water Sa	mpled: 03/13	//2023 11:00	Sample Name:	MW-12	1008
Radium, Total 226 & 228 by EPA 903.1 & 90	03/23/2023	04/10/2023 11:00			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic w/H	INO3 (B)				
Sample ID: 2303235-09 Water Sam	mpled: 03/13	/2023 15:50	Sample Name:	CCR-2	009
Radium, Total 226 & 228 by EPA 903.1 & 90	03/23/2023	04/10/2023 15:50			<del>-</del>
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic w/H	HNO3 (B)				
Sample ID: 2303235-10 Water San	mpled: 03/13,	/2023 14:30	Sample Name:	CCR-3	010
Radium, Total 226 & 228 by EPA 903.1 & 90	03/23/2023	04/10/2023 14:30			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic w/H	INO3 (B)				
Sample ID: 2303235-11 Water Sample	mpled: 03/13	/2023 16:44	Sample Name:	CCR-4	011
Radium, Total 226 & 228 by EPA 903.1 & 90	03/23/2023	04/10/2023 16:44			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic w/H	INO3 (B)				
Sample ID: 2303235-12 Water Sam	mpled: 03/13,	/2023 16:20	Sample Name:	CCR-5	012
Smap Jomeh 3/10/23	0 1630		MS	3/16/230	1630
Released By	Date	Receiv	ed By	· · · · · · · · · · · · · · · · · · ·	Date
<u> </u>			In Selle	5 3/21/	23 955
Released By	Date	Receiv	ed By		Date
Released By	Date	WO#:	30571	927	Date
Released By	Date	PM: DAP	Due Da	te: 04/11/23	Date
Released By	Date				Date



# SUBCONTRACT ORDER (Continued)

Work Order: 2303235 (Continued)

Analysis		Due	Expires	Comments	
Sample ID: 2303235-12	Water	Sampled: 03/1	3/2023 16:20	Sample Name: CCR-	5
Radium, Total 226 & 228 by EP	A 903.1 & 9	0 03/23/2023	04/10/2023 16:20	)	
Containers Supplied: 1000mL Plastic w/HNO3 (A) 10	00mL Plastic	w/HNO3 (B)	0.000,000,000,000,000,000,000,000,000,0	A DAL MINISTERIO MENTENDA ANTONIO MARIO NA ARTO ARTO ARTO ARTO ARABAMINA ARTO ARABAMINA ARTO ARTO MARIO MARI	

WO#:30571927

PM: DAP Due Date: 04/11/23

CLIENT: MICROMETHOD

Smap Jomeh	3/14/230 1630	WS 3/16/2	230/630
Released By U	Date	Received By	Date
UPS		Jan Sett	3/21/23 955
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date

Principal   Prin		DC#_Title: ENV-FRM-0 Pittsburgh		000	0 40-	041116	WO#	: 3	0571	92	7
Client Name:	Pace	Effective Date: 02/03/2023	3							44547555	
Courier:   Fed Ex IV PS   USPS   Client   Commercial   Pacce   Other Tracking Number:   2 363 0/3 0/3 (6/50 9/3)   Examined By	T AMERICAN VENTOR		<del></del>				CLIENT:	: MICI	ROMETHOD		
Tracking Number:   Z 363 003 03 6950 93\( boldson berighted by the momentary Used)   D.P.D. Residual Chlorine Location Factors   D.P.D. Residual Chlorine	Client Name:	Micro - Method	5								
Coustody Seal on Cooler/Box Present:	Courier: 🗆 Fed						her				
Custody Seal on Cooler/Box Present:	Tracking Numbe	er: 12 363 063 03	3 6°	150	936	b		[1	Examined B	y <u>2</u>	a
Thermometer Used: Type of Ice: Wet Blue (None)   lemped by							☐ Yes ☐	∃No	Labeled By	وي ا	)a_
Correction Factor:		Ised: Typ	e of Ice	e: W	et Blu	ue/None		ı	Temped By	V	1a
Ph paper Lot#   D.P.D. Residual Chlorine Lot   D.P.D. Residu	AND ALL THE PARTY OF THE PARTY				Corre	ction Fact	or:	٥٥	Final Te	mp: _ ~	٥٥ ســ
Ph paper Lot#   D.P.D. Residual Chlorine Lot Chain of Custody Present   V   1.	Cooler Tempera Temp should be abo	ive freezing to 6°C		·	0011.01	J	A			,	
Chain of Custody Present Chain of Custody Filled Out:Were client corrections present on COC Chain of Custody Relinquished Sampler Name & Signature on COC: Sample Labels match COC:Includes date/time/ID Matrix: Samples Arrived within Hold Time: Samples Arrived within Hold T	(C)((p) 5)((d = 1 = 1 = 1 = 1	• •				рН рар	er Lot#		.P.D. Resid	ual Chlo	rine Lot#
Chain of Custody Present Chain of Custody Filled Out:Were client corrections present on COC Chain of Custody Relinquished Sampler Name & Signature on COC: Sample Labels match COC:Includes date/time/ID Matrix: Samples Arrived within Hold Time: Short Hold Time Analysis (<72hr remaining): Rush Turn Around Time Requested: Sufficient Volume: Correct Containers Used:Pace Containers Used Containers Intact: Orthophosphate field filtered: Organic Samples checked for dechlorination Filtered volume received for dissolved tests: All containers Checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation requirements:  8260C/D: Headspace in VOA Vials (> 6mm)  Firip Blank Present:  1.  2.  3.  4.  5.  4.  5.  6.  5.  7.  7.  7.  8.  8.  8.  8.  9.  10.  9.  11.  10.  11.  11.  12.  13.  14:  15:  Added 25 mL   NU3   10 012   Preservation 2   2   100   Preservation 3 - 22 - 23   Luff of added 2   2   100   Preservation 3 - 22 - 23   Luff of added 2   2   100   Preservation 3 - 22 - 23   Luff of added 2   2   100   Preservation 3 - 22 - 23   Luff of added 2   2   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 - 23   Luff of added 3   100   Preservation 3 - 22 -	Comments:		Yes	No	NA	101	13121				
Chain of Custody Filled Out:Were client corrections present on COC  Chain of Custody Relinquished  Sampler Name & Signature on COC:  Sample Labels match COC:Includes date/time/ID Matrix:  Samples Arrived within Hold Time: Short Hold Time Analysis (<72hr remaining): Rush Turn Around Time Requested:  Sufficient Volume:  Correct Containers UsedPace Containers Used Containers Intact: Orthophosphate field filtered: Hex Cr Aqueous samples field filtered: Organic Samples checked for dechlorination Filtered volume received for dissolved tests: All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation requirements:  2.  2.  3.  3.  3.  3.  3.  3.  4.  5.  6.  5.  7.  7.  7.  7.  7.  7.  7.  7.  7		v Present	V			1.					
Were client corrections present on COC Chain of Custody Relinquished Sampler Name & Signature on COC:		·	1			2.					
Sampler Name & Signature on COC:  Sampler Labels match COC:  -Includes date/time/ID Matrix:  Samples Arrived within Hold Time:  Short Hold Time Analysis (<72hr remaining):  Rush Turn Around Time Requested:  Sufficient Volume:  Correct Containers Used:  -Pace Containers Used  Containers Intact:  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation  requirements:    Lote of added Preservative   Date/Time of Preservative   Date/Time o			V	V							
Sample Labels match COC: -Includes date/time/ID Matrix:  Samples Arrived within Hold Time: Short Hold Time Analysis (<72hr remaining): Rush Turn Around Time Requested: Sufficient Volume: Correct Containers Used: -Pace Containers Used -Pace Containers Used Containers Intact: Orthophosphate field filtered: Organic Samples checked for dechlorination Filtered volume received for dissolved tests: All containers Hode, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation requirements:    Sample Labels match COC:   J			1			3.					
Sample Labels match COC: -Includes date/time/ID Matrix:  Samples Arrived within Hold Time: Short Hold Time Analysis (<72hr remaining): Rush Turn Around Time Requested: Sufficient Volume: Correct Containers Used: -Pace Containers Used Containers Intact: Orthophosphate field filtered: Hex Cr Aqueous samples field filtered: Organic Samples checked for dechlorination Filtered volume received for dissolved tests: All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation requirements:    Samples Arrived within Hold Time:   Samples Arrived within				1		4.	****				
Matrix:  Samples Arrived within Hold Time:  Short Hold Time Analysis (<72hr remaining):  Rush Turn Around Time Requested:  Sufficient Volume:  Correct Containers Used:  -Pace Containers Used  -Pace Containers Used  Containers Intact:  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation:  exceptions: VOA Vials (>6mm)  Seedoc/D: Headspace in VOA Vials (>6mm)  Trip Blank Present:    All containers checked for preservation   Value of added Preservation   Value						5.	•				
Samples Arrived within Hold Time:  Short Hold Time Analysis (<72hr remaining):  Rush Turn Around Time Requested:  Sufficient Volume:  Correct Containers Used:  -Pace Containers Used  Containers Intact:  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation  requirements:    Added 25 mL   NU3   10 012	-Includes da	ate/time/ID									
7.   Short Hold Time Analysis (<72hr remaining):   7.     7.	Matrix:		V	VI							
Rush Turn Around Time Requested:  Rush Turn Around Time Requested:  Sufficient Volume:  Correct Containers Used:  -Pace Containers Used  Containers Intact:  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation  requirements:    Initial when completed   Date/Time of Preservation   Date/Time of P	Samples Arrived	l within Hold Time:		1		6.					
Rush Turn Around Time Requested:  Sufficient Volume:  Correct Containers Used:  -Pace Containers Used  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation  requirements:    Initial when	Short Hold Time	e Analysis (<72hr				7.					
Sufficient Volume:  Correct Containers Used: -Pace Containers Used  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation requirements:    Date/Time of Preservation 3 22 23   Date/Time of Preservation 2 100 7				Ľ,							
Correct Containers Used: -Pace Containers Used  Containers Intact:  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation  requirements:    Date/Time of Preservation 2	Rush Turn Arou	ınd Time Requested:		<b>√</b>	ļ					<u></u> _	
-Pace Containers Used  Containers Intact:  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation  requirements:    Initial when			14		ļ	<del>}</del>					
Containers Intact:  Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation requirements:  Initial when completed			V	<u> </u>		10.					
Orthophosphate field filtered:  Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation requirements:  Initial when completed Date/Time of Preservation 2 Date/Time of Preservation 2 Preservation 2 Date/Time of Preserva			<b>_</b>	\ <u> </u>	<del>                                     </del>	11					
Hex Cr Aqueous samples field filtered:  Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation requirements:    Initial when			$\vdash \checkmark$	-	<del>                                     </del>					<del>.</del>	
Organic Samples checked for dechlorination  Filtered volume received for dissolved tests:  All containers checked for preservation:     exceptions: VOA, coliform, TOC, O&G,     Phenolics, Radon, non-aqueous matrix  All containers meet method preservation     requirements:    Lot# of added Preservative   Preservation			-	ļ	1	<del> </del>					
Filtered volume received for dissolved tests:  All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation requirements:    V   15:	Hex Cr Aqueous	samples field filtered:			<del>                                     </del>				2.000		
All containers checked for preservation:  exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation requirements:    Lot# of added Preservative   Preservation	Organic Sample	s checked for decilionination	<del></del>		17	<del> </del>					
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix  All containers meet method preservation requirements:    Lot# of added Preservative Pr			1.7	<u> </u>	V	<del> </del>					****
Phenolics, Radon, non-aqueous matrix  All containers meet method preservation requirements:    Lot# of added Preservative   Date/Time of Preservation   Completed   Date/Time of Preservation   Date/T			<u> </u>		L		1.1.2	- 2	LAM/)'a	10 01	2
All containers meet method preservation requirements:    Lot# of added Preservative   Date/Time of Preservation   3-22-23						Ma	nea a	ייזי בי	ر ۱۳۷۷ع س	,0	
requirements:    Completed	•			1 .	r	Initial wi	nen		Date/Time of	<i>r</i>	
8260C/D: Headspace in VOA Vials (> 6mm)  17.  624.1: Headspace in VOA Vials (0mm)  Trip Blank Present:  Trip blank custody seal present? YES or NO							ed <i>20</i>			3000	1-23 C
8260C/D: Headspace in VOA Vials (> 6mm)  624.1: Headspace in VOA Vials (0mm)  7 18.  Trip Blank Present:  7 Trip blank custody seal present? YES or NO	requiremen	ILS:					added .	2170	07		
624.1: Headspace in VOA Vials (0mm)  Trip Blank Present:  Trip blank custody seal present? YES or NO	<b>8260C/D</b> : Head	space in VOA Vials (> 6mm)	1		1		<u></u>	,			·
Trip Blank Present: Trip blank custody seal present? YES or NO			1		V	18.					
	Trip Blank Prese	ent:			+	Tri	blank cu	sto <b>dy</b> s	eal present	YES o	r NO
	·		V			Initial wh	nen 20	Date:	3-22-27	Surve SN:	Meter 1503
Comments:	Comments:				1	,	<u> </u>				

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.

PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Bein eИ Other ISCN 3 ดาท Due Date: 04/11/23 Pages ecna SPLC 10#:30571927 Profile Number MCKN CLIENT: MICROMETHOD NGEN Notes **NOAK** U69V Vials T69V PM: DAP H69/ S6ĐQ DC#\_Title: ENV-FRM-GBUR-0072 v02\_Sample Container Count Offshore Projects Bb3N ₽ **BP35** ВЬЗИ Page Plastic **Bb3C** BP2U 8248 UIAB S 4  $\varphi$ ( 4  $\prec$ 1 4 7 6 BP1N 6 TS5/A Micro-Methods Amber Glass NG5/ Effective Date: 1/11/2023 UEDA 2303235 **SEÐ∀ ∀C1H** Container Codes 3 Matrix <u>ම</u> Client Sample Line Item OCC 8 POG 008 3 8 Š

1 gallon cubitainer 1/2 gallon cubitainer 1/20ml coliform Na Thiosulfate	EZI VOAK I ZPLC	EZI 5g Encore VOAK Kit Volatile So I Wipe/Swab ZPLC Siploc Bag
allon cubitainer	VOAK 1 ZPLC	Kit Volatile Sc Wipe/Swab Siploc Bag
I coliform Na Thiosulfate	l ZPLC	Wipe/Swab Siploc Bag
וד כסוווס ווועם ווווספתומני	ZPLC	Siploc Bag
1L plastic HNO3		
1L plastic unpreserved		
250mL plastic H2SO4	WT	Water
250mL plastic HNO3	SL	Solid
250mL plastic unpreserved	OL	Non-Aq Liquid
250mL plastic NAOH	WP	Wipe
500mL plastic H2SO4		
500mL plastic unpreserved		

40mL clear VOA vial Na Thiosulfate

40mL clear VOA vial HCI

VG9T VG9H

100mL amber glass Na Thiosulfate

100mL amber glass unpreserved

AGSU

<u>z</u>

AG5T

1 Gallon Jug with HNO3

4oz amber wide jar

40mL amber VOA vial H2SO4

Glass

DG9S

VG9U

40mL clear VOA vial

500mL clear glass unpreserved 500mL amber glass unpreserved

8oz wide jar unpreserved

WGKU

AG2U

General

GN

250mL amber glass unpreserved

1L clear glass unpreserved 250mL amber glass H2SO4

G3S G3U

Page 49 of 49

<u>G</u>10

AG1T

4oz wide jar unpreserved

WGFU

JGFU

1L amber glass H2SO4

AG1S AG1H

1 Gallon Jug

Z S S 1L amber glass HCI

BG2U

1L amber glass NA Thiosulfate

Qualtrax ID: 55678

Pace® Analytical Services, LLC

Page 1 of 1



Mailing Address: PO Box 1410 Ocean Springs, MS 39566-1410 6500 Sunplex Drive Ocean Springs, MS 39564 228.875.6420 Phone 228.875.6423 Fax

June 13, 2023

Jim Ward Work Order #: 2305232

Choctaw Generation LP

2391 Pensacola Rd.

Purchase Order #: RDH17816 - Yr 2023

Ackerman, MS 39735

RE: CGLP CCR Annual

Enclosed are Micro-Methods Laboratory, Inc. results of analyses performed on samples received 05/11/2023 08:38. If you have any questions concerning this report, please feel free to contact the office.

Sincerely,

Mitch Spicer

Lab Director *Micro-Methods Laboratory, Inc.* 



#### DISCLAIMER

The results only relate to the items or the sample and/or samples received by the laboratory. This report shall not be reproduced except in full, without the approval of the laboratory. All NELAP certified test methods performed meet the requirements of NELAC 2009 Standards. Any variances and/or deviations specific to this analytical report are referenced in the lab report using qualifiers and detailed explanations found in the case narrative.





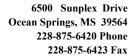
Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### **ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date/Time Sampled	Sampled by	Date/Time Received
MW-7	2305232-01	Water	05/10/2023 11:58	Ethan Easterling	05/11/2023 08:38
MW-9	2305232-02	Water	05/10/2023 15:30	Ethan Easterling	05/11/2023 08:38
MW-12	2305232-03	Water	05/10/2023 14:05	Ethan Easterling	05/11/2023 08:38
MW-13	2305232-04	Water	05/10/2023 13:45	Ethan Easterling	05/11/2023 08:38
MW-14	2305232-05	Water	05/10/2023 10:30	Ethan Easterling	05/11/2023 08:38
Field Blank	2305232-06	Water	05/10/2023 10:38	Ethan Easterling	05/11/2023 08:38
Duplicate	2305232-07	Water	05/10/2023 00:00	Ethan Easterling	05/11/2023 08:38
OW-2	2305232-08	Water	05/10/2023 14:40	Ethan Easterling	05/11/2023 08:38
CCR-2	2305232-09	Water	05/10/2023 11:25	Ethan Easterling	05/11/2023 08:38
CCR-3	2305232-10	Water	05/10/2023 12:20	Ethan Easterling	05/11/2023 08:38
CCR-4	2305232-11	Water	05/10/2023 15:24	Ethan Easterling	05/11/2023 08:38
CCR-5	2305232-12	Water	05/10/2023 14:40	Ethan Easterling	05/11/2023 08:38





COC meets acceptance criteria

Choctaw Generation LP Project: CGLP CCR Annual 2391 Pensacola Rd. Project Number: [none]

2391 Pensacola Rd. Project Number: [none] Reported:
Ackerman MS, 39735 Project Manager: Jim Ward 06/13/2023 08:18

**Sample Receipt Conditions** 

Date/Time Received: 5/11/2023 8:38:00AM Shipped by: Fed Ex

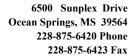
Received by: Sarah E. Tomek Submitted by: Caleb James

Date/Time Logged: 5/11/2023 10:37:00AM Logged by: Sarah E. Tomek

Cooler ID: client cooler #1 Receipt Temperature: 2.8 °C

Yes

Cooler Custody Seals Present	Yes	Received on Ice but Not Frozen	Yes
Containers Intact	Yes	No Ice, Short Trip	No
COC/Labels Agree	Yes	Obvious Contamination	No
Labels Complete	Yes	Rush to meet HT	No
COC Complete	Yes	Received within HT	Yes
Volatile Vial Headspace >6mm	No	Proper Containers for Analysis	Yes
Field Sheet/Instructions Included	No	Correct Preservation	Yes
Samples Rejected/Documented in Log	No	Adequate Sample for Analysis	Yes
Temp Taken From Temp Blank	Yes	Sample Custody Seals Present	Yes
Temp Taken From Sample Container	No	Samples Missing from COC/Cooler	No
Temp Taken From Cooler	No		

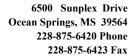




Choctaw Generation LP Project: CGLP CCR Annual

2391 Pensacola Rd. Project Number: [none] Reported:
Ackerman MS, 39735 Project Manager: Jim Ward 06/13/2023 08:18

Cooler ID: client cooler #2	_	Receipt Temperature: 1.7 °C	
Cooler Custody Seals Present	Yes	Received on Ice but Not Frozen	Yes
Containers Intact	Yes	No Ice, Short Trip	No
COC/Labels Agree	Yes	Obvious Contamination	No
Labels Complete	Yes	Rush to meet HT	No
COC Complete	Yes	Received within HT	Yes
Volatile Vial Headspace >6mm	No	Proper Containers for Analysis	Yes
Field Sheet/Instructions Included	No	Correct Preservation	Yes
Samples Rejected/Documented in Log	No	Adequate Sample for Analysis	Yes
Temp Taken From Temp Blank	Yes	Sample Custody Seals Present	Yes
Temp Taken From Sample Container	No	Samples Missing from COC/Cooler	No
Temp Taken From Cooler	No		
COC meets acceptance criteria	Yes		





Choctaw Generation LP Project: CGLP CCR Annual

2391 Pensacola Rd. Project Number: [none] Reported:
Ackerman MS, 39735 Project Manager: Jim Ward 06/13/2023 08:18

Cooler ID: client cooler #3	_	Receipt Temperature: 1.9 °C	
Cooler Custody Seals Present	Yes	Received on Ice but Not Frozen	Yes
Containers Intact	Yes	No Ice, Short Trip	No
COC/Labels Agree	Yes	Obvious Contamination	No
Labels Complete	Yes	Rush to meet HT	No
COC Complete	Yes	Received within HT	Yes
Volatile Vial Headspace >6mm	No	Proper Containers for Analysis	Yes
Field Sheet/Instructions Included	No	Correct Preservation	Yes
Samples Rejected/Documented in Log	No	Adequate Sample for Analysis	Yes
Temp Taken From Temp Blank	Yes	Sample Custody Seals Present	Yes
Temp Taken From Sample Container	No	Samples Missing from COC/Cooler	No
Temp Taken From Cooler	No		
COC meets acceptance criteria	Yes		



6500 Sunplex Drive Ocean Springs, MS 39564 228-875-6420 Phone 228-875-6423 Fax

Choctaw Generation LP 2391 Pensacola Rd. Ackerman MS, 39735 Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### **CASE NARRATIVE SUMMARY**

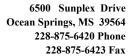
All reported results are within Micro-Methods Laboratory, Inc.defined laboratory quality control objectives unless detailed in narrative summary or identified as qualifications. NOTE: All results listed on this report are calculated on a wet weight basis (as received by the laboratory) unless otherwise noted in the analysis qualification sections.

#### **Summary Comments:**

See attached results from Sub-Contract Laboratory

Qualifiers: No Data Qualification

Analyte & Samples(s) Qualified: None





Project: CGLP CCR Annual

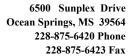
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### MW-7

#### 2305232-01 (Water)

				0_ 0. (	/					
			_	_			Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameter</b>	S									
Fluoride	0.25	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Meth	ods ICP-AES	1								
Barium 455.403 [Radial]	0.053	0.010	mg/L	1.0	3E16046	CLV	05/15/2023 10:00	05/16/2023 12:41	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Meth	ods ICP-MS	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 14:19	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG	"			
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG	"		"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG	"		п	
Selenium [NG]	ND	0.00500	"	"	"	GWG			n	
Thallium [He]	ND	0.00500	"	"	"	GWG	"		п	
Mercury by EPA 200 Series Met	thods CVAAS	3								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 12:04	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

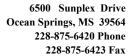
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### MW-9

#### 2305232-02 (Water)

							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
Classical Chemistry Parameter	ers									
Fluoride	0.41	0.22	mg/L	1.0	3E12006	CRG	05/11/2023	05/15/2023 09:12	SM 4500-F C	
Metals by EPA 200 Series Met	thods ICP-AES						14:50	09:12	2011	
Barium 455.403 [Radial]	0.082	0.010	mg/L	1.0	3E16046	CLV	05/15/2023 10:00	05/16/2023 12:52	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	0.041	0.040	u	u u	"	CLV			"	
Metals by EPA 200 Series Met	thods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 14:25	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	0.00413	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG				
Cobalt [He]	0.0158	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			•	
Molybdenum [He]	ND	0.00100	"	u	"	GWG				
Selenium [NG]	ND	0.00500	"	u	"	GWG				
Thallium [He]	ND	0.00500	"	"	"	GWG				
Mercury by EPA 200 Series M	ethods CVAAS	<u>;                                    </u>								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 12:59	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### MW-12

#### 2305232-03 (Water)

							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameter</b>	's									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Meth	ods ICP-AES									
Barium 455.403 [Radial]	0.171	0.010	mg/L	1.0	3E16046	CLV	05/15/2023 10:00	05/16/2023 12:55	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Meth	ods ICP-MS	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 14:32	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			n n	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG				
Cobalt [He]	0.0190	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	u u	"	GWG			"	
Molybdenum [He]	ND	0.00100	u	"	"	GWG			"	
Selenium [NG]	ND	0.00500	u .	"	"	GWG			"	
Thallium [He]	ND	0.00500	"	"	"	GWG			"	
Mercury by EPA 200 Series Me	thods CVAAS	;								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 13:02	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### MW-13

#### 2305232-04 (Water)

					101,					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Paramete</b>	ers									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Met	hods ICP-AES									
Barium 455.403 [Radial]	0.140	0.010	mg/L	1.0	3E16046	CLV	05/15/2023 10:00	05/16/2023 12:59	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Met	hods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 14:38	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			m m	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG			m m	
Cobalt [He]	ND	0.00100	"	"	"	GWG			n	
Lead [He]	ND	0.00100	"	"	"	GWG			n	
Molybdenum [He]	ND	0.00100	"	"		GWG				
Selenium [NG]	ND	0.00500	"	"	"	GWG			u u	
Thallium [He]	ND	0.00500	"	"	"	GWG			n .	
Mercury by EPA 200 Series Me	ethods CVAAS	}								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 13:10	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

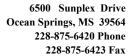
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### MW-14

#### 2305232-05 (Water)

				o <u> </u>	,					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Paramete</b>	ers									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Met	hods ICP-AES									
Barium 455.403 [Radial]	0.010	0.010	mg/L	1.0	3E16046	CLV	05/15/2023 10:00	05/16/2023 13:02	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Met	hods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 14:44	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG				
Selenium [NG]	ND	0.00500	"	"	"	GWG			п	
Thallium [He]	ND	0.00500	"	"	"	GWG			п	
Mercury by EPA 200 Series Me	ethods CVAAS	;								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 13:13	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

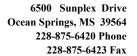
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### Field Blank

#### 2305232-06 (Water)

							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>	3									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Metho	ds ICP-AES	;								
Barium 455.403 [Radial]	ND	0.010	mg/L	1.0	3E16046	CLV	05/15/2023 10:00	05/16/2023 13:06	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Metho	ds ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 14:50	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	II .	GWG		"	m m	
Beryllium [He]	ND	0.00100	"	"	"	GWG		"	"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			n	
Chromium [He]	ND	0.00100	u	"	"	GWG			n	
Cobalt [He]	ND	0.00100	u	"	"	GWG				
Lead [He]	ND	0.00100	u .	"	"	GWG			ī	
Molybdenum [He]	ND	0.00100	u	"	"	GWG				
Selenium [NG]	ND	0.00500	"	"	"	GWG			n .	
Thallium [He]	ND	0.00500	"	"	"	GWG			п	
Mercury by EPA 200 Series Met	hods CVAAS	3								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 13:17	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### **Duplicate**

#### 2305232-07 (Water)

				o <u>-</u> o. (	,					
	5	MDI		Б.,	D		Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Paramete</b>	rs									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Meth	nods ICP-AES									
Barium 455.403 [Radial]	0.011	0.010	mg/L	1.0	3E16046	CLV	05/15/2023 10:00	05/16/2023 13:10	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	u u	CLV	"		"	
Metals by EPA 200 Series Meth	nods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 14:56	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG	"		"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			n n	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"		"	GWG			n n	
Thallium [He]	ND	0.00500	"	"	"	GWG			II .	
Mercury by EPA 200 Series Me	thods CVAAS	;								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 13:20	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

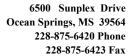
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### OW-2

#### 2305232-08 (Water)

				32-00 (VV	,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
		WIIAE	OTILO		Baton	7 that you	<u>'</u>	<u> </u>	Wictiod	Qualificia
Classical Chemistry Parame		0.00							014 4500 5 0	
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Me	thods ICP-AES									
Barium 455.403 [Radial]	0.035	0.010	mg/L	1.0	3E16046	CLV	05/15/2023 10:00	05/16/2023 13:13	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV	"		"	
Metals by EPA 200 Series Me	thods ICP-MS	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 15:20	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG	"		"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	"	"	"	GWG	"		"	
Cobalt [He]	ND	0.00100	"	"	"	GWG				
Lead [He]	ND	0.00100	"	"	"	GWG				
Molybdenum [He]	ND	0.00100	"	"	"	GWG				
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	
Thallium [He]	ND	0.00500	"	"	"	GWG			"	
Mercury by EPA 200 Series M	Methods CVAAS	}								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 13:51	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

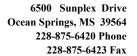
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### CCR-2

#### 2305232-09 (Water)

					,					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>	S									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Metho	ods ICP-AES									
Barium 455.403 [Radial]	0.098	0.010	mg/L	1.0	3E16044	CLV	05/15/2023 10:00	05/16/2023 11:41	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Metho	ods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 15:27	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG	"		"	
Beryllium [He]	ND	0.00100	"	u u	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			"	
Chromium [He]	ND	0.00100	u	"	"	GWG			"	
Cobalt [He]	0.00203	0.00100	u .	u u	"	GWG	"		"	
Lead [He]	ND	0.00100	"	u u	"	GWG			"	
Molybdenum [He]	ND	0.00100	u	"	"	GWG			"	
Selenium [NG]	ND	0.00500	u .	"	"	GWG	"		n .	
Thallium [He]	ND	0.00500	"	"	"	GWG				
Mercury by EPA 200 Series Met	hods CVAAS									
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 13:55	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

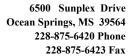
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### CCR-3

#### 2305232-10 (Water)

				(						
			_			_	Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Paramete</b>	rs									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Meth	ods ICP-AES									
Barium 455.403 [Radial]	0.058	0.010	mg/L	1.0	3E16044	CLV	05/15/2023 10:00	05/16/2023 11:45	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	0.086	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Meth	ods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 15:33	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	0.00122	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG	"		"	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	0.0213	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG	"		"	
Thallium [He]	ND	0.00500	"	"	"	GWG			"	
Mercury by EPA 200 Series Me	thods CVAAS	i								
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 13:59	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

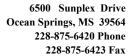
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### CCR-4

#### 2305232-11 (Water)

				02 (110						
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Paramet</b>	ers									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Me	thods ICP-AES									
Barium 455.403 [Radial]	0.122	0.010	mg/L	1.0	3E16044	CLV	05/15/2023 10:00	05/16/2023 11:49	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Me	thods ICP-MS [	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 15:39	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG		"	"	
Beryllium [He]	ND	0.00100	"	"	"	GWG	"		"	
Cadmium [He]	ND	0.00100	"	"	"	GWG		"		
Chromium [He]	ND	0.00100	"	"	"	GWG		"		
Cobalt [He]	0.00269	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG	"			
Molybdenum [He]	ND	0.00100	"	"	"	GWG		"		
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	
Thallium [He]	ND	0.00500	"	"	"	GWG			n n	
Mercury by EPA 200 Series M	lethods CVAAS									
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 12:23	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### CCR-5

#### 2305232-12 (Water)

				·- ( · · ·	,					
Amelida	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Mathad	Qualifiers
Analyte	Result	IVINL	Ullis	ווט	Daton	Analyst	Troparca	7 thatyzou	Method	Qualifiers
Classical Chemistry Paramet	ers									
Fluoride	ND	0.22	mg/L	1.0	3E12006	CRG	05/11/2023 14:50	05/15/2023 09:12	SM 4500-F C 2011	
Metals by EPA 200 Series Me	thods ICP-AES									
Barium 455.403 [Radial]	0.054	0.010	mg/L	1.0	3E16044	CLV	05/15/2023 10:00	05/16/2023 11:52	EPA 200.7 Rev 4.4	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV	"		•	
Metals by EPA 200 Series Me	thods ICP-MS [	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3E15048	GWG	05/15/2023 12:00	05/17/2023 15:45	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG	"		"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			n n	
Chromium [He]	ND	0.00100	"	"	n .	GWG			"	
Cobalt [He]	0.00962	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			II .	
Selenium [NG]	ND	0.00500	"	"	"	GWG			n n	
Thallium [He]	ND	0.00500	"	"	n n	GWG			n n	
Mercury by EPA 200 Series M	lethods CVAAS									
Mercury	ND	0.00200	mg/L	1.0	3E16050	CLV	05/15/2023 10:00	05/16/2023 14:03	EPA 245.1 Rev 3.0	





Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

# Classical Chemistry Parameters - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3E12006 - Default Prep GenChe	m										
Blank (3E12006-BLK1)											
Fluoride	5/15/23 9:12	ND	0.22	mg/L							
LCS (3E12006-BS1)											
Fluoride	5/15/23 9:12	1.91	0.22	mg/L	2.00		95.5	87.8-113			
LCS Dup (3E12006-BSD1)											
Fluoride	5/15/23 9:12	2.00	0.22	mg/L	2.00		100	87.8-113	4.60	30	
Duplicate (3E12006-DUP1)			Source: 23052	32-11							
Fluoride	5/15/23 9:12	ND	0.22	mg/L		ND				20	
Matrix Spike (3E12006-MS1)			Source: 23052	32-03							
Fluoride	5/15/23 9:12	1.88	0.22	mg/L	2.00	ND	94.0	70.2-127			
Matrix Spike Dup (3E12006-MSD1)			Source: 23052	32-03							
Fluoride	5/15/23 9:12	2.00	0.22	mg/L	2.00	ND	100	70.2-127	6.19	30	



Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

# Metals by EPA 200 Series Methods ICP-AES - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3E16044 - EPA 200.2 DCN 10	17 Rev 10										
Blank (3E16044-BLK1)											
Barium 455.403 [Radial]	5/16/23 10:13	ND	0.010	mg/L							
Lithium 610.362 [Axial]	5/16/23 10:13	ND	0.040								
_CS (3E16044-BS1)											
Barium 455.403 [Radial]	5/16/23 10:16	0.210	0.010	mg/L	0.200		105	85-115			
Lithium 610.362 [Axial]	5/16/23 10:16	0.202	0.040		0.200		101	85-115			
LCS Dup (3E16044-BSD1)											
Barium 455.403 [Radial]	5/16/23 10:20	0.205	0.010	mg/L	0.200		103	85-115	2.17	20	
ithium 610.362 [Axial]	5/16/23 10:20	0.197	0.040		0.200		98.4	85-115	2.68	20	
Matrix Spike (3E16044-MS1)			Source: 23052	207-02							
Barium 455.403 [Radial]	5/16/23 10:38	0.201	0.010	mg/L	0.200	ND	101	70-130			
ithium 610.362 [Axial]	5/16/23 10:38	0.204	0.040		0.200	ND	102	70-130			
Matrix Spike Dup (3E16044-MSD1)			Source: 23052	207-02							
Barium 455.403 [Radial]	5/16/23 10:42	0.204	0.010	mg/L	0.200	ND	102	70-130	1.29	20	
Lithium 610.362 [Axial]	5/16/23 10:42	0.208	0.040		0.200	ND	104	70-130	1.83	20	
Batch 3E16046 - EPA 200.2 DCN 10	17 Rev 10										
Blank (3E16046-BLK1)											
Barium 455.403 [Radial]	5/16/23 10:13	ND	0.010	mg/L							
ithium 610.362 [Axial]	5/16/23 10:13	ND	0.040								
_CS (3E16046-BS1)											
Barium 455.403 [Radial]	5/16/23 10:16	0.210	0.010	mg/L	0.200		105	85-115			
_ithium 610.362 [Axial]	5/16/23 10:16	0.202	0.040		0.200		101	85-115			





Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

## Metals by EPA 200 Series Methods ICP-AES - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3E16046 - EPA 200.2 DCN	1017 Rev 10										
LCS Dup (3E16046-BSD1)											
Barium 455.403 [Radial]	5/16/23 10:20	0.205	0.010	mg/L	0.200		103	85-115	2.17	20	
Lithium 610.362 [Axial]	5/16/23 10:20	0.197	0.040		0.200		98.4	85-115	2.68	20	
Matrix Spike (3E16046-MS1)			Source: 23052	32-01							
Barium 455.403 [Radial]	5/16/23 12:45	0.265	0.010	mg/L	0.200	0.053	106	70-130			
Lithium 610.362 [Axial]	5/16/23 12:45	0.229	0.040		0.200	0.014	107	70-130			
Matrix Spike Dup (3E16046-MSD	1)		Source: 23052	32-01							
Barium 455.403 [Radial]	5/16/23 12:48	0.262	0.010	mg/L	0.200	0.053	105	70-130	1.12	20	
Lithium 610.362 [Axial]	5/16/23 12:48	0.224	0.040		0.200	0.014	105	70-130	1.99	20	

Reported:

06/13/2023 08:18



Choctaw Generation LP 2391 Pensacola Rd. Ackerman MS, 39735 Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

# Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3E15048 - EPA 200.2 DC	CN 1017 Rev 10										
Blank (3E15048-BLK1)											
Antimony [He]	5/17/23 13:25	ND	0.00200	mg/L							
Arsenic [NG]	5/17/23 13:25	ND	0.00200								
Beryllium [He]	5/17/23 13:25	ND	0.00100								
Cadmium [He]	5/17/23 13:25	ND	0.00100								
Chromium [He]	5/17/23 13:25	ND	0.00100								
Cobalt [He]	5/17/23 13:25	ND	0.00100								
Lead [He]	5/17/23 13:25	ND	0.00100								
Molybdenum [He]	5/17/23 13:25	ND	0.00100								
Selenium [NG]	5/17/23 13:25	ND	0.00500								
Thallium [He]	5/17/23 13:25	ND	0.00500								
LCS (3E15048-BS1)											
Antimony [He]	5/17/23 13:31	0.092	0.00200	mg/L	0.100		92.2	85-115			
Arsenic [NG]	5/17/23 13:31	0.097	0.00200		0.100		96.9	85-115			
Beryllium [He]	5/17/23 13:31	0.094	0.00100		0.100		94.3	85-115			
Cadmium [He]	5/17/23 13:31	0.098	0.00100		0.100		97.9	85-115			
Chromium [He]	5/17/23 13:31	0.099	0.00100		0.100		99.2	85-115			
Cobalt [He]	5/17/23 13:31	0.092	0.00100		0.100		91.7	85-115			
Lead [He]	5/17/23 13:31	0.099	0.00100		0.100		99.2	85-115			
Molybdenum [He]	5/17/23 13:31	0.098	0.00100		0.100		97.8	85-115			
Selenium [NG]	5/17/23 13:31	0.101	0.00500		0.100		101	85-115			
Thallium [He]	5/17/23 13:31	0.099	0.00500		0.100		98.9	85-115			
LCS Dup (3E15048-BSD1)											
Antimony [He]	5/17/23 13:37	0.098	0.00200	mg/L	0.100		97.9	85-115	6.03	20	
Arsenic [NG]	5/17/23 13:37	0.099	0.00200		0.100		99.1	85-115	2.18	20	
Beryllium [He]	5/17/23 13:37	0.098	0.00100		0.100		98.2	85-115	4.09	20	
Cadmium [He]	5/17/23 13:37	0.103	0.00100		0.100		103	85-115	5.48	20	
Chromium [He]	5/17/23 13:37	0.104	0.00100		0.100		104	85-115	5.00	20	
Cobalt [He]	5/17/23 13:37	0.096	0.00100		0.100		96.1	85-115	4.66	20	
Lead [He]	5/17/23 13:37	0.104	0.00100		0.100		104	85-115	4.80	20	
Molybdenum [He]	5/17/23 13:37	0.102	0.00100		0.100		102	85-115	4.45	20	
Selenium [NG]	5/17/23 13:37	0.104	0.00500		0.100		104	85-115	3.42	20	
Thallium [He]	5/17/23 13:37	0.104	0.00500		0.100		104	85-115	5.17	20	



Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

# Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3E15048 - EPA 200.2 DCN 10	17 Rev 10										
Matrix Spike (3E15048-MS1)			Source: 23052	41-01							
Antimony [He]	5/17/23 13:49	0.097	0.00200	mg/L	0.100	ND	97.0	70-130			
Arsenic [NG]	5/17/23 13:49	0.095	0.00200		0.100	ND	94.9	70-130			
Beryllium [He]	5/17/23 13:49	0.100	0.00100		0.100	ND	99.7	70-130			
Cadmium [He]	5/17/23 13:49	0.101	0.00100		0.100	ND	101	70-130			
Chromium [He]	5/17/23 13:49	0.099	0.00100		0.100	ND	99.5	70-130			
Cobalt [He]	5/17/23 13:49	0.091	0.00100		0.100	ND	90.7	70-130			
Lead [He]	5/17/23 13:49	0.103	0.00100		0.100	ND	103	70-130			
Molybdenum [He]	5/17/23 13:49	0.106	0.00100		0.100	0.0006	105	70-130			
Selenium [NG]	5/17/23 13:49	0.097	0.00500		0.100	ND	96.9	70-130			
Thallium [He]	5/17/23 13:49	0.102	0.00500		0.100	ND	102	70-130			
Matrix Spike (3E15048-MS2)			Source: 23051	82-03							
Antimony [He]	5/17/23 14:07	0.099	0.00200	mg/L	0.100	0.0003	99.0	70-130			
Arsenic [NG]	5/17/23 14:07	0.096	0.00200		0.100	ND	95.9	70-130			
Beryllium [He]	5/17/23 14:07	0.106	0.00100		0.100	ND	106	70-130			
Cadmium [He]	5/17/23 14:07	0.101	0.00100		0.100	ND	101	70-130			
Chromium [He]	5/17/23 14:07	0.102	0.00100		0.100	ND	102	70-130			
Cobalt [He]	5/17/23 14:07	0.093	0.00100		0.100	0.0002	93.0	70-130			
Lead [He]	5/17/23 14:07	0.103	0.00100		0.100	ND	103	70-130			
Molybdenum [He]	5/17/23 14:07	0.105	0.00100		0.100	ND	105	70-130			
Selenium [NG]	5/17/23 14:07	0.098	0.00500		0.100	ND	97.5	70-130			
Thallium [He]	5/17/23 14:07	0.103	0.00500		0.100	ND	103	70-130			
Matrix Spike Dup (3E15048-MSD1)			Source: 23052	41-01							
Antimony [He]	5/17/23 13:55	0.095	0.00200	mg/L	0.100	ND	95.2	70-130	1.91	20	
Arsenic [NG]	5/17/23 13:55	0.094	0.00200		0.100	ND	93.6	70-130	1.38	20	
Beryllium [He]	5/17/23 13:55	0.098	0.00100		0.100	ND	97.8	70-130	1.86	20	
Cadmium [He]	5/17/23 13:55	0.099	0.00100		0.100	ND	98.7	70-130	2.43	20	
Chromium [He]	5/17/23 13:55	0.097	0.00100		0.100	ND	97.2	70-130	2.27	20	
Cobalt [He]	5/17/23 13:55	0.088	0.00100		0.100	ND	88.4	70-130	2.62	20	
Lead [He]	5/17/23 13:55	0.100	0.00100		0.100	ND	100	70-130	2.64	20	
Molybdenum [He]	5/17/23 13:55	0.102	0.00100		0.100	0.0006	102	70-130	3.10	20	
Selenium [NG]	5/17/23 13:55	0.094	0.00500		0.100	ND	94.2	70-130	2.75	20	
Thallium [He]	5/17/23 13:55	0.099	0.00500		0.100	ND	99.2	70-130	2.44	20	



Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

# Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3E15048 - EPA 200.2 DCN 10	017 Rev 10										
Matrix Spike Dup (3E15048-MSD2)	1		Source: 23051	82-03							
Antimony [He]	5/17/23 14:13	0.097	0.00200	mg/L	0.100	0.0003	96.6	70-130	2.49	20	
Arsenic [NG]	5/17/23 14:13	0.096	0.00200		0.100	ND	96.1	70-130	0.206	20	
Beryllium [He]	5/17/23 14:13	0.104	0.00100		0.100	ND	104	70-130	1.94	20	
Cadmium [He]	5/17/23 14:13	0.098	0.00100		0.100	ND	98.2	70-130	2.46	20	
Chromium [He]	5/17/23 14:13	0.101	0.00100		0.100	ND	101	70-130	0.971	20	
Cobalt [He]	5/17/23 14:13	0.092	0.00100		0.100	0.0002	92.0	70-130	1.16	20	
Lead [He]	5/17/23 14:13	0.101	0.00100		0.100	ND	101	70-130	2.02	20	
Molybdenum [He]	5/17/23 14:13	0.103	0.00100		0.100	ND	103	70-130	1.79	20	
Selenium [NG]	5/17/23 14:13	0.098	0.00500		0.100	ND	97.6	70-130	0.0998	20	
Thallium [He]	5/17/23 14:13	0.101	0.00500		0.100	ND	101	70-130	2.07	20	



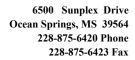
Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

# Mercury by EPA 200 Series Methods CVAAS - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
	Allalyzeu				Level	Mesuit		LIIIIII		LIIIII	
Batch 3E16050 - EPA 245.1 DCN 1017	7 Rev 10										
Blank (3E16050-BLK1)											
Mercury	5/16/23 10:52	ND	0.00200	mg/L							
LCS (3E16050-BS1)											
Mercury	5/16/23 10:56	0.005	0.00200	mg/L	0.00500		98.0	85-115			
LCS Dup (3E16050-BSD1)											
Mercury	5/16/23 10:59	0.005	0.00200	mg/L	0.00500		96.0	85-115	2.06	20	
Matrix Spike (3E16050-MS1)			Source: 23052	32-11							
Mercury	5/16/23 12:08	0.005	0.00200	mg/L	0.00500	ND	98.0	70-130			
Matrix Spike (3E16050-MS2)			Source: 23052	32-01							
Mercury	5/16/23 12:34	0.005	0.00200	mg/L	0.00500	ND	98.0	70-130			
Matrix Spike Dup (3E16050-MSD1)			Source: 23052	32-11							
Mercury	5/16/23 12:16	0.005	0.00200	mg/L	0.00500	ND	90.0	70-130	8.51	20	
Matrix Spike Dup (3E16050-MSD2)			Source: 23052	32-01							
Mercury	5/16/23 12:39	0.005	0.00200	mg/L	0.00500	ND	102	70-130	4.00	20	





Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### **Certified Analyses Included in this Report**

Analyte	Certification Code
EPA 200.7 Rev 4.4 in Water	
Aluminum 394.401 [Radial]	C01,C02
Aluminum 396.152 [Radial]	C01,C02
Antimony 206.833 [Axial]	C01,C02
Arsenic 193.759 [Axial]	C01,C02
Barium 455.403 [Radial]	C01,C02
Barium 493.409 [Radial]	C01,C02
Beryllium 313.042 [Axial]	C01,C02
Boron 249.773 [Radial]	C01,C02
Cadmium 228.802 [Axial]	C01,C02
Calcium 315.887 [Radial]	C01,C02
Chromium 283.563 [Axial]	C01,C02
Cobalt 228.616 [Axial]	C01,C02
Copper 324.754 [Axial]	C01,C02
Iron 259.940 [Axial]	C01,C02
Iron 259.940 [Radial]	C01,C02
Lead 220.353 [Axial]	C01,C02
Lithium 610.362 [Axial]	C01,C02
Magnesium 285.213 [Radial]	C01,C02
Manganese 257.610 [Axial]	C01,C02
Molybdenum 202.030 [Axial]	C01,C02
Nickel 231.604 [Axial]	C01,C02
Potassium 766.490 [Radial]	C01,C02
Phosphorus 178.284 [Axial]	C01,C02
Phosphorus 178.284 [Radial]	C01,C02
Selenium 196.090 [Axial]	C01,C02
Silver 328.068 [Axial]	C01,C02
Sodium 589.592 [Axial]	C01,C02
Sodium 589.592 [Radial]	C01,C02
Strontium 346.446 [Radial]	C01,C02
Strontium 421.552 [Radial]	C01,C02
Thallium 190.856 [Axial]	C01,C02
Vanadium 309.311 [Axial]	C01,C02
Zinc 213.856 [Axial]	C01,C02
EPA 200.8 Rev 5.4 in Water	
Aluminum [He]	C01,C02
Antimony [He]	C01,C02
Antimony [HHe]	C01,C02
Antimony [NG]	C01,C02
Arsenic [He]	C01,C02
Arsenic [HHe]	C01,C02
Arsenic [NG]	C01,C02





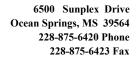
Choctaw Generation LP	Project: CGLP CCR Annual	
2391 Pensacola Rd.	Project Number: [none]	Reported:
Ackerman MS, 39735	Project Manager: Jim Ward	06/13/2023 08:18

Barium [He]	C01,C02
Beryllium [He]	C01,C02
Boron [NG]	C01,C02
Cadmium [He]	C01,C02
Cadmium [HHe]	C01,C02
Cadmium [NG]	C01,C02
Chromium [He]	C01,C02
Cobalt [He]	C01,C02
Copper [He]	C01,C02
Copper [NG]	C01,C02
Iron [He]	C01,C02
Lead [He]	C01,C02
Lead [NG]	C01,C02
Manganese [He]	C01,C02
Molybdenum [He]	C01,C02
Nickel [He]	C01,C02
Selenium [He]	C01,C02
Selenium [HHe]	C01,C02
Selenium [NG]	C01,C02
Silver [He]	C01,C02
Silver [NG]	C01,C02
Strontium [He]	C01,C02
Thallium [He]	C01,C02
Vanadium [He]	C01,C02
Zinc [He]	C01,C02

#### EPA 245.1 Rev 3.0 in Water

Mercury C01,C02

<sup>\*\*</sup>Only compounds included in this list are associated with accredited analyses\*\*





Project: CGLP CCR Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 06/13/2023 08:18

#### Laboratory Accreditations/Certifications

Code	Description	Number	Expires
C01	LA Environmental Lab Accreditation Program	01960	06/30/2023
C02	The NELAC Institute (NELAP)	TNI01397	06/30/2023
C03	Ms Dept of Health (Drinking Water Microbiology)	MS00021	12/31/2023
C04	Ms Dept of Health (Drinking Water Chemistry)	MS00021	12/31/2023
C05	Ms DEQ Lead Firm Certification	PBF-00000028	03/31/2024
C06	MsDEQ Asbestos Inspector : C.D. Bingham	ABI-00001348	02/09/2024
C07	MsDEQ Air Monitor : C.D. Bingham	AM-011572	02/10/2024
C08	MsDEQ Asbestos Inspector: C. W. Meins	ABI-00001821	09/09/2022
C09	MsDEQ Air Monitor: C.W. Meins	AM-011189	02/10/2024
C14	MsDEQ Lead Paint Inspector : C.D. Bingham	PBI-00003690	02/07/2024
C15	MsDEQ Lead Paint Inspector : C.W. Meins	PBI-00001740	02/07/2024

#### **Report Definitions**

TNC DET ND NR	Too Numerous To Count Analyte DETECTED Analyte NOT DETECTED at or above the minimum reporting limit Not Reported
RPD ICV	Relative Percent Difference  Initial Calibration Verfiication
CCV	Continuing Calibration Verification Standard
SSV	Secondary Source Verification Standard
LCS	Lab Control Spike - Lab matrix prepared with known concentration of analyte/s of interest analyzed by method.
MS	Matrix Spike - Sample prepared with known concentration of analyte/s of interest analyzed by method.
MSD	Matrix Spike Duplicate - Duplicate sample prepared with known concentration of analyte/s of interest analyzed by method.
MRL	Minimum Reporting Limit
%REC	Percentage Recovery of known concentration added to matrix
Batch	Group of samples prepared for analysis not to exceed 20 samples.
Matrix	Material containing analyte/s of interest
Surrogate	Analyte added to sample to determine extraction efficiency of method.





Choctaw Generation LP Project: CGLP CCR Annual

2391 Pensacola Rd. Project Number: [none] Reported:
Ackerman MS, 39735 Project Manager: Jim Ward 06/13/2023 08:18

# **Analyst Initials Key**

 FullName
 Initials

 Charles L Vorhoff
 CLV

 Christa R Gray
 CRG

 Garrett Givhan
 GWG

 Sarah E. Tomek
 SET

 Teresa Meins
 TKM

 Tina Tomek
 TPT



PO Box 1410, Ocean Springs, MS 39566-1410 (228) 875-6420 FAX (228) 875-6423

www.micromethodslab.com

Chain of Custody Record

Lab ID# MS00021

LELAP ID # 01960 TNI ID # TNI01397

Print Form

1205231

d Partnership	LLP P	oject Ma	anager:			Jim		ard				Į.	rn Arc	T bnuc	ime &	Report	ng
Rd.	٦	ırchase	Order #	."							X Nor	Ourno	ormal tur *	n around	time is 1	0 working	days
Zip: 39735	m	mail Ado	iress:	MW	ard	080		ern	0.0	mo	Ne	ct Day*	ē	quests	must be	, ,	Mail
	S	ampler N		inted:	) and	× (	3	1	12	Jul 10C		er*	75	rior ap	proved.	1 1	Email
	S	ampler N	lame Si	aned 2	0	2	1/2	N	1		QC Lev	el: Leve	7	Leve	2	evel 3	
			0	List /	halys	es Re	ques	red (	U			Fie	ld Te	sting			
CR	re P	eservative	-		-			-	- 1		ID# Field Te	st Field	J Test F	# ield Tesi	ID#		r <b>ix:</b> later
<u>a</u>	ontaine	G) or		senic	ryllium Imium,	omium,	hium, ercury	enium		& 228							DW = Drinking Water
		Grab (		A	Be	Chr	Lit Me	Se		226						SO = 30	Soil
138			X	X	X	X	X	X	X							L=Li	quid
123 15:30	H	4 0	X	X	X	$\stackrel{\frown}{\times}$	X	X	X							Q = Q	= =
13 14.05		4 0	X	X	X	$\times$	X	X	X	_						S= 15	ludge
123 /3:45		4 0	×	×	X	X	X	X	$\times$	_							
23 10130		4 G	X	X	X	X	X	X	X	$\hat{}$							•
23 10:38		4 G	X	X	X	$\hat{\times}$	X	X	X	$\triangle$						Pres	Preservation:
		4 0	X	X	X	$\hat{\times}$	X	X	$\times$	$\hat{}$						1= H2 2= H3	PO4
	_	G G	×	X	X	X	X	X	X	$\hat{}$						3=Na	SH.
23 11:25		G	×	X	X	X	X	X	X							4=Zn	4=ZnC4H10O6 8
	_	<u>4</u> ۵	X	X	X	X	X	X	X	$\hat{}$						N 1	NaOH
3/5.24	-	G G	×	X	X	X	X	X	X							7-N3:	03
Cool	er#		Recei	pt Ten	np Cor	rected	å			1						2H=8 >=N=.	20203
×			Samp	e	Blank	X	Cooler				**All Te	mps are	Correc	ed Valu	es**	9=Nai	1SO4
	A.	signatur	0		00	mpany		ate	===	ne	Notes:				٠	J.	
85	XX.	2	N		E	Ä	10	John	17	5	Plea	ž V	Z	・ エ	day	cooks	4
		,					1		+		5	5	70	1	,		
1	10	1	1								کر و د د	7	2	ان ال	~	000	
UPACA	VIV	5	B	re	1	M	N	5/11/2	30	8	32	P4 22		÷	7	ا م ا د	
		0	1					1			22	2	200	2	11	. =	7
	acola Rd.  le: MS Zip: 39735  Annual  Sampling Date/Time Co.  Silo/23 1/5:30  Silo/23 1/3:4:30  Silo/23 1/3:4:30  Silo/23 1/3:4:30  Silo/23 1/3:25  Silo/23 1/3:26  Silo/23 1/	Rd.  PRd.  Zip: 39735  CR  CR  Signature   Properties   P	Rd.  Project Matrix Sampler N	39735  R    Project Ma   Purchase   Purchase   Add   Purchase   Sampler N   Sa						Jim Ward  Southernc  Company  Company  Cooler  Cooler		Antimony, Arsenic Barium, Beryllium Cadmium, Cobalt Lithium, Mercury Molybdenum, Selenium Selenium  Thallium  Total Radium 226 & 228	Jim Ward  Southernco.com  Next  Company  Barlium, Beryllium Beryllium, Cooler  Company  Date  Company  Date  Time  Notes:  Sliphs 17:45  Pleas  Company  Date  Notes:  Pleas  Company  Date  Notes:  Pleas  Column  Cooler  Notes:  Cooler  Notes:  Company  Date  Notes:  Cooler  Notes:  Coo	Jim Ward  Southernco.com  Next  Company  Barlium, Beryllium Cadmium, Cobalt Chromium, Lead Lithium, Mercury Molybdenum, Selenium Thallium  Total Radium 226 & 228  Sliphs 17:45  Pleas  Molybden  Notes: Field Test  Pleas  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas  Molybden  Time Notes: Pleas  Molybden  Time Notes: Pleas  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas	Jim Ward  Southernco.com  Next  Company  Barlium, Beryllium Cadmium, Cobalt Chromium, Lead Lithium, Mercury Molybdenum, Selenium Thallium  Total Radium 226 & 228  Sliphs 17:45  Pleas  Molybden  Notes: Field Test  Pleas  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas  Molybden  Time Notes: Pleas  Molybden  Time Notes: Pleas  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas  Molybden  Total Radium 226 & 228  Molybden  Total Radium 226 & 228  Molybden  Time Notes: Pleas	Jim Ward  Southernco.com  Next  Company  Barlium, Beryllium Beryllium, Cooler  Company  Date  Company  Date  Time  Notes:  Sliphs 17:45  Pleas  Company  Date  Notes:  Pleas  Company  Date  Notes:  Pleas  Column  Cooler  Notes:  Cooler  Notes:  Company  Date  Notes:  Cooler  Notes:  Coo	Turn Around Time & Re Our normal turn around time is 10 we intered a serious, Arssenic Barium, Beryllium Beryllium Beryllium Beryllium Cadmium, Cobaim, Lead Lithium, Dur Beryllium Beryllium Beryllium Beryllium Cadmium, Cobaim, Lead Lithium, Dur Beryllium Dur

DCN F316 Rev.6 MicroMethods Laboratory Issued/Revised 6/15/22

Received by



PO Box 1410, Ocean Springs, MS 39566-1410 (228) 875-6420 FAX (228) 875-6423

Chain of Custody Record

Lab ID# MS00021 LELAP ID # 01960 TNI ID # TNI01397

2305232

www.micromethodsiab.com										
Company Name: Choctaw Generation Limited Partnership LLLP Project Manager	mited Partnership LLLF	Project Ma	inager:	_	Jim W	Ward		Turn	Turn Around Time & Reporting	eporting
Address: 2391 Pensacola	a Rd.	Purchase Order #:	Order #:					Our normal	Our normal turn around time is 10 working days  *All rush orderPh	working days Phone
City: Ackerman State: MS	<sup>Zip:</sup> 39735	Email Address	beams II	vard@	)sout	hernc	mward@southernco.com	Next Day*	requests must be	Mail Fax
Phone: 662-387-5758		Sampler Name	lame Printed	ancs	Cm	and the	TEMBERICA	_Other*	Total special sections.	Email
Fax:		Sampler Na	lamerSigned:	Der.	7	B	+	QC Level: Level 1	Level 2	Level 3
			List	List Analyses Requested	s Reque	sted	\r	Field	Field Testing	
Project Name: CGLP CCR	CCR	servat	Э			-	m B	Field Test Field Tes	ID# ID# ID# ID# ID# Field Test Field Test Field Test	Matrix: W = Water
Project #: Annual	lual	ontaine G) or osite (0	ioride	rium, ryllium lmium, obalt	ead nium, ercury	denur enium	Radiu & 228			DW = Drinking Water
Sample Identification	Sampling Matrix Date/Time Code	Grab (	Flu	Ba Be Cad	Chr I Lit	Molyl Se				SO = Soil SE = Sediment
CCR-5	5/10/23 14:40 W		×	×	X	X	X			L=Liquid
										O = Oil SL = Sludge
			1	-	-					
										Preservation:
										2= H3PO4
										3=NaOH 4=ZnC4H10O6
										NaOH
	50		-			_				6=HNO3
Received on Ice; 1) N Thermometer#	Cooler #		Receipt Temp Corrected CO	Blank	* (Onler	P		**All Tomos are Corrected Values**	rrocted Values**	L 8=HCl
Printec	ame	Signature	e e	Con	Company	Date	Time	Notes:		
Relinquished by	ames Ch	13 Com	N	ECS	N.	Sho/2	5	Please ser	Please send 4-day cockes buck	ches buck
Received by FRD FX								2000	Tar -	
Relinquished by				•				000		
Received by	MARKE SAVI	My.	DIVIDE STATES	7	MAN	5/11/2	S ()XX			
Relinquished by	0	0			4	-				
Deceived by										

DCN F316 Rev.6 MicroMethods Laboratory Issued/Revised 6/15/22



June 12, 2023

Tina Tomek Micro-Methods Lab 6500 Sunplex Drive Ocean Springs, MS 39564

RE: Project: 2305232

Pace Project No.: 30589504

#### Dear Tina Tomek:

Enclosed are the analytical results for sample(s) received by the laboratory on May 18, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

• Pace Analytical Services - Greensburg

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

Sincerely,

Justin P. Horn justin.horn@pacelabs.com (724)850-5600

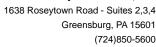
Justen Hown

Project Manager

Enclosures

cc: Accounts Payable, Micro-Methods Lab







#### **CERTIFICATIONS**

Project: 2305232
Pace Project No.: 30589504

#### Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

**Arkansas Certification** 

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

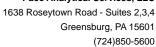
South Dakota Certification
Tennessee Certification #: 02867

Ohio EPA Rad Approval: #41249

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L

# REPORT OF LABORATORY ANALYSIS



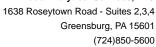


# **SAMPLE SUMMARY**

Project: 2305232
Pace Project No.: 30589504

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30589504001	2305232-01	Water	05/10/23 11:58	05/18/23 09:50
30589504002	2305232-02	Water	05/10/23 15:30	05/18/23 09:50
30589504003	2305232-03	Water	05/10/23 14:05	05/18/23 09:50
30589504004	2305232-04	Water	05/10/23 13:45	05/18/23 09:50
30589504005	2305232-05	Water	05/10/23 10:30	05/18/23 09:50
30589504006	2305232-06	Water	05/10/23 10:38	05/18/23 09:50
30589504007	2305232-07	Water	05/10/23 00:00	05/18/23 09:50
30589504008	2305232-08	Water	05/10/23 14:40	05/18/23 09:50
30589504009	2305232-09	Water	05/10/23 11:25	05/18/23 09:50
30589504010	2305232-10	Water	05/10/23 12:20	05/18/23 09:50
30589504011	2305232-11	Water	05/10/23 15:24	05/18/23 09:50
30589504012	2305232-12	Water	05/10/23 14:40	05/18/23 09:50

# **REPORT OF LABORATORY ANALYSIS**





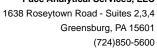
# **SAMPLE ANALYTE COUNT**

Project: 2305232 Pace Project No.: 30589504

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30589504001	2305232-01	EPA 903.1		1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504002	2305232-02	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504003	2305232-03	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504004	2305232-04	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504005	2305232-05	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504006	2305232-06	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504007	2305232-07	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504008	2305232-08	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504009	2305232-09	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504010	2305232-10	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504011	2305232-11	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30589504012	2305232-12	EPA 903.1	JLJ	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1

# **REPORT OF LABORATORY ANALYSIS**

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





# **SAMPLE ANALYTE COUNT**

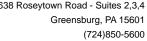
Project: 2305232 Pace Project No.: 30589504

Analytes

Lab ID Sample ID Method Analysts Reported

PASI-PA = Pace Analytical Services - Greensburg

# **REPORT OF LABORATORY ANALYSIS**





# **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 2305232
Pace Project No.: 30589504

<b>Sample: 2305232-01</b> PWS:	<b>Lab ID: 30589</b> Site ID:	<b>504001</b> Collected: 05/10/23 11:58 Sample Type:	Received:	05/18/23 09:50	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.229 ± 0.350 (0.563) C:NA T:95%	pCi/L	06/12/23 15:22	2 13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.352 ± 0.353 (0.728) C:80% T:85%	pCi/L	06/06/23 11:39	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.581 ± 0.703 (1.29)	pCi/L	06/12/23 17:14	1 7440-14-4	
<b>Sample: 2305232-02</b> PWS:	<b>Lab ID: 30589</b> Site ID:	504002 Collected: 05/10/23 15:30 Sample Type:	Received:	05/18/23 09:50	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Gervices - Greensburg				
Radium-226	EPA 903.1	0.719 ± 0.603 (0.863) C:NA T:90%	pCi/L	06/12/23 15:22	2 13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	1.84 ± 0.574 (0.760) C:90% T:81%	pCi/L	06/06/23 11:39	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	2.56 ± 1.18 (1.62)	pCi/L	06/12/23 17:14	1 7440-14-4	
Sample: 2305232-03	Lab ID: 30589	504003 Collected: 05/10/23 14:05	Received:	05/18/23 09:50	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.628 ± 0.498 (0.648) C:NA T:95%	pCi/L	06/12/23 15:22	2 13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.494 ± 0.414 (0.840) C:87% T:85%	pCi/L	06/06/23 11:39	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	1.12 ± 0.912 (1.49)	pCi/L	06/12/23 17:14	7440-14-4	

# **REPORT OF LABORATORY ANALYSIS**

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

(724)850-5600



# **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 2305232
Pace Project No.: 30589504

<b>Sample: 2305232-04</b> PWS:	<b>Lab ID: 305895</b> Site ID:	<b>04004</b> Collected: 05/10/23 13:45 Sample Type:	Received:	05/18/23 09:50	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	rvices - Greensburg				
Radium-226	EPA 903.1	0.750 ± 0.695 (1.06) C:NA T:101%	pCi/L	06/12/23 15:22	2 13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 904.0	0.539 ± 0.365 (0.704) C:81% T:93%	pCi/L	06/06/23 11:39	15262-20-1	
	Pace Analytical Se	rvices - Greensburg				
Total Radium	Total Radium Calculation	1.29 ± 1.06 (1.76)	pCi/L	06/12/23 17:14	1 7440-14-4	
<b>Sample: 2305232-05</b> PWS:	<b>Lab ID: 305895</b> Site ID:	<b>04005</b> Collected: 05/10/23 10:30 Sample Type:	Received:	05/18/23 09:50	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg		·		
Radium-226	EPA 903.1	0.159 ± 0.494 (0.957) C:NA T:95%	pCi/L	06/12/23 15:22	2 13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 904.0	0.757 ± 0.413 (0.750) C:84% T:85%	pCi/L	06/06/23 11:39	15262-20-1	
	Pace Analytical Se	rvices - Greensburg				
Total Radium	Total Radium Calculation	0.916 ± 0.907 (1.71)	pCi/L	06/12/23 17:14	1 7440-14-4	
<b>Sample: 2305232-06</b> PWS:	<b>Lab ID: 305895</b> Site ID:	<b>04006</b> Collected: 05/10/23 10:38 Sample Type:	Received:	05/18/23 09:50	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 903.1	0.370 ± 0.754 (1.34) C:NA T:90%	pCi/L	06/12/23 15:22	2 13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 904.0	0.675 ± 0.385 (0.706) C:83% T:89%	pCi/L	06/06/23 11:39	15262-20-1	
	Pace Analytical Se	rvices - Greensburg				
Total Radium	Total Radium Calculation	1.05 ± 1.14 (2.05)	pCi/L	06/12/23 17:14	7440-14-4	

# **REPORT OF LABORATORY ANALYSIS**

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

(724)850-5600



**ANALYTICAL RESULTS - RADIOCHEMISTRY** 

Project: 2305232
Pace Project No.: 30589504

<b>Sample: 2305232-07</b> PWS:	<b>Lab ID: 305895</b> Site ID:	<b>04007</b> Collected: 05/10/23 00:00 Sample Type:	Received:	05/18/23 09:50	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	rvices - Greensburg				
Radium-226	EPA 903.1	0.506 ± 0.588 (0.948) C:NA T:91%	pCi/L	06/12/23 15:40	13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 904.0	0.690 ± 0.422 (0.795) C:81% T:88%	pCi/L	06/06/23 11:39	15262-20-1	
	Pace Analytical Se	rvices - Greensburg				
Total Radium	Total Radium Calculation	1.20 ± 1.01 (1.74)	pCi/L	06/12/23 17:14	1 7440-14-4	
<b>Sample: 2305232-08</b> PWS:	<b>Lab ID: 305895</b> Site ID:	<b>04008</b> Collected: 05/10/23 14:40 Sample Type:	Received:	05/18/23 09:50	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	rvices - Greensburg				
Radium-226	EPA 903.1	0.468 ± 0.614 (1.02) C:NA T:87%	pCi/L	06/12/23 15:40	13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 904.0	0.537 ± 0.408 (0.808) C:79% T:86%	pCi/L	06/06/23 11:39	15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	1.01 ± 1.02 (1.83)	pCi/L	06/12/23 17:14	1 7440-14-4	
Sample: 2305232-09	Lab ID: 305895	<b>04009</b> Collected: 05/10/23 11:25	Received:	05/18/23 09:50	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	rvices - Greensburg				
Radium-226	EPA 903.1	0.904 ± 0.669 (0.905) C:NA T:96%	pCi/L	06/12/23 15:40	13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 904.0	0.699 ± 0.417 (0.788) C:82% T:90%	pCi/L	06/06/23 11:32	2 15262-20-1	
		rvices - Greensburg				
Total Radium	Total Radium Calculation	1.60 ± 1.09 (1.69)	pCi/L	06/12/23 17:14	7440-14-4	

# **REPORT OF LABORATORY ANALYSIS**

(724)850-5600



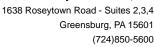
# **ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 2305232
Pace Project No.: 30589504

<b>Sample: 2305232-10</b> PWS:	<b>Lab ID: 30589</b> Site ID:		Received:	05/18/23 09:50 M	latrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.0686 ± 0.404 (0.824) C:NA T:91%	pCi/L	06/12/23 15:40	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	1.08 ± 0.492 (0.841) C:79% T:85%	pCi/L	06/06/23 11:32	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	1.15 ± 0.896 (1.67)	pCi/L	06/12/23 17:14	7440-14-4	
Sample: 2305232-11	Lab ID: 30589	504011 Collected: 05/10/23 15:24	Received:	05/18/23 09:50 M	latrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Gervices - Greensburg		•		
Radium-226	EPA 903.1	0.144 ± 0.529 (1.02) C:NA T:96%	pCi/L	06/12/23 15:40	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.804 ± 0.460 (0.853) C:79% T:82%	pCi/L	06/06/23 11:32	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.948 ± 0.989 (1.87)	pCi/L	06/12/23 17:14	7440-14-4	
Sample: 2305232-12	Lab ID: 30589		Received:	05/18/23 09:50 N	latrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.378 ± 0.613 (1.07) C:NA T:92%	pCi/L	06/12/23 15:40	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.320 ± 0.327 (0.678) C:87% T:91%	pCi/L	06/06/23 14:45	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.698 ± 0.940 (1.75)	pCi/L	06/12/23 17:14	7440-14-4	

# **REPORT OF LABORATORY ANALYSIS**

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





#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2305232 Pace Project No.: 30589504

QC Batch: 590573 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30589504001, 30589504002, 30589504003, 30589504004, 30589504005, 30589504006, 30589504007,

30589504008, 30589504009, 30589504010, 30589504011, 30589504012

METHOD BLANK: 2870025 Matrix: Water

Associated Lab Samples: 30589504001, 30589504002, 30589504003, 30589504004, 30589504005, 30589504006, 30589504007,

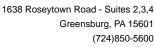
30589504008, 30589504009, 30589504010, 30589504011, 30589504012

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.421 ± 0.364 (0.734) C:77% T:87%
 pCi/L
 06/06/23 11:39

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

#### **REPORT OF LABORATORY ANALYSIS**





#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2305232 Pace Project No.: 30589504

QC Batch: 590572 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30589504001, 30589504002, 30589504003, 30589504004, 30589504005, 30589504006, 30589504007,

30589504008, 30589504009, 30589504010, 30589504011, 30589504012

METHOD BLANK: 2870024 Matrix: Water

Associated Lab Samples: 30589504001, 30589504002, 30589504003, 30589504004, 30589504005, 30589504006, 30589504007,

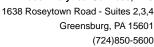
30589504008, 30589504009, 30589504010, 30589504011, 30589504012

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.114 ± 0.273 (0.527) C:NA T:96%
 pCi/L
 06/12/23 15:22

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

#### **REPORT OF LABORATORY ANALYSIS**





#### **QUALIFIERS**

Project: 2305232
Pace Project No.: 30589504

#### **DEFINITIONS**

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Date: 06/12/2023 05:17 PM

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.



Due

# **SUBCONTRACT ORDER**

Page 13 of 17 Page 44 of 48

# Sending Laboratory:

Micro-Methods Laboratory, Inc.

6500 Sunplex Drive

Ocean Springs, MS 39564

Phone: 228.875.6420 Fax: 228.875.6423

Project Manager: Teresa Meins

# **Subcontracted Laboratory:**

Pace Analytical-7

Comments

1638 Roseytown Rd. Suites 2, 3, 4

Greensburg, PA 15601

Phone: (724) 850-5600

Fax: -

work (	oraer	: 230	J5232

**Analysis** 

Sample ID: 2305232-01	Water S	ampled:	05/10/2023	11:58	Sample Name:	MW-7	
Radium, Total 226 & 228 by EPA	903.1 & 90	05/19/2	2023 06/07/2	023 11:58			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 100	0mL Plastic w	/HNO3 (B)					
Sample ID: 2305232-02	Water S	ampled:	05/10/2023	15:30	Sample Name:	MW-9	
Radium, Total 226 & 228 by EPA	903.1 & 90	05/19/2	2023 06/07/2	023 15:30			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 100	00mL Plastic w	/HNO3 (B)	-				
Sample ID: 2305232-03	Water S	ampled:	05/10/2023	14:05	Sample Name:	MW-12	
Radium, Total 226 & 228 by EPA	903.1 & 90	05/19/2	2023 06/07/2	023 14:05			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 100	IOmL Plastic w	//HNO3 (B)					
Sample ID: 2305232-04	Water S	ampled:	05/10/2023	13:45	Sample Name:	MW-13	
Radium, Total 226 & 228 by EPA	903.1 & 90	05/19/2	2023 06/07/2	023 13:45			
Containers Supplied: 1000mL Plastic w/HNO3 (A) 100	00mL Plastic v	//HNO3 (B)					
Sample ID: 2305232-05	Water S	ampled:	05/10/2023	10:30	Sample Name:	MW-14	
Radium, Total 226 & 228 by EPA	903.1 & 90	05/19/2	2023 06/07/2	023 10:30			
Smah Jomeh Released By	5/1	5/23( Date	1630		05 ved By	5/15/23	30 1030 Date
1199				.//-	2 11	5/	18123951
Released By		Date	Anna V	Receiv	ed By		Date
Released By		 Date		Receiv	•		Date
Released By		Date		Recei	WO#:30	589504	
Released By		Date	Pa	Rece	30589504		

Page 1 of 3

**Expires** 



# SUBCONTRACT ORDER

(Continued)

Work Order: 2305232 (Continued)

Analysis	Due	Expires	Comments	
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plasti	ic w/HNO3 (B)	1998 (Blange) and a 18 a consequence of the last of th	To and a state of the state of	ann a thail an thair
Sample ID: 2305232-06 Water	Sampled: 05/	10/2023 10:38	Sample Name:	Field Blank
Radium, Total 226 & 228 by EPA 903.1 &	90 05/19/2023	06/07/2023 10:38		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plasti	ic w/HNO3 (B)			
Sample ID: 2305232-07 <i>Water</i>	Sampled: 05/	10/2023 00:00	Sample Name:	Duplicate
Radium, Total 226 & 228 by EPA 903.1 &	90 05/19/2023	06/07/2023 00:00		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plasti	c w/HNO3 (B)			
Sample ID: 2305232-08 <i>Water</i>	Sampled: 05/.	10/2023 14:40	Sample Name:	OW-2
Radium, Total 226 & 228 by EPA 903.1 &	90 05/19/2023	06/07/2023 14:40		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plasti	c w/HNO3 (B)			
Sample ID: 2305232-09 <i>Water</i>	Sampled: 05/	10/2023 11:25	Sample Name:	CCR-2
Radium,Total 226 & 228 by EPA 903.1 &	90 05/19/2023	06/07/2023 11:25		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plasti	c w/HNO3 (B)			
Sample ID: 2305232-10 <i>Water</i>	Sampled: 05/	10/2023 12:20	Sample Name:	CCR-3
Radium, Total 226 & 228 by EPA 903.1 &	90 05/19/2023	06/07/2023 12:20		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plasti	c w/HNO3 (B)			
Sample ID: 2305232-11 <i>Water</i>	Sampled: 05/.	10/2023 15:24	Sample Name:	CCR-4
Radium, Total 226 & 228 by EPA 903.1 &	90 05/19/2023	06/07/2023 15:24		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plasti	c w/HNO3 (B)			
Sample ID: 2305232-12 <i>Water</i>	Sampled: 05/.	10/2023 14:40	Sample Name:	CCR-5
Smap Jomeh 5%.	15/230 16	30	WS	5/15/23 1 1630
Released By	<sup>*</sup> Date	Receiv	ed By	Date
UPS			Just 1	25 S/1812) (SI
Released By	Date	Receiv	ed By	Date
Released By	Date	Receiv	ed By	Date
Released By	Date	Recei	WO#:30	0589504
Released By	Date	Rece	PM: JPH CLIENT: MICRO	Due Date: 06/09/23 DMETHOD

Page 2 of 3

Page 14 of 17 Page 45 of 48



# SUBCONTRACT ORDER

(Continued)

Work Order: 2305232 (Continued)

Analysis	Due	Expires	Comments	
Sample ID: 2305232-12 <i>Water</i>	Sampled: 05/2	10/2023 14:40	Sample Name: CCR-5	
Radium, Total 226 & 228 by EPA 903.1 & 9	0 05/19/2023	06/07/2023 14:40		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic	w/HNO3 (B)			

WO#: 30589504

PM: JPH

Due Date: 06/09/23

CLIENT: MICROMETHOD

Smah Jameh	5/15/23 / 1630	WS 5	15/230/630
Released By	Date	Received By	Date
MS		Dan Alle	5 5/18/29 95
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date

	DC#_Title: ENV-FRM-G Pittsburgh	BUR	-008	8 v04	_Sample Conditio WO#: 3	n Upon Receipt- 30589504
Pace AMALYTICAL SERVICES	Effective Date: 02/03/2023	<u> </u>			PM: JPH CLIENT: MI	Due Date: 06/09/23 CROMETHOD
	Micro-Methods	•				
	Ex UPS USPS Client C	J Comi	mercia 1 🖊 1	11 ∐ Pa 9 <b>%</b> €	sce U Other	Examined By
Tracking Numb					T _ '	
<b>Custody Seal or</b>	,	s 🗆 No		Seals I	-	Labeled By
Thermometer U	Jsed: Type	e of Ico	e: W	et Bl	ue (lone)	Temped By
Cooler Tempera Temp should be abo	ature: Observed Temp ove freezing to 6°C	- I	∘C	Correc	ction Factor:	∘C Final Temp:•C
					pH paper Lot#	D.P.D. Residual Chlorine Lot #
Comments:		Yes	No	NA	100312	
Chain of Custod	ly Present	7			1.	
Chain of Custod	ly Filled Out:	J	١,		2.	A MANAGE AND A MAN
	t corrections present on COC		7	<u> </u>		
Chain of Custod		7		ļ	3.	
	& Signature on COC:	<u> </u>	7	-	4.	
Sample Labels r					5.	- Indiana - Indi
	ate/time/ID	L @	· ·			
Matrix:		-	1			
	d within Hold Time:	7	ļ	<del> </del>	6.	
	e Analysis (<72hr	-	1)		7.	
remaining):	1 = D =t1		3	<del>                                     </del>	8.	
	and Time Requested:	1	-	-	9.	
Sufficient Volur Correct Contair		1			10.	
_	ainers Used		<del>\</del>			
Containers Inta		1			11.	
Orthophosphat	<del>"M. ' "M. ' "M. ' " " " " " " " " " " " " " " " " " " </del>			1	12.	
	s samples field filtered:	T		1)	13.	
	es checked for dechlorination			1	14:	
	received for dissolved tests:	Ι,		17	15:	
	checked for preservation:	7			16.	
exceptions	: VOA, coliform, TOC, O&G, Radon, non-aqueous matrix				PHIL	
	meet method preservation		T		Initial when 1	Date/Time of
requireme		<u> </u>			completed \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Preservation
1					Preservative	
9260C/D: Head	Isnace in VOA Vials (> 6mm)	T		7	17.	

18.

Initial when  ${\cal N}$ 

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.

PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Survey Meter SN: 1563

Trip blank custody seal present? YES or NO

Trip Blank Present:

Comments:

624.1: Headspace in VOA Vials (0mm)

Rad Samples Screened <0.5 mrem/hr.

DC#\_Title: ENV-FRM-GBUR-0072 v02\_Sample Container Count Offshore Projects Effective Date: 1/11/2023

	ı <b>1</b>				Τ	T	T	Ι -	Ţ	T		<u> </u>	Ī	Γ	Γ.	<u> </u>	l
						_											
										_	,						
				กเอย									1				
vicensiisiide (; 19 g	m/s/cinmininum.	IN Jackinson	-tatamanaa	<u>en</u>	injuma antatrici	: A335					i- amingano	× ,,,,,,,,,,,		m m		distribution	in in the same of the same
Ó			Other	ISGN								3/2000		Due Date: 06/09/23			
0 2 0 0 0 0			0	ดาด									其	90 :			
_				ยกวอ	)								30589504	Date			
<u>_</u>				ЭТЬГС										ang	1H0D		and the second
Profile Number				мекп			ļ								ROME		
ile Z	တ္သ			WGFU									61		CLIENT: MICROMETHOD		
Prof	Notes			MAOV									#01	<b>3</b>   <b>3</b>			
				UGĐV											E	 	
			Vials	T69V													
				Н6ЭЛ													
				\$69G													
				บยฯส													
	of			8638													
				ВРЗИ													
	Je.		stic	ВРЗС													
	Page		Plastic	BP2U													
ı				8248													
				Urqa													
				BP1N	4-									1	and the same of	7	
		l		TGĐA	-												
			ass	Ng⊝∀													
	$\downarrow$		Amber Glass	บยอ∀													
	र्		Amb	S£Ð4									-				
	2			нгәА													
	てるのちょっこん	L		XintsM	13					- Company of the Comp		Verzie, george				7	· Codes
Client	Site		ľ	Sample Line Item		لم	S	5	S	9	5	P	Ø	9	-5	لِي	Container Codes

 i_		entinale la scient	ines/pienestis	AITAD III YILL		en a la l	aasanaa	900/ALAD-07	ALLIEU AL		sesee
Plastic/Misc.	1 gallon cubitainer	1/2 gallon cubitainer	120mL coliform Na Thiosulfate	1L plastic HNO3	1L plastic unpreserved	250mL plastic H2SO4	250mL plastic HNO3	250mL plastic unpreserved	250mL plastic NAOH	500mL plastic H2SO4	500mL plastic unpreserved
	GCUB	12GN	SP5T	BP1N	BP1U	BP3S	BP3N	BP3U	BP3C	BP2S	BP2U
		F	I		<b></b>		Γ	Γ	<u> </u>	<u> </u>	I
	40mL amber VOA vial H2SO4	40mL clear VOA vial	40mL clear VOA vial Na Thiosulfate	40mL clear VOA vial HCI	4oz amber wide jar	4oz wide jar unpreserved	500mL clear glass unpreserved	500mL amber glass unpreserved	8oz wide jar unpreserved	General	
Glass	DG9S	VG9U	VG9T	VG9H	JGFU	WGFU	BG2U	AG2U	WGKU	GN .	
)	1 Gallon Jug with HNO3	100mL amber glass unpreserved	100mL amber glass Na Thiosulfate	1 Gallon Jug	1L amber glass H2SO4	1L amber glass HCi	1L amber glass NA Thiosulfate	1L clear glass unpreserved	250mL amber glass H2SO4	250mL amber glass unpreserved	

GJN AG5U

AGST

VOAK Kit Volatile Solid

5g Encore

Wipe/Swab

ZPLC Siploc Bag

Water Solid

LΜ

Page 1 of 1

Non-Aq Liquid

edi∧∖

WΡ

Pace® Analytical Services, LLC

Qualtrax ID: 55678

21 ⊋ <sub>ae 17 of 17</sub> Page 48 of 48

AG1T

AG1S AG1H

NPS



Mailing Address: PO Box 1410 Ocean Springs, MS 39566-1410 6500 Sunplex Drive Ocean Springs, MS 39564 228.875.6420 Phone 228.875.6423 Fax

October 09, 2023

Jim Ward Work Order #: 2309244

Choctaw Generation LP

Purchase Order #: RDH17816 - Yr 2023

2391 Pensacola Rd.

Ackerman, MS 39735

RE: CGLP CCR Semi Annual

Enclosed are Micro-Methods Laboratory, Inc. results of analyses performed on samples received 09/14/2023 08:55. If you have any questions concerning this report, please feel free to contact the office.

Sincerely,

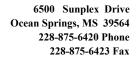
Mitch Spicer

Lab Director *Micro-Methods Laboratory, Inc.* 



#### DISCLAIMER

The results only relate to the items or the sample and/or samples received by the laboratory. This report shall not be reproduced except in full, without the approval of the laboratory. All NELAP certified test methods performed meet the requirements of NELAC 2009 Standards. Any variances and/or deviations specific to this analytical report are referenced in the lab report using qualifiers and detailed explanations found in the case narrative.





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date/Time Sampled	Sampled by	Date/Time Received
MW-9	2309244-01	Water	09/13/2023 12:05	Caleb James	09/14/2023 08:55
OW-2	2309244-02	Water	09/13/2023 14:52	Caleb James	09/14/2023 08:55
MW-13	2309244-03	Water	09/13/2023 16:07	Caleb James	09/14/2023 08:55
MW-7	2309244-04	Water	09/13/2023 11:57	Caleb James	09/14/2023 08:55
MW-14	2309244-05	Water	09/13/2023 10:30	Caleb James	09/14/2023 08:55
Field Blank	2309244-06	Water	09/13/2023 10:35	Caleb James	09/14/2023 08:55
Duplicate	2309244-07	Water	09/13/2023 00:00	Caleb James	09/14/2023 08:55
MW-12	2309244-08	Water	09/13/2023 13:35	Caleb James	09/14/2023 08:55
CCR-2	2309244-09	Water	09/13/2023 15:45	Caleb James	09/14/2023 08:55
CCR-3	2309244-10	Water	09/13/2023 11:10	Caleb James	09/14/2023 08:55
CCR-4	2309244-11	Water	09/13/2023 15:50	Caleb James	09/14/2023 08:55
CCR-5	2309244-12	Water	09/13/2023 14:56	Caleb James	09/14/2023 08:55





Choctaw Generation LP Project: CGLP CCR Semi Annual

2391 Pensacola Rd. Project Number: [none] Reported:
Ackerman MS, 39735 Project Manager: Jim Ward 10/09/2023 13:31

**Sample Receipt Conditions** 

Date/Time Received: 9/14/2023 8:55:00AM Shipped by: Fed Ex

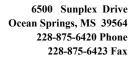
Received by: Teresa Meins Submitted by: Ethan Easterling

Date/Time Logged: 9/14/2023 9:09:00AM Logged by: Teresa Meins

Cooler ID: client cooler #1 Receipt Temperature: 1.9 °C

Received on Ice but Not Frozen Yes Cooler Custody Seals Present Yes Containers Intact Yes No Ice, Short Trip No COC/Labels Agree Yes **Obvious Contamination** No Labels Complete Rush to meet HT Yes No COC Complete Yes Received within HT Yes Volatile Vial Headspace >6mm Proper Containers for Analysis No Yes Field Sheet/Instructions Included Correct Preservation No Yes Samples Rejected/Documented in Log No Adequate Sample for Analysis Yes Temp Taken From Temp Blank Yes Sample Custody Seals Present Yes Temp Taken From Sample Container Samples Missing from COC/Cooler No No

Temp Taken From Cooler No
COC meets acceptance criteria Yes

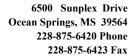




Choctaw Generation LP Project: CGLP CCR Semi Annual

2391 Pensacola Rd.Project Number: [none]Reported:Ackerman MS, 39735Project Manager: Jim Ward10/09/2023 13:31

Cooler ID: client cooler #2	_	Receipt Temperature: 0.4 °C	
Cooler Custody Seals Present	Yes	Received on Ice but Not Frozen	Yes
Containers Intact	Yes	No Ice, Short Trip	No
COC/Labels Agree	Yes	Obvious Contamination	No
Labels Complete	Yes	Rush to meet HT	No
COC Complete	Yes	Received within HT	Yes
Volatile Vial Headspace >6mm	No	Proper Containers for Analysis	Yes
Field Sheet/Instructions Included	No	Correct Preservation	Yes
Samples Rejected/Documented in Log	No	Adequate Sample for Analysis	Yes
Temp Taken From Temp Blank	Yes	Sample Custody Seals Present	Yes
Temp Taken From Sample Container	No	Samples Missing from COC/Cooler	No
Temp Taken From Cooler	No		
COC meets acceptance criteria	Yes		





Choctaw Generation LP Project: CGLP CCR Semi Annual

2391 Pensacola Rd.Project Number: [none]Reported:Ackerman MS, 39735Project Manager: Jim Ward10/09/2023 13:31

Cooler Custody Seals Present	Yes	Received on Ice but Not Frozen	Yes
Containers Intact	Yes	No Ice, Short Trip	No
COC/Labels Agree	Yes	Obvious Contamination	No
Labels Complete	Yes	Rush to meet HT	No
COC Complete	Yes	Received within HT	Yes
Volatile Vial Headspace >6mm	No	Proper Containers for Analysis	Yes
Field Sheet/Instructions Included	No	Correct Preservation	Yes
Samples Rejected/Documented in Log	No	Adequate Sample for Analysis	Yes
Temp Taken From Temp Blank	Yes	Sample Custody Seals Present	Yes
Temp Taken From Sample Container	No	Samples Missing from COC/Cooler	No
Temp Taken From Cooler	No		
COC meets acceptance criteria	Yes		



6500 Sunplex Drive Ocean Springs, MS 39564 228-875-6420 Phone 228-875-6423 Fax

Choctaw Generation LP 2391 Pensacola Rd. Ackerman MS, 39735 Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### **CASE NARRATIVE SUMMARY**

All reported results are within Micro-Methods Laboratory, Inc.defined laboratory quality control objectives unless detailed in narrative summary or identified as qualifications. NOTE: All results listed on this report are calculated on a wet weight basis (as received by the laboratory) unless otherwise noted in the analysis qualification sections.

#### **Summary Comments:**

COC Page 2 no sampler signature. TKM

Relinquished by and Received by date corrected as per client. T. Tomek

See attached results from Sub-Contract Laboratory

Qualifiers: No Data Qualification

Analyte & Samples(s) Qualified: None





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### MW-9

# 2309244-01 (Water)

			20002	0 : (***	101)					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
Classical Chemistry Parame	eters									
Chloride	337	8.00	mg/L	4.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	0.23	0.22	"	1.0	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	101	20.0	u	4.0	3120032	DLW	09/20/2023 11:30	09/20/2023 15:22	SM 4500-SO42 E 2011	
Total Dissolved Solids	556	1	"	1.0	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series M	lethods ICP-AES									
Barium 455.403 [Radial]	0.045	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 14:27	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	20.6	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV	*		m m	
Metals by EPA 200 Series M	lethods ICP-MS [	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 13:26	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	u	"	"	GWG	*		"	
Beryllium [He]	0.00235	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	u u	"	"	GWG	*		"	
Chromium [He]	ND	0.00100	"	"	"	GWG			•	
Cobalt [He]	0.00806	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			•	
Selenium [NG]	ND	0.00500	u	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### OW-2

# 2309244-02 (Water)

				OZ (11C	,					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>										
Chloride	156	4.00	mg/L	2.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	0.22	0.22	"	1.0	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	89.1	20.0	"	4.0	3120032	DLW	09/20/2023 11:30	09/20/2023 15:22	SM 4500-SO42 E 2011	
Total Dissolved Solids	449	1	"	1.0	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Method	ds ICP-AES	3								
Barium 455.403 [Radial]	0.029	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 14:38	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV		•	"	
Calcium 315.887 [Radial]	40.9	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV		"	"	
Metals by EPA 200 Series Method	ds ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 13:32	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG	•	"	"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG		"	"	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			n	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

# MW-13

# 2309244-03 (Water)

				•			Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
Classical Chemistry Parameters										
Chloride	7.28	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	6.10	5.00	"	"	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	151	1	"	"	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Method	ds ICP-AES	3								
Barium 455.403 [Radial]	0.149	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 14:42	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV	"		"	
Calcium 315.887 [Radial]	16.9	0.050	"	"	"	CLV	"		"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Method	ds ICP-MS	[Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 13:39	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG	"		"	
Cadmium [He]	ND	0.00100	"	"	"	GWG			•	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### MW-7

# 2309244-04 (Water)

				•						
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
Classical Chemistry Parame	ters									
Chloride	7.68	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	44.7	5.00	"	"	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	163	1	"	"	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Me	ethods ICP-AES									
Barium 455.403 [Radial]	0.065	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 14:45	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV				
Calcium 315.887 [Radial]	24.7	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV		"	"	
Metals by EPA 200 Series Me	ethods ICP-MS	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 13:45	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG		"	•	
Chromium [He]	ND	0.00100	"	"	"	GWG			"	
Cobalt [He]	ND	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

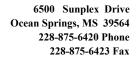
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

# MW-14

# 2309244-05 (Water)

					,					
	D !!	MDI	11-24-	Dil	Datal	A lo - 1	Date Time	Date Time		0 1:5
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
Classical Chemistry Parameter	rs									
Chloride	25.6	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	7.65	5.00	"	"	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	80	1	"	"	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Meth	ods ICP-AES	3								
Barium 455.403 [Radial]	0.012	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 14:49	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	0.590	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Meth	ods ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 14:24	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG		09/20/2023 11:47	"	
Chromium [He]	ND	0.00100	"	"	"	GWG		09/19/2023 14:24	"	
Cobalt [He]	ND	0.00100	"	"	· ·	GWG		"	"	
Lead [He]	ND	0.00100	"	"	"	GWG	*		"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG		"	"	





Project: CGLP CCR Semi Annual

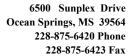
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### Field Blank

# 2309244-06 (Water)

							Date	Date		
	5 "	ME		D.1	5.41		Time	Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>										
Chloride	0.85	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	ND	5.00	"	"	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	6	1	"	"	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Method	Is ICP-AES	3								
Barium 455.403 [Radial]	ND	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 14:53	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	ND	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	u u	CLV			"	
Metals by EPA 200 Series Method	Is ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 14:30	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG		"	"	
Cadmium [He]	ND	0.00100	"	"	"	GWG		09/20/2023 11:51	п	
Chromium [He]	ND	0.00100	"	"	"	GWG		09/19/2023 14:30	"	
Cobalt [He]	ND	0.00100	"	"	"	GWG		"	"	
Lead [He]	ND	0.00100	u	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	· ·	"	"	GWG		"	"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

# **Duplicate**

#### 2309244-07 (Water)

			23032	44-07 (VV	itei)					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>										
Chloride	26.2	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	7.65	5.00	"	"	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	81	1	"	"	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Method	ds ICP-AES	<u> </u>								
Barium 455.403 [Radial]	0.011	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 14:56	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	0.563	0.050	"	"	"	CLV		•	"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Method	ds ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 14:36	EPA 200.8 Rev 5.4	_
Arsenic [NG]	ND	0.00200	"	"	"	GWG		•	"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			•	
Cadmium [He]	ND	0.00100	"	"	"	GWG		09/20/2023 11:55	"	
Chromium [He]	ND	0.00100	"	"	"	GWG		09/19/2023 14:36	"	
Cobalt [He]	ND	0.00100	"	"	"	GWG	"	"		
Lead [He]	ND	0.00100	"	u u	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG				
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### MW-12

# 2309244-08 (Water)

				00 (110	,					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>										
Chloride	43.7	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	u	II .	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	29.7	5.00	"	"	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	174	1	"	"	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Method	Is ICP-AES									
Barium 455.403 [Radial]	0.173	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 15:00	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV			"	
Calcium 315.887 [Radial]	25.2	0.050	u u	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Method	Is ICP-MS	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 14:42	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	u	II .	"	GWG		09/20/2023 12:00	"	
Chromium [He]	ND	0.00100	"	"	"	GWG		09/19/2023 14:42	"	
Cobalt [He]	0.00491	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	n	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### CCR-2

# 2309244-09 (Water)

				00 (III	,					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>										
Chloride	5.08	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	10.1	5.00	"	"	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	89	1	"	"	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Metho	ds ICP-AES									
Barium 455.403 [Radial]	0.110	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 13:50	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV				
Calcium 315.887 [Radial]	13.5	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV			"	
Metals by EPA 200 Series Metho	ds ICP-MS [	Analysis M	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 14:49	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG				
Beryllium [He]	ND	0.00100	"	u u	"	GWG			"	
Cadmium [He]	ND	0.00100	"	II .	"	GWG		09/20/2023 12:04	"	
Chromium [He]	ND	0.00100	"	"	"	GWG		09/19/2023 14:49	"	
Cobalt [He]	0.00130	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			•	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### CCR-3

# 2309244-10 (Water)

				77 10 (11C	/					
							Date Time	Date Time		
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Prepared	Analyzed	Method	Qualifiers
<b>Classical Chemistry Parameters</b>	3									
Chloride	8.48	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	0.27	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	71.5	10.0	"	2.0	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	213	1	"	1.0	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Metho	ds ICP-AES									
Barium 455.403 [Radial]	0.046	0.010	mg/L	1.0	3119038	CLV	09/19/2023 10:00	09/20/2023 13:53	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV	"		"	
Calcium 315.887 [Radial]	17.5	0.050	"	"	"	CLV	"		"	
Lithium 610.362 [Axial]	0.058	0.040	"	"	II .	CLV	"		"	
Metals by EPA 200 Series Metho	ds ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 14:55	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG			"	
Beryllium [He]	ND	0.00100	"	"	"	GWG	"		"	
Cadmium [He]	ND	0.00100	"	"	"	GWG		09/20/2023 12:08	"	
Chromium [He]	ND	0.00100	"	"	"	GWG		09/19/2023 14:55	"	
Cobalt [He]	0.00999	0.00100	"	"	"	GWG	"		"	
Lead [He]	ND	0.00100	"	"	"	GWG	"		"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG	"		"	





Project: CGLP CCR Semi Annual

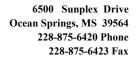
Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### CCR-4

#### 2309244-11 (Water)

Australia	Docult	MDI	Linita	Dil	Datak	Analyst	Date Time Prepared	Date Time Analyzed	Madead	Ovelifier
Analyte	Result	MRL	Units	DII	Batch	Analyst	Fiepaieu	Allalyzeu	Method	Qualifiers
Classical Chemistry Parameters	s									
Chloride	10.7	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	18.3	5.00	"	"	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	174	1	"	"	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Metho	ods ICP-AES									
Barium 455.403 [Radial]	0.157	0.010	mg/L	1.0	3119037	CLV	09/19/2023 10:00	09/20/2023 13:21	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	ND	0.050	"	"	"	CLV	*		"	
Calcium 315.887 [Radial]	23.9	0.050	"	"	"	CLV			"	
Lithium 610.362 [Axial]	ND	0.040	"	"	"	CLV				
Metals by EPA 200 Series Metho	ods ICP-MS [	Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 15:01	EPA 200.8 Rev 5.4	_
Arsenic [NG]	ND	0.00200	"	"	"	GWG		"		
Beryllium [He]	ND	0.00100	"	u u	· ·	GWG				
Cadmium [He]	ND	0.00100	"	"	"	GWG		09/20/2023 12:13	"	
Chromium [He]	ND	0.00100	"	"	"	GWG		09/19/2023 15:01	"	
Cobalt [He]	0.00248	0.00100	"	"	"	GWG		"	m m	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	"	GWG	*			
Selenium [NG]	ND	0.00500	"	"	"	GWG	*		"	





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### CCR-5

#### 2309244-12 (Water)

				– (	,					
Analyte	Result	MRL	Units	Dil	Batch	Analyst	Date Time Prepared	Date Time Analyzed	Method	Qualifiers
Classical Chemistry Parameters										
Chloride	7.32	2.00	mg/L	1.0	3118024	DLW	09/18/2023 08:20	09/18/2023 12:05	ASTM D 512-12	
Fluoride	ND	0.22	"	"	3120035	CRG	09/20/2023 12:06	09/20/2023 14:17	SM 4500-F C 2011	
Sulfate as SO4	96.4	20.0	"	4.0	3118038	DLW	09/18/2023 14:00	09/18/2023 14:45	SM 4500-SO42 E 2011	
Total Dissolved Solids	386	1	"	1.0	3119051	DLW	09/18/2023 13:15	09/20/2023 00:00	SM 2540 C-2015	
Metals by EPA 200 Series Method	ds ICP-AES	3								
Barium 455.403 [Radial]	0.083	0.010	mg/L	1.0	3119037	CLV	09/19/2023 10:00	09/20/2023 13:24	EPA 200.7 Rev 4.4	
Boron 249.773 [Radial]	0.067	0.050	"	"	"	CLV				
Calcium 315.887 [Radial]	47.9	0.250	"	5.0	"	CLV		09/20/2023 13:57	"	
Lithium 610.362 [Axial]	ND	0.040	"	1.0	"	CLV		09/20/2023 13:24	"	
Metals by EPA 200 Series Method	ds ICP-MS	[Analysis N	lode]							
Antimony [He]	ND	0.00200	mg/L	1.0	3118034	GWG	09/18/2023 13:00	09/19/2023 15:07	EPA 200.8 Rev 5.4	
Arsenic [NG]	ND	0.00200	"	"	"	GWG		"	"	
Beryllium [He]	ND	0.00100	"	"	"	GWG			"	
Cadmium [He]	ND	0.00100	"	"	"	GWG	"	09/20/2023 12:17	"	
Chromium [He]	ND	0.00100	"	"	"	GWG		09/19/2023 15:07	"	
Cobalt [He]	0.00261	0.00100	"	"	"	GWG			"	
Lead [He]	ND	0.00100	"	"	"	GWG			"	
Molybdenum [He]	ND	0.00100	"	"	11	GWG			"	
Selenium [NG]	ND	0.00500	"	"	"	GWG			"	



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### Classical Chemistry Parameters - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3l18024 - Default Prep GenC	hem										
Blank (3l18024-BLK1)											
Chloride	9/18/23 11:45	ND	2.00	mg/L							
LCS (3I18024-BS1)											
Chloride	9/18/23 11:45	25.2	2.00	mg/L	25.0		101	85-115			
LCS Dup (3l18024-BSD1)											
Chloride	9/18/23 11:45	24.5	2.00	mg/L	25.0		98.0	85-115	2.82	30	
Duplicate (3I18024-DUP1)			Source: 23090	87-03							
Chloride	9/18/23 11:45	5.11	2.00	mg/L		5.14			0.585	20	
Matrix Spike (3l18024-MS1)			Source: 23090	87-03							
Chloride	9/18/23 11:45	25.7	2.00	mg/L	20.0	5.14	103	70-130			
Matrix Spike Dup (3I18024-MSD1)			Source: 23090	87-03							
Chloride	9/18/23 11:45	25.2	2.00	mg/L	20.0	5.14	100	70-130	1.96	20	
Batch 3l18038 - Default Prep GenC	hem										
Blank (3I18038-BLK1)											
Sulfate as SO4	9/18/23 14:45	ND	5.00	mg/L							
LCS (3I18038-BS1)											
Sulfate as SO4	9/18/23 14:45	31.1	5.00	mg/L	30.0		104	88-108			
LCS Dup (3l18038-BSD1)											
Sulfate as SO4	9/18/23 14:45	30.9	5.00	mg/L	30.0		103	88-108	0.810	20	



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### Classical Chemistry Parameters - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3l18038 - Default Prep Gen	Chem										
Duplicate (3l18038-DUP1)			Source: 23091	75-01							
Sulfate as SO4	9/18/23 14:45	18.0	5.00	mg/L		18.9			4.98	20	
Matrix Spike (3l18038-MS1)			Source: 23091	75-01							
Sulfate as SO4	9/18/23 14:45	48.2	5.00	mg/L	30.0	18.9	97.4	74.1-129			
Matrix Spike Dup (3I18038-MSD1)	)		Source: 23091	75-01							
Sulfate as SO4	9/18/23 14:45	44.9	5.00	mg/L	30.0	18.9	86.4	74.1-129	7.11	20	
Batch 3l19051 - Default Prep Gen	Chem										
Blank (3l19051-BLK1)											
Total Dissolved Solids	9/20/23 0:00	ND	1	mg/L							
LCS (3I19051-BS1)											
Total Dissolved Solids	9/20/23 0:00	79	1	mg/L	99.8		79.2	60.3-100			
LCS Dup (3l19051-BSD1)											
Total Dissolved Solids	9/20/23 0:00	80	1	mg/L	99.8		80.2	60.3-100	1.26	10	
Duplicate (3l19051-DUP1)			Source: 23092	44-05							
Total Dissolved Solids	9/20/23 0:00	83	1	mg/L		80			3.68	10	
Duplicate (3l19051-DUP2)			Source: 23092	44-11							
Total Dissolved Solids	9/20/23 0:00	177	1	mg/L		174			1.71	10	
Batch 3l20032 - Default Prep Gen	Chem										
Blank (3I20032-BLK1)											
Sulfate as SO4	9/20/23 13:44	ND	5.00	mg/L							



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### Classical Chemistry Parameters - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3l20032 - Default Prep Gen0	Chem										
LCS (3I20032-BS1)											
Sulfate as SO4	9/20/23 13:44	30.6	5.00	mg/L	30.0		102	88-108			
LCS Dup (3l20032-BSD1)											
Sulfate as SO4	9/20/23 13:44	31.6	5.00	mg/L	30.0		105	88-108	3.18	20	
Duplicate (3I20032-DUP1)			Source: 23093	310-01							
Sulfate as SO4	9/20/23 13:44	16400	2500	mg/L		16600			0.781	20	
Batch 3l20035 - Default Prep GenC	Chem										
Blank (3l20035-BLK1)											
Fluoride	9/20/23 14:17	ND	0.22	mg/L							
LCS (3I20035-BS1)											
Fluoride	9/20/23 14:17	1.91	0.22	mg/L	2.00		95.5	87.8-113			
LCS Dup (3l20035-BSD1)											
Fluoride	9/20/23 14:17	1.96	0.22	mg/L	2.00		98.0	87.8-113	2.58	30	
Matrix Spike (3I20035-MS1)			Source: 23092	244-02							
Fluoride	9/20/23 14:17	1.99	0.22	mg/L	2.00	0.22	88.8	70.2-127			
Matrix Spike Dup (3I20035-MSD1)			Source: 23092	244-02							
Fluoride	9/20/23 14:17	2.03	0.22	mg/L	2.00	0.22	90.8	70.2-127	1.99	30	



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### Metals by EPA 200 Series Methods ICP-AES - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3I19037 - EPA 200.2 DCN 101	7 Rev 10										
Blank (3l19037-BLK1)											
Barium 455.403 [Radial]	9/20/23 14:21	ND	0.010	mg/L							
Boron 249.773 [Radial]	9/20/23 14:21	ND	0.050								
Calcium 315.887 [Radial]	9/20/23 14:21	ND	0.050								
Lithium 610.362 [Axial]	9/20/23 14:21	ND	0.040								
LCS (3I19037-BS1)											
Barium 455.403 [Radial]	9/20/23 14:13	0.183	0.010	mg/L	0.200		91.3	85-115			
Boron 249.773 [Radial]	9/20/23 14:13	0.179	0.050		0.200		89.6	85-115			
Calcium 315.887 [Radial]	9/20/23 14:13	0.195	0.050		0.200		97.5	85-115			
Lithium 610.362 [Axial]	9/20/23 14:13	0.186	0.040		0.200		92.8	85-115			
LCS Dup (3l19037-BSD1)											
Barium 455.403 [Radial]	9/20/23 14:16	0.186	0.010	mg/L	0.200		92.9	85-115	1.78	20	
Boron 249.773 [Radial]	9/20/23 14:16	0.182	0.050		0.200		90.8	85-115	1.42	20	
Calcium 315.887 [Radial]	9/20/23 14:16	0.200	0.050		0.200		100	85-115	2.64	20	
Lithium 610.362 [Axial]	9/20/23 14:16	0.188	0.040		0.200		94.1	85-115	1.37	20	
Duplicate (3l19037-DUP1)			Source: 23091	75-01							
Calcium 315.887 [Radial]	9/20/23 13:06	5.10	0.050	mg/L		4.74			7.24	20	
Matrix Spike (3l19037-MS1)			Source: 23091	75-01							
Barium 455.403 [Radial]	9/20/23 13:06	0.296	0.010	mg/L	0.200	0.091	102	70-130			
Boron 249.773 [Radial]	9/20/23 13:06	0.225	0.050		0.200	0.024	101	70-130			
Lithium 610.362 [Axial]	9/20/23 13:06	0.231	0.040		0.200	0.013	109	70-130			
Matrix Spike Dup (3l19037-MSD1)			Source: 23091	75-01							
Barium 455.403 [Radial]	9/20/23 13:10	0.306	0.010	mg/L	0.200	0.091	107	70-130	3.26	20	
Boron 249.773 [Radial]	9/20/23 13:10	0.232	0.050		0.200	0.024	104	70-130	3.12	20	
Lithium 610.362 [Axial]	9/20/23 13:10	0.239	0.040		0.200	0.013	113	70-130	3.54	20	



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### Metals by EPA 200 Series Methods ICP-AES - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3I19038 - EPA 200.2 DCN 1017	Rev 10										
Blank (3l19038-BLK1)											
Barium 455.403 [Radial]	9/20/23 14:21	ND	0.010	mg/L							
Boron 249.773 [Radial]	9/20/23 14:21	ND	0.050								
Calcium 315.887 [Radial]	9/20/23 14:21	ND	0.050								
Lithium 610.362 [Axial]	9/20/23 14:21	ND	0.040								
LCS (3l19038-BS1)											
Barium 455.403 [Radial]	9/20/23 14:13	0.183	0.010	mg/L	0.200		91.3	85-115			
Boron 249.773 [Radial]	9/20/23 14:13	0.179	0.050		0.200		89.6	85-115			
Calcium 315.887 [Radial]	9/20/23 14:13	0.195	0.050		0.200		97.5	85-115			
Lithium 610.362 [Axial]	9/20/23 14:13	0.186	0.040		0.200		92.8	85-115			
LCS Dup (3l19038-BSD1)											
Barium 455.403 [Radial]	9/20/23 14:16	0.186	0.010	mg/L	0.200		92.9	85-115	1.78	20	
Boron 249.773 [Radial]	9/20/23 14:16	0.182	0.050		0.200		90.8	85-115	1.42	20	
Calcium 315.887 [Radial]	9/20/23 14:16	0.200	0.050		0.200		100	85-115	2.64	20	
Lithium 610.362 [Axial]	9/20/23 14:16	0.188	0.040		0.200		94.1	85-115	1.37	20	
Duplicate (3l19038-DUP1)			Source: 23092	44-01							
Calcium 315.887 [Radial]	9/20/23 14:31	21.1	0.050	mg/L		20.6			2.36	20	
Matrix Spike (3l19038-MS1)			Source: 23092	44-01							
Barium 455.403 [Radial]	9/20/23 14:31	0.239	0.010	mg/L	0.200	0.045	97.0	70-130			
Boron 249.773 [Radial]	9/20/23 14:31	0.213	0.050		0.200	0.018	97.3	70-130			
Lithium 610.362 [Axial]	9/20/23 14:31	0.227	0.040		0.200	0.034	96.5	70-130			
Matrix Spike Dup (3I19038-MSD1)			Source: 23092	44-01							
Barium 455.403 [Radial]	9/20/23 14:35	0.232	0.010	mg/L	0.200	0.045	93.5	70-130	3.02	20	
Boron 249.773 [Radial]	9/20/23 14:35	0.206	0.050		0.200	0.018	93.7	70-130	3.46	20	
Lithium 610.362 [Axial]	9/20/23 14:35	0.229	0.040		0.200	0.034	97.4	70-130	0.840	20	



Project: CGLP CCR Semi Annual

Project Number: [none] Reported:
Project Manager: Jim Ward 10/09/2023 13:31

#### Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3l18034 - EPA 200.2 DCN 1	017 Rev 10										
Blank (3l18034-BLK1)											
Antimony [He]	9/19/23 12:01	ND	0.00200	mg/L							
Arsenic [NG]	9/19/23 12:01	ND	0.00200								
Beryllium [He]	9/19/23 12:01	ND	0.00100								
Cadmium [He]	9/19/23 12:01	ND	0.00100								
Chromium [He]	9/19/23 12:01	ND	0.00100								
Cobalt [He]	9/19/23 12:01	ND	0.00100								
Lead [He]	9/19/23 12:01	ND	0.00100								
Molybdenum [He]	9/19/23 12:01	ND	0.00100								
Selenium [NG]	9/19/23 12:01	ND	0.00500								
LCS (3I18034-BS1)											
Antimony [He]	9/19/23 12:07	0.104	0.00200	mg/L	0.100		104	85-115			
Arsenic [NG]	9/19/23 12:07	0.101	0.00200		0.100		101	85-115			
Beryllium [He]	9/19/23 12:07	0.099	0.00100		0.100		99.1	85-115			
Cadmium [He]	9/19/23 12:07	0.104	0.00100		0.100		104	85-115			
Chromium [He]	9/19/23 12:07	0.103	0.00100		0.100		103	85-115			
Cobalt [He]	9/19/23 12:07	0.102	0.00100		0.100		102	85-115			
Lead [He]	9/19/23 12:07	0.100	0.00100		0.100		100	85-115			
Molybdenum [He]	9/19/23 12:07	0.100	0.00100		0.100		100	85-115			
Selenium [NG]	9/19/23 12:07	0.099	0.00500		0.100		99.4	85-115			
LCS Dup (3I18034-BSD1)											
Antimony [He]	9/19/23 12:13	0.106	0.00200	mg/L	0.100		106	85-115	1.88	20	
Arsenic [NG]	9/19/23 12:13	0.101	0.00200		0.100		101	85-115	0.612	20	
Beryllium [He]	9/19/23 12:13	0.100	0.00100		0.100		99.6	85-115	0.448	20	
Cadmium [He]	9/19/23 12:13	0.098	0.00100		0.100		98.4	85-115	5.32	20	
Chromium [He]	9/19/23 12:13	0.102	0.00100		0.100		102	85-115	0.608	20	
Cobalt [He]	9/19/23 12:13	0.102	0.00100		0.100		102	85-115	0.245	20	
Lead [He]	9/19/23 12:13	0.101	0.00100		0.100		101	85-115	0.379	20	
Molybdenum [He]	9/19/23 12:13	0.100	0.00100		0.100		100	85-115	0.169	20	
Selenium [NG]	9/19/23 12:13	0.100	0.00500		0.100		100	85-115	1.02	20	



Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Matrix Spike (3I18034-MS1)   Selenium [NG]   Selenium [NG]   Selenium [NG]   Selenium [He]   Selenium [NG]   Selenium [NG]	Source: 23092  0.00200 0.00200 0.00100 0.00100 0.00100 0.00100 0.00100 0.00500  Source: 23092 0.00200 0.00200 0.00100	mg/L " " " " "	0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100	0.016 0.026 ND 0.003 0.004 0.001 0.0002 0.509 ND	108 101 97.3 85.1 98.3 94.9 103 70.5 91.2	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130			
Antimony [He] 9/19/23 12:26 0.124  Arsenic [NG] 9/19/23 12:26 0.127  Beryllium [He] 9/19/23 12:26 0.097  Cadmium [He] 9/19/23 12:26 0.088  Chromium [He] 9/19/23 12:26 0.103  Cobalt [He] 9/19/23 12:26 0.103  Cobalt [He] 9/19/23 12:26 0.096  Lead [He] 9/19/23 12:26 0.096  Lead [He] 9/19/23 12:26 0.093  Molybdenum [He] 9/19/23 12:26 0.580  Selenium [NG] 9/19/23 12:26 0.091  Matrix Spike (3118034-MS2)  Antimony [He] 9/19/23 12:44 0.108  Arsenic [NG] 9/19/23 12:44 0.098  Beryllium [He] 9/19/23 12:44 0.099  Cadmium [He] 9/19/23 12:44 0.099  Chromium [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.099  Molybdenum [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.099  Molybdenum [He] 9/19/23 12:44 0.099  Molybdenum [He] 9/19/23 12:44 0.092  Matrix Spike Dup (3118034-MSD1)  Antimony [He] 9/19/23 12:44 0.092	0.00200 0.00200 0.00100 0.00100 0.00100 0.00100 0.00100 0.00500 Source: 23092 0.00200 0.00200 0.00100	mg/L " " " " " " "	0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100	0.026 ND 0.003 0.004 0.001 0.0002 0.509 ND	101 97.3 85.1 98.3 94.9 103 70.5 91.2	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130			
Arsenic [NG] 9/19/23 12:26 0.127  Beryllium [He] 9/19/23 12:26 0.097  Cadmium [He] 9/19/23 12:26 0.088  Chromium [He] 9/19/23 12:26 0.103  Cobalt [He] 9/19/23 12:26 0.096  Lead [He] 9/19/23 12:26 0.103  Molybdenum [He] 9/19/23 12:26 0.103  Molybdenum [NG] 9/19/23 12:26 0.580  Selenium [NG] 9/19/23 12:26 0.091  Matrix Spike (3118034-MS2)  Antimony [He] 9/19/23 12:44 0.108  Arsenic [NG] 9/19/23 12:44 0.098  Beryllium [He] 9/19/23 12:44 0.089  Chromium [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.097  Lead [He] 9/19/23 12:44 0.097  Lead [He] 9/19/23 12:44 0.097  Molybdenum [He] 9/19/23 12:44 0.097  Lead [He] 9/19/23 12:44 0.097  Molybdenum [He] 9/19/23 12:44 0.102  Molybdenum [He] 9/19/23 12:44 0.102  Molybdenum [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3118034-MSD1)  Antimony [He] 9/19/23 12:32 0.123	0.00200 0.00100 0.00100 0.00100 0.00100 0.00100 0.00500 Source: 23092 0.00200 0.00200		0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100	0.026 ND 0.003 0.004 0.001 0.0002 0.509 ND	101 97.3 85.1 98.3 94.9 103 70.5 91.2	70-130 70-130 70-130 70-130 70-130 70-130 70-130 70-130			
Beryllium [He] 9/19/23 12:26 0.097 Cadmium [He] 9/19/23 12:26 0.088 Chromium [He] 9/19/23 12:26 0.103 Cobalt [He] 9/19/23 12:26 0.096 Lead [He] 9/19/23 12:26 0.096 Lead [He] 9/19/23 12:26 0.580 Selenium [NG] 9/19/23 12:26 0.091  Matrix Spike (3118034-MS2)  Antimony [He] 9/19/23 12:44 0.108 Arsenic [NG] 9/19/23 12:44 0.098 Beryllium [He] 9/19/23 12:44 0.100 Cadmium [He] 9/19/23 12:44 0.089 Chromium [He] 9/19/23 12:44 0.099 Cholium [He] 9/19/23 12:44 0.099 Cobalt [He] 9/19/23 12:44 0.099 Molybdenum [He] 9/19/23 12:44 0.099 Molybdenum [He] 9/19/23 12:44 0.097 Lead [He] 9/19/23 12:44 0.102 Molybdenum [He] 9/19/23 12:44 0.092  Matrix Spike Dup (3118034-MSD1) Antimony [He] 9/19/23 12:32 0.123	0.00100 0.00100 0.00100 0.00100 0.00100 0.00500 Source: 23092 0.00200 0.00200	" " " " 250-01	0.100 0.100 0.100 0.100 0.100 0.100 0.100	ND 0.003 0.004 0.001 0.0002 0.509 ND	97.3 85.1 98.3 94.9 103 70.5 91.2	70-130 70-130 70-130 70-130 70-130 70-130 70-130			
Cadmium [He]       9/19/23       12:26       0.088         Chromium [He]       9/19/23       12:26       0.103         Cobalt [He]       9/19/23       12:26       0.096         Lead [He]       9/19/23       12:26       0.103         Molybdenum [He]       9/19/23       12:26       0.580         Selenium [NG]       9/19/23       12:26       0.091         Matrix Spike (3118034-MS2)         Antimony [He]       9/19/23       12:44       0.108         Arsenic [NG]       9/19/23       12:44       0.098         Beryllium [He]       9/19/23       12:44       0.089         Chromium [He]       9/19/23       12:44       0.099         Chobalt [He]       9/19/23       12:44       0.097         Lead [He]       9/19/23       12:44       0.102         Molybdenum [He]       9/19/23       12:44       0.107         Selenium [NG]       9/19/23       12:44       0.107         Selenium [NG]       9/19/23       12:44       0.092         Matrix Spike Dup (3118034-MSD1)       0.123       0.123	0.00100 0.00100 0.00100 0.00100 0.00500 Source: 23092 0.00200 0.00200	" " " " 250-01	0.100 0.100 0.100 0.100 0.100 0.100	0.003 0.004 0.001 0.0002 0.509 ND	85.1 98.3 94.9 103 70.5 91.2	70-130 70-130 70-130 70-130 70-130 70-130			
Chromium [He]       9/19/23 12:26       0.103         Cobalt [He]       9/19/23 12:26       0.096         Lead [He]       9/19/23 12:26       0.103         Molybdenum [He]       9/19/23 12:26       0.580         Selenium [NG]       9/19/23 12:26       0.091         Matrix Spike (3/18034-MS2)         Antimony [He]       9/19/23 12:44       0.108         Arsenic [NG]       9/19/23 12:44       0.098         Beryllium [He]       9/19/23 12:44       0.089         Chromium [He]       9/19/23 12:44       0.099         Cobalt [He]       9/19/23 12:44       0.097         Lead [He]       9/19/23 12:44       0.102         Molybdenum [He]       9/19/23 12:44       0.107         Selenium [NG]       9/19/23 12:44       0.092         Matrix Spike Dup (3/18034-MSD1)         Antimony [He]       9/19/23 12:32       0.123	0.00100 0.00100 0.00100 0.00500 Source: 23092 0.00200 0.00200	" " " " 250-01	0.100 0.100 0.100 0.100 0.100	0.004 0.001 0.0002 0.509 ND	98.3 94.9 103 70.5 91.2	70-130 70-130 70-130 70-130 70-130			
Cobalt [He] 9/19/23 12:26 0.096 Lead [He] 9/19/23 12:26 0.103 Molybdenum [He] 9/19/23 12:26 0.580 Selenium [NG] 9/19/23 12:26 0.091  Matrix Spike (3/18034-MS2)  Antimony [He] 9/19/23 12:44 0.108 Arsenic [NG] 9/19/23 12:44 0.098 Beryllium [He] 9/19/23 12:44 0.100 Cadmium [He] 9/19/23 12:44 0.089 Chromium [He] 9/19/23 12:44 0.099 Cobalt [He] 9/19/23 12:44 0.099 Cobalt [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.099  Molybdenum [He] 9/19/23 12:44 0.102 Molybdenum [He] 9/19/23 12:44 0.102  Molybdenum [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3/18034-MSD1)  Antimony [He] 9/19/23 12:32 0.123	0.00100 0.00100 0.00100 0.00500 Source: 23092 0.00200 0.00200 0.00100	" 250-01	0.100 0.100 0.100 0.100	0.001 0.0002 0.509 ND	94.9 103 70.5 91.2	70-130 70-130 70-130 70-130			
Lead [He] 9/19/23 12:26 0.103  Molybdenum [He] 9/19/23 12:26 0.580  Selenium [NG] 9/19/23 12:26 0.091  Matrix Spike (3118034-MS2)  Antimony [He] 9/19/23 12:44 0.108  Arsenic [NG] 9/19/23 12:44 0.098  Beryllium [He] 9/19/23 12:44 0.100  Cadmium [He] 9/19/23 12:44 0.089  Chromium [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.097  Lead [He] 9/19/23 12:44 0.102  Molybdenum [He] 9/19/23 12:44 0.102  Molybdenum [He] 9/19/23 12:44 0.107  Selenium [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3118034-MSD1)  Antimony [He] 9/19/23 12:32 0.123	0.00100 0.00100 0.00500 Source: 23092 0.00200 0.00200 0.00100	" 250-01	0.100 0.100 0.100	0.0002 0.509 ND	103 70.5 91.2	70-130 70-130 70-130			
Molybdenum [He]       9/19/23       12:26       0.580         Selenium [NG]       9/19/23       12:26       0.091         Matrix Spike (3118034-MS2)         Antimony [He]       9/19/23       12:44       0.108         Arsenic [NG]       9/19/23       12:44       0.098         Beryllium [He]       9/19/23       12:44       0.089         Chromium [He]       9/19/23       12:44       0.099         Cobalt [He]       9/19/23       12:44       0.097         Lead [He]       9/19/23       12:44       0.102         Molybdenum [He]       9/19/23       12:44       0.107         Selenium [NG]       9/19/23       12:44       0.092         Matrix Spike Dup (3118034-MSD1)         Antimony [He]       9/19/23       12:32       0.123	0.00100 0.00500 <b>Source: 23092</b> 0.00200 0.00200 0.00100	" 250-01	0.100 0.100 0.100	0.509 ND	70.5 91.2	70-130 70-130			
Selenium [NG]       9/19/23       12:26       0.091         Matrix Spike (3118034-MS2)       Antimony [He]       9/19/23       12:44       0.108         Arsenic [NG]       9/19/23       12:44       0.098         Beryllium [He]       9/19/23       12:44       0.089         Chromium [He]       9/19/23       12:44       0.099         Cobalt [He]       9/19/23       12:44       0.097         Lead [He]       9/19/23       12:44       0.102         Molybdenum [He]       9/19/23       12:44       0.107         Selenium [NG]       9/19/23       12:44       0.092         Matrix Spike Dup (3118034-MSD1)       Antimony [He]       9/19/23       12:32       0.123	0.00500  Source: 23092  0.00200  0.00200  0.00100	" 250-01	0.100	ND ND	91.2	70-130			
Matrix Spike (3118034-MS2)         Antimony [He]       9/19/23 12:44       0.108         Arsenic [NG]       9/19/23 12:44       0.098         Beryllium [He]       9/19/23 12:44       0.100         Cadmium [He]       9/19/23 12:44       0.089         Chromium [He]       9/19/23 12:44       0.099         Cobalt [He]       9/19/23 12:44       0.097         Lead [He]       9/19/23 12:44       0.102         Molybdenum [He]       9/19/23 12:44       0.107         Selenium [NG]       9/19/23 12:44       0.092         Matrix Spike Dup (3118034-MSD1)         Antimony [He]       9/19/23 12:32       0.123	0.00200 0.00200 0.00200 0.00100		0.100	ND					
Antimony [He] 9/19/23 12:44 0.108  Arsenic [NG] 9/19/23 12:44 0.098  Beryllium [He] 9/19/23 12:44 0.100  Cadmium [He] 9/19/23 12:44 0.089  Chromium [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.097  Lead [He] 9/19/23 12:44 0.102  Molybdenum [He] 9/19/23 12:44 0.107  Selenium [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3/18/034-MSD1)  Antimony [He] 9/19/23 12:32 0.123	0.00200 0.00200 0.00100				108	70-130			
Arsenic [NG] 9/19/23 12:44 0.098 Beryllium [He] 9/19/23 12:44 0.100 Cadmium [He] 9/19/23 12:44 0.089 Chromium [He] 9/19/23 12:44 0.099 Cobalt [He] 9/19/23 12:44 0.097 Lead [He] 9/19/23 12:44 0.102 Molybdenum [He] 9/19/23 12:44 0.107 Selenium [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3118034-MSD1) Antimony [He] 9/19/23 12:32 0.123	0.00200 0.00100	mg/L "			108	70-130			
Beryllium [He] 9/19/23 12:44 0.100 Cadmium [He] 9/19/23 12:44 0.089 Chromium [He] 9/19/23 12:44 0.099 Cobalt [He] 9/19/23 12:44 0.097 Lead [He] 9/19/23 12:44 0.102 Molybdenum [He] 9/19/23 12:44 0.107 Selenium [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3118034-MSD1) Antimony [He] 9/19/23 12:32 0.123	0.00100		0.100	ND		10-100			
Cadmium [He] 9/19/23 12:44 0.089 Chromium [He] 9/19/23 12:44 0.099 Cobalt [He] 9/19/23 12:44 0.097 Lead [He] 9/19/23 12:44 0.102 Molybdenum [He] 9/19/23 12:44 0.107 Selenium [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3118034-MSD1) Antimony [He] 9/19/23 12:32 0.123				ND	98.0	70-130			
Chromium [He] 9/19/23 12:44 0.099  Cobalt [He] 9/19/23 12:44 0.097  Lead [He] 9/19/23 12:44 0.102  Molybdenum [He] 9/19/23 12:44 0.107  Selenium [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3/18034-MSD1)  Antimony [He] 9/19/23 12:32 0.123			0.100	ND	100	70-130			
Cobalt [He]       9/19/23 12:44       0.097         Lead [He]       9/19/23 12:44       0.102         Molybdenum [He]       9/19/23 12:44       0.107         Selenium [NG]       9/19/23 12:44       0.092         Matrix Spike Dup (3/18/034-MSD1)         Antimony [He]       9/19/23 12:32       0.123	0.00100		0.100	0.0001	88.4	70-130			
Lead [He]     9/19/23 12:44     0.102       Molybdenum [He]     9/19/23 12:44     0.107       Selenium [NG]     9/19/23 12:44     0.092       Matrix Spike Dup (3118034-MSD1)       Antimony [He]     9/19/23 12:32     0.123	0.00100		0.100	ND	98.8	70-130			
Molybdenum [He] 9/19/23 12:44 0.107  Selenium [NG] 9/19/23 12:44 0.092  Matrix Spike Dup (3118034-MSD1)  Antimony [He] 9/19/23 12:32 0.123	0.00100		0.100	ND	97.0	70-130			
Selenium [NG]     9/19/23     12:44     0.092       Matrix Spike Dup (3118034-MSD1)       Antimony [He]     9/19/23     12:32     0.123	0.00100		0.100	ND	102	70-130			
Matrix Spike Dup (3118034-MSD1)  Antimony [He] 9/19/23 12:32 0.123	0.00100		0.100	0.0009	106	70-130			
Antimony [He] 9/19/23 12:32 0.123	0.00500		0.100	ND	92.4	70-130			
,, ,	Source: 23092	29-02							
Arsenic [NG] 9/19/23 12:32 0.126	0.00200	mg/L	0.100	0.016	107	70-130	0.832	20	
	0.00200		0.100	0.026	101	70-130	0.107	20	
Beryllium [He] 9/19/23 12:32 0.100	0.00100		0.100	ND	99.7	70-130	2.48	20	
Cadmium [He] 9/19/23 12:32 0.088	0.00100		0.100	0.003	85.1	70-130	0.0750	20	
Chromium [He] 9/19/23 12:32 0.102	0.00100		0.100	0.004	97.6	70-130	0.664	20	
Cobalt [He] 9/19/23 12:32 0.095	0.00105		0.100	0.001	94.2	70-130	0.748	20	
Lead [He] 9/19/23 12:32 0.103	0.00100		0.100	0.0002	103	70-130	0.240	20	
Molybdenum [He] 9/19/23 12:32 0.588	0.00100 0.00100	"						20	
Selenium [NG] 9/19/23 12:32 0.091			0.100	0.509	78.4	70-130	1.35	20	

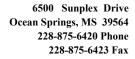


Project: CGLP CCR Semi Annual

Project Number: [none] Reported:
Project Manager: Jim Ward 10/09/2023 13:31

#### Metals by EPA 200 Series Methods ICP-MS [Analysis Mode] - Quality Control

Analyte	Analyzed	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifiers
Batch 3l18034 - EPA 200.2 DCN 1	1017 Rev 10										
Matrix Spike Dup (3I18034-MSD2	2)		Source: 230925	50-01							
Antimony [He]	9/19/23 12:51	0.107	0.00200	mg/L	0.100	ND	107	70-130	0.859	20	
Arsenic [NG]	9/19/23 12:51	0.101	0.00200		0.100	ND	101	70-130	3.01	20	
Beryllium [He]	9/19/23 12:51	0.101	0.00100		0.100	ND	101	70-130	0.911	20	
Cadmium [He]	9/19/23 12:51	0.088	0.00100		0.100	0.0001	88.2	70-130	0.138	20	
Chromium [He]	9/19/23 12:51	0.099	0.00100		0.100	ND	99.3	70-130	0.494	20	
Cobalt [He]	9/19/23 12:51	0.098	0.00100		0.100	ND	98.1	70-130	1.08	20	
Lead [He]	9/19/23 12:51	0.102	0.00100		0.100	ND	102	70-130	0.470	20	
Molybdenum [He]	9/19/23 12:51	0.107	0.00100		0.100	0.0009	106	70-130	0.0242	20	
Selenium [NG]	9/19/23 12:51	0.094	0.00500		0.100	ND	94.5	70-130	2.20	20	





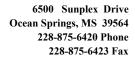
Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### **Certified Analyses Included in this Report**

Critoride	Analyte	Certification Code
Aluminum 381-420   Fleatini   C01 C02	ASTM D 512-12 in Water	
Aluminum 361-40 [Fadial] C01-002 Aluminum 361-52 [Fadial] C01-002 Aluminum 361-52 [Fadial] C01-002 Arzenic 193.756 [Axial] C01-002 Barum 455-400 [Fadial] C01-002 Barum 455-400 [Fadial] C01-002 Barum 455-400 [Fadial] C01-002 Baryllium 313-042 [Axial] C01-002 Baryllium 313-042 [Axial] C01-002 Baryllium 313-042 [Axial] C01-002 Baryllium 313-042 [Axial] C01-002 Calcium 315-887 [Fadial] C01-002 Calcium 315-887 [Fadial] C01-002 Calcium 315-887 [Fadial] C01-002 Calcium 315-887 [Fadial] C01-002 Capper 324-754 [Axial] C01-002 Capper 325-754 [Axial] C01-002 Capp	Chloride	C01,C02
Auminum 396.152 [Radial] C01.002 Antimony 208.833 [Axial] C01.002 Bartum 495.403 [Radial] C01.002 Bartum 495.804 [Radial] C01.002 Cademum 228.802 [Axial] C01.002 Cademum 228.802 [Axial] C01.002 Charemum 228.802 [Axial] C01.002 Charemum 228.804 [Axial] C01.002 Charemum 228.804 [Axial] C01.002 Charemum 238.804 [Radial] C01.002 Charemum 238.804 [Radial] C01.002 Charemum 238.804 [Radial] C01.002 Charemum 238.304 [Axial] C01.002 Charemum 238.304 [Axial] C01.002 Charemum 238.304 [Axial] C01.002 Charemum 238.304 [Axial] C01.002 Charemum 238.314 [Axial] C01.002 Magnesium 238.213 [Radial] C01.002 Potassium 786.400 [Radial] C01.002 Potassium 786.400 [Radial] C01.002 Selenium 186.000 [Axial] C01.002 Selenium 186.000 [Axial] C01.002 Selenium 180.800 [Axial] C01.002 Selenium 180.800 [Axial] C01.002 Selenium 180.806 [Axial	EPA 200.7 Rev 4.4 in Water	
Artimony 206.833 [Axial] C01,C02 Arsenic 183,769 [Axial] C01,C02 Barlum 453.409 [Yadial] C01,C02 Barlum 453.409 [Yadial] C01,C02 Barlum 453.409 [Yadial] C01,C02 Cardimam 228.802 [Axial] C01,C02 Cardimam 228.802 [Axial] C01,C02 Cardimam 228.802 [Axial] C01,C02 Cardimam 228.803 [Axial] C01,C02 Cardimam 228.804 [Axial] C01,C02 Cardimam 288.804 [Axial] C01,C02 Lead 220.383 [Axial] C01,C02 Lead 220.383 [Axial] C01,C02 Lead 220.383 [Axial] C01,C02 Lead 220.383 [Axial] C01,C02 Marganesse 257.804 [Axial] C01,C02 Marganesse 257.804 [Axial] C01,C02 Marganesse 258.804 [Axial] C01,C02 Marganesse 258.804 [Axial] C01,C02 Phosphorus 178.284 [Axial] C01,C02 Phosphorus 178.284 [Axial] C01,C02 Short 389.806 [Axial] C01,C02	Aluminum 394.401 [Radial]	C01,C02
Arsenic 198.789 [Asial]	Aluminum 396.152 [Radial]	C01,C02
Barium 485.403 [Radial]         C01,C02           Barium 483.408 [Radial]         C01,C02           Berroillary 313,C42 [Axial]         C01,C02           Berroil 240,773 [Radial]         C01,C02           Calcium 318.887 [Radial]         C01,C02           Cholent 288.815 [Axial]         C01,C02           Cobest 228.816 [Axial]         C01,C02           Coper 328.746 [Axial]         C01,C02           Long 258.476 [Axial]         C01,C02           Iron 259.940 [Radial]         C01,C02           Iron 259.940 [Radial]         C01,C02           Iron 259.940 [Radial]         C01,C02           Hampersium 258.213 [Radial]         C01,C02           Mangaresium 258.213 [Radial]         C01,C02           Mangaresium 258.213 [Radial]         C01,C02           Malposenum 202.030 [Axial]         C01,C02           Molybeanum 202.030 [Axial]         C01,C02           Plassium 768.400 [Radial]         C01,C02           Phosphona 178.284 [Axial]         C01,C02           Selentum 186.080 [Axial]         C01,C02           Selentum 186.080 [Axial]         C01,C02           Selentum 186.080 [Axial]         C01,C02           Selentum 186.080 [Axial]         C01,C02           Selentum 186.85 [Axial]         C01,C	Antimony 206.833 [Axial]	C01,C02
Banium 493,409 [Radial]         C01,C02           Benylium 313,042 [Axial]         C01,C02           Benylium 313,042 [Axial]         C01,C02           Cadmium 228,020 [Axial]         C01,C02           Calcium 315,887 [Radial]         C01,C02           Chromium 283,563 [Axial]         C01,C02           Copper 324,754 [Axial]         C01,C02           Copper 324,754 [Axial]         C01,C02           Iron 259,940 [Axial]         C01,C02           Lead 220,353 [Axial]         C01,C02           Lead 220,353 [Axial]         C01,C02           Lead 220,353 [Axial]         C01,C02           Manganesus 257,610 [Axial]         C01,C02           Molydenum 202,030 [Axial]         C01,C02           Molydenum 202,030 [Axial]         C01,C02           Potassium 766,490 [Radial]         C01,C02           Phosphorus 178,284 [Radial]         C01,C02           Silverium 386,982 [Axial]         C01,C02           Silverium 386,982 [Xaial]         C01,C02           Silverium 421,552 [Radial]         C01,	Arsenic 193.759 [Axial]	C01,C02
Bernyllium 313.042 [Axial]	Barium 455.403 [Radial]	C01,C02
Born 249, 773 [Radial]         C01,C02           Cadmim 288.802 [Axial]         C01,C02           Cholum 315.878 [Radial]         C01,C02           Chomalim 283.803 [Axial]         C01,C02           Chosal 228.816 [Axial]         C01,C02           Coper 324.754 [Axial]         C01,C02           Iron 259.940 [Axial]         C01,C02           Lead 220.353 [Axial]         C01,C02           Ledium 810.362 [Axial]         C01,C02           Mangneslum 285.213 [Radial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Phosphorus 178.284 [Radial]         C01,C02           Phosphorus 178.284 [Radial]         C01,C02           Soleium 189.592 [Axial]         C01,C02           Soleium 189.592 [Radial]         C01,C02           Soleium 189.592 [Radial]         C01,C02           Soleium 189.598 [Radial]         C01,C02           Soleium 189.598 [Radial]         C01,C02           Thallum 190.586 [Axial]         C01,C02           Thallum 190.586 [Axial]         C01,C02           Alunium [He]         C01,C02 <td>Barium 493.409 [Radial]</td> <td>C01,C02</td>	Barium 493.409 [Radial]	C01,C02
Cademium 228.802 [Axial]         C01.C02           Calclum 315.887 [Radial]         C01.C02           Chromlum 283.563 [Axial]         C01.C02           Copber 324.754 [Axial]         C01.C02           Iron 259.940 [Axial]         C01.C02           Iron 259.940 [Radial]         C01.C02           Lead 220.353 [Axial]         C01.C02           Lithium 610.382 [Axial]         C01.C02           Magnesium 285.213 [Radial]         C01.C02           Magnesium 285.213 [Radial]         C01.C02           Molybelenum 202.000 [Axial]         C01.C02           Molybelenum 202.000 [Axial]         C01.C02           Ploesslum 766.490 [Radial]         C01.C02           Phosphorus 178.284 [Radial]         C01.C02           Phosphorus 178.284 [Radial]         C01.C02           Solum 589.592 [Axial]         C01.C02           Solum 589.592 [Radial]         C01.C02           Solum 589.592 [Radial]         C01.C02           Stronlum 241.552 [Radial]         C01.C02           Thaillum 190.686 [Axial]         C01.C02           Vanadium 309.311 [Axial]         C01.C02           Auminum [He]         C01.C02           Antimony [He]         C01.C02	Beryllium 313.042 [Axial]	C01,C02
Calcium 315.887 [Radial]         C01,C02           Chromium 283.563 [Axial]         C01,C02           Cobalt 228.616 [Axial]         C01,C02           Copper 324.744 [Axial]         C01,C02           Iron 259.940 [Radial]         C01,C02           Iron 259.940 [Radial]         C01,C02           Lead 220.353 [Axial]         C01,C02           Magnesium 285.213 [Radial]         C01,C02           Manganese 257.610 [Axial]         C01,C02           Molydenum 202.030 [Axial]         C01,C02           Molydenum 202.030 [Axial]         C01,C02           Molydenum 202.030 [Axial]         C01,C02           Polassium 766.490 [Radial]         C01,C02           Phosphorus 178.284 [Axial]         C01,C02           Phosphorus 178.284 [Axial]         C01,C02           Silver 328.068 [Axial]         C01,C02           Sodium 589.592 [Axial]         C01,C02           Sodium 589.592 [Radial]         C01,C02           Storolium 346.446 [Radial]         C01,C02           Thallium 190.856 [Axial]         C01,C02           Thallium 190.856 [Axial]         C01,C02           Thallium 190.856 [Axial]         C01,C02           Antimory [He]         C01,C02           Antimory [He]         C01,C02 <td>Boron 249.773 [Radial]</td> <td>C01,C02</td>	Boron 249.773 [Radial]	C01,C02
Chomium 283.563 [Axial]         C01,C02           Cobalt 228.616 [Axial]         C01,C02           Copper 324.754 [Axial]         C01,C02           Iron 259.940 [Radial]         C01,C02           Lead 220.353 [Axial]         C01,C02           Lithium 610.382 [Axial]         C01,C02           Magneslum 285.213 [Radial]         C01,C02           Magneslum 285.23 [Radial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Nickal 231.604 [Axial]         C01,C02           Pobssbum 766.409 [Radial]         C01,C02           Phosphous 178.284 [Radial]         C01,C02           Selenium 196.090 [Axial]         C01,C02           Selenium 196.090 [Axial]         C01,C02           Selenium 196.992 [Axial]         C01,C02           Selonium 398.992 [Radial]         C01,C02           Storolium 346.446 [Radial]         C01,C02           Storolium 346.446 [Radial]         C01,C02           Vanadum 309.311 [Axial]         C01,C02           Vanadum 309.311 [Axial]         C01,C02           Aluminum [He]         C01,C02           Antimony [He]         C01,C02           Antimony [He]         C01,C02	Cadmium 228.802 [Axial]	C01,C02
Cobalt 228 616 [Axial]         C01,C02           Copper 324.754 [Axial]         C01,C02           Iron 259.940 [Rxial]         C01,C02           Lead 220.553 [Axial]         C01,C02           Lead 220.553 [Axial]         C01,C02           Lithium 610.362 [Axial]         C01,C02           Magnesium 285.213 [Radial]         C01,C02           Mangesium 285.213 [Radial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Nickel 231.604 [Axial]         C01,C02           Ploashum 766.490 [Radial]         C01,C02           Phosphorus 178.284 [Axial]         C01,C02           Selenium 196.090 [Axial]         C01,C02           Selenium 196.090 [Axial]         C01,C02           Sodium 589.592 [Axial]         C01,C02           Sodium 589.592 [Axial]         C01,C02           Strontium 421.552 [Radial]         C01,C02           Strontium 421.552 [Radial]         C01,C02           Vanadum 309.311 [Axial]         C01,C02           Zinc 213.856 [Axial]         C01,C02           Aluminum [He]         C01,C02           Antimony [He]         C01,C02	Calcium 315.887 [Radial]	C01,C02
Coper 324.754 [Axial]         C01,C02           Iron 259.940 [Radial]         C01,C02           Lead 220.353 [Axial]         C01,C02           Lithium 610.362 [Axial]         C01,C02           Magnesium 285.213 [Radial]         C01,C02           Manganese 257.610 [Axial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Nickel 231.604 [Axial]         C01,C02           Picassium 766.490 [Radial]         C01,C02           Phosphorus 178.284 [Axial]         C01,C02           Phosphorus 178.284 [Radial]         C01,C02           Selenium 196.090 [Axial]         C01,C02           Solium 589.592 [Radial]         C01,C02           Solium 589.592 [Radial]         C01,C02           Strontium 421.552 [Radial]         C01,C02           Strontium 390.311 [Axial]         C01,C02           Vanadum 309.311 [Axial]         C01,C02           Zince 213.856 [Axial]         C01,C02           Aluminum [He]         C01,C02           Antimony [He]         C01,C02           Antimony [He]         C01,C02	Chromium 283.563 [Axial]	C01,C02
Iron 259.940 [Axiai]	Cobalt 228.616 [Axial]	C01,C02
Iron 259,940 [Radial]	Copper 324.754 [Axial]	C01,C02
Lead 220.353 [Axial]         C01,C02           Lithium 610.362 [Axial]         C01,C02           Magnesium 285.213 [Radial]         C01,C02           Manganese 257.610 [Axial]         C01,C02           Molybdenum 202.030 [Axial]         C01,C02           Nickel 231.604 [Axial]         C01,C02           Ploassium 766.490 [Radial]         C01,C02           Phosphorus 178.284 [Axial]         C01,C02           Phosphorus 178.284 [Radial]         C01,C02           Selenium 196.090 [Axial]         C01,C02           Sodium 589.592 [Axial]         C01,C02           Sodium 589.592 [Radial]         C01,C02           Strontium 346.446 [Radial]         C01,C02           Strontium 347.1552 [Radial]         C01,C02           Thallium 198.856 [Axial]         C01,C02           Vanadium 309.311 [Axial]         C01,C02           Zinc 213.856 [Axial]         C01,C02           Zinc 213.856 [Axial]         C01,C02           Aluminum [He]         C01,C02           Antimony [He]         C01,C02           Antimony [He]         C01,C02	Iron 259.940 [Axial]	C01,C02
Lithium 610,362 [Axial]         C01,C02           Magnesium 285,213 [Radial]         C01,C02           Molybdenum 202,030 [Axial]         C01,C02           Mickel 231,604 [Axial]         C01,C02           Pictassium 766,490 [Radial]         C01,C02           Phosphorus 178,284 [Radial]         C01,C02           Phosphorus 178,284 [Radial]         C01,C02           Selenium 196,090 [Axial]         C01,C02           Silver 328,068 [Axial]         C01,C02           Sodium 589,592 [Axial]         C01,C02           Strontium 346,446 [Radial]         C01,C02           Strontium 346,446 [Radial]         C01,C02           Thallium 190,856 [Axial]         C01,C02           Vanadium 309,311 [Axial]         C01,C02           Zinc 213,856 [Axial]         C01,C02           Aluminum [He]         C01,C02           Antimony [He]         C01,C02           Antimony [He]         C01,C02	Iron 259.940 [Radial]	C01,C02
Magnesium 285.213 [Radial] C01,C02  Manganese 257.610 [Axial] C01,C02  Molybdenum 202.030 [Axial] C01,C02  Nickel 231.604 [Axial] C01,C02  Potassium 766.490 [Radial] C01,C02  Phosphorus 178.284 [Radial] C01,C02  Phosphorus 178.284 [Radial] C01,C02  Selenium 196.090 [Axial] C01,C02  Selenium 196.090 [Axial] C01,C02  Sodium 589.592 [Axial] C01,C02  Sodium 589.592 [Radial] C01,C02  Strontium 346.446 [Radial] C01,C02  Strontium 346.446 [Radial] C01,C02  Strontium 421.552 [Radial] C01,C02  Thallium 190.856 [Axial] C01,C02  Thallium 190.856 [Axial] C01,C02  Zinc 213.856 [Axial] C01,C02  EPA 200.8 Rev 5.4 in Water  Aluminum [He] C01,C02  Antimony [He] C01,C02  Antimony [HHe] C01,C02	Lead 220.353 [Axial]	C01,C02
Manganese 257.610 [Axial]       C01,C02         Molybdenum 202.030 [Axial]       C01,C02         Nickel 231.604 [Axial]       C01,C02         Potassium 786.490 [Radial]       C01,C02         Phosphorus 178.284 [Axial]       C01,C02         Phosphorus 178.284 [Radial]       C01,C02         Selenium 196.090 [Axial]       C01,C02         Silver 328.068 [Axial]       C01,C02         Sodium 589.592 [Radial]       C01,C02         Strontium 346.446 [Radial]       C01,C02         Strontium 421.552 [Radial]       C01,C02         Thallium 190.856 [Axial]       C01,C02         Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [He]       C01,C02	Lithium 610.362 [Axial]	C01,C02
Molybdenum 202.030 [Axial] C01,C02 Nickel 231.604 [Axial] C01,C02 Potassium 766.490 [Radial] C01,C02 Phosphorus 178.284 [Axial] C01,C02 Phosphorus 178.284 [Radial] C01,C02 Selenium 196.090 [Axial] C01,C02 Silver 328.068 [Axial] C01,C02 Sodium 589.592 [Axial] C01,C02 Sodium 589.592 [Radial] C01,C02 Strontium 346.446 [Radial] C01,C02 Strontium 346.446 [Radial] C01,C02 Strontium 421.552 [Radial] C01,C02 Thallium 190.856 [Axial] C01,C02 Vanadium 309.311 [Axial] C01,C02 Zinc 213.856 [Axial] C01,C02 EPA 200.8 Rev 5.4 in Water  Aluminum [He] C01,C02 Antimory [He] C01,C02 Antimory [He] C01,C02 Antimory [He] C01,C02	Magnesium 285.213 [Radial]	C01,C02
Nickel 231.604 [Axial] C01,C02 Potassium 766.490 [Radial] C01,C02 Phosphorus 178.284 [Axial] C01,C02 Phosphorus 178.284 [Radial] C01,C02 Selenium 196.090 [Axial] C01,C02 Silver 328.068 [Axial] C01,C02 Sodium 589.592 [Axial] C01,C02 Sodium 589.592 [Radial] C01,C02 Sotium 421.552 [Radial] C01,C02 Strontium 346.446 [Radial] C01,C02 Strontium 421.552 [Radial] C01,C02 Thallium 190.856 [Axial] C01,C02 Vanadium 309.311 [Axial] C01,C02 Zinc 213.856 [Axial] C01,C02 Zinc 213.856 [Axial] C01,C02 Antimony [He] C01,C02 Antimony [He] C01,C02 Antimony [He] C01,C02 Antimony [He] C01,C02	Manganese 257.610 [Axial]	C01,C02
Potassium 766.490 [Radial] C01,C02 Phosphorus 178.284 [Axial] C01,C02 Phosphorus 178.284 [Radial] C01,C02 Selenium 196.090 [Axial] C01,C02 Silver 328.068 [Axial] C01,C02 Sodium 589.592 [Axial] C01,C02 Sodium 589.592 [Radial] C01,C02 Strontium 346.446 [Radial] C01,C02 Strontium 421.552 [Radial] C01,C02 Strontium 421.552 [Radial] C01,C02 Thallium 190.856 [Axial] C01,C02 Vanadium 309.311 [Axial] C01,C02 Zinc 213.856 [Axial] C01,C02 Zinc 213.856 [Axial] C01,C02 Antimony [He] C01,C02 Antimony [He] C01,C02 Antimony [HHe] C01,C02	Molybdenum 202.030 [Axial]	C01,C02
Phosphorus 178.284 [Axial]       C01,C02         Phosphorus 178.284 [Radial]       C01,C02         Selenium 196.090 [Axial]       C01,C02         Silver 328.068 [Axial]       C01,C02         Sodium 589.592 [Axial]       C01,C02         Sodium 589.592 [Radial]       C01,C02         Strontium 346.446 [Radial]       C01,C02         Strontium 421.552 [Radial]       C01,C02         Thallium 190.856 [Axial]       C01,C02         Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Nickel 231.604 [Axial]	C01,C02
Phosphorus 178.284 [Radial] C01,C02  Selenium 196.090 [Axial] C01,C02  Silver 328.068 [Axial] C01,C02  Sodium 589.592 [Axial] C01,C02  Sodium 589.592 [Radial] C01,C02  Strontium 346.446 [Radial] C01,C02  Strontium 421.552 [Radial] C01,C02  Thallium 190.856 [Axial] C01,C02  Vanadium 309.311 [Axial] C01,C02  Zinc 213.856 [Axial] C01,C02  EPA 200.8 Rev 5.4 in Water  Aluminum [He] C01,C02  Antimony [He] C01,C02  Antimony [He] C01,C02	Potassium 766.490 [Radial]	C01,C02
Selenium 196.090 [Axial]       C01,C02         Silver 328.068 [Axial]       C01,C02         Sodium 589.592 [Axial]       C01,C02         Sodium 589.592 [Radial]       C01,C02         Strontium 346.446 [Radial]       C01,C02         Strontium 421.552 [Radial]       C01,C02         Thallium 190.856 [Axial]       C01,C02         Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         EPA 200.8 Rev 5.4 in Water       Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Phosphorus 178.284 [Axial]	C01,C02
Silver 328.068 [Axial]       C01,C02         Sodium 589.592 [Axial]       C01,C02         Stontium 346.446 [Radial]       C01,C02         Strontium 421.552 [Radial]       C01,C02         Thallium 190.856 [Axial]       C01,C02         Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         EPA 200.8 Rev 5.4 in Water       Aluminum [He]         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Phosphorus 178.284 [Radial]	C01,C02
Sodium 589.592 [Axial]         C01,C02           Sodium 589.592 [Radial]         C01,C02           Strontium 346.446 [Radial]         C01,C02           Strontium 421.552 [Radial]         C01,C02           Thallium 190.856 [Axial]         C01,C02           Vanadium 309.311 [Axial]         C01,C02           Zinc 213.856 [Axial]         C01,C02           EPA 200.8 Rev 5.4 in Water         Aluminum [He]           Antimony [He]         C01,C02           Antimony [HHe]         C01,C02	Selenium 196.090 [Axial]	C01,C02
Sodium 589.592 [Radial]       C01,C02         Strontium 346.446 [Radial]       C01,C02         Strontium 421.552 [Radial]       C01,C02         Thallium 190.856 [Axial]       C01,C02         Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         EPA 200.8 Rev 5.4 in Water       Aluminum [He]         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Silver 328.068 [Axial]	C01,C02
Strontium 346.446 [Radial]       C01,C02         Strontium 421.552 [Radial]       C01,C02         Thallium 190.856 [Axial]       C01,C02         Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         EPA 200.8 Rev 5.4 in Water       Aluminum [He]         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Sodium 589.592 [Axial]	C01,C02
Strontium 421.552 [Radial]       C01,C02         Thallium 190.856 [Axial]       C01,C02         Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         EPA 200.8 Rev 5.4 in Water       Aluminum [He]         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Sodium 589.592 [Radial]	C01,C02
Thallium 190.856 [Axial]       C01,C02         Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         EPA 200.8 Rev 5.4 in Water       Aluminum [He]         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Strontium 346.446 [Radial]	C01,C02
Vanadium 309.311 [Axial]       C01,C02         Zinc 213.856 [Axial]       C01,C02         EPA 200.8 Rev 5.4 in Water         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Strontium 421.552 [Radial]	C01,C02
Zinc 213.856 [Axial]       C01,C02         EPA 200.8 Rev 5.4 in Water         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Thallium 190.856 [Axial]	C01,C02
EPA 200.8 Rev 5.4 in Water         Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Vanadium 309.311 [Axial]	C01,C02
Aluminum [He]       C01,C02         Antimony [He]       C01,C02         Antimony [HHe]       C01,C02	Zinc 213.856 [Axial]	C01,C02
Antimony [He] C01,C02 Antimony [HHe] C01,C02	EPA 200.8 Rev 5.4 in Water	
Antimony [He]         C01,C02           Antimony [HHe]         C01,C02	Aluminum [He]	C01,C02
Antimony [HHe] C01,C02	Antimony [He]	
	Antimony [HHe]	
	Antimony [NG]	





Choctaw Generation LP 2391 Pensacola Rd. Ackerman MS, 39735		Project: CGLP CCR Semi Annual Project Number: [none] Project Manager: Jim Ward	<b>Reported:</b> 10/09/2023 13:31
Arsenic [He]	C01,C02		

Arsenic [He]	C01,C02
Arsenic [HHe]	C01,C02
Arsenic [NG]	C01,C02
Barium [He]	C01,C02
Beryllium [He]	C01,C02
Boron [NG]	C01,C02
Cadmium [He]	C01,C02
Cadmium [HHe]	C01,C02
Cadmium [NG]	C01,C02
Chromium [He]	C01,C02
Cobalt [He]	C01,C02
Copper [He]	C01,C02
Copper [NG]	C01,C02
Iron [He]	C01,C02
Lead [He]	C01,C02
Lead [NG]	C01,C02
Manganese [He]	C01,C02
Molybdenum [He]	C01,C02
Nickel [He]	C01,C02
Selenium [He]	C01,C02
Selenium [HHe]	C01,C02
Selenium [NG]	C01,C02
Silver [He]	C01,C02
Silver [NG]	C01,C02
Strontium [He]	C01,C02
Thallium [He]	C01,C02
Vanadium [He]	C01,C02
Zinc [He]	C01,C02
CM 2540 C-2015 in Water	

#### SM 2540 C-2015 in Water

Total Dissolved Solids C01,C02

#### SM 4500-SO42 E 2011 in Water

Sulfate as SO4 C01,C02

<sup>\*\*</sup>Only compounds included in this list are associated with accredited analyses\*\*





Project: CGLP CCR Semi Annual

Project Number: [none]
Project Manager: Jim Ward

**Reported:** 10/09/2023 13:31

#### Laboratory Accreditations/Certifications

Code	Description	Number	Expires
C01	LA Environmental Lab Accreditation Program	01960	06/30/2024
C02	The NELAC Institute (NELAP)	TNI01397	06/30/2024
C03	Ms Dept of Health (Drinking Water Microbiology)	MS00021	12/31/2023
C04	Ms Dept of Health (Drinking Water Chemistry)	MS00021	12/31/2023
C05	Ms DEQ Lead Firm Certification	PBF-00000028	03/31/2024
C06	MsDEQ Asbestos Inspector : C.D. Bingham	ABI-00001348	02/09/2024
C07	MsDEQ Air Monitor : C.D. Bingham	AM-011572	02/10/2024
C08	MsDEQ Asbestos Inspector: C. W. Meins	ABI-00001821	09/09/2022
C09	MsDEQ Air Monitor: C.W. Meins	AM-011189	02/10/2024
C14	MsDEQ Lead Paint Inspector : C.D. Bingham	PBI-00003690	02/07/2024
C15	MsDEQ Lead Paint Inspector : C.W. Meins	PBI-00001740	02/07/2024

#### **Report Definitions**

ND Analyte NOT DETECTED at or above the minimum reporting limit  NR Not Reported  Detection Proceed Services and Detection Proceedings of the Proc
RPD Relative Percent Difference  ICV Initial Calibration Verfiication
CCV Continuing Calibration Verification Standard
SSV Secondary Source Verfication Standard
LCS Lab Control Spike - Lab matrix prepared with known concentration of analyte/s of interest analyzed by method.
MS Matrix Spike - Sample prepared with known concentration of analyte/s of interest analyzed by method.
MSD Matrix Spike Duplicate - Duplicate sample prepared with known concentration of analyte/s of interest analyzed by method.
MRL Minimum Reporting Limit
%REC Percentage Recovery of known concentration added to matrix
Batch Group of samples prepared for analysis not to exceed 20 samples.
Matrix Material containing analyte/s of interest
Surrogate Analyte added to sample to determine extraction efficiency of method.





Choctaw Generation LP Project: CGLP CCR Semi Annual

 2391 Pensacola Rd.
 Project Number: [none]
 Reported:

 Ackerman MS, 39735
 Project Manager: Jim Ward
 10/09/2023 13:31

#### **Analyst Initials Key**

<u>FullName</u>	<u>Initials</u>
Charles L Vorhoff	CLV
Christa R Gray	CRG
Dortha L. Wells	DLW
Garrett Givhan	GWG
Sarah E. Tomek	SET
Teresa Meins	TKM
Tina Tomek	TPT

Chain of Custody Record

Lab ID# MS00021 LELAP ID # 01960 TNI ID # TNI01397

Print Form

M-M Lab 220924

PO Box 1410, Ocean Springs, MS 39566-1410 (228) 875-6420 FAX (228) 875-6423

www.micromethodslab.com

(			1			_								Received by
1.60/er #3 121						_								Relinquished by
(00 18/ # T														Received by
2 /2 # 7 0 . 4	13	28.0	- 2			_					-			Relinquished by
(00/er#/1.9	8:55	1/23	14/2	3	12	7	our.	B	la-	义	ins	Mi	Juresa	Received by
Please return Ecs; Holay corlers	84:61	3/2?	1/2/2		CCX		M	F	N	M	kines (	3	Caleb	Relinquished by
Notes:	Time		Date	ıny	Company			क	Signature	1	9	Printed Name	Printe	
**All Temps are Corrected Values** 9=NaHSO4		║,	ĕ	Cooler	Ķ	Blank	 	Sample				₽.		Date & Time
/=Nd232O3	1.4	10.4	1.9,	ed(°C	orrect	Temp Corrected(°C	ipt Te	Receipt	17.	Cooler #	15 Co	eter#_	N Thermometer#	n Ice?
6=HNO3	$\times \times$	X	<u>                                     </u>	X	X	X	X		4 G	٤	3/23/5×80	9/1	+~	CC
NaOH	X	X	X	X	X	X	X		4 G	٤	3/23 11:10	9//	CCR-3	00
4=ZnC4H10O6 &	X	X	X	X	X	X	X		4 G	8	8/23/5:45	9/1	CCR-2	CC
3=NaOH	X	$\overline{X}$	$\stackrel{\frown}{\times}$	X	X	$\times$	$\stackrel{\frown}{\times}$		4 G	٤	3/22/13:35	9/13	MW-12	MW
1= H2504 2= H3P04	X	$\times$	$\stackrel{\frown}{\times}$	$\searrow$	X	X		<u> </u>	4 G	٤			Field Duplicate	Field D
Preservation:	XX	$\times$	$\stackrel{\frown}{\times}$	X	X	$\times$	X		4 G	8	9/13/23 10:35	9/1	Field Blank	Field
	X	X	$\stackrel{\frown}{\times}$	X	X	X	$\stackrel{\frown}{\times}$		4 G	٧	9/13/23 10:30	9//	-14	MW-14
	X	$\times$	A X	×	X	X	$\stackrel{\frown}{X}$	) >	4 G	8	45.11876	9/	V-7	MW-7
SL = Sludge	X	X	∕ X	X	X	X	X		4 G	٧	3/23/6:07	9/	MW-13	MV
A = Air O = Oil	X	X	X	X	$\times$	X	X		4 G	٤	sle3 14:52	2/2	OW-2	9
L= Liquid	X	X	×	X	X	X	X		4 G	8	3/23/2:05	9/13	V-9	WW-9
SO = Soil SE = Sediment	Se	Li	Cá	Chi		An	Ci	_	Grab	Code	Sampling No.	D (0	ntification	Sample Identification
DW = Drinking Water S = Solid	bdenu lenium l Radii 6 & 22	thiun	<u>Lead</u> alcium, Cobalt	admiun romiun	ım, Bo	timony rsenic	hloride, ide, Su	TDS	(G) or cosite (	Contain	1	¥	Semi-Annual	Project #:
Field Test Field Test Field Test W = Water	um 8	- 1	-		- 1		Ifate	O)	Servat	3	CR	PC	CGLP CCR	Project Name:
Field Testing			sted	Reque	898	List Analyses Requested	List							
QC Level: Level 1 Level 2 Level 3					K,	a	gned	Vame S	Sampler Name Signed:	S				Fax:
pici approved.					rs	James	rinted:	Vame F	Sampler Name Printed:	S			5758	Phone: 662-387-5758
Next Day* requests must beMail 2nd Day* refor approvedFax	o.com		her	out	@s	mward@southernc	mv	dress :	Email Address	m	Zip: 39735	S	State: MS	City: Ackerman
Normal *All rush orderPhone							]# 	Order	Purchase Order #	9	Rd.	ola	Pensacola	Address: 2391
Turn Around Time & Reporting Our pormal turn around time is 10 working days		0	Var	Jim Ward	ي:			anager	oject M	FLFP	ed Partnership	Limite	ctaw Generation	Company Name: Choctaw Generation Limited Partnership LLLP Project Manager.

DCN F316 Rev.6 MicroMethods Laboratory Issued/Revised 6/15/22

M-M Lab WO#

**Print Form** 

PO Box 1410, Ocean Springs, MS 39566-1410 (228) 875-6420 FAX (228) 875-6423 Chain of Custody Record

**TNI ID # TNI01397 LELAP ID # 01960** Lab ID# MS00021

www.micromethodslab.com		
Company Name: Choctaw Generation Limited Partnership LLLP Project Manager:	Project Manager: Jim Ward	Turn Around Time & Reporting
Address: 2391 Pensacola Rd.	Purchase Order #:	Normal
State: MS Zip: 39735	Email Address : jmward@southernco.com	`, ¥
Phone: 662-387-5758	Sampler Name Printed:	_Other*Email
Fax:	Sampler Name Signed:	QC Level: Level 1 Level 2 Level 3
	List Analyses Requested	Field Testing
Project Name: CGLP CCR	fate nn,	Field Test
Project #: Semi-Annual	G) or osite (C) DS loride, de, Sul imony, senic m, Bo yllium, dmium ead lcium, obalt chium denium Radium Radium Radium, s. 2.2	
Sample Identification Date/Time Code	Grab (Comp Ch Fluoric Ant Bariu Ber Ca Chr Ca Chr Molyt	SC = Sediment
CCR-5 9/13/13,14:56 W	G X X	L= Liquid
		0 = 0
		Preservation:
		1= H2SO4 2= H3PO4
		3=NaOH
		5=ZnC4H1006 &
		6=HNO3
Received on $lce / / V N$ Thermometer# 5 Cooler #	Tem	/=Na252O3
Date & Time By:	SampleBlankVCooler	**All Temps are Corrected Values** 9=NaHSO4
Printed Name	Signature, Company Date Time	Notes:
Relinquished by Cales Lancs / H	A.A.	
Received by Teresa Meins	un Meine Hotes 855	
Relinquished by	11/3 A	
Received by	1. 45th 2.0	
Relinquished by		
Received by		

MicroMethods Laboratory

DCN F316 Rev.6

Physical Address: 6500 Sunplex Drive, Ocean Springs MS 39564

(724)850-5600



October 09, 2023

Tina Tomek Micro-Methods Lab 6500 Sunplex Drive Ocean Springs, MS 39564

RE: Project: 2309244

Pace Project No.: 30624440

#### Dear Tina Tomek:

Enclosed are the analytical results for sample(s) received by the laboratory on September 21, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

• Pace Analytical Services - Greensburg

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

Sincerely,

Justin P. Horn justin.horn@pacelabs.com (724)850-5600

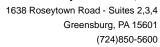
Justen Hown

Project Manager

Enclosures

cc: Accounts Payable, Micro-Methods Lab







#### **CERTIFICATIONS**

Project: 2309244
Pace Project No.: 30624440

#### Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417 ANABISO/IEC 17025:2017 Rad Cert#: L24170

Alabama Certification #: 41590 Arizona Certification #: AZ0734

**Arkansas Certification** 

California Certification #: 2950 Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040

Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA010 Louisiana DEQ/TNI Certification #: 04086

Maine Certification #: 2023021 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-015 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

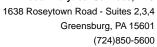
South Dakota Certification

Tennessee Certification #: TN02867

Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

#### REPORT OF LABORATORY ANALYSIS





#### **SAMPLE SUMMARY**

Project: 2309244
Pace Project No.: 30624440

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30624440001	2309244-01	Water	09/13/23 12:05	09/21/23 10:10
30624440002	2309244-02	Water	09/13/23 14:52	09/21/23 10:10
30624440003	2309244-03	Water	09/13/23 16:07	09/21/23 10:10
30624440004	2309244-04	Water	09/13/23 11:57	09/21/23 10:10
30624440005	2309244-05	Water	09/13/23 10:30	09/21/23 10:10
30624440006	2309244-06	Water	09/13/23 10:35	09/21/23 10:10
30624440007	2309244-07	Water	09/13/23 00:00	09/21/23 10:10
30624440008	2309244-08	Water	09/13/23 13:35	09/21/23 10:10
30624440009	2309244-09	Water	09/13/23 15:45	09/21/23 10:10
30624440010	2309244-10	Water	09/13/23 11:10	09/21/23 10:10
30624440011	2309244-11	Water	09/13/23 15:50	09/21/23 10:10
30624440012	2309244-12	Water	09/13/23 14:56	09/21/23 10:10

#### **REPORT OF LABORATORY ANALYSIS**

(724)850-5600

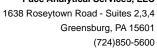


#### **SAMPLE ANALYTE COUNT**

Project: 2309244
Pace Project No.: 30624440

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30624440001	2309244-01	EPA 903.1	 MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440002	2309244-02	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440003	2309244-03	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440004	2309244-04	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440005	2309244-05	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440006	2309244-06	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440007	2309244-07	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440008	2309244-08	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440009	2309244-09	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440010	2309244-10	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440011	2309244-11	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1
30624440012	2309244-12	EPA 903.1	MAR1	1
		EPA 904.0	ZPC	1
		Total Radium Calculation	JAL	1

#### **REPORT OF LABORATORY ANALYSIS**





#### **SAMPLE ANALYTE COUNT**

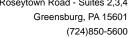
Project: 2309244
Pace Project No.: 30624440

Analytes

Lab ID Sample ID Method Analysts Reported

PASI-PA = Pace Analytical Services - Greensburg

#### REPORT OF LABORATORY ANALYSIS

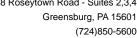




Project: 2309244
Pace Project No.: 30624440

Sample: 2309244-01 Lab ID: 30624440001 Collected: 09/13/23 12:05 Received: 09/21/23 10:10 Matrix: Water PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Pace Analytical Services - Greensburg EPA 903.1  $0.301 \pm 0.426 \quad (0.722)$ Radium-226 pCi/L 10/05/23 14:32 13982-63-3 C:NA T:84% Pace Analytical Services - Greensburg  $0.611 \pm 0.405 \quad (0.765)$ EPA 904.0 Radium-228 pCi/L 10/05/23 14:47 15262-20-1 C:81% T:79% Pace Analytical Services - Greensburg Total Radium Total Radium 0.912 ± 0.831 (1.49) pCi/L 10/09/23 13:17 7440-14-4 Calculation Sample: 2309244-02 Lab ID: 30624440002 Collected: 09/13/23 14:52 Received: 09/21/23 10:10 PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units CAS No. Analyzed Qual Pace Analytical Services - Greensburg -0.0667 ± 0.570 (1.16) Radium-226 EPA 903.1 pCi/L 10/05/23 14:32 13982-63-3 C:NA T:80% Pace Analytical Services - Greensburg  $0.545 \pm 0.378 \quad (0.709)$ Radium-228 EPA 904.0 10/05/23 14:48 15262-20-1 pCi/L C:80% T:77% Pace Analytical Services - Greensburg Total Radium Total Radium  $0.545 \pm 0.948$  (1.87) pCi/L 10/09/23 13:17 7440-14-4 Calculation Sample: 2309244-03 Lab ID: 30624440003 Collected: 09/13/23 16:07 Received: 09/21/23 10:10 Matrix: Water PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Pace Analytical Services - Greensburg EPA 903.1  $0.330 \pm 0.383 \quad (0.619)$ Radium-226 pCi/L 10/05/23 14:32 13982-63-3 C:NA T:95% Pace Analytical Services - Greensburg 1.44 ± 0.494 (0.663) Radium-228 EPA 904.0 pCi/L 10/05/23 14:48 15262-20-1 C:79% T:88% Pace Analytical Services - Greensburg Total Radium Total Radium  $1.77 \pm 0.877$  (1.28) pCi/L 10/09/23 13:17 7440-14-4 Calculation

#### **REPORT OF LABORATORY ANALYSIS**

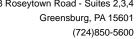




Project: 2309244
Pace Project No.: 30624440

Sample: 2309244-04 Lab ID: 30624440004 Collected: 09/13/23 11:57 Received: 09/21/23 10:10 Matrix: Water PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Pace Analytical Services - Greensburg EPA 903.1  $0.530 \pm 0.512 \quad (0.795)$ Radium-226 pCi/L 10/05/23 14:32 13982-63-3 C:NA T:89% Pace Analytical Services - Greensburg EPA 904.0  $0.153 \pm 0.319 \quad (0.706)$ Radium-228 pCi/L 10/05/23 14:48 15262-20-1 C:84% T:84% Pace Analytical Services - Greensburg Total Radium Total Radium  $0.683 \pm 0.831 \quad (1.50)$ pCi/L 10/09/23 13:17 7440-14-4 Calculation Sample: 2309244-05 Lab ID: 30624440005 Collected: 09/13/23 10:30 Received: 09/21/23 10:10 Site ID: Sample Type: Comments: • Sampler name and signature not on COC. Act ± Unc (MDC) Carr Trac **Parameters** Method Units CAS No. Analyzed Qual Pace Analytical Services - Greensburg Radium-226 EPA 903.1 -0.115 ± 0.423 (0.914) pCi/L 10/05/23 14:32 13982-63-3 C:NA T:86% Pace Analytical Services - Greensburg  $0.439 \pm 0.391 \quad (0.788)$ Radium-228 EPA 904.0 10/05/23 14:48 15262-20-1 pCi/L C:72% T:86% Pace Analytical Services - Greensburg Total Radium Total Radium  $0.439 \pm 0.814$  (1.70) pCi/L 10/09/23 13:17 7440-14-4 Calculation Sample: 2309244-06 Lab ID: 30624440006 Collected: 09/13/23 10:35 Received: 09/21/23 10:10 PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Pace Analytical Services - Greensburg EPA 903.1  $0.327 \pm 0.463 \quad (0.785)$ Radium-226 pCi/L 10/05/23 14:45 13982-63-3 C:NA T:82% Pace Analytical Services - Greensburg Radium-228 EPA 904.0  $0.679 \pm 0.388 \quad (0.691)$ pCi/L 10/05/23 14:48 15262-20-1 C:77% T:88% Pace Analytical Services - Greensburg Total Radium Total Radium 1.01 ± 0.851 (1.48) pCi/L 10/09/23 13:17 7440-14-4 Calculation

#### **REPORT OF LABORATORY ANALYSIS**



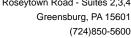


Project: 2309244
Pace Project No.: 30624440

Sample: 2309244-07 Lab ID: 30624440007 Collected: 09/13/23 00:00 Received: 09/21/23 10:10 Matrix: Water PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Pace Analytical Services - Greensburg EPA 903.1  $0.116 \pm 0.424 \quad (0.815)$ Radium-226 pCi/L 10/05/23 14:45 13982-63-3 C:NA T:81% Pace Analytical Services - Greensburg EPA 904.0  $1.02 \pm 0.472 \quad (0.751)$ Radium-228 pCi/L 10/05/23 14:48 15262-20-1 C:77% T:85% Pace Analytical Services - Greensburg Total Radium Total Radium  $1.14 \pm 0.896$  (1.57) pCi/L 10/09/23 13:17 7440-14-4 Calculation Sample: 2309244-08 Lab ID: 30624440008 Collected: 09/13/23 13:35 Received: 09/21/23 10:10 PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Units CAS No. Act ± Unc (MDC) Carr Trac Analyzed Qual Pace Analytical Services - Greensburg  $0.1000 \pm 0.460 \quad (0.871)$ Radium-226 EPA 903.1 pCi/L 10/05/23 14:45 13982-63-3 C:NA T:93% Pace Analytical Services - Greensburg  $0.648 \pm 0.427 \quad (0.806)$ Radium-228 EPA 904.0 10/05/23 14:48 15262-20-1 pCi/L C:79% T:80% Pace Analytical Services - Greensburg Total Radium Total Radium  $0.748 \pm 0.887$  (1.68) pCi/L 10/09/23 13:17 7440-14-4 Calculation Lab ID: 30624440009 Sample: 2309244-09 Collected: 09/13/23 15:45 Received: 09/21/23 10:10 Matrix: Water PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Pace Analytical Services - Greensburg EPA 903.1  $0.692 \pm 0.507 \quad (0.698)$ Radium-226 pCi/L 10/05/23 14:45 13982-63-3 C:NA T:89% Pace Analytical Services - Greensburg Radium-228 EPA 904.0  $1.80 \pm 0.630 \quad (0.888)$ pCi/L 10/05/23 14:49 15262-20-1 C:78% T:77% Pace Analytical Services - Greensburg Total Radium Total Radium 2.49 ± 1.14 (1.59) pCi/L 10/09/23 13:17 7440-14-4

#### **REPORT OF LABORATORY ANALYSIS**

Calculation



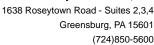


Project: 2309244
Pace Project No.: 30624440

Sample: 2309244-10 Lab ID: 30624440010 Collected: 09/13/23 11:10 Received: 09/21/23 10:10 Matrix: Water PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Pace Analytical Services - Greensburg EPA 903.1  $0.0694 \pm 0.707$  (1.35) Radium-226 pCi/L 10/05/23 14:45 13982-63-3 C:NA T:82% Pace Analytical Services - Greensburg EPA 904.0  $1.11 \pm 0.517 \quad (0.856)$ Radium-228 pCi/L 10/05/23 14:49 15262-20-1 C:77% T:80% Pace Analytical Services - Greensburg Total Radium Total Radium 1.18 ± 1.22 (2.21) pCi/L 10/09/23 13:17 7440-14-4 Calculation Sample: 2309244-11 Lab ID: 30624440011 Collected: 09/13/23 15:50 Received: 09/21/23 10:10 PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units CAS No. Analyzed Qual Pace Analytical Services - Greensburg Radium-226 EPA 903.1  $0.460 \pm 0.454 \quad (0.691)$ pCi/L 10/05/23 14:45 13982-63-3 C:NA T:86% Pace Analytical Services - Greensburg 1.36 ± 0.530 (0.772) Radium-228 EPA 904.0 pCi/L 10/05/23 14:49 15262-20-1 C:78% T:80% Pace Analytical Services - Greensburg Total Radium Total Radium  $1.82 \pm 0.984$  (1.46) pCi/L 10/09/23 13:17 7440-14-4 Calculation Sample: 2309244-12 Lab ID: 30624440012 Collected: 09/13/23 14:56 Received: 09/21/23 10:10 Matrix: Water PWS: Site ID: Sample Type: Comments: • Sampler name and signature not on COC. **Parameters** Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Pace Analytical Services - Greensburg EPA 903.1  $0.429 \pm 0.495 \quad (0.805)$ Radium-226 pCi/L 10/05/23 14:45 13982-63-3 C:NA T:86% Pace Analytical Services - Greensburg Radium-228 EPA 904.0  $1.54 \pm 0.553$  (0.766) pCi/L 10/05/23 14:49 15262-20-1 C:76% T:79% Pace Analytical Services - Greensburg Total Radium Total Radium 1.97 ± 1.05 (1.57) pCi/L 10/09/23 13:17 7440-14-4

#### **REPORT OF LABORATORY ANALYSIS**

Calculation





#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2309244
Pace Project No.: 30624440

QC Batch: 617732 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30624440001, 30624440002, 30624440003, 30624440004, 30624440005, 30624440007,

30624440008, 30624440009, 30624440010, 30624440011, 30624440012

METHOD BLANK: 3008854 Matrix: Water

Associated Lab Samples: 30624440001, 30624440002, 30624440003, 30624440004, 30624440005, 30624440007,

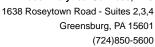
30624440008, 30624440009, 30624440010, 30624440011, 30624440012

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.303 ± 0.228 (0.117) C:NA T:83%
 pCi/L
 10/05/23 14:32

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

#### **REPORT OF LABORATORY ANALYSIS**





#### **QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2309244
Pace Project No.: 30624440

QC Batch: 617734 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30624440001, 30624440002, 30624440003, 30624440004, 30624440005, 30624440007,

30624440008, 30624440009, 30624440010, 30624440011, 30624440012

METHOD BLANK: 3008857 Matrix: Water

Associated Lab Samples: 30624440001, 30624440002, 30624440003, 30624440004, 30624440005, 30624440007,

30624440008, 30624440009, 30624440010, 30624440011, 30624440012

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.354 ± 0.372 (0.769) C:77% T:77%
 pCi/L
 10/05/23 14:47

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

#### **REPORT OF LABORATORY ANALYSIS**



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

#### **QUALIFIERS**

Project: 2309244
Pace Project No.: 30624440

#### **DEFINITIONS**

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Date: 10/09/2023 01:25 PM

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.



Due

Sample ID: 2309244-01 Water Sampled: 09/13/2023 12:05

Sample ID: 2309244-02 Water Sampled: 09/13/2023 14:52

Radium, Total 226 & 228 by EPA 903.1 & 9C 09/22/2023 10/11/2023 12:05

## SUBCONTRACT ORDER

002

#### Sending Laboratory:

Micro-Methods Laboratory, Inc.

6500 Sunplex Drive

Ocean Springs, MS 39564

Phone: 228.875.6420 Fax: 228.875.6423

Project Manager: Teresa Meins

1000mL Plastic w/HNO3 (A) 1000mL Plastic w/HNO3 (B)

#### **Subcontracted Laboratory:**

Pace Analytical-7 1638 Roseytown Rd. Suites 2, 3, 4 Greensburg, PA 15601

Phone: (724) 850-5600

**Comments** 

Sample Name: MW-9

Sample Name: OW-2

Fax: -

**Expires** 

WO#:30624440

Work Order: 2309244

**Analysis** 

Containers Supplied:

Radium, Total 226 & 228 by EPA 903.1 & 9	C 09/22/2023 10/11/	/2023 14:52	
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic	w/HNO3 (B)		
Sample ID: 2309244-03 Water	Sampled: 09/13/2023	3 16:07 Sample Name: MW-13	0Λ S
Radium, Total 226 & 228 by EPA 903.1 & 9	C 09/22/2023 10/11/	72023 16:07	
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic	w/HNO3 (B)		
Sample ID: 2309244-04 <i>Water</i>	Sampled: 09/13/2023	3 11:57 Sample Name: MW-7	009
Radium, Total 226 & 228 by EPA 903.1 & 9	C 09/22/2023 10/11/	2023 11:57	Received by Pace Greensburg Therm ID Corr Factor +/-
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic	w/HNO3 (B)		Receipt Temp Corrected Temp Correct Preservation Ø/ N
Sample ID: 2309244-05 Water	Sampled: 09/13/2023	3 10:30 Sample Name: MW-14	005
Smah Jamel 9/13	1230 1630	<u>_VP</u> 5	9/15/23 0 163
Released By	Date	Received By	Date
W5		Zulto	401/28/01
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date
	Pa	ge 1 of 3	Page 13 of 17 Page 45 of 49



**SUBCONTRACT** 

PM: JPH

Due Date: 10/12/23

CLIENT: MICROMETHOD

Work Order: 2309244 (Continued)

Analysis	Due	Expires	Comments	
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL P	lastic w/HNO3 (B)			
Sample ID: 2309244-06 Wat	er Sampled: 09/1	13/2023 10:35	Sample Name: Field Blank	006
Radium, Total 226 & 228 by EPA 903.	L & 9C 09/22/2023	10/11/2023 10:35	5	000
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL P	lastic w/HNO3 (B)			
Sample ID: 2309244-07 Wat	er Sampled: 09/1	3/2023 00:00	Sample Name: Duplicate	007
Radium, Total 226 & 228 by EPA 903.1	L & 9C 09/22/2023	10/11/2023 00:00		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL P	lastic w/HNO3 (B)			
Sample ID: 2309244-08 Wat	er Sampled: 09/1	3/2023 13:35	Sample Name: MW-12	800
Radium, Total 226 & 228 by EPA 903.1	. & 90 09/22/2023	10/11/2023 13:35		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Pl	lastic w/HNO3 (B)			
Sample ID: 2309244-09 Wat	er Sampled: 09/1	3/2023 15:45	Sample Name: CCR-2	009
Radium, Total 226 & 228 by EPA 903.1	. & 9C 09/22/2023	10/11/2023 15:45		
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Pl	astic w/HNO3 (B)			
Sample ID: 2309244-10 Water	er Sampled: 09/1	3/2023 11:10	Sample Name: CCR-3	O IA
Radium, Total 226 & 228 by EPA 903.1	& 9C 09/22/2023	10/11/2023 11:10		<del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Pl	astic w/HNO3 (B)			
Sample ID: 2309244-11 Wate	er Sampled: 09/1	3/2023 15:50	Sample Name: CCR-4	011
Radium,Total 226 & 228 by EPA 903.1  Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic w/HNO3 (A)	& 9C 09/22/2023 astic w/HNO3 (B)	10/11/2023 15:50		
Sample ID: 2309244-12 Wate	er Sampled: 09/1.	3/2023 14:56	Sample Name: CCR-5	
Smal James	9/15/230 16	30 1/	PS 9	115/2301630
Released By	Date	Receive	ed By	Date
1195			Charlet The	9/21/23 (M)
Released By	Date	Receiv	9d Ву	Date
Released By	Date	Receive	ed By	Date
Released By	Date	Receive	ed By	Date
Released By	 Date	Receive	ed By	Date



# SUBCONTRACT ORDER

(Continued)

Work Order: 2309244 (Continued)

Analysis	Due	Expires	Comments	
Sample ID: 2309244-12 Water	Sampled: 09/1	3/2023 14:56	Sample Name: CCR-5	017
Radium, Total 226 & 228 by EPA 903.1 &	9C 09/22/2023	10/11/2023 14:5	66	
Containers Supplied: 1000mL Plastic w/HNO3 (A) 1000mL Plastic	c w/HNO3 (B)			

WO#: 30624440

PM: JPH

Due Date: 10/12/23

CLIENT: MICROMETHOD

Smah Jomet	9/15/2301630	W5	9/15/230 1630
Released By	Date	Received By	Date
INS		Mulles	9/21/23 1018
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date

DC# Title: ENV-FRM-	GBUF	₹-008	8 v0:	Sample Condition Upo	on Receipt-
Pittsburgh				•	1
Bass				WO#:	30624440
Ffective Date: 07/06/2023				PM: JPH	Due Date: 10/12/23
Client Name: Mrcro Metho	<u>345</u>			Pro CLIENT: M	11 CROMETHOD
Courier: Ged Ex YUPS GUSPS Glient Tracking Number: 1235306303	☐ Com	mercia	al □ P	ce 🗌 Other	ınıtıal / Date
Tracking Number: 1235306303	68	50 (	077	Exar	mined By: 05 9122123
					0 100 100
Custody Seal on Cooler/Box Present:	es ∐N∈	0			led By: 05 9 13-163
Thermometer Used: Typ					ped By:
Cooler Temperature: Observed Temp		۰C	Corre	tion Factor:•C F	inal Temp:oC
Temp should be above freezing to 6°C					Desidual Chloring Let #
	Yes	No	NA	pH paper Lot# D.P.D	. Residual Chlorine Lot #
Comments:	765	140	IVA		
Chain of Custody Present	<del> </del>	-	<u> </u>	1.	
Chain of Custody Filled Out: -Were client corrections present on COC			PS	291177173	
Chain of Custody Relinquished	<del>  _</del>	955		3.	
Sampler Name & Signature on COC:			-	4.	
Sample Labels match COC:	$\vdash$	-		5.	
-Includes date/time/ID		I	I		
Matrix:		T			
Samples Arrived within Hold Time:	T	<u> </u>	<u> </u>	6.	
Short Hold Time Analysis (<72hr				7.	
remaining):		-			
Rush Turn Around Time Requested:		-		8.	
Sufficient Volume:				9.	
Correct Containers Used:				10.	
-Pace Containers Used					
Containers Intact:				11.	
Orthophosphate field filtered:				12.	
Hex Cr Aqueous samples field filtered:				13.	
Organic Samples checked for dechlorination	ļ	ļ		14:	
Filtered volume received for dissolved tests:			<u> </u>	15: 16.	and the second s
All containers checked for preservation:		l		10.	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				OHCS	
All containers meet method preservation				Initial when C5 Date/Tir	<b> </b>
· requirements:				Lot# of added	ation
8260C/D: Headspace in VOA Vials (> 6mm)				Preservative 17.	
624.1: Headspace in VOA Vials (0mm)				18.	
Trip Blank Present:				Trip blank custody seal pr	,
Rad Samples Screened <0.5 mrem/hr.				Initial when 55 Date: 934(6	Survey Meter SN: (50.)
Comments:					
					~~~~

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office. PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680

Page 1 of 1

DC#\_Title: ENV-FRM-GBUR-0072 v02\_Sample Container Count Offshore Projects Effective Date: 1/11/2023

ยองก ВN Other ISCN BUN ecna SPLC Profile Number Mekn WGFU Notes YOAK **N69**A Vials **T69**V **Н6**ЭЛ S690 UERB ₽ **BP3S BP3N** Page Plastic **B**b3C USAB 8528 BP1U N148 **TSDA** Amber Glass USDA 2309 24H USDA **8698** HLDA Container Codes Matrix 012 S  $\frac{9}{2}$ Client Sample 3 ફુ 00 Line Item  $\mathcal{B}$  $\boldsymbol{\beta}$ ट्ठ E 8 5

	Glass			Plastic/Misc.	ပ္ပ	
	DG9S	40mL amber VOA vial H2SO4	GCUB	1 gallon cubitainer	EZI	5a Encore
ved	VG9U	40mL clear VOA vial	12GN	1/2 gallon cubitainer	VOAK	
uifate	VG9T	40mL clear VOA vial Na Thiosulfate	SP5T	120mL coliform Na Thiosulfate	<u> </u>	Wipe/Swab
	VG9H	40mL clear VOA vial HCI	BP1N	1L plastic HNO3	ZPI	ZPLC Siploc Bag
	JGFU	4oz amber wide jar	BP1U	1L plastic unpreserved	]	
	WGFU	4oz wide jar unpreserved	BP3S	250mL plastic H2SO4	<u>™</u>	Water
Ð	BG2U	500mL clear glass unpreserved	BP3N	250mL plastic HNO3	જ	Solid
	IAG2U	500ml ambar alan 1ed	BP3U	250mL plastic unpreserved	ᅙ	Non-Aq Liquic
<u>C</u>	#:30	0#:30624440	BP3C	250mL plastic NAOH	WP	Wipe
		10/10/03	BP2S	500mL plastic H2SO4		
PM: JPH	Ŧ	Date:	BP2U	500mL plastic unpreserved		
	1					

100mL amber glass Na Thiosulfate

100mL amber glass unpreserved

AG5U AG5T

Z O

1 Gallon Jug with HNO3

1L amber glass NA Thiosulfate

1L amber glass H2SO4

AG1S

1 Gallon Jug

SSN

1L amber glass HCI

AG1H

250mL amber glass H2SO 250mL amber glass unpres

1L clear glass unpreserved

BG1U AG1T

CLIENT: MICROMETHOD

PM: JPH

Qualtrax ID: 55678

Page 49 of 49

..... Analytical Services, LLC

### **APPENDIX C**

FIELD SAMPLING DATA

## CHOCTAW GENERATION AMU MONITOR WELLS SEMI-ANNUAL ASSESSMENT MONITORING EVENT

Monitor Well:	MV	V-9			Well Diame	eter:	4	inches
Date: Sampling Method:	3/13	Pumped				ı <b>mn Height:</b> ell Depth - Static Wa	14.64 Iter Level)	ft
Measured Well Dep Static Water Level: (Depth to Water) Maximum Drawdow		21.74 7.10 8.56	ft		TOC Elevation (TOC Elevation Well Volum	i <b>on:</b> n - Static Water Lev	480.04 <u>472.94</u> el) <b>9.52</b>	ft ft gal
(10% of WCH + SWL)					(Water Columi	n Height x Well Cas	ing Volume Fac	tor)
	Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН

Start	Pump	

Date	Purged (L)	Time	Time (min)	Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
3-13-23		9:35						
	1.5 L	9 41			0.24	15.5	5 15	1417
		9:44			0.02	154	4.74	1432
		9:47			0.02	15.3	463	1432
		9:50			0.12	15.7	4.58	1438
		9:53			0.38	15.7	4.55	1435
		9:56			0.02	15.0	4.53	1441
	V	9:59	/		0.02	15.0	4.52	1437
	5.5 L	10:02		7.78)	0.02	14.9	4.51	1440
				Fin	1 Depth			
		10:05	Somple	(me	1			
			7					
								4.1
		-						
				-				

Sample	Time:	
Sample	Analyzed	for:

10:05

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,

Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

(SWL - Final Depth)

Total Drawdown (ft): Drawdown/Water Column (%):

4.64%

\_\_\_(SWL - Final Depth) \_\_\_(Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

If drawdown exceeds 10% of water column height, flow will be stopped and well allowed to recover.

Well Stabilization
pH: 0.1 standard units
conductivity: within 3%
temperature: 0.1 deg. C
turbidity: <5 NTU or 10%

Well Casing Volumes (	gal/ft)		
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

## CHOCTAW GENERATION AMU MONITOR WELLS SEMI-ANNUAL ASSESSMENT MONITORING EVENT

Monitor Well:	OW-2	Well Diameter:	4 inches
Date: 03//3	3/23	Water Column Height:	16.47 ft
Sampling Method:	Pumped	(Measured Well Depth - Static Wa	ater Level)
Measured Well Depth:	27.05 ft	TOC Elevation <sup>(1)</sup> :	489.40 ft
Static Water Level: (Depth to Water)	/0.58 ft	<b>GW Elevation:</b> (TOC Elevation - Static Water Lev	478,82 ft
Maximum Drawdown Depth (10% of WCH + SWL)	12.23 ft	<b>Well Volume:</b> (Water Column Height x Well Cas	10.71 gal ing Volume Factor)

Start	Pu	mp

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
03/13/23		1/28			Commence of	10000		A Comment
7	206	11:31			0.02	15.8	6.43	668.9
		11:34			0.02	15.8	6.15	644.8
		11:37			0.02	156	611	6340
	V	11:40			0.09	15.6	6.07	629.3
	5.0 L	11:43		1194	016	15.5	6.12	633.0
						100		
				FI	VAL DE	27/4		
		1174211						
		11:50	SAMP	E 11.	ME			
		1						
								_

Sample	Time:	
Sample	<b>Analyzed</b>	for:

11:50

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):

8.26%

(SWL - Final Depth)

Drawdown/Water Column (%):

3

\_\_(Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

If drawdown exceeds 10% of water column height, flow will be stopped and well allowed to recover.

flow will be stopped and well allowed to recover.

FIELD	BLANK	TAKEN @ 12:0	25
Well Casing Volu	ımes (gal/ft)		

vveii Stabilization	
0.1 standard units	
within 3%	
0.1 deg. C	
<5 NTU or 10%	

Well Casing Volumes (gal/ft)			
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:	MW-13	Well Diameter:	4 inches
Date: Sampling Method:	03/13/23 Pumped	Water Column Height: (Measured Well Depth - Static W.	42.71 ft
Measured Well Dep		TOC Elevation <sup>(1)</sup> :	584.48 ft
Static Water Level: (Depth to Water)	63.79ft	GW Elevation: (TOC Elevation - Static Water Le	521.19 ft
Maximum Drawdow (10% of WCH + SWL)	n Depth <u>67,56</u> ft	Well Volume: (Water Column Height x Well Cas	27.76 gal sing Volume Factor)

	_
Start	<b>Pump</b>

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
03//3/23		09:31				Barrier .		
, ,		09.56			1.25	16.7	6.94	260.1
		0959			1.07	16.7	6.93	256.1
	8.5	10 02		65.21	78.0	16.7	6.93	254.3
			Final Oupl	65.2	1'			
			Sumple Til	10:0	6			

Sample	Time:
Sample	Analyzed for:

10:06

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):

Drawdown/Water Column (%):

(SWL - Final Depth)

(Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization				
pH:	0.1 standard units			
conductivity:	within 3%			
temperature:	0.1 deg. C			
turbidity:	<5 NTU or 10%			

Well Casing Volumes (gal/ft)				
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24	
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46	
8" = 2.61	10" = 4.08	12" = 5.87		

Monitor Well:	MW-7	Well Diameter:	4inches
Date:	3/13/23	Water Column Height:	22.66 ft
Sampling Method:	Pumped	(Measured Well Depth - Static W	/ater Level)
Measured Well Depth:	56.92 ft	TOC Elevation <sup>(1)</sup> :	571.76 ft
Static Water Level: (Depth to Water) Maximum Drawdown D	34.26ft epth 36.52 ft	GW Elevation: (TOC Elevation - Static Water Le Well Volume:	537.5 ft 14.73 gal
(400) = 514(011 + 014(1)		(Water Column Height x Well Ca	sing Volume Factor)

## Start Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
03/13/23		10:50						
		11.07			1.76	16.3	6.33	263.9
		11.07		1.77	1.35	16.3	6,35	261.8
	6.0	1113		35.22	1.76	16.4	6.30	263.9 261.8 262.0
		Find	Durth	75.22				
		Same		11 17				
								) =

Sample Time: Sample Analyzed for:	Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,
	Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).
Total Drawdown (ft):	(SWL - Final Depth)
Drawdown/Water Column (%):	(Total Drawdown / WCH)
M. A Ma	
Sampler Signature:	

If possible, total drawdown will not exceed 0.33 ft.

Well	Stabilization
pH:	0.1 standard units
conductivity:	within 3%
temperature:	0.1 deg. C
turbidity:	<5 NTU or 10%

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:		N-14	Well Diameter:	4inches
Date:	3-13.	-23	Water Column Height:	32.37ft
Sampling Method:		Pumped	(Measured Well Depth - Static W.	ater Level)
Measured Well Depth:		60.97 ft	TOC Elevation <sup>(1)</sup> :	593.84 ft
Static Water Level: (Depth to Water)		28.60 ft	<b>GW Elevation:</b> (TOC Elevation - Static Water Le	565,24t
Maximum Drawdown Depth (10% of WCH + SWL)		31.84 ft	Well Volume: (Water Column Height x Well Cas	21.0 4 gal sing Volume Factor)

(10% of WCH + SWL)

Start	Pump	)

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
3/13/2	3	14:06				-		-
1 1		14.25			0.33	19.0	5.74	161.2
		1428			0.21	18.4	4.96	157.8
		14.71			0.35	18.9	4.90	155.1
		14.34		1	0.44	18.9		156.6
	9,0	14 38		30.02	0.48	18.8	4.80	156.1
		Fred !	Depth	20.02	/			
			.' -					
		Simple	1. 1100	14.4				
		- 4						
	+							
						-		

Sample Time:								
Sample Analyzed for:	Appendix III (E	Boron, Calcium	, Chloride, Fluorid	e, Sulfate, & TDS	i). pH measured in	the field. Appe	endix IV (Antim	ony, Arsenic,
	Barium, Beryll	ium, Cadmium	, Chromium, Coba	lt, Fluoride, Lead	, Lithium, Molybde	num, Selenium	i, & Radium 22	6/228).
Total Drawdown (ft):					(SWL - Final Dept	h)		
Drawdown/Waten Column (%):					(Total Drawdown /	WCH)		
MA Ships								
Sampler Signature:								

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization					
pH:	0.1 standard units				
conductivity:	within 3%				
temperature:	0.1 deg. C				
turbidity:	<5 NTU or 10%				

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:	MW-12	Well Diameter:	4inches
Date:	3/13/23	Water Column Height:	
Sampling Method:	Pumped	(Measured Well Depth - Static	: Water Level)
Measured Well Depth:	19.09 ft	TOC Elevation <sup>(1)</sup> :	474.19 ft
Static Water Level: (Depth to Water)	3.57 ft	GW Elevation: (TOC Elevation - Static Water	470.62ft
Maximum Drawdown D (10% of WCH + SWL)	epth <u>5.12</u> ft	Well Volume: (Water Column Height x Well	10.09 gal Casing Volume Factor)

Start	Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
03/13/23		10:37			-			
	1.5 L	10:40			199	13.8	6.44	629.8
		10:43			168	141	627	544,2
		10:47		4	112	13.9	6.26	526.4
		10:50			164	14.0	6.23	525.1
		10:53			163	13.9	6.23	524.6
		10:56	(	4.88'	123.7	13.7	6.20	525.9
				FINA	L DEPTH	-		
		11:00	SAMPI	5 TI	4E			

Sample	Time:	
Sample	Analyzed	for:

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,

Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):

9.447

1:00

(SWL - Final Depth)
(Total Drawdown / WCH)

Drawdown/Water Column (%):

3/13/23

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization				
pH:	0.1 standard units			
conductivity:	within 3%			
temperature:	0.1 deg. C			
turbidity:	<5 NTU or 10%			

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well: CCR-2	Well Diameter: 4 inche
Date: 03/13/23	Water Column Height: 34,56 ft
Sampling Method: Pumped Measured Well Depth: 84.5 ft	(Measured Well Depth - Static Water Level) <b>TOC Elevation</b> <sup>(1)</sup> : 542.50 ft
Static Water Level: 49.94 ft	GW Elevation: 492.56 ft (TOC Elevation - Static Water Level)
Maximum Drawdown Depth (10% of WCH + SWL)	Well Volume: 22.46 gal (Water Column Height x Well Casing Volume Factor)

Start	Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	pН	Conductivity (uS/cm)
03/13/23		15:24						
,	2.06	15:31			0102	18.3	7:15	243.3
		15134			0.02	17.3	7.01	238.8
	11	15:37			21.1	17.6	7.02	238.0 237.0 236.3
	V	15:40			291	17.6	696	23710
	5.5 L	15:43		51.98	24.3	17.5	7.00	236.3
				FINE	K DEPT	4		
		15:50	SAM	PLE T	IME			
							i j	

Sample	illie.	
Sample	Analyzed for:	

15:50

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

2.64 (SWL - Final Depth)

Total Drawdown (ft): Drawdown Water Column (%):

590%

(Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization			
pH:	0.1 standard units		
conductivity:	within 3%		
temperature:	0.1 deg. C		
turbidity:	<5 NTU or 10%		

Well Casing Volumes (gal/ft)			
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2* = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well: Co	CR-3	Well Diameter:	4inches
Date: <u>03/13</u>	23	Water Column Height: (Measured Well Depth - Static W	28,32 ft
Sampling Method: Measured Well Depth:	Pumped 53.00 ft	TOC Elevation <sup>(1)</sup> :	504.78 ft
Static Water Level:  Depth to Water)  Maximum Drawdown Depth	24.68 ft	GW Elevation: (TOC Elevation - Static Water Le	480.10 ft

Start	Pum	a

(10% of WCH + SWL)

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
3/13/23		14:05						
E = 1	2.0 4	14:08			4.97	1810	6.26	668,3 653.6
	1	14:11			1.36	177	6.25	653.6
		14:14			8.29	17.5	6.19	650 9
		14.17			10.1	17.3	6.21	649.3
	N	14:20			6.11	17.3	6.19	647.4
	V	14:23			8.01	16.6	6.21	649.0
	5.5L	14:26			137	17.0	6 19	641.5
			(	26.58	1			
			,		Final Dep	do		
					(1.20)	1. A.		
		14:30	<11	2	-	5		
		14.30	21400	ME T	me		-	
					1			
					+			
					1			
					-			
				-				
			_		-			
		-			-			

Sample	Time:
Sample	Analyzed for:

14:30

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):
Drawdown Water Column (%):

5.70%

(SWL - Final Depth)
(Total Drawdown / WCH)

(Water Column Height x Well Casing Volume Factor)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization			
pH:	0.1 standard units		
conductivity:	within 3%		
temperature:	0.1 deg. C		
turbidity:	<5 NTU or 10%		

Well Casing Volumes (gal/ft)			
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:	CR-4	Well Diameter:	4inches
Date: 03//3	3/23	Water Column Height:	28.13 ft
Sampling Method:	Pumped	(Measured Well Depth - Static W	ater Level)
Measured Well Depth:	53.00 ft	TOC Elevation <sup>(1)</sup> :	505.68 ft
Static Water Level: (Depth to Water)	24.87 ft	<b>GW Elevation:</b> (TOC Elevation - Static Water Le	
Maximum Drawdown Depth (10% of WCH + SWL)	27.68 ft	<b>Well Volume:</b> (Water Column Height x Well Ca	18.28 gal sing Volume Factor)

**Start Pump** 

(10% of WCH + SWL)

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	pН	Conductivity (uS/cm)
03/13/23		16 19						
/	20 L	16125			8.37	167	6.74	373.2
L I	1	16:28			28.1	15.8	6.74	367.7
	-1	16.31			111.0	16.6	6.68	364,5
	1/	16:34			16.8	16.7	6.67	363.7
	V	16,37			12.2	16.7	6.65	363.0
	6.5L	16:40			13.7	16.5	6.69	364,0
				27.16	6.11	2-07-0-0		
				27:15	Friend F	CP74	-	
	-	/~						
	1	16 44	San	010-	TIME			
	-	10 77	JANI	100	11/10			
					1			
							1	
					1			
		9						

Sample Time: Sample Analyzed for:					OS). pH measured i			
Total Drawdown (ft):	Barlam, Beryin	am, Caumum,	On Omani, Coba	t, Flaciliae, Lee	(SWL - Final Dep		r, a readom	LLO, LLO).
Drawdown/Water Column (%):					(Total Drawdown	/ WCH)		
Sampler Signature:	/13/23	3						

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization						
pH:	0.1 standard units					
conductivity:	within 3%					
temperature:	0.1 deg. C					
turbidity:	<5 NTU or 10%					

Well Casing Volumes (gal/ft)							
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24				
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46				
8" = 2.61	10" = 4.08	12" = 5.87					

Monitor Well:	CCR	-5			Well Diame	eter:	4	inches	
Date:	3/13/2	23				umn Height: ell Depth - Static Wa	27.9	_ft	
Sampling Metho		Pumped			TOC Eleva	•		4	
Measured Well D Static Water Lev (Depth to Water) Maximum Drawd	el:	34.55 6.6S			GW Elevat	ion: n - Static Water Lev	470.46 463.8 (el) 8 14	_	
(10% of WCH + SWL)	•	1.77	."			n Height x Well Cas	ing Volume Fa		
	Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
Start Pump	3/13/23		15:34			7/3	17	C 02	450 6
	1		1610			263	16.8	6.57	959.9
			12.12		776	779	16.8	G.SA	9 28. 8

Sample Time:	16: 2	20		2				
Sample Analyzed for:					S). pH measured			
	Barium, Beryll	um, Cadmium,	, Chromium, Col	oalt, Fluoride, Lea	ad, Lithium, Molybo	denum, Seleniu	m, & Radium	226/228).
Total Drawdown (ft):					(SWL - Final De	pth)		
Drawdown/Water Column (%):					(Total Drawdowi	n / WCH)		
Sampler Signature:		Gro	ul wet.	russ	very cloud	y es u	sual,	

If possible, total drawdown will not exceed 0.33 ft.

Well	Stabilization
pH:	0.1 standard units
conductivity:	within 3%
temperature:	0.1 deg. C
turbidity:	<5 NTU or 10%

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

# CHOCTAW GENERATION AMU MONITOR WELLS

		ANI	NUAL ASSE	SOMENI	VIONITORIN	IG EVENT			
Monitor Well:	.MW-	.9			Well Diame	eter:	4	inches	
Date:	5-10 -	-23			Water Colu	ımn Height:	13.35	ft	
Sampling Method Measured Well Do Static Water Leve (Depth to Water) Maximum Drawdo (10% of WCH + SWL)	epth: el:	21.74 8.39 9.73			(Measured We TOC Elevati GW Elevatio (TOC Elevation Well Volum	ell Depth - Static Wa tion: ion: n - Static Water Lev	480.04 471.65 (el) 8.68	ft ft gal	
(10% of World Corte)	Date	Volume Purged	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
Start Pump	5 10 23	(L)	15:01	(11111)	(10)	(110)	(0)	0.00	(doronn)
		2.0	15 12			0.02	19.3	SIL	1365
			15.15			016	19.3	4 78	13.70
			15.18			0,41	19.3	4.7	1372
		110	13.21			0.19	14. 7	4.69	1379
		4.0	1524			1.69	19.2	4.65	1382
	540	Male Trace	1590						
		-			-				
						1			
		-		^	. 0	00			
		-	Fn	1)80	th 8	95			
			1.4.5	UN	11.0			-	
			-						
		1							
		1							
Sample Time:		1530							
Sample Analyzed	for:			yllium, Cadmiur	n, Chromium, Co	balt, Fluoride, Lead	I, Lithium, Merc	ury, Molybden	um, Selenium,
	(4.)	Thallium, Radi		261					
Total Drawdown			- 0	50					
Drawdown/Water	Column (%):	-	4	17 /8	_	f_			
CA!	Mu	2)							
Sampler Signature									
If possible, total drawd	down will not exceed 0% of water column he	0.33 ft. ight, flow will be	stopped and well	allowed to reco	ver.				
Well Stabilization		1	Well Casing Vol	umes (gal/ft)					
pH:	0.1 standard units		1" = 0.041	anno (gaint)	1 1/2 " = 0.10		2" = 0.16		2 1/2" = 0.24
conductivity:	within 3%		3" = 0.37		3 1/2" = 0.50		4" = 0.65	(	6" = 1.46
temperature:	0.1 deg. C	1	8" ₹ 2.61		10" = 4.08		12" = 5.87		
turbidity:	<5 NTU or 10%								

Monitor Well:	MW-12	Well Diameter:	4	_inches
Date:	5-10-23	Water Column Height:	13.10	ft
Sampling Method:	Pumped	(Measured Well Depth - Static W	_	
Measured Well Depth:	19.09 ft	TOC Elevation:	474.19	
Static Water Level: (Depth to Water)	<b>5.99</b> ft	GW Elevation: (TOC Elevation - Static Water Le	468.20 vel)	ft
Maximum Drawdown D	enth 7.30 ft	Well Volume:	8.52	gal

Start	Pump

(10% of WCH + SWL)

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
5-10-23		13:20						
	15	13:28			990	19.5	5.69	5511
	1	13:32			23.1	18.8	5.74	368.0
		13.36			133	186	5.63	295.6
		13:40			20.6	185	5 72	53/8
	V	13 44			20.2	18.6	5.61	3512
	4.25	13:48			18 1	18.5	5.68	542.1
	•	13:50	DEPT	4 = 7.	51'			h H
			Allow T	rech	arge			
		14:02	DEPT	4 = 7	191			-

(Water Column Height x Well Casing Volume Factor)

Sample	Time:
Sample	Analyzed for:

14:05

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium,

Thallium, Radium 226/228

Total Drawdown (ft):

9.16%

Drawdown/Water Column (%):

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization				
pH:	0.1 standard units			
conductivity:	within 3%			
temperature:	0.1 deg. C			
turbidity:	<5 NTU or 10%			

Well Casing Volumes (gal/ft)				
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24	
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46	
8" = 2.61	10" = 4.08	12" = 5.87		

Monitor Well:	MW-7	Well Diameter:	4inches
Date:	1/10/23		23.12 ft
Sampling Method:	Pumped	(Measured Well Depth - Static V	Vater Level)
Measured Well Depth:	56.92 ft	TOC Elevation:	<u>571.76</u> ft
Static Water Level: (Depth to Water)	33.8 ft	<b>GW Elevation:</b> (TOC Elevation - Static Water L	<b>537.96</b> ft evel)
Maximum Drawdown E	Depth 36.11 ft	<b>Well Volume:</b> (Water Column Height x Well Ca	/ <u>5.03</u> gal asing Volume Factor)

Start	Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
5/10/23		11:48			1,,,	10000		2 111
	2	11:51			1.61	18.5	6.51	244.   238. 8 238.8
	11	10.54			1.48	18.2	6 58	238.8
	4	11:57			7.40	10.3	6.44	238.8
			/ 0	Bayth	34.6			
			( Not					

Sample Time: Sample Analyzed for:	Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium,
Cample Analyzed for.	Thallium, Radium 226/228
Total Drawdown (ft):	0.8 #
Drawdown/Water Column (%):	3.5%

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well	Stabilization		Well Casing	Volumes (gal/ft)	
pH:	0.1 standard units	1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
conductivity:	within 3%	3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
temperature:	0.1 deg. C	8" = 2.61	10" = 4.08	12" = 5.87	
turbidity:	<5 NTU or 10%				

Monitor Well:	CCR-2	Well Diameter:	4inches
Date: 5	-10-23	Water Column Height:	34.14 ft
Sampling Method:	Pumped	(Measured Well Depth - Static W	/ater Level)
Measured Well Depth:	84.5 ft	TOC Elevation:	542.50 ft
Static Water Level:	<b>50.36</b> ft	GW Elevation:	492.14 ft
(Depth to Water)		(TOC Elevation - Static Water Le	evel)
<b>Maximum Drawdown Depth</b>	<i>53</i> .77 <sub>ft</sub>	Well Volume:	22.19 gal
(10% of WCH + SWL)		(Water Column Height x Well Ca	sing Volume Factor)

**Start Pump** 

(10% of WCH + SWL)

Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
	10:35					Fig. 10	
1.5	11:03			1.79	19.6	6.68	2388
1	1/207			0,02	1918		2343
	11.11					6.74	235.C
	11:15		Ü	0.02	19.2	6 69	233,6
3.0	11 19			0.02	19.2	6.74	234.4
	Final	משט	T44 =	51.79	,		
	1			an e e			
	Purged	Purged (L)	Purged (L) Time (min)    10:\$5   15   1/:03     1/:07     1/:15     3:0   1/:19	Purged (L) Time (min) Level (ft)    10:\$5    15   1/:03	Purged (L) Time (min) Level (ft) Turbidity (NTU)    0:\$5    5	Purged (L) Time (min) Level (ft) Turbidity (C)    0.85	Purged (L) Time (min) Level (ft) Turbidity (NTU) Temp (C) PH (NTU) (NTU) Temp (C) PH (NTU) (NTU) Temp (C) PH (NTU) (NTU) (NTU) (NTU) PH (NTU) (NTU) PH (NTU)

Sample	Time:	
Sample	Analyzed for:	

11:25

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium,

Thallium, Radium 226/228

Total Drawdown (ft):

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization			
pH:	0.1 standard units		
conductivity:	within 3%		
temperature:	0.1 deg. C		
turbidity:	<5 NTU or 10%		

Well Casing Volumes (gal/ft)				
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24	
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46	
8" = 2.61	10" = 4.08	12" = 5.87		

Monitor Well:	CCR-4	Well Diameter:	4 inches
	-10-23	Water Column Height: (Measured Well Depth - Static W	
Sampling Method: Measured Well Depth:	Pumped 53 ft	TOC Elevation:	505.68 ft
Static Water Level: (Depth to Water)	25.13 ft	GW Elevation: (TOC Elevation - Static Water Le	
Maximum Drawdown Dep (10% of WCH + SWL)	th <u>27.92</u> ft	Well Volume: (Water Column Height x Well Ca	gal gal gaing Volume Factor)

Start	Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
5-10-23	1000	15.03			85.	10		27/2
	1.5	15:09			6.71	19.8	6.31	361.9
		15 12			716	19.7	6.39	360.4
	3.25	15:15 15:18			9.03	19.5	6.40	360.4 358.8 354.7
	3.45	13.10			7100	17.0	6.70	331 1
		-			1001			
		TINAL	- Derti	7 = 2	6,281			
							/	
	7-1-1							
54								

Sample	Time:
Sample	Analyzed for:

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium,

Thallium, Radium 226/228

Total Drawdown (ft):

1.15'

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization			
pH:	0.1 standard units		
conductivity:	within 3%		
temperature:	0.1 deg. C		
turbidity:	<5 NTU or 10%		

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

**Monitor Well:** 

Well Diameter:

inches

Date:

5-10-23

Water Column Height:

27.48 ft

Sampling Method:

Pumped

(Measured Well Depth - Static Water Level)

Measured Well Depth:

53

**TOC Elevation:** 

504.78 ft

Static Water Level:

25.52 ft

**GW Elevation:** 

(Depth to Water)

(TOC Elevation - Static Water Level)

Maximum Drawdown Depth

28.27ft

Well Volume:

17.86 gal

(10% of WCH + SWL)

(Water Column Height x Well Casing Volume Factor)

## Start Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivit (uS/cm)
5-10-23		1/ 55						E. Land
	1.75	12:01			130	20.2	6.00	575
	1	12:05	1		0.13	19.9	5.82	6045
		12:09			0.02	19.7	5.95	600 9 597 3 597 8
	V	12:13			0.02	19.7	5.88	597 3
	3.5	12:17			0.02	19.7	5.90	597.8
	FINAL	DEP	TH =	26.89				

Sample Time:

2:20

Sample Analyzed for:

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium,

Thallium, Radium 226/228

Total Drawdown (ft):

1.37

Drawdown/Water Column (%):

4.990/0

### Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization				
pH:	0.1 standard units			
conductivity:	within 3%			
temperature:	0.1 deg. C			
turbidity:	<5 NTU or 10%			

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:	OW-2	Well Diameter:	4	inches
Date: 5	-10 - 23	Water Column Height:	16 12	4
O Barrella and .	District	(Measured Well Depth - Static W		-"
Sampling Method:	Pumped	(modeling trong popul		
Measured Well Depth:	27.05 ft	TOC Elevation:	489.40	_ft
Static Water Level:	10.93 ft	GW Elevation:	478.4	<b>7</b> ft
(Depth to Water)	4.00	(TOC Elevation - Static Water Le	evel)	_

12.54 ft

**Maximum Drawdown Depth** (10% of WCH + SWL)

Start	Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
5-10-23		14:20				-	lana de	
	1.5	14:25			14.7	19.0	562	621.7
	1	14:28			14.3	19.0	5.69	612.4
	V	14.31			13.2	187	5.62	6117
	2.75	14:34			13.2	18.8	5.62	611.8
1	F		714 =	11 491				
	FINA	L OCA	714 =	//. 8 /				
						7		

Sample	Time:	
Sample	<b>Analyzed</b>	fc

14:40

Antimony, Arsenic, Barium, Beryllium, C.

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium, Thallium, Radium 226/228

Total Drawdown (ft):

Drawdown/Water Column (%):

5.96%

1186

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization		
pH:	0.1 standard units	
conductivity:	within 3%	
temperature:	0.1 deg. C	
turbidity:	<5 NTU or 10%	

Well Casing Volumes (gal/ft)			
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well: CO	CR-5	Well Diameter:	4inches
Date: <u>5//0/</u> 3	23	Water Column Height:	
Sampling Method:	Pumped	(Measured Well Depth - Statio	: Water Level)
Measured Well Depth:	34.55 ft	TOC Elevation:	<u>470.46</u> ft
Static Water Level:	7.48 ft	GW Elevation:	46.298 ft 462.98
(Depth to Water)		(TOC Elevation - Static Water	
Maximum Drawdown Depth (10% of WCH + SWL)		Well Volume: (Water Column Height x Well	gal Casing Volume Factor)

Start	Pump

Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
10000	14 20						
2	14:26			409			212.
	14:29			36.7	20	7	916.6
	14:32			36.8	19.6	6.04	9/3.3
11	14:35			607	19.6		9075
3.75	14:38			41.5	19.6	6.61	903.9
1000							
					15		
					1.0		
				1/2			
				Deple	-		
			1	121			
			1. NO				
			V.				
						-	
	-						
-							
						-	
					-		
	Purged	Purged Time (L)   14:20   14:20   14:22   14:32   14:35	Purged (L) Time (min) (Min) (L) (L) (Min)	Purged (L) Time (min) Level (ft)  /4:20  2 /4:26	Purged (L) Time (min) Level (ft) Turbidity (NTU)  14:20  2 14:26  14:29  14:32  36.8  14:35  3.75  41.5	Purged (L) Time (min) Level (ft) Turbidity (C)  14:20  2 14:26  40.9 20.2  14:32  36.8 19.6  3.75 14:38  41.5 19.6	Purged (L) Time (min) Level (ft) Turbidity (NTU) PH (C) PH (D) PH

Sample	Time:
Sample	Analyzed for:

Sampler Signature:

14.40

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium,

Thallium, Radium 226/228

Total Drawdown (ft):

0.57

Drawdown/Water Column (%):

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization			
pH: 0.1 standard units			
conductivity:	within 3%		
temperature:	0.1 deg. C		
turbidity: <5 NTU or 10°			

Well Casing Volumes (gal/ft)			
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:	MW-14	Well Diameter:	4inche
Date:	5/10/23	Water Column Height:	32.56 ft
Sampling Method:	Pumped	(Measured Well Depth - Static W	ater Level)
Measured Well Depti	h: 60.97 ft	TOC Elevation <sup>(1)</sup> :	593.84 ft
Static Water Level:	28.41 ft	GW Elevation:	565.43 ft
(Depth to Water)		(TOC Elevation - Static Water Le	
Maximum Drawdowr	Depth 31.67 ft	Well Volume: (Water Column Height x Well Cas	21.16 gal sing Volume Factor)

Start	Pump

Date	(L) (min) (ft) (NTU)		Turbidity (NTU)	Temp (C)	pН	Conductivity (uS/cm)		
10/23		10:09						
11	3	10:18			0.46	204	547	1631
		10:21			0.32	20.1	5.13	142.2
		10:24			0.65	20	5-11	139.8
	4	10:21			0.64	20.1	5.04	139.8
						12	0	
				-	11 29	33	38	
				. /	oth.	1 - 1	3	
				- 1 se	1	10		
			For		1 Samp			
			,	1.1 B	well -			
			6	eloc				
			•					
			7					
				1				

Sample	Time:	
Sample	Analyzed for:	

10:30

Sample Analyzed for:

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium,

Thallium, Radium 226/228

Total Drawdown (ft):

Drawdown/Water Column (%):

0.92 ft.

If possible, total drawdown will not exceed 0.33 ft.

If drawdown exceeds 10% of water column height, flow will be stopped and well allowed to recover.

Well Stabilization					
pH:	0.1 standard units				
conductivity:	within 3%				
temperature:	0.1 deg. C				
turbiditu.	<5 NTIL or 10%				

Well Casing Volumes (gal/ft)						
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24			
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46			
8" = 2.61	10" = 4.08	12" = 5.87				

Additional repair is needed. Sampling tube is ripped at connection point

Monitor Well:	MW-13	Well Diameter:	4inches
Date:	10/23	Water Column Height	: 43.31 ft
Sampling Method:	Pumped	(Measured Well Depth - Stati	c Water Level)
Measured Well Depth:	106 ft	TOC Elevation:	584.48 ft
Static Water Level:	62.69 ft	GW Elevation:	521.79 ft
(Depth to Water)		(TOC Elevation - Static Wate	r Level)
Maximum Drawdown Dep	oth (65.5 ft	Well Volume: (Water Column Height x Well	28. /5 gal Casing Volume Factor)

Start	Pump	

Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
The same of	13:18			Water Street	1		
2	13 27	4		226054	21.4	4.72	5-4 246
1	1330			0.29	21.1	6.81	245
	13.33			0.34	22.9	6.92	242.7
	13:36			0.4856	21.1	6.87	243.9
5	13:39			0.37	21	6.86	241-8
				104 14			
		0 0	1 01	. 0			
		1, 1	dept				
		time	-				
-							
-				-			
	Purged (L)	Purged (L)  3:18   2  3:27    3:39    3:39	Purged (L) Time (min)  /3:18  2 /3:27  /3:30  /3:38  /5:36  5 /3:39	Purged (L) Time (min) Level (ft)  /3:18  2 /3:27  /3:30  /3:38  /5:36  5 /3:39	Purged (L) Time (min) Level (ft) Turbidity (NTU)    3:15	Purged (L) Time (min) Level (ft) Turbidity (NTU) (C)    /3:18	Purged (L) Time (min) Level (ft) Turbidity (NTU) PH (C) PH (T) (NTU) (C) PH (T)

Sample	Time:
Sample	Analyzed for:

13:45

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Mercury, Molybdenum, Selenium,

Thallium, Radium 226/228

Total Drawdown (ft):

1.45 4

Drawdown/Water Column (%):

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization					
pH:	0.1 standard units				
conductivity:	within 3%				
temperature:	0.1 deg. C				
turbidity:	<5 NTU or 10%				

Well Casing Volumes (gal/ft)						
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24			
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46			
8" = 2.61	10" = 4.08	12" = 5.87				

Monitor Well:	MW-7	Well Diameter: 4 inches
Date:	3/23	Water Column Height: 22.67 ft
Sampling Method:	Pumped	(Measured Well Depth - Static Water Level)
Measured Well Depth:	56.92 ft	TOC Elevation <sup>(1)</sup> : 571.76 ft
Static Water Level: (Depth to Water)	34,25 ft	GW Elevation: 537.51 ft (TOC Elevation - Static Water Level)
Maximum Drawdown Depth (10% of WCH + SWL)	36.52 ft	Well Volume: 14.74 gal (Water Column Height x Well Casing Volume Factor)
_	T.W.L	Planned Mater

	Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
Start Pump	9/13/23		11.31			2.35	19.5	6.18	242.9
-	Is	(no	11:49			2.35	195	6.28	240.2
, , e	b	/	11:47			293	19	6.30	240.7
Col Dept	P	de p	11.53		351	3.58 2.45 3.0/	19.2	624	241.3
Final Depthi 35'	-	4 25	11:30			0.06		-	- 4
32									
11756									
7.1									
							/		

Sample Time: Sample Analyzed for: 1057

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,

Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):
Drawdown/Water Column (%):

(SWL - Final Depth)
(Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Stabilization
0.1 standard units
within 3%
0.1 deg. C
<5 NTU or 10%

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:	MW-9	Well Diameter:	4inches
Date: 9	-13-23	Water Column Height:	12.32 ft
Sampling Method:	Pumped	(Measured Well Depth - Static Wa	ter Level)
Measured Well Depth:	ft	TOC Elevation <sup>(1)</sup> :	480.04 ft
Static Water Level: (Depth to Water) Maximum Drawdown Depth (10% of WCH + SWL)	9.42 ft 10.65 ft	GW Elevation: (TOC Elevation - Static Water Lev Well Volume: (Water Column Height x Well Casi	8.0   gal

Start	Pump
Juli	unip

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
9-13-2	3	11:42				1		
	2.0	11:47			1.50	21.2	4.8	968.9
	1	11:50			1.11	21.4	4.75	939 (
		11:53			0.78	21.3	468	948.6
		11:56			0.94	21.4	4.72	946.3
	4.5	11:56			1.01	21.3	4.70	946.7
				/~				
			/	10.18				
			(					
_				FIN	AL DEPT	H		
	1							
	-							
		-						
	-							
	-			-				

12:05

Sample Analyzed for:

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,

Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

6.76 (SWL - Final Depth)

Total Drawdown (ft):

Drawdown Water Column (%):

(Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

If drawdown exceeds 10% of water column height, flow will be stopped and well allowed to recover.

Well Stabilization	
pH:	0.1 standard units
conductivity:	within 3%
temperature:	0.1 deg. C
turbidity:	<5 NTU or 10%

Well Casing Volumes	(gal/ft)		
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:	/W-12	Well Diameter:	4inches
Date: 9-	13-23	Water Column Height: (Measured Well Depth - Static W	10.26 ft
Sampling Method:	Pumped 19.09 ft	TOC Elevation <sup>(1)</sup> :	474.19 ft
Measured Well Depth: Static Water Level: (Depth to Water)	8.89 ft	GW Elevation: (TOC Elevation - Static Water Le	<b>465.3</b> ft
Maximum Drawdown Depth (10% of WCH + SWL)	_ <b>7.9</b> /_ft	Well Volume: (Water Column Height x Well Ca	6.63 gal sing Volume Factor)

Ctart	D.	 -

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
9-13-23		12.34	A LEWIS CO					
	25	12:43			22.7	21.8	6.30	370.20
	1	12:46			13.0	21.5	6.25	385.0
		12:49			9.86	21.5	6.31	383.1
		12:52			197	21.5	6.23	382 1
		12:55			6.60	21.5	6.29	381.8
	1	12:58			10.3	21.6	6.25	382.6
	5.0	13:01			9.47	21.7	6.29	381.8
		13:02		/0.33	- wait	allow	to rech	irge
		/3:33	(	9.89				
				FINA	L DEPT	4		
				1,710.1	2011		1	

Sample Time:	13:35	
Sample Analyzed for:	Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,	
	Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).	
Total Drawdown (ft):	/, OC (SWL - Final Depth)	
Drawdown Water column (%):	6.0980 - 9.8% (Total Drawdown / WCH)	

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well	Stabilization		
pH:	0.1 standard units		
conductivity: within 3%			
temperature: 0.1 deg. C			
turbidity:	<5 NTU or 10%		

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well: M	W-13	Well Diameter:	4inches
Date: 9/13 Sampling Method:	Pumped	Water Column Height: (Measured Well Depth - Static W	42.06 ft
Measured Well Depth:	106 ft	TOC Elevation <sup>(1)</sup> :	584.48 ft
Static Water Level: (Depth to Water)  Maximum Drawdown Depth (10% of WCH + SWL)	<u>63.94</u> ft <u>68.15</u> ft	GW Elevation: (TOC Elevation - Static Water Le Well Volume: (Water Column Height x Well Ca	27.34 gal

Find Pooth.
Sample Timer 16:07
16:07

Start Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
9/13/23		15 48						
, /		15.54			2.74	22.2	7.25	244.9
		15 57			1.65	21.4	6.89	242.7
		16:00			1.43	20.9	6.91	242
	5	16:03		65.03	7.65 1.43 0.75	20.9	682	242.7 242 239.5
						-		
		1						
							-	
		7						

Sample	Time:	
Sample	Analyzed	for:

16:07

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,

Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):

Drawdown/Water Column (%):

1.09

(SWL - Final Depth)
(Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization		
pH:	0.1 standard units	
conductivity:	within 3%	
temperature:	0.1 deg. C	
turbidity:	<5 NTU or 10%	

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well:	MW-14	Well Diameter:	4	inches
Date: 9/13	3/23	Water Column Height:	31.72	ft
Sampling Method:	Pumped	(Measured Well Depth - Static	Water Level)	
Measured Well Depth:	60.97 ft	TOC Elevation <sup>(1)</sup> :	593.84	ft
Static Water Level: (Depth to Water)	29.25 ft	<b>GW Elevation:</b> (TOC Elevation - Static Water I	564.59 _evel)	ft
Maximum Drawdown Depth (10% of WCH + SWL)	32.42 ft	Well Volume: (Water Column Height x Well C	20.62 asing Volume Fac	_gal ctor)

Start	Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
9/13/23		10.06			A STATE OF THE PARTY OF THE PAR	3120		
16.00	1	10.10			0.22	21.5	5./3	137.5
		10:13			0.22	21.2	5.02	131.8
		10.16			0.14	21.3	4.98	130.7
	.1.0.	10:19		-0.11	0.51	21.3	491	130.4
	4.25	10:22		30.11	0.24	21.2	495	130.0
						· ·		
			11.05 V					
		1	this v	M	- sampled	10:35		
1	icale -	alen at	·	Joly	Sampeo			
Dup	Car		at Mi	0.00				
25.40	01	John	1					
[0]	Blan	1-0						
net		11						
						-		
	-							

Final Depth 30.11 Sample Time: 10:30

Sample Time: Sample Analyzed for:

Sampler Signature:

10:30

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):

(SWL - Final Depth)

Drawdown/Water Column (%):

(Total Drawdown / WCH)

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization			
pH:	0.1 standard units		
conductivity: within 3%			
temperature: 0.1 deg. C			
turbidity:	<5 NTU or 10%		

Well Casing Volumes (gal/ft)					
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24		
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46		
8" = 2.61	10" = 4.08	12" = 5.87			

Monitor Well:	OW-	-2	Well Diameter:	4inches
Date:	9-13-	23	Water Column Height:	25.36 ft
Sampling Method:		Pumped	(Measured Well Depth - Static W	ater Level)
Measured Well De	pth:	27.05 ft	TOC Elevation <sup>(1)</sup> :	489.40ft
Static Water Level (Depth to Water)	:	27.64 ft	<b>GW Elevation:</b> (TOC Elevation - Static Water Le	
Maximum Drawdo (10% of WCH + SWL)	wn Depth	30.18 ft	Well Volume: (Water Column Height x Well Ca	16.48 gal sing Volume Factor)

Start	Pi	ımn	

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
9-13-23		10:54						1000
NT STEET	2.0	10 57			25.9	193	6.40	398.0 390.9
		11:00			9,0(	19.2	649	3909
		11:03			13.7	194	6.46	378.4
	5.0	11:06			12.1	19.3	6.48	384.7
				0951				
			(	29.51	FINAL DE	1074		
					FINAL DE	FIR		

Sample Time: Sample Analyzed for:	11:10
	Appendix III (Boron, Calcium, G

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (%): 1.87 (SWL - Final Depth)

Drawdown/Water Column (%): 0.073738 - 7.37% (Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization				
pH:	0.1 standard units			
conductivity:	within 3%			
temperature:	0.1 deg. C			
turbidity:	<5 NTU or 10%			

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

Monitor Well: C	CR-2	Well Diameter: 4	inche
Date: 9//3	3/23 Pumped	Water Column Height: 33.13 (Measured Well Depth - Static Water Level)	ft
Sampling Method: Measured Well Depth: Static Water Level: (Depth to Water) Maximum Drawdown Depth (10% of WCH + SWL)	84.5 ft 51.37 ft 54.68 ft	/A\	

Start	Pump

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
9-13-23		15 13			The Park			
	1.5	15:25 15:28 15:31 15:34			17.1	21.1	6.98	27.4
		15:28			12.1	20.8	6.80	217.4
		15:31			8.53	20.7	6.85	215.6
		15:34			7.74	20.6	679	213.6
	-	15:37			3.78	20.6	6.83	214.9
	35	15:37 15:40			1.48	206	6.75	213.6 214.9 214.0
				/				
		15:42		52.86	)		X 1	
		1.			FINAL	DCPTH	1	
							1 mars	
					-			
	-							
			_					

Sample	Time:
Sample	Analyzed for:

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,

Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft): Drawdown Water Column (%):

(SWL - Final Depth)

0.044974 (Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown with not exceed 0.33 ft.

If drawdown exceeds 10% of water column height, flow will be stopped and well allowed to recover.

Well Stabilization				
0.1 standard units				
within 3%				
0.1 deg. C				
<5 NTU or 10%				

Well Casing Volumes (gal/ft)					
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24		
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46		
8" = 2.61	10" = 4.08	12" = 5.87			

#REF!

Monitor Well:	CR-3	Well Diameter:	4	inches
Date: 9-13	3-23	Water Column Height:	15.04	ft
Sampling Method:	Pumped	(Measured Well Depth - Static Wa	ater Level)	
Measured Well Depth:	53.00 ft	TOC Elevation <sup>(1)</sup> :	504.78	
Static Water Level:	12.01 ft	GW Elevation:	477.39	ft
(Depth to Water)	10	(TOC Elevation - Static Water Lev		
Maximum Drawdown Depth	13.51 ft	Well Volume:		gal
(10% of WCH + SWL)		(Water Column Height x Well Cas	sing Volume Fact	or)

Start	Pump	

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рН	Conductivity (uS/cm)
9-13-23		14.16						
	2.0	14:22			2.30	19.5	5.66	609.4
	1	14:25			1.08	19.4	5.71	602.9
	T N	14:28			0.02	19.3	5.63	603.4
	1	14 31			0.02	19.3	5.68 5.63	602.2
	5.5	14:34			0.02	19.1	5.63	602.9 603.4 602.2 602.3
		14:37		13.72	Allow	73 (ec	harge	
		14:50		(13.47	)			
					FINAL	DEPTH	4	
_								
						1		

Sample	Time:
Sample	Analyzed for:

14:52

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):
Drawdown/Water Column (%):

1.46

(SWL - Final Depth)

0.09707

9.71%

(Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization				
pH:	0.1 standard units			
conductivity:	within 3%			
temperature:	0.1 deg. C			
turbidity:	<5 NTU or 10%			

	Well Casing	Volumes (gal/ft)	
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46
8" = 2.61	10" = 4.08	12" = 5.87	

inches

CCR-4	Well Diameter:	4
9-13-23	Water Column Height	27.34
	6 15 0.5	6 15 00

11 (Measured Well Depth - Static Water Level) Sampling Method: Pumped **TOC Elevation**<sup>(1)</sup>: 505.68 ft **Measured Well Depth:** 53.00 25.66 ft **Static Water Level: GW** Elevation: (TOC Elevation - Static Water Level) (Depth to Water) 28.39 ft Well Volume: **Maximum Drawdown Depth** 

(10% of WCH + SWL)

Start	Pum	n

Date	Volume Purged (L)	Time	Elapsed Time (min)	Water Level (ft)	Turbidity (NTU)	Temp (C)	рH	Conductivity (uS/cm)
1-13-23	E STATE OF	16:20						
	1.75	16:27			9.22	20.0	6.95	343.5
	1	16:30 16:33			194	19.6	6.70	337.2
		16:33			23.6	19.4	6.69	336.5
		16 36			37.29	19.4	6.63	335.1
		16:39			39.3	194	6.69	334.6 334.8
	5.75	16 41			37.5	19.4	6.72	334.8
		Will		227/				
		16 45	- (	2736	FINAL D	EPTH		

(Water Column Height x Well Casing Volume Factor)

Sample	Time:	
Sample	Analyzed	for:

16:50

Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, & Radium 226/228).

Total Drawdown (ft):
Drawdown/Water Column (%):

7. 7' (SWL - Final Depth) 0.06218 - 6.23 % (Total Drawdown / WCH)

Sampler Signature:

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization					
pH:	0.1 standard units				
conductivity:	within 3%				
temperature:	0.1 deg. C				
turbidity:	<5 NTU or 10%				

Well Casing Volumes (gal/ft)											
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24								
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46								
8" = 2.61	10" = 4.08	12" = 5.87									

Monitor Well:	CCR-5	Well Diameter:	4	inches
Date: 9	1/13/23	Water Column Height:	26.61	_ft
Sampling Method: Measured Well Depth:	Pumped 34.55 ft	(Measured Well Depth - Static \ TOC Elevation (1):		ft
Static Water Level: (Depth to Water)	7.94 ft	GW Elevation: (TOC Elevation - Static Water L	462.52	
Maximum Drawdown De	epth <u>/D./gO</u> ft	Well Volume: (Water Column Height x Well C	17.30 asing Volume Fa	

Elapsed

Date	Purged (L)	Time	Time (min)	Level (ft)	Turbidity (NTU)	Temp (C)	pН	Conductivity (uS/cm)
9/13/23		14:22						
1 /		14:26			28.9	22.7	6.87	656.6
		14.29			22.2	219	6.93	638.8
		14:32			31.1	21.9	6.97	638.8
		14.35			43.2	21.7	6.95	629.6
		14:38			47.1	21.8	697	6237
		14-41			34.7	21,3	88.5	623
	1	14:43			42.5	21.7	6.89	6171
	9	14/16			34.9	21-1	4	leile.
	15-50-	14.49		0.11	344	21.1	6.95	611.6
		14:52		8.95	35.5	21.1	696	614
				-				
				-	-			
		-		-	-	-	-	-
				-	-	-	-	
				+			-	
_	-				_			-
	-				t			
	+							
	1							
						1		

Water

Sample Time:

Volume

Sample Analyzed for:

14:56
Appendix III (Boron, Calcium, Chloride, Fluoride, Sulfate, & TDS). pH measured in the field. Appendix IV (Antimony, Arsenic,

 $Barium, Beryllium, Cadmium, Chromium, Cobalt, Fluoride, Lead, Lithium, Molybdenum, Selenium, \& Radium \\ \underline{226/228)}.$ 

Total Drawdown (ft):

Drawdown/Water Column (%):

(SWL - Final Depth)

(Total Drawdown / WCH)

Sampler Signature

If possible, total drawdown will not exceed 0.33 ft.

Well Stabilization											
pH:	0.1 standard units										
conductivity:	within 3%										
temperature:	0.1 deg. C										
turbidity:	<5 NTU or 10%										

Well Casing Volumes (gal/ft)											
1" = 0.041	1 1/2 " = 0.10	2" = 0.16	2 1/2" = 0.24								
3" = 0.37	3 1/2" = 0.50	4" = 0.65	6" = 1.46								
8" = 2.61	10" = 4.08	12" = 5.87									

## **APPENDIX D**

2023 GROUNDWATER MONITORING SUMMARY

#### **Detection and Assessment Monitoring Results:**

Detected

Detected above Prediction Limit

Detected above Prediction Limit and Groundwater Protection Standard (GWPS)

NS = Not Sampled

### Antimony (Sb) Monitoring Results (mg/L)

							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
	Prediction Limit = 0.002, GWPS = 0.006															

### Arsenic (As) Monitoring Results (mg/L)

							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
	Prediction Limit = 0.002, GWPS = 0.010															

#### Barium (Ba) Monitoring Results (mg/L)

						Darian	i (Bu) Moin	torning recor	into (ilig/L)							
	Monitoring Well															
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	0.131	0.071	0.146	0.087	NS	NS	NS	0.064	0.080	0.203	0.169	0.012	NS	NS	NS	0.034
5/10/23	0.098	0.058	0.122	0.054	NS	NS	NS	0.053	0.082	0.171	0.14	0.01	NS	NS	NS	0.035
9/13/23	0.11	0.046	0.157	0.083	NS	NS	NS	0.065	0.045	0.173	0.149	0.012	NS	NS	NS	0.029
	Prediction Limit = 0.2558, GWPS = 2															

### Beryllium (Be) Monitoring Results (mg/L)

							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	0.00114	ND	ND	NS	NS	NS	ND	0.00395	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	0.00122	ND	ND	NS	NS	NS	ND	0.00413	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	ND	ND	ND	NS	NS	NS	ND	0.00235	ND	ND	ND	NS	NS	NS	ND
	Prediction Limit = 0.001, GWPS = 0.004															

#### Boron (B) Monitoring Results (mg/L)

							` '		<u> </u>																			
							Monito	oring Well																				
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2												
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down												
3/13/23	ND	ND	ND	0.058	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND												
5/10/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-	-	-	NS	NS	NS	-												
9/13/23	ND	ND	ND	0.067	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND												
	Prediction Limit = 0.050																											

<sup>(1)</sup> Appendix III constituent not required to be monitored during the annual monitoring event.

### Calcium (Ca) Monitoring Results (mg/L)

							Monito	ring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	15.7	35.4	23.7	104	NS	NS	NS	25.9	43.3	30.7	20.4	0.608	NS	NS	NS	41.1
5/10/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-	-	-	NS	NS	NS	-
9/13/23	13.5	17.5	23.9	47.9	NS	NS	NS	24.7	20.6	25.2	16.9	0.59	NS	NS	NS	40.9
							Prediction I	_imit = 85.88	79							

<sup>(1)</sup> Appendix III constituent not required to be monitored during the annual monitoring event.

#### Cadmium (Cd) Monitoring Results (mg/L)

							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
						Predic	ction Limit =	0.001, GWP	S = 0.005							

### Chloride (CI) Monitoring Results (mg/L)

							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	354	61.4	ND	11.6	NS	NS	NS	92.5
5/10/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-	-	-	NS	NS	NS	-
9/13/23	5.08	8.48	10.7	7.32	NS	NS	NS	7.68	337	43.7	7.28	25.6	NS	NS	NS	156
							Prediction I	Limit = 26.60	34							

<sup>(1)</sup> Appendix III constituent not required to be monitored during the annual monitoring event.

#### Chromium (Cr) Monitoring Results (mg/L)

										<u> </u>						
							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
						Pred	iction Limit	= 0.001, GW	PS = 0.1							

#### Cobalt (Co) Monitoring Results (mg/L)

							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	0.00228	0.0236	0.00418	0.0106	NS	NS	NS	ND	0.0157	0.019	ND	ND	NS	NS	NS	ND
5/10/23	0.00203	0.0213	0.00269	0.00962	NS	NS	NS	ND	0.0158	0.019	ND	ND	NS	NS	NS	ND
9/13/23	0.0013	0.00999	0.00248	0.00261	NS	NS	NS	ND	0.00806	0.00491	ND	ND	NS	NS	NS	ND
						Predi	ction Limit =	0.001, GWP	S = 0.006							

#### Fluoride (F) Monitoring Results (mg/L)

									<u> </u>							
							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	0.39	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	ND	ND	ND	NS	NS	NS	0.25	0.41	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	0.27	ND	ND	NS	NS	NS	ND	0.23	ND	ND	ND	NS	NS	NS	0.22
						Pred	diction Limit	= 0.30, GWF	PS = 4.0							

#### Lead (Pb) Monitoring Results (mg/L)

							( -,		(3/							
							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
						Predic	ction Limit =	0.001, GWP	S = 0.015							

### Lithium (Li) Monitoring Results (mg/L)

							Monito	oring Well	<u> </u>							
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	0.088	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	0.086	ND	ND	NS	NS	NS	ND	0.041	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	0.058	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
						Predi	ction Limit =	0.050, GWP	S = 0.050							

#### Mercury (Hg) Monitoring Results (mg/L)

							, , ,		· • /							
							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-		-	NS	NS	NS	-
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-	-	-	NS	NS	NS	-
						Predic	ction Limit =	0.002, GWP	S = 0.002							

<sup>(1)</sup> Appendix IV constituent not required to be monitored during semi-annual assessment monitoring.

### Molybdenum (Mo) Monitoring Results (mg/L)

							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
						Predi	ction Limit =	0.001, GWF	S =0.100							

#### Selenium (Se) Monitoring Results (mg/L)

							Monite	oring Well	```							
							MOTILO	oring wen								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
						Predi	ction Limit =	= 0.001, GWF	PS = 0.05							

#### Sulfate (SO4) Monitoring Results (mg/L)

							Monito	oring Well								
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	10.6	242.00	27.9	422	NS	NS	NS	40.5	96.7	66.7	5.04	17.00	NS	NS	NS	99.2
5/10/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-	1	-	NS	NS	NS	-
9/13/23	10.1	71.5	18.3	96.4	NS	NS	NS	44.7	101	29.7	6.1	7.65	NS	NS	NS	89.1
							Prediction	Limit = 44.81	02							

<sup>(1)</sup> Appendix III constituent not required to be monitored during the annual monitoring event.

### Thallium (TI) Monitoring Results (mg/L)

	Monitoring Well															
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-	-	-	NS	NS	NS	-
5/10/23	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	ND	ND	NS	NS	NS	ND
9/13/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-	-	-	NS	NS	NS	-
	Prediction Limit = 0.001, GWPS = 0.002															

<sup>(1)</sup> Appendix IV constituent not required to be monitored during semi-annual assessment monitoring.

#### Total Dissolved Solids (TDS) Monitoring Results (mg/L)

	Monitoring Well															
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	70	435	170	758	NS	NS	NS	149	887	243	142	87	NS	NS	NS	358
5/10/23 <sup>(1)</sup>	-	-	-	-	NS	NS	NS	-	-	-	-	-	NS	NS	NS	-
9/13/23	89	213	174	386	NS	NS	NS	163	556	174	151	80	NS	NS	NS	449
	Prediction Limit = 320.8384															

<sup>(1)</sup> Appendix III constituent not required to be monitored during the annual monitoring event.

#### pH Monitoring Results (S.U.)

	F															
	Monitoring Well															
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	7.00	6.19	6.69	6.50	NS	NS	NS	6.30	4.51	6.20	6.88	4.80	NS	NS	NS	6.12
5/10/23	6.74	5.9	6.40	6.61	NS	NS	NS	6.44	4.65	5.68	6.86	5.04	NS	NS	NS	5.62
9/13/23	6.75	5.63	6.72	6.96	NS	NS	NS	6.34	4.7	6.29	6.82	4.95	NS	NS	NS	6.48
	Prediction Limit = 3.77 – 9.97															

#### Radium 226 and 228 Combined (Ra) Monitoring Results (pCi/L)

	Monitoring Well															
Date	CCR-2	CCR-3	CCR-4	CCR-5	CCR-6	CCR-7	CCR-8	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	OW-2
	Down	Down	Down	Down/ Boundary	Mine Property	Mine Property	Mine Property	Up	Down	Down	Up	Up	Down	Down	MW16 Replacement Well/Down	Down
3/13/23	1.632	1.186	1.483	1.925	NS	NS	NS	1.645	3.82	1.97	1.663	1.935	NS	NS	NS	1.691
5/10/23	1.693	1.904	1.873	1.748	NS	NS	NS	1.291	2.703	1.488	1.764	1.714	NS	NS	NS	1.828
9/13/23	2.498	2.46	2.051	2.345	NS	NS	NS	1.501	1.487	1.677	2.059	1.702	NS	NS	NS	1.869
						Pred	iction Limit	= X, GWPS =	5 pCi/L							

<sup>(1)</sup> Per MS Dept. of Health (BJ Smith) and EPA guidance for drinking water standards, Radium 226/228 Combined is calculated by adding Radium 226 and Radium 228 Activity (Act) concentrations together if they are detected above the MDC; otherwise, the MDC is used.