2025 Annual Groundwater Monitoring and Corrective Action Report

Gavin Bottom Ash Pond

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
ASD	Alternate Source Demonstration
BAC	Bottom Ash Complex
BAP	Bottom Ash Pond
CCR	Coal combustion residual
CFR	Code of Federal Regulations
cm/sec	centimeters per second
ERM	Environmental Resources Management, Inc.
ft	feet
Gavin	Gavin Power, LLC
H1	First semiannual
H2	Second semiannual
K	Hydraulic conductivity
NFAP	North Fly Ash Pond
Plant	General James M. Gavin Power Plant
SSI	Statistically significant increase
TDS	Total dissolved solids
USEPA	United States Environment Protection Agency

EXECUTIVE SUMMARY

On behalf of Gavin Power, LLC (Gavin), Environmental Resources Management, Inc. (ERM) has prepared this *2025 Annual Groundwater Monitoring and Corrective Action Report* summarizing groundwater monitoring activities at the Bottom Ash Pond (BAP) at the General James M. Gavin Power Plant (Plant) located in Cheshire, Ohio. The BAP is one of three regulated coal combustion residual (CCR) units at the Plant that are subject to regulation under Title 40, Code of Federal Regulations (CFR), Part 257, Subpart D (40 CFR § 257.50 *et seq*.), also known as the CCR Rule. A review of the CCR monitoring well network is documented in the *Updated Groundwater Monitoring System Evaluation and Certification—40 CFR 257.91* for the BAP (ERM 2021a).

This report documents the status of the groundwater monitoring program for the BAP, which includes the following as required by 40 CFR § 257.90(e):

- A description of the current program status;
- A summary of key actions completed;
- A description of problems encountered and actions taken to resolve the problems; and
- Identification of key activities for the coming year.

The BAP CCR unit groundwater monitoring program began 2025 in a "detection monitoring" program status as defined by 40 CFR § 257.94 and remained in detection monitoring at the end of the 2025 reporting period. Groundwater monitoring in 2025 consisted of two semi-annual monitoring events completed in March-April and September-October 2025 that included groundwater level measurements and subsequent groundwater sampling. Groundwater level measurements were used to construct updated groundwater potentiometric surface maps.

Groundwater samples were collected for laboratory analysis of CCR Rule Appendix III constituents, and the results were compared to previously calculated upgradient well prediction limits to identify statistically significant increases (SSIs) for downgradient wells. The following locations and analytes exhibited SSIs in 2025:

TABLE ES-1: SSIS IN BAP DOWNGRADIENT MONITORING WELLS

Well	Date Sampled	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	TDS
BAC-02	Mar-2025	X	X	X	X	X	X	X
	Sept -2025	X	ϕ	X	X	X	X	X
BAC-03	Mar-2025	X	ϕ	X	ϕ	X	X	X
	Oct-2025	X	ϕ	X	ϕ	X	X	ϕ
BAC-04	Mar-2025	X	ϕ	X	ϕ	X	X	X
	Sept-2025	X	ϕ	X	ϕ	X	X	X
BAC-05	Mar-2025	X	ϕ	X	X	X	X	X
	Sept-2025	X	ϕ	X	ϕ	X	X	ϕ

Notes: X = SSI; ϕ = No SSI; SSI = statistically significant increase; TDS = total dissolved solids

Each identified SSI was evaluated in one of the two attached Alternate Source Demonstration (ASD) Reports. The ASD reports identify regional brine as the source of SSIs for total dissolved solids [TDS], calcium, chloride, and fluoride, and the North Fly Ash Pond (NFAP) at the adjacent Kyger Creek Generating Station as the source of SSIs for boron, pH, and sulfate; therefore, the BAP groundwater monitoring system remained in detection monitoring at the conclusion of 2025. Accordingly, no remedial actions were selected, initiated, or performed in 2025.

Some of the topics discussed in this report are also addressed in USEPA's November 22, 2022 Final Decision: Denial of Alternative Closure Deadline for General James M. Gavin Plant, Cheshire, Ohio (Final Denial). In other documents, Gavin has explained how the approaches described and documented in this report are consistent with USEPA regulations and guidance as well as with best engineering practices and judgment. Gavin has contested USEPA's findings in the Final Denial from a factual, technical and legal perspective.

1. INTRODUCTION

The General James M. Gavin Power Plant is a coal-fired generating station located in Gallia County in Cheshire, Ohio, along the border between Ohio and West Virginia (Figure 1-1). The Plant contains three regulated CCR management units that are subject to regulation under Title 40, Code of Federal Regulations, Part 257, Subpart D (40 CFR § 257.50 *et seq.*), also known as the CCR Rule: the Residual Waste Landfill, the Fly Ash Reservoir, and the BAP.

The BAP has a total land surface area of approximately 49.1 acres and is located south of the main Plant area and adjacent to the Ohio River. The BAP, together with the smaller Reclaim Pond, makes up the Bottom Ash Complex (BAC), which initiated operations in 1974. Bottom ash slurry was previously pumped into the BAP where the surficial water was decanted through a reinforced concrete drop inlet structure into the Reclaim Pond. The placement of bottom ash in the BAP ceased in 2022, as described in Section 3.1. The water in the Reclaim Pond was and still is either pumped to the Plant for reuse or discharged to the Ohio River via an overflow structure subject to the Gavin National Pollutant Discharge Elimination System permit. The Reclaim Pond was not designed to retain an accumulation of CCR; did not and does not receive any significant amount of CCR; and did not and does not treat, store, or dispose of CCR. Therefore, it is not subject to the CCR Rule.

ERM produced this report on behalf of Gavin. The report documents the status of the groundwater monitoring program for the BAP, which includes the following as required by 40 CFR § 257.90(e):

- A description of the current program status;
- A summary of key actions completed;
- A description of problems encountered and actions taken to resolve the problems; and
- Identification of key activities for the coming year.

Consistent with the notification requirements of the CCR Rule, this annual groundwater monitoring report will be posted to the Plant operating record no later than 31 January 2026 (40 CFR § 257.105(h)(1)). Within 30 days of placing the report in the operating record, notification will be made to the Ohio Environmental Protection Agency, and the report will be placed on the Plant publicly accessible internet site (40 CFR § 257.106(h)(1), 257.107(h)(1)). Table 1-1 cross-references the reporting requirements under the CCR Rule with the contents of this report.

TABLE 1-1: REGULATORY REQUIREMENT CROSS-REFERENCES

Regulatory Citation in 40 CFR Part 257, Subpart D	Requirement (paraphrased)	Where Addressed in This Report
§ 257.90(e)	Status of the groundwater monitoring program.	Section 2
§ 257.90(e)	Summarize key actions completed.	Sections 4 and 5
§ 257.90(e)	Describe any problems encountered and actions taken to resolve problems.	Section 4
§ 257.90(e)	Key activities for upcoming year.	Section 6
§ 257.90(e)(1)	Map, aerial image, or diagram of CCR unit and all background and downgradient monitoring wells.	Figure 3-3
§ 257.90(e)(2)	Identification of new monitoring wells installed or abandoned during the preceding year and narrative description.	N/A
§ 257.90(e)(3)	Summary of groundwater data, wells sampled, date sampled, and whether sampling was required under detection or assessment monitoring.	Section 4.2, 5.3, Appendices D-E
§ 257.90(e)(4)	Narrative discussion of any transition between monitoring programs.	N/A
§ 257.93(c) (via § 257.90(e)(5))	Rate and direction of groundwater flow each time groundwater is sampled.	Sections 5.1, 5.2
§ 257.93(h)	Summary of SSIs over background values for each constituent listed in Appendix III of the CCR Rule.	Section 5.3
§ 257.94(e)(2) (via § 257.90(e)(5))	Any ASD reports and related certifications pertaining to a detection monitoring program.	Appendices D-E
§ 257.95(g)(3) (via § 257.90(e)(5))	Any alternate source demonstration reports and related certifications pertaining to an assessment monitoring program.	N/A
§ 257.96(a) (via § 257.90(e)(5))	Any assessment of corrective measures to prevent further releases, remediate any releases, and restore affected area to original conditions, including the related certifications.	N/A
§ 257.97(a) (via § 257.90(e)(5))	Any semi-annual reports describing the progress in selecting and designing a remedy, including the related certifications.	N/A
§ 257.98(e) (via § 257.90(e)(5))	Any notification describing the completion of the selected remedy, including the related certifications.	N/A

2. PROGRAM STATUS § 257.90(E)

The BAP groundwater monitoring system began the 2025 reporting period in detection monitoring. SSIs were identified for the BAP groundwater monitoring network for boron, calcium, chloride, fluoride, pH, sulfate, and TDS in 2025. Regional brine was identified as the alternative source for the SSIs for calcium, chloride, fluoride, and TDS, and the Kyger Creek NFAP was identified as alternate source for the SSIs for boron, pH, and sulfate. Therefore, the BAP remains in detection monitoring at the end of the 2025 reporting period.

3. BACKGROUND

3.1 DESCRIPTION OF CCR UNIT

The BAP previously received bottom ash, miscellaneous Plant wastewaters including coal-pile runoff, cooling-tower blowdown, pyrites, and various Plant sump wastewaters, and is subject to the CCR Rule. The conversion of Units 1 and 2 to dry ash handling systems was completed and the receipt of CCR waste streams in the BAP ceased in 2022. The BAP received non-CCR waste streams until April 7, 2023 at which time flow was diverted to temporary water treatment infrastructure and then directly into the Reclaim Pond.

Prior to April 7, 2023, the water from the BAP was decanted through a reinforced concrete drop inlet structure into the Reclaim Pond before discharge through a permitted outfall. The 6.7-acre Reclaim Pond abuts and is located to the northwest of the Bottom Ash Pond (Figure 3-1). The two ponds comprise the BAC. As discussed in Section 1, the Reclaim Pond is not subject to the CCR Rule. Because the Reclaim Pond is not a CCR unit and does not require groundwater monitoring, this report and the associated groundwater monitoring system pertains only to the BAP.

Gavin plans to achieve closure of the BAP through removal of CCR. CCR was excavated from the BAP throughout 2023 and disposed of in Gavin's lined CCR landfill (known as the Residual Waste Landfill). Excavation of residual materials continued through December 16, 2023 when removal of CCR material from the interior of the BAP was completed.

3.2 GEOLOGY

The geology in the vicinity of the BAP is visualized in Figure 3-2 and features 50 to 100 feet (ft) of unconsolidated deposits overlying deeper bedrock units. At the surface, a fine-grained unit consisting of clays and silts extends 10-40 ft below ground surface depending on surface topography. This unit overlays a layer with fine-grained sands intermixed within the clay and silt matrix. Together, these two layers make up the separation layer. In some portions of the BAP, a thin (less than 5 ft) layer of sand and clay is present directly beneath the separation layer. Below this layer, there is an approximately 20 to 40 ft thick layer of medium-to-coarse grained glacial sand and gravel. In some cores collected around the BAP in 2022, smaller lenses (less than 5 ft) of the finer silt and clay materials observed in the upper layers are interbedded within the sand and gravel layer (ERM 2023). The alluvial aquifer lies directly above the uppermost of the bedrock layers in the area – a claystone/siltstone layer (interpreted to be the Round Knob) atop the underlying sandstone stratum (interpreted to be the Cow Run).

3.2.1 SITE HYDROLOGY AND HYDROGEOLOGY

The uppermost aquifer beneath the BAP area is the approximately 20 to 40 ft thick layer of coarser-grained sands and gravels described in Section 3.2. Also referred to as the alluvial aquifer, the uppermost aquifer is confined by the clay and silt separation layer above and by the siltstone/claystone bedrock unit below (Figure 3-2). The Ohio River acts as a hydraulic boundary to the east that is dynamic in nature due to fluctuations in river stage. Two water supply wells operated by the Plant (FW-15 and FW-1101) exist approximately 400 to 700 feet north of the BAP (Figure 3-3). These wells have 20-to-30-foot screens positioned within the alluvial aquifer and

have a significant combined influence on groundwater flow at the BAP. The use of the wells is variable in both duration and frequency and is dependent on Plant needs; however, when in use, the pumping rates are consistent at 550 and 650 gallons per minute for FW-1101 and FW-15, respectively. Two additional water supply wells (FW-17 and FW-1102) exist approximately 0.4 to 0.5 miles further north and are not expected to have a significant influence on groundwater at the BAP due to their distance from the BAP and infrequency of their use.

The direction of groundwater flow is dependent on the elevation of the Ohio River and influence from the pumping wells described above. For a discussion of groundwater flow in 2025, see Section 5.1. Potentiometric surface maps were prepared for gauging events from 2016 through 2024 and are included in Appendix A. The maps in Appendix A demonstrate that groundwater flow direction can range from westerly to southeasterly, and the most common flow direction is to the northeast towards the water supply wells. Additionally, interpreted groundwater flow based on 15-minute transducer data collected since 2023 shows a predominant groundwater flow direction to the northeast (ERM 2024 and ERM 2025).

Five undisturbed Shelby tube samples of the clay and silt separation layer (mentioned above, located above the uppermost aquifer) were collected from a barge within the BAP in 2020 for laboratory grain size distribution and permeameter testing (ERM 2021b). The samples ranged from 0.9% to 32.3% sand and 67.7% to 99.1% silt and clay. The permeameter testing of these samples yielded hydraulic conductivity (K) values ranging from 1.44×10^{-8} centimeters per second (cm/sec) to 1.18×10^{-7} cm/sec. Thus, even the samples with a higher amount of sand yielded very low K values. These data are direct evidence that the separation layer beneath the BAP acts as an aquitard to downward migration of water stored in the BAP.

As discussed further in Section 3.2.2, there is evidence of groundwater flow between the Cow Run Sandstone and the overlying alluvial aquifer at the BAP.

3.2.2 HYDRAULIC CONDUCTIVITY

Groundwater flow within fractured sedimentary bedrock strata beneath the Gavin Plant occurs primarily via flow through the network of interconnected and saturated fractures, which provides a much higher effective porosity (fracture/secondary porosity) than does the bedrock aquifer matrix (primary porosity). This is due to the effective pore size of the fractures (the ratio of volume of open fractures to the bulk volume of the bedrock matrix) as compared to the miniscule pore sizes between sedimentary grains making up the bedrock matrix. Consequently, the fracture network provides a flow system with significantly higher hydraulic conductivity than the overall bedrock matrix porosity.

This network of fractures is highly heterogeneous, varying greatly in connectivity and conductivity from location to location. The fracture network is also anisotropic, which means the hydraulic conductivity varies in magnitude depending on the direction of measurement. As such, the occurrence of fracture interconnectivity and saturation varies greatly at a regional scale. In the Ohio River Valley, stress relief fracturing in bedrock provides a structural framework for bedrock overlain by coarse glacial outwash alluvial deposits to be hydraulically interconnected. The degree of stress fracturing is generally greatest in bedrock directly underlying the alluvial valley bottom, driving enhanced transmissivity of the fracture network in these areas (USGS 1981). Such is the

case of the BAP area, where the Ohio River acts as a major regional groundwater discharge boundary, driving shallow brines towards the surface due to differences in hydraulic head. In addition, the depth of brine is shallower along the Ohio River than in the surrounding ridges due to flow from areas of recharge to areas of discharge (USGS 1997).

Heterogeneity and anisotropy of the fracture network are clearly observed in the bedrock wells installed around the BAP. Hydraulic conductivity was measured to be 4.17×10^{-2} cm/sec at bedrock well BAC-11 where observations of significant fractures were made during drilling and geophysical logging. This high K value in BAC-11 is similar to K values measured in the alluvial aquifer. Conversely, substantially lower K values were measured at bedrock wells BAC-09 (1.23×10^{-6} cm/sec) and BAC-19 (2.65×10^{-8} cm/sec), where fewer fractures were observed. This difference in hydraulic conductivity values between wells screened within the same bedrock unit exemplifies the effect of fracture network connectivity on hydraulic conductivity and helps to explain why some portions of the alluvial aquifer can be impacted by regional discharge (i.e., near BAC-02) while other areas may not be substantially influenced by regional discharges of brine (i.e., near BAC-01 and BAC-18).

3.2.3 EVALUATION OF POTENTIAL GROUNDWATER MOUNDING AT THE BAP

From August 2022 through November 2023, programmable electronic data loggers equipped with a pressure-sensitive water level transducer were installed at four pairs of alluvial aquifer monitoring wells (eight monitoring wells) at the southern, western, northern, and eastern boundaries of the BAP to evaluate the potential for groundwater mounding. These monitoring well pairs were chosen based on their proximity to one another, and to the BAP. Each well pair included a well directly adjacent to the BAP, and the other located approximately 150-250 ft away from the BAP, which allowed for the evaluation of hydraulic heads and resulting hydraulic gradients between each couplet. A signature of mounding would be identified by consistently higher potentiometric elevations at the well located closer to the BAP compared to its counterpart located further from the BAP. The four well couplet pairs included the following:

- BAC-01 (further from BAP) and BAC-08 (closer to BAP), installed at the western boundary of the BAP;
- BAC-10 (further from BAP) and BAC-02 (closer to BAP), installed at the northern boundary of the BAP;
- BAC-12 (further from BAP) and BAC-04 (closer to BAP), installed at the eastern boundary of the BAP; and
- BAC-16 (further from BAP) and BAC-18 (closer to BAP), installed at the southern boundary of the BAP.

Mounding was not observed at the BAP (ERM 2024). The potentiometric elevation at the northern boundary of the BAP is largely controlled by the operation of the pumping wells located north of the BAP. Well BAC-10 is located closer to the pumping wells and typically has a lower potentiometric surface during times of pumping. This signature is consistent with greater drawdown at BAC-10 because it is closer to the water supply wells than BAC-02 and is not a result of mounding at the northern boundary at the BAP. At the eastern, southern, and western boundaries of the BAP, potentiometric elevations in the wells located further from the BAP were

consistently very similar to or higher than the potentiometric elevations in the wells located closer to the BAP. These observations are not consistent with mounding at the BAP.

3.3 MONITORING WELL NETWORK AND SUPPLEMENTAL WELLS

The certified BAP groundwater monitoring well network consists of five upgradient monitoring wells (BAC-01, MW-1, MW-6, BAC-06, and BAC-07) and four downgradient monitoring wells (BAC-02, BAC-03, BAC-04, and BAC-05). All network monitoring wells are screened in the uppermost aquifer (alluvial aquifer) around the BAP (Figure 3-3). In 2020, BAC-06 and BAC-07 were installed at the southern boundary of the Bottom Ash Pond and in 2021, were incorporated into the updated monitoring network (ERM 2021a).

In 2022, sixteen supplemental monitoring wells were proposed and successfully installed in key areas around the BAP (ERM 2023). Nine wells were installed in the coarse-grained alluvium (BAC-08, BAC-10, BAC-12, BAC-14, BAC-16, BAC-18, BAC-21, BAC-22, and BAC-23) and four wells were installed in shallow bedrock (BAC-09, BAC-11, BAC-13, and BAC-19). BAC-15 and BAC-20 were installed in the fine-grained silt and clay layer. BAC-17 was installed to span the alluvial aquifer and the separation layer. This well was installed to emulate the construction of well B-0904 which was previously sampled by Gavin but is not on Gavin's property. Collectively, these wells were installed to provide supplemental characterization of the conditions at the BAP and to support ASDs. Potentiometric elevations and analytical results from these wells have been incorporated in this report.

Figure 3-3 provides the monitoring well locations, including both the certified monitoring well network wells (shown in yellow and blue) and supplemental wells not in the federal program (shown in purple), on the Site location map. A summary of the well construction information for wells around the BAP is located in Appendix B, and boring logs and well construction logs are located in Appendix C.

The upgradient wells are positioned to accurately represent the quality of background groundwater flowing from the west (BAC-01, MW-1, MW-6) and groundwater flowing from the south (BAC-06 and BAC-07) from Kyger Creek Generating Station's NFAP. The downgradient wells are positioned at the downgradient boundary where bottom ash was previously placed prior to excavation to detect potential releases of CCR constituents from the BAP into groundwater in the uppermost aquifer.

3.4 PREVIOUS GROUNDWATER MONITORING ACTIVITIES

The BAP monitoring wells were initially sampled eight times between August 2016 and July 2017 to establish upgradient well baseline data. Consistent with the CCR Rule and the *Groundwater Monitoring Plan Appendix G Statistical Analysis Plan* (ERM 2017), a prediction limit approach was used to identify potential future impacts to groundwater. After each semi-annual groundwater sampling event in July 2017, May and September 2018, March and September 2019, March and September 2020, March and September 2021, March/April and October 2022, April and September/October 2023, and March/April and September-November 2024 the results from the downgradient wells were compared to the prediction limits to identify SSIs. ASD Reports were developed for each sampling event discussing each SSI, which concluded that the SSIs resulted

from alternate sources, and thus the CCR unit remained in detection monitoring (ERM 2018a; ERM 2018b; ERM 2019; ERM 2020; ERM 2021c; ERM 2022; ERM 2023; ERM 2024).

4. MONITORING ACTIVITIES

4.1 GROUNDWATER POTENTIOMETRIC ELEVATION MONITORING

Programmable electronic data loggers equipped with a pressure-sensitive water level transducer were installed in several alluvium-bedrock well couplets around the BAP from January to December 2025. These monitoring well locations were selected based on their placement and proximity to one another and to the BAP. Transducer data were evaluated to determine the direction of vertical gradients and the conditions that lead to upward vertical gradients. Transducers were installed in alluvium-bedrock well pairs at the northern (BAC-02/BAC-11), eastern (BAC-04/BAC-13), southern (BAC-18/BAC-19), and western (BAC-01/ BAC-09) boundaries of the BAP.

In addition, a stilling well was installed in the Ohio River adjacent to the BAP to collect river stage elevation data, which was also reviewed with the transducer-based potentiometric elevations. During the transducer deployment periods, water supply wells FW-15 and FW-1101 (located north of the BAP) were cycled on and off which allowed an evaluation of potentiometric elevations under both pumping and non-pumping conditions. As a measure of data quality, transducer data were reviewed against corresponding manual water level measurements and adjusted if necessary to ensure accuracy and consistency between datasets.

4.2 2025 SAMPLING SUMMARY

Groundwater samples were collected in 2025 as part of the detection monitoring program under 40 CFR § 257.94 and analyzed for the constituents listed in Appendix III to 40 CFR Part 257, Subpart D. Table 4-1 provides a summary of the 2025 sample dates and the well gradient designation (upgradient or downgradient) relative to the BAP. During both the first and second semiannual (H1 & H2) 2025 sampling events, no significant field sampling issues were encountered, and therefore no actions were required for resolution. Samples were collected by bladder pump, were not filtered in the field or at the laboratory and were managed under chain-of-custody procedures from the field to the laboratory.

TABLE 4-1: SAMPLING DATES FOR EACH WELL

Monitoring Well	Location	Sampling Dates	
		H1	H2
BAC-01	Upgradient	20 March 2025	1 October 2025
BAC-02	Downgradient	28 March 2025	26 September 2025
BAC-03	Downgradient	21 March 2025	1 October 2025
BAC-04	Downgradient	31 March 2025	26 September 2025
BAC-05	Downgradient	31 March 2025	26 September 2025
BAC-06	Upgradient	27 March 2025	9 September 2025
BAC-07	Upgradient	24 March 2025	24 September 2025
MW-1	Upgradient	1 April 2025	2 October 2025
MW-6	Upgradient	19 March 2025	1 October 2025

Notes: H1 = spring 2025; H2 = fall 2025

In order to obtain more information on groundwater quality surrounding the BAP, the supplemental monitoring wells installed in mid-2022 were analyzed for the constituents listed in Appendices III and IV of 40 CFR § 257 during the H1 and H2 2025 sampling events.

4.3 DATA QUALITY

Samples collected during 2025 were analyzed by Eurofins Canton/Cleveland located in Barberton, Ohio. All resulting field and laboratory documentation was reviewed to assess the validity, reliability, and usability of the analytical results. Data quality information reviewed included field sampling forms, chain-of-custody documentation, holding times, laboratory methods, laboratory method blanks, laboratory control sample recoveries, field duplicate samples, matrix spikes/matrix spike duplicates, quantitation limits, and equipment blanks. Data qualifiers were appended to the results in the project database as appropriate based on laboratory quality measurements (e.g., control sample recoveries) and field quality measurements (e.g., agreement between normal and field duplicate samples). The data quality review found the laboratory analytical results to be valid, reliable, and usable for decision-making purposes with the listed qualifiers. No analytical results were rejected.

5. MONITORING RESULTS

5.1 GROUNDWATER POTENTIOMETRIC CONTOURS AND FLOW DIRECTION

Synoptic gauging was completed in February 2025 and September 2025 to collect depth to groundwater measurements. The February and September events were completed prior to semiannual sampling events. The synoptic gauging event completed in February 2025 was performed when the nearby water supply wells FW-15 and FW-1101 were operational (i.e. under pumping conditions). The synoptic gauging event in September 2025 was performed when nearby water supply wells FW-15 and FW-1101 were not operational (i.e. under non pumping conditions). Resulting potentiometric elevations for each gauging round were calculated by subtracting the depth to groundwater from the surveyed reference elevation for each well. Groundwater potentiometric elevations, interpreted potentiometric surface maps, and interpreted groundwater flow directions for wells screened in the alluvium are presented on Figure 5-1 (2025 H1, pumping conditions) and Figure 5-2 (2025 H2, non-pumping conditions).

During the February gauging event, during which time the water supply wells FW-15 and FW-1101 were active, the principal groundwater flow direction in the uppermost aquifer system (alluvial aquifer) under the BAP was from the south, west and east, toward the water supply wells which were operational at the time of the gauging event (Figure 5-1). In the September 2025 gauging event, the lack of influence from the water supply wells FW-15 and FW-1101 was observed, resulting in groundwater flow west to east (Figure 5-2).

To better address spatial and temporal density of data, a review was conducted of all available potentiometric surface maps using all monitoring wells around the BAP during semiannual gauging events from August 2016 to August 2024 (Appendix A). From 2016 to the end of 2024, 12 out of a total of 19 synoptic gauging events depicted evidence of northward flow of groundwater from the Kyger Creek NFAP toward the BAP. This spatially and temporally dense dataset demonstrates groundwater flow from the Kyger Creek NFAP toward the BAP under pumping conditions.

5.2 HYDRAULIC TESTING AND GROUNDWATER VELOCITY CALCULATION

The hydraulic gradient at the BAP is generally controlled by two main factors, the Ohio River and pumping of FW-15 and FW-1101, which contribute to the average groundwater-flow gradient to the northeast. The horizontal hydraulic gradient for the September 2025 gauging event, which occurred during non-pumping conditions, was generally to the east, toward the Ohio River. The horizontal hydraulic gradient for the February 2025 gauging event, which occurred while water supply wells FW-15 and FW-1101 were operational, was generally to the east, northeast and north, towards BAC-02 and BAC-10.

Measured horizontal hydraulic gradients across the BAP, as measured between MW-1 and BAC-03, were 0.0007 for the February 2025 (pumping) event and 0.0006 for the September 2025 (non-pumping) event. Based on the measured hydraulic gradients, an assumed porosity of 0.3, and an estimated average hydraulic conductivity of 6.99×10^{-2} cm/sec for the alluvial aquifer, the horizontal velocity of groundwater in the alluvial aquifer beneath the BAP was 160 feet per year in February under pumping conditions and was 130 feet per year in September under non-pumping

conditions. These values are similar to the horizontal groundwater velocities calculated in 2024 (90 feet per year under non-pumping conditions, 190 feet per year under pumping conditions).

5.3 COMPARISON OF RESULTS TO PREDICTION LIMITS

Consistent with the CCR Rule and the *Statistical Analysis Plan* (ERM 2017) in the operating record, an interwell prediction limit approach was used to identify potential impacts to groundwater. Upper prediction limits were developed for the Appendix III parameters; in the case of pH, a lower prediction limit was also developed. The *2017 Annual Groundwater Monitoring and Corrective Action Report* (ERM 2018a) provides documentation of the development of the upper and lower prediction limits for the BAP.

5.3.1 2025 SAMPLING EVENT RESULTS

Table 5-1 identifies SSIs for the March/April (H1) and September/October (H2) 2025 monitoring events based on a comparison of the sampling results in downgradient wells to the prediction limits for the respective Appendix III analytes.

TABLE 5-1: SSIS FROM 2025 SAMPLING EVENTS

	Monitoring Well							
	BAC-02		BAC-03		BAC-04		BAC-05	
Analyte/Event	H1	H2	H1	H2	H1	H2	H1	H2
Boron	X	X	X	X	X	X	X	X
Calcium	X	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ
Chloride	X	X	X	X	X	X	X	X
Fluoride	X	X	ϕ	ϕ	ϕ	ϕ	X	ϕ
pH	X	ϕ	X	X	X	X	X	X
Sulfate	X	X	X	X	X	X	X	X
TDS	X	X	X	ϕ	X	X	X	ϕ

Notes: ϕ = No SSI; X = SSI; SSI = statistically significant increase; TDS = total dissolved solids
Results are for the downgradient wells sampled in March/April (H1) and September/October (H2) 2025.

March/April 2025 SSIs were similar to those observed in 2017, 2018, 2019, 2020, 2021, 2022, 2023, and 2024. Alternate sources were identified consistent with the results of those previous analyses for each of the SSIs detected in the March/April 2025 data and were documented in the *Gavin BAP First Semiannual Sampling Event of 2025 ASD Report* which is included as Appendix D. The first half 2025 ASD report identified the regional discharge of groundwater as the source of calcium, chloride, fluoride, and TDS, and the Kyger Creek NFAP as the source of boron, low pH, and sulfate.

September/October 2025 SSIs were also similar to those observed in 2017, 2018, 2019, 2020, 2021, 2022, 2023, and 2024. Alternate sources were identified for each of the SSIs associated

with the September/October 2025 data and documented in the *Gavin BAP Second Semiannual Sampling Event of 2025 ASD Report*, which is included as Appendix E. The second half 2025 report identified the regional discharge of groundwater as the source of chloride, fluoride, and TDS, and the Kyger Creek NFAP as the source of boron, low pH, and sulfate.

Appendix F provides a summary of all historical and current analytical results obtained from the BAP groundwater monitoring program (including recent supplemental sampling). Appendix G contains laboratory analytical reports from both semi-annual sampling events in 2025.

6. KEY FUTURE ACTIVITIES

The following key future activities are planned for 2026:

- Groundwater Sampling
  - Two semiannual groundwater sampling events will be performed in 2026 at the BAP and the results will be compared to the prediction limits.
  - Monitoring wells that were installed in 2022 will be sampled and evaluated for addition to the certified monitoring network for use as background or compliance wells.
- Groundwater Hydraulic Monitoring
  - Up to four groundwater gauging events will be performed in 2026 at the BAP to establish hydraulic gradients under both pumping and non-pumping conditions.
  - Transducers will be downloaded, and the data processed and evaluated.
- Monitoring Network
  - The existing monitoring network will be evaluated for potential additional wells.

7. REFERENCES

ERM (Environmental Resources Management, Inc.). 2017. *Groundwater Monitoring Plan. Bottom Ash Complex, Fly Ash Reservoir, and Residual Waste Landfill*, *Gavin Plant, Cheshire Ohio*.

ERM. 2018a. *2017 Annual Groundwater Monitoring and Corrective Action Report. Bottom Ash Complex, Gavin Plant, Cheshire Ohio,* dated 1-31-2018.

ERM. 2018b. *Gavin Bottom Ash Complex Alternate Source Demonstration,* dated 7-3-2018.

ERM. 2019. *2018 Annual Groundwater Monitoring and Corrective Action Report. Bottom Ash Complex, Gavin Plant, Cheshire Ohio,* dated 1-31-2019*.*

ERM. 2020. *2019 Annual Groundwater Monitoring and Corrective Action Report. Bottom Ash Complex, Gavin Plant, Cheshire Ohio,* dated 1-29-2020*.*

ERM. 2021a*. Updated Groundwater Monitoring System Evaluation and Certification—40 CFR 257.91, Gavin Bottom Ash Pond, Gavin Plant, Cheshire Ohio,* dated 5-17-

ERM. 2021b. *Bottom Ash Pond Investigation Report, Gavin Power Plant, Cheshire Ohio,* dated 7-31-2021.

ERM. 2021c. *2020 Annual Groundwater Monitoring and Corrective Action Report. Bottom Ash Complex, Gavin Plant, Cheshire Ohio,* dated 1-31-2021*.*

ERM. *2022. 2021 Annual Groundwater Monitoring and Corrective Action Report. Bottom Ash Complex, Gavin Plant, Cheshire Ohio,* dated 1-31-2021*.*

ERM. 2023. *2022 Annual Groundwater Monitoring and Corrective Action Report. Bottom Ash Complex, Gavin Plant, Cheshire Ohio,* dated 1-31-2023*.*

ERM. 2024. *2023 Annual Groundwater Monitoring and Corrective Action Report. Bottom Ash Complex, Gavin Plant, Cheshire Ohio,* dated 1-31-2024*.*

ERM. 2025. *2024 Annual Groundwater Monitoring and Corrective Action Report. Bottom Ash Complex, Gavin Plant, Cheshire Ohio,* dated 1-31-2025*.*

USGS (United States Geologic Survey). 1981. Hydrologic Effects of Stress-Relief Fracturing in an Appalachian Valley. Paper 2177.

USGS. 1997. Ground-Water Hydrology of the Area Bordering the Ohio River Between Chester and Waverly, West Virginia. Report 95-710.

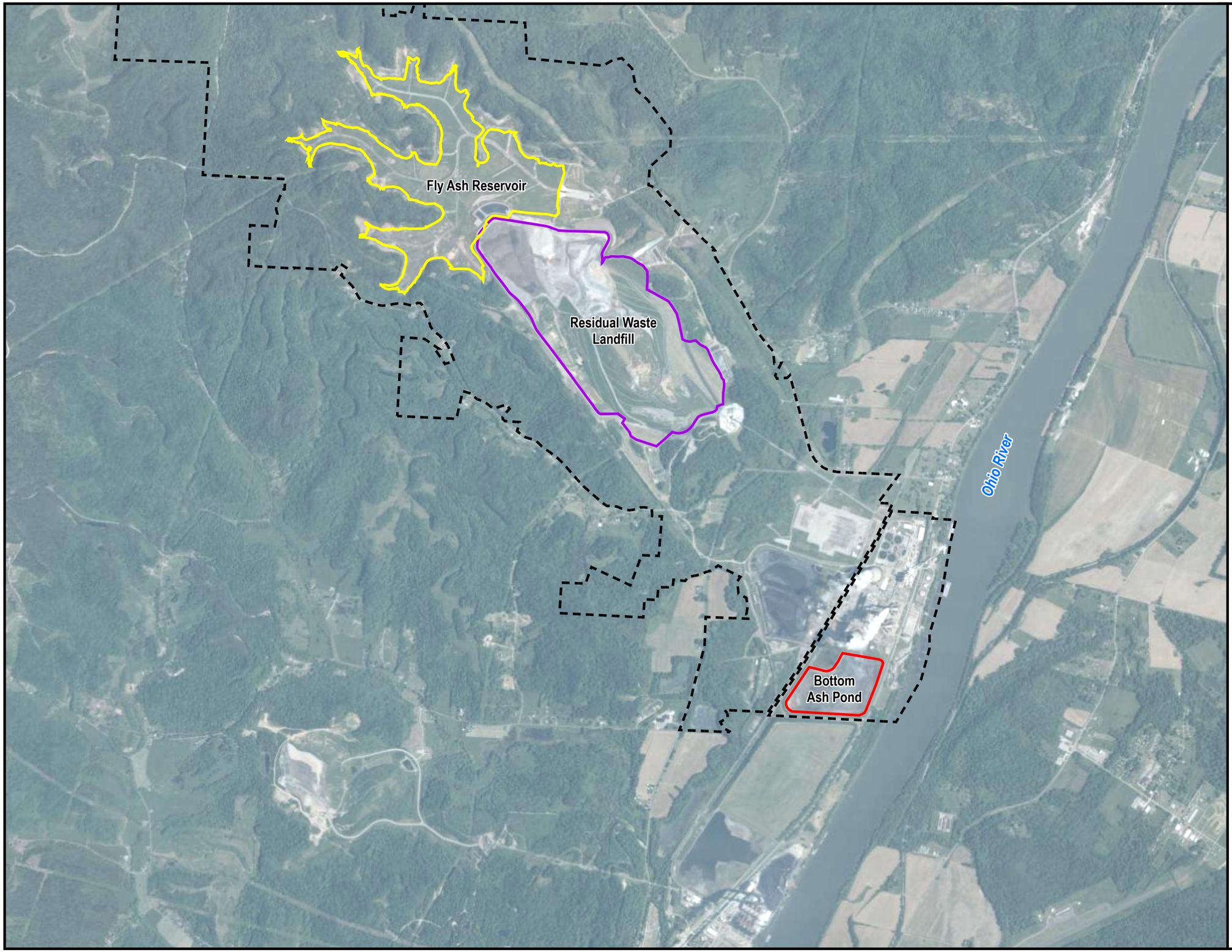
FIGURES

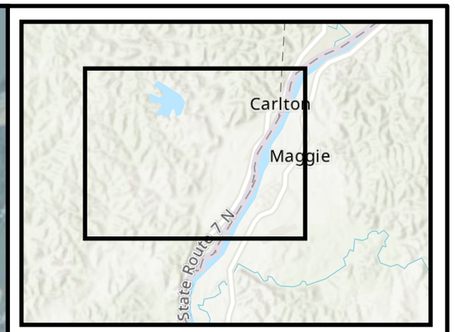


Figure 1-1: Gavin Plant Location
Gavin Generating Station
Cheshire, Ohio

ERM

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Legend

- Fly Ash Reservoir
- Residual Waste Landfill
- Bottom Ash Pond
- Property Boundary

NOTES:

1. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

N

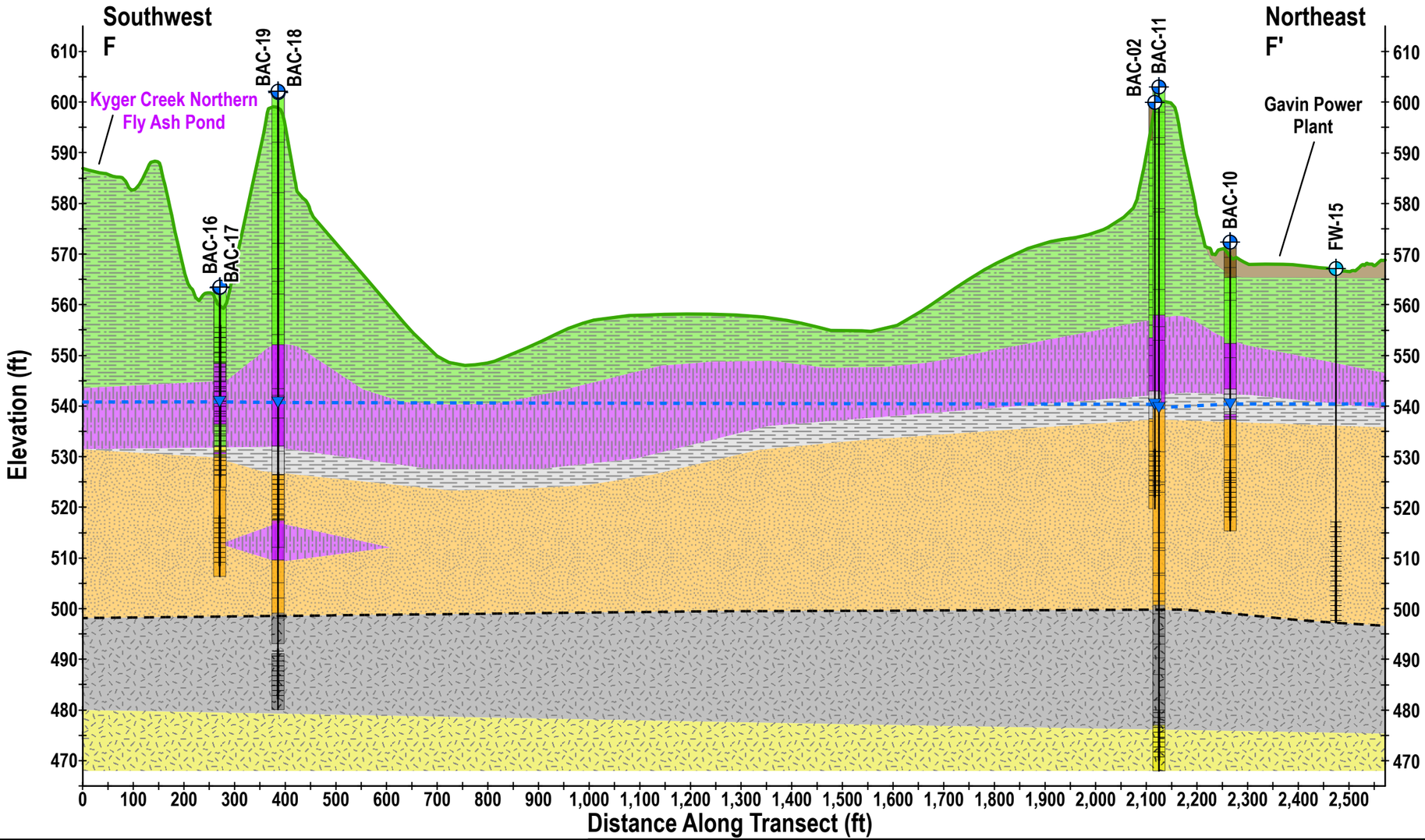
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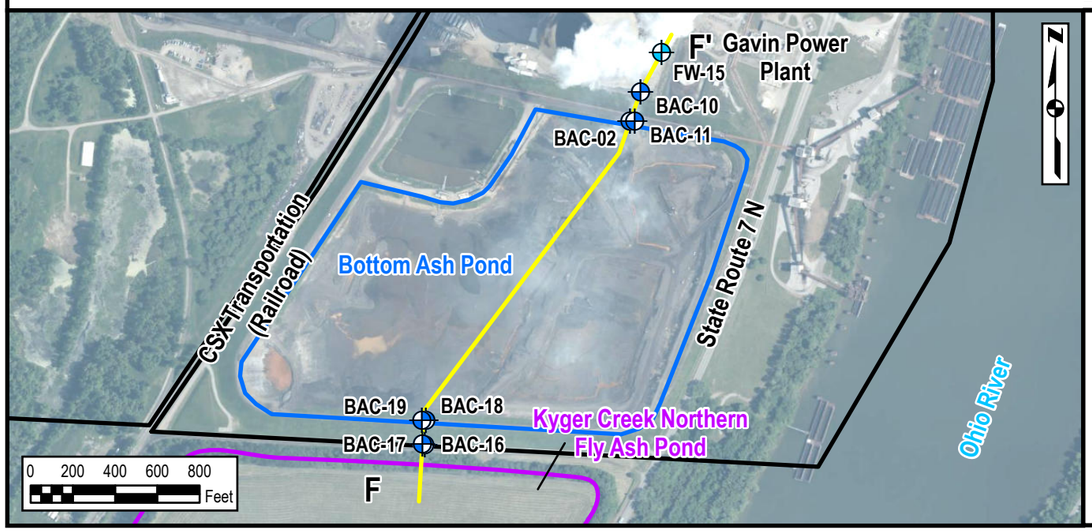
Feet

Figure 3-1: Former Bottom Ash Pond Location
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM

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Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Generalized Lithology

- Road Material
- Clay and Silt — Separation Layer
- Sandy Clay and Silt — Separation Layer
- Sand and Clay
- Sand and Gravel — Alluvial Aquifer
- Sand — Alluvial Aquifer
- Claystone/Siltstone — Bedrock Units
- Sandstone — Bedrock Units

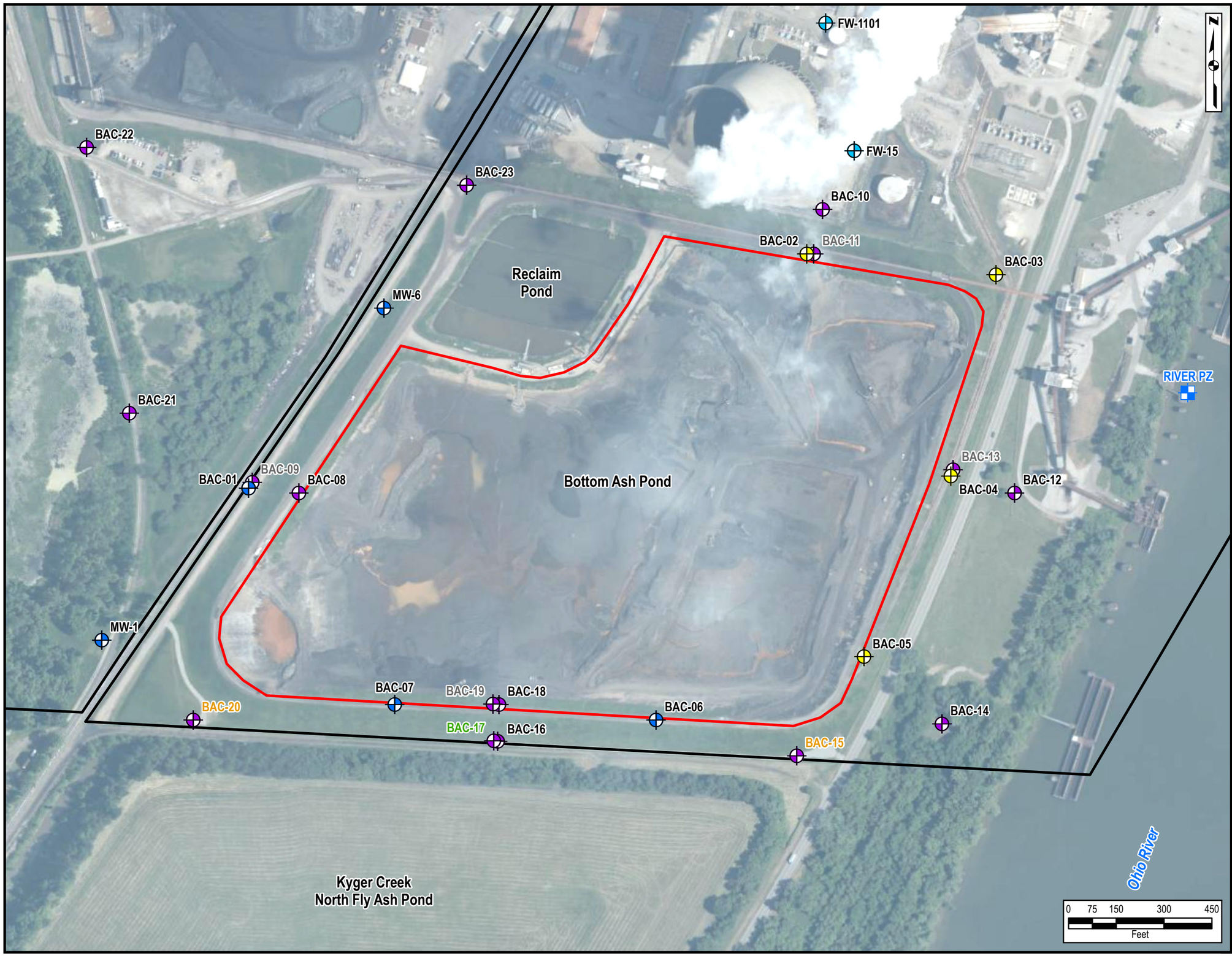
Figure 3-2: Bottom Ash Pond Cross Section
Gavin Power, LLC
Cheshire, Ohio

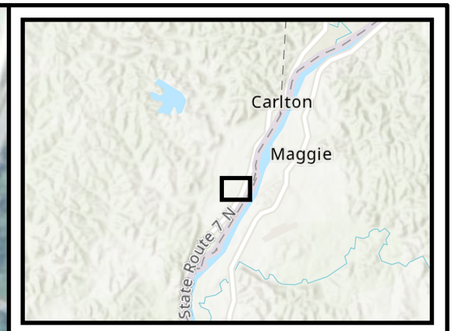
NOTES:

1. Potentiometric elevations from 09/08/25.
2. Surface profile from OGRIP LiDAR 2020.
3. Elevation is exaggerated 10X.
4. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
5. The geology is generalized based on the lithology descriptions.
6. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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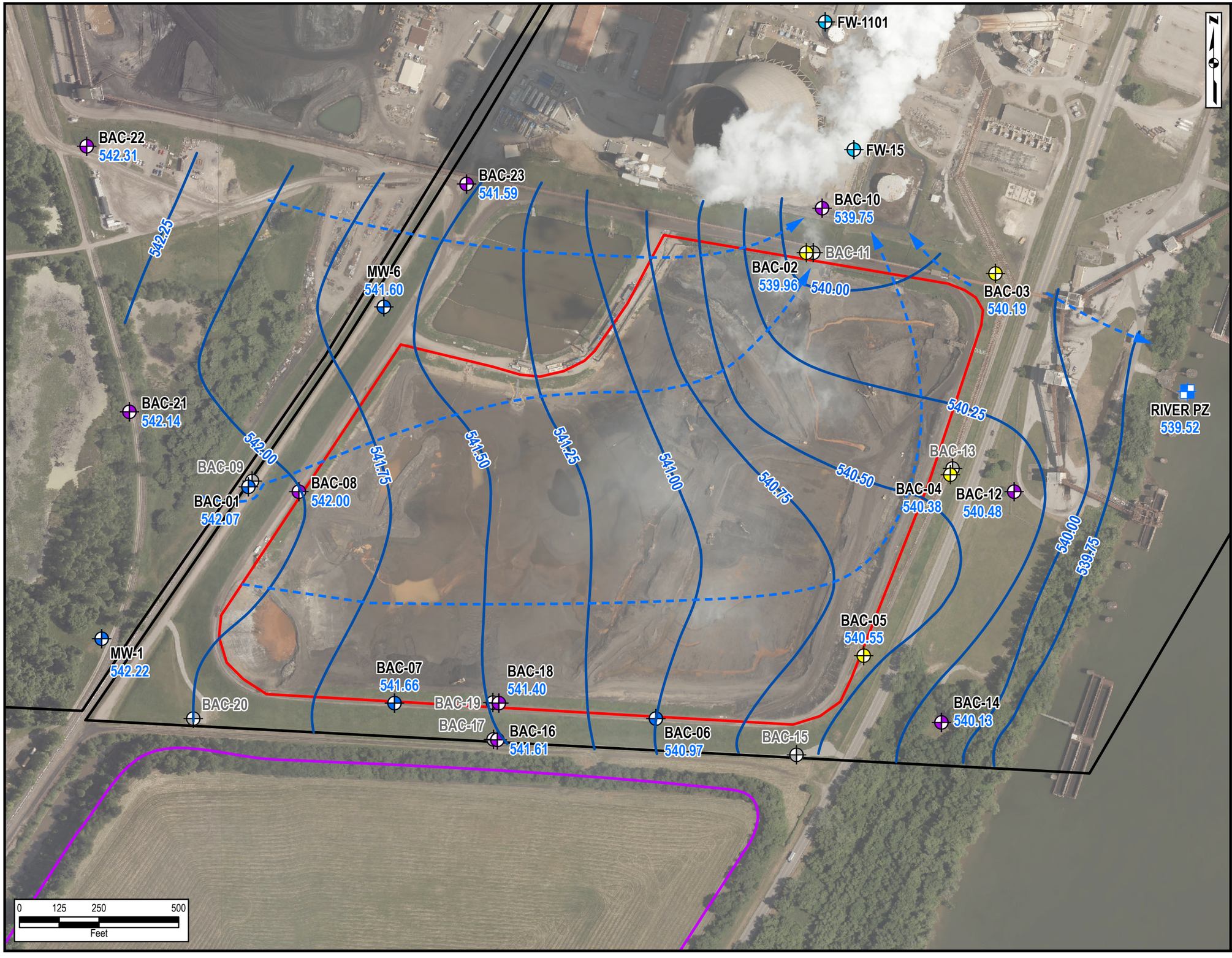
- 2022 Monitoring Well (Not in Federal Program)
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Water Supply Well
- Piezometer
- BAC Alluvium Well
- BAC Silt and Clay/Alluvium Well
- BAC Silt and Clay Well
- BAC Bedrock Well
- Approximate location of Bottom Ash Pond boundary
- Gavin Property Boundary

NOTES:

1. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 3-3: Bottom Ash Pond Monitoring Well Network
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM



Legend

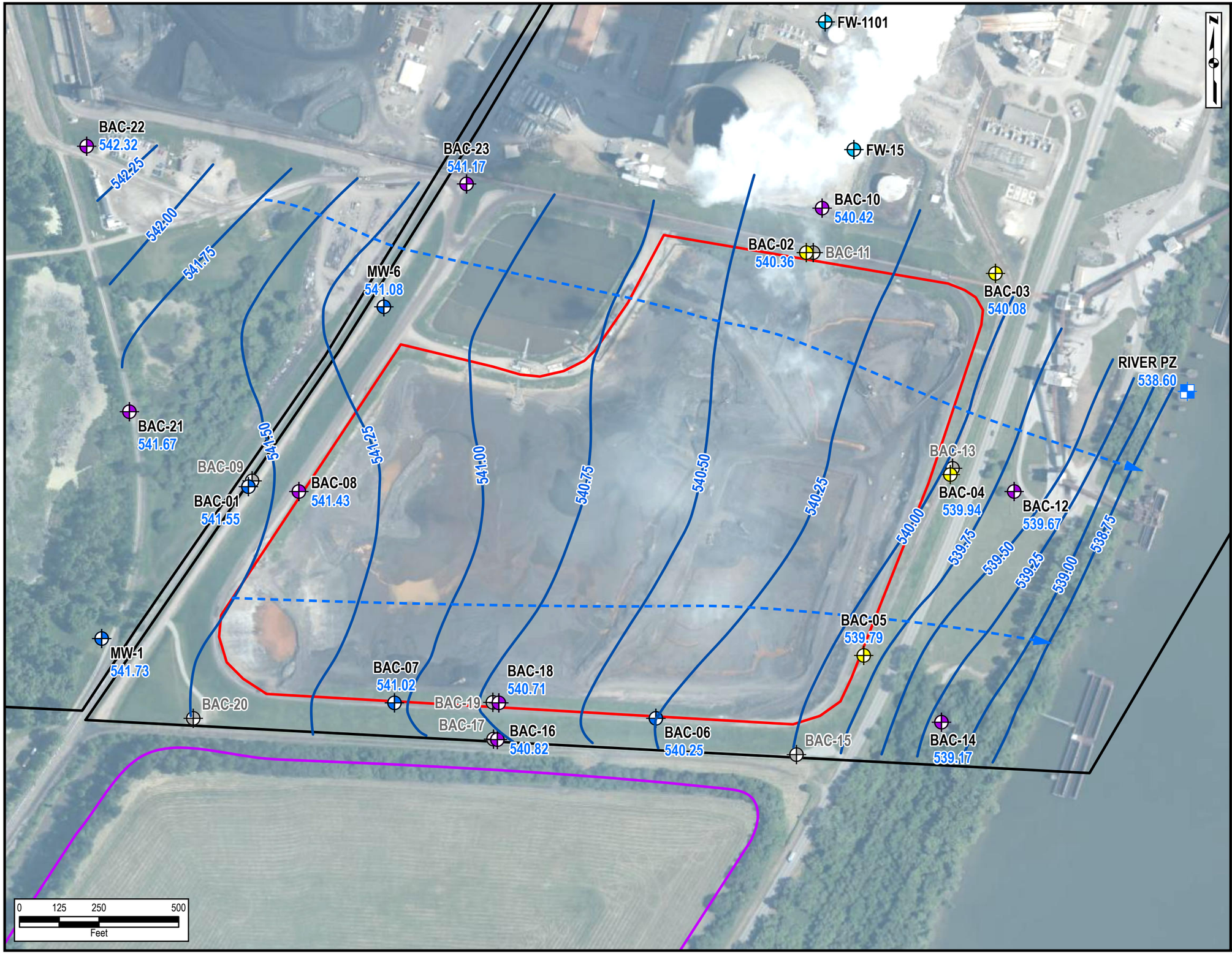
- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.85 Groundwater Elevation (ft)
- H1 2025 Interpreted Groundwater Potentiometric Contour
- H1 2025 Interpreted Generalized Groundwater Flow Direction
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

- Monitoring wells were gauged on 2/24/2025 - 2/25/2025.
- Wells not used for contouring of the Alluvium include wells screened in silt/clay or bedrock.
- Flow lines indicate a general groundwater flow direction within alluvium beneath the Former Bottom Ash Pond. They do not represent all potential flow paths within the alluvium.
- Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS Pro 3.4.2
- H1 refers to the first half of 2025.

Figure 5-1: Interpreted Groundwater Potentiometric Contour Map H1 2025 - Pumping Conditions
Gavin Generating Station
Cheshire, Ohio

ERM



Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.75 Groundwater Elevation (ft)
- H2 2025 Interpreted Groundwater Potentiometric Contour
- H2 2025 Interpreted Generalized Groundwater Flow Direction
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

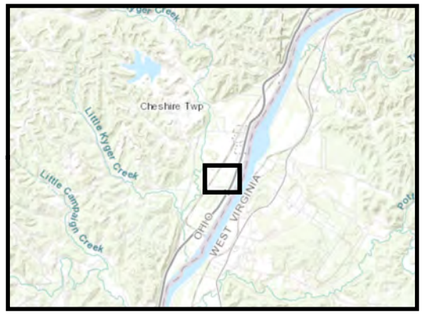
- Monitoring wells were gauged on 9/8/2025.
- Wells not used for contouring of the Alluvium include wells screened in silt/clay or bedrock.
- Flow lines indicate a general groundwater flow direction within alluvium beneath the Former Bottom Ash Pond. They do not represent all potential flow paths within the alluvium.
- Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS Pro 3.4.2
- H2 refers to the second half of 2025.
- Non-Pumping conditions based on interpretation of water level data from transducer installed in BAC-02. Pump had been off for approximately 29 hours..

Figure 5-2: Interpretive Groundwater Potentiometric Contour Map H2 2025 - Non-Pumping Conditions
Gavin Generating Station
Cheshire, Ohio

ERM

APPENDIX A BOTTOM ASH POND POTENTIOMETRIC SURFACE MAPS, 2016-2024





Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Potentiometric Contour (ft)
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 8/25/2016
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4

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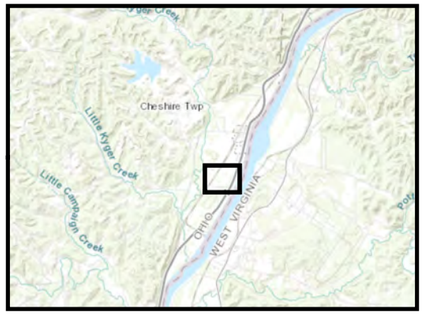
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Feet

Figure A-1: August 2016 Groundwater Flow Direction Map
Bottom Ash Complex
Gavin Power Plant
Cheshire, Ohio

ERM

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Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Potentiometric Contour (ft)
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 2/7/2017
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.4

N

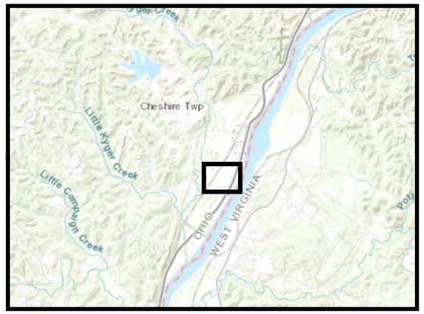
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Feet

Figure A-2: February 2017 Groundwater Flow Direction Map
Bottom Ash Complex
Gavin Power Plant
Cheshire, Ohio

ERM

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Legend

- Groundwater Elevation (7/14/2017)
- Groundwater Elevation Contours (0.5 ft)
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Aerial Imagery: ESRI World Imagery
   Reproduced under license in ArcGIS 10.5

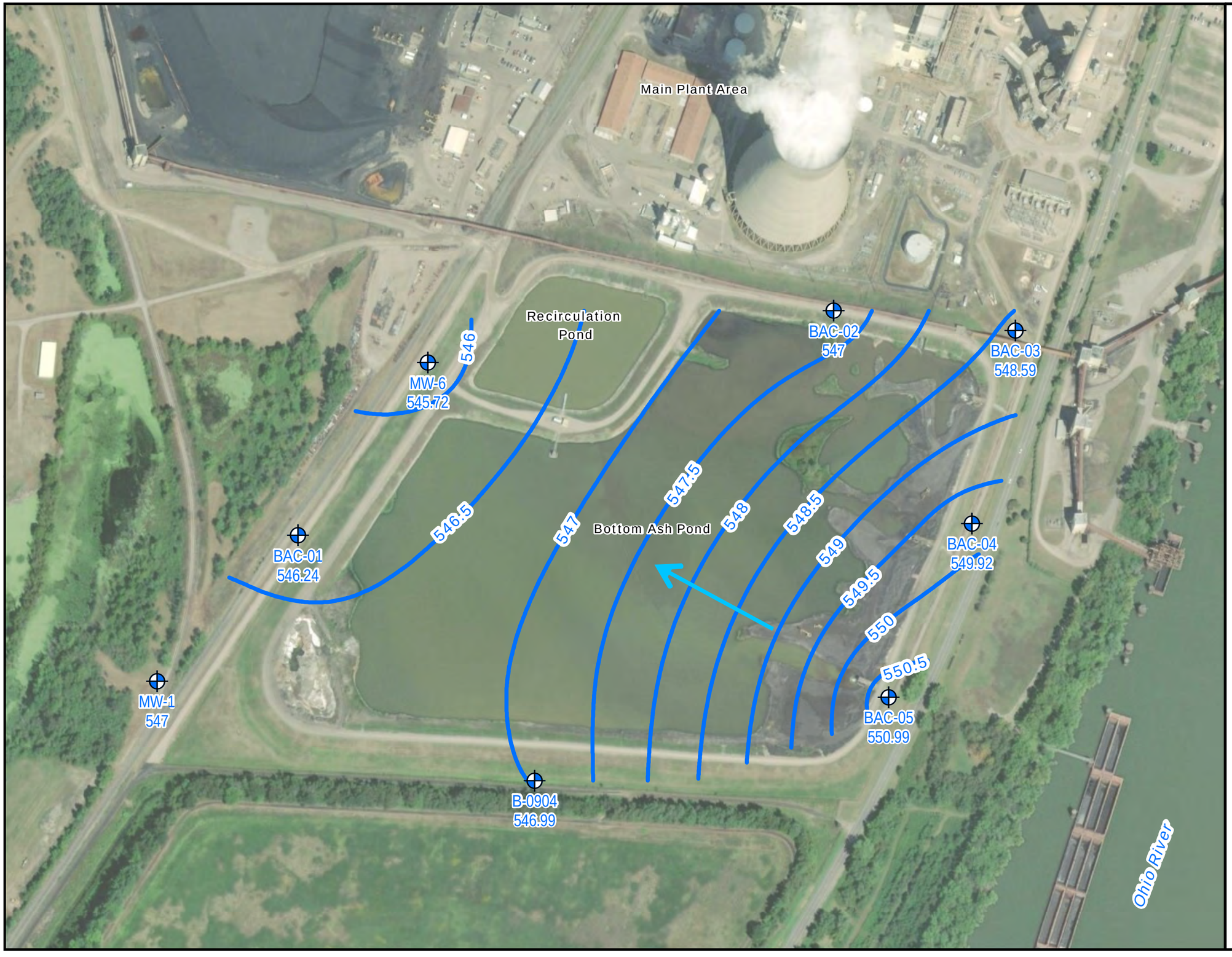
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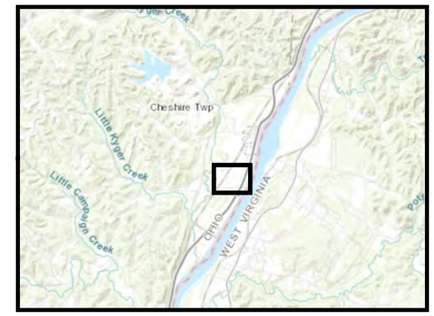
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Feet

Figure A-3: July 2017 Groundwater Elevations and Flow Direction
Bottom Ash Complex Alternate Source Demonstration
Gavin Generating Station
Cheshire, Ohio

ERM

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Legend

- Groundwater Elevation (2/21/2018)
- Groundwater Elevation Contours (0.5 ft)
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Aerial Imagery: ESRI World Imagery
   Reproduced under license in ArcGIS 10.4

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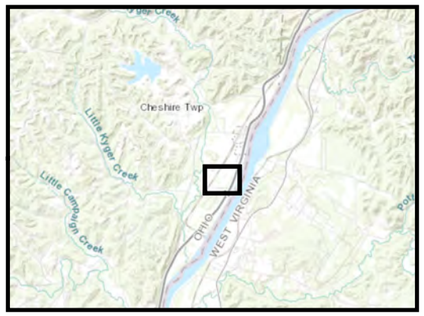
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Feet

Figure A-4: February 2018 Groundwater Elevations and Flow Direction
Bottom Ash Complex Alternate Source Demonstration
Gavin Generating Station
Cheshire, Ohio

ERM

Q:\Team\DMW\Clients_F_K\Gavin\GavinPowerPlant\MXD\2018_BAC_ASD_Report\Figure3_9_Feb2018_GWElevationsandFlow_20180605.mxd - Dana.Hasnik/eld - 6/21/2018





Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Potentiometric Contour (ft)
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 5/15/2018
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.5

N

0 60 120 240 360 480
Feet

Figure **A-5**: May 2018 Groundwater Flow Direction
Bottom Ash Complex Annual Groundwater Monitoring and Corrective Action Report
Gavin Power Plant
Cheshire, Ohio

ERM

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Main Plant Area

Recirculation Pond

Bottom Ash Pond

MW-6
540.85

BAC-01
541.43

MW-1
542.01

BAC-02
538.8

BAC-03
538.8

BAC-04
539.2

BAC-05
539.19

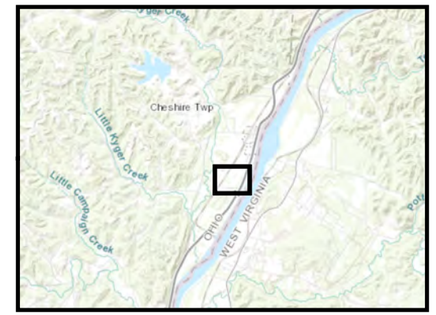
542

541

540

539

Ohio River



Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Potentiometric Contour (ft)
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 9/6/2017
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.5

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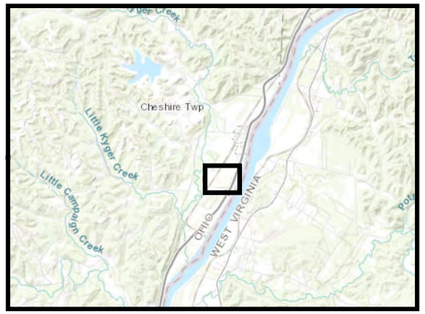
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Feet

Figure A-6: September 2018 Ground-water Flow Direction Bottom Ash Complex Annual Groundwater Monitoring and Corrective Action Report
Gavin Power Plant
Cheshire, Ohio

ERM

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Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Interpreted Groundwater Elevation Contour
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 3/5/2019
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.5

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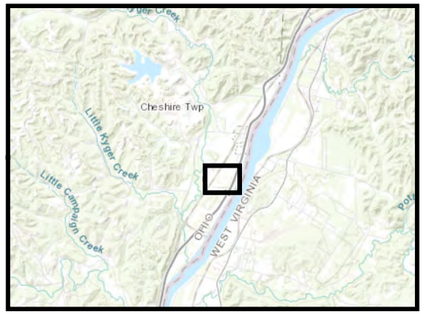
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Feet

Figure A-7: Interpreted Groundwater Potentiometric Contour March 2019
Gavin Power Plant
Cheshire, Ohio

ERM

Q:\Boston\Team\DMMV\Clients_F_K\Gavin\GavinPowerPlant\MXD\2019_GWMonitoring&CorrectiveActionReport\BAP\Figure3_1_BAC_March2019_GWFlowDirection_20191218.mxd - Paulina.Staley - 1/8/2020





Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Interpreted Groundwater Elevation Contour
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 9/5/2019
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.5

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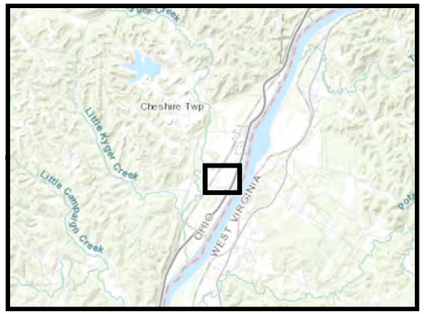
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Feet

Figure A-8: Interpreted Groundwater Potentiometric Contour
September 2019
Gavin Power Plant
Cheshire, Ohio

ERM

Q:\Boston\Team\DM\MV\Clients_F_K\Gavin\GavinPowerPlant\MXD\2019_GWMonitoring&CorrectiveActionReport\B4\Figure3-2_BAC_September2019_GWFlowDirection_20191218.mxd - Paulina.Staley - 1/8/2020





Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Interpreted Groundwater Elevation Contour
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 3/5/2020
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.7

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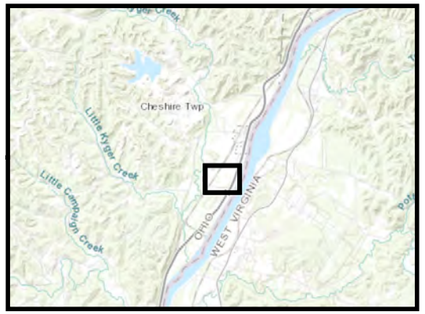
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Feet

Figure **A-9**: March 2020 Groundwater Elevations and Flow Direction
Gavin Generating Station
Cheshire, Ohio

ERM

Q:\Boston\Team\DMM\Clients_F_K\Gavin\Gavin Power Plant\MXD\2020_GWMonitoring\Corrective Action Report\BAP\Figure3_1_BAP_March2020_GWFlowDirection_20202512.mxd - nathan.roberts - 5/13/2020





Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Interpreted Groundwater Elevation Contour
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 9/2/2020
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.7

N

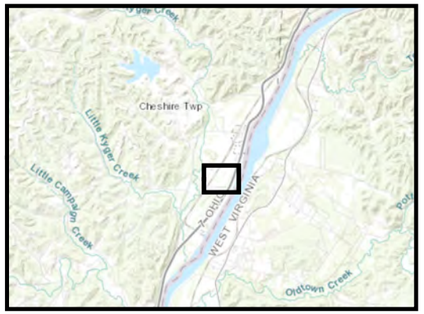
0 60 120 240 360 480
Feet

Figure **A-10**: September 2020 Groundwater Elevations and Flow Direction
Gavin Generating Station
Cheshire, Ohio

ERM

Q:\Boston\Team\DMMV\Clients_F_K\Gavin\GavinPowerPlant\MXD\2020_GWMonitoring\Corrective Action\Report\BAP\Figures\3_1_BAP_September2020_GWFlowDirection_20201028.mxd - nathan.roberts - 10/28/2020





Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Interpreted Groundwater Elevation Contour
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 3/6/2021
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.7

N

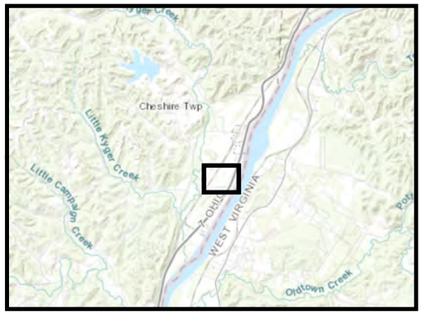
0 60 120 240 360 480
Feet

Figure A-11: March 2021 Groundwater Elevations and Flow Direction
Gavin Power, LLC
Cheshire, Ohio

ERM

Q:\Boston\Team\DMM\Clients_F_K\Gavin\Gavin\PowerPlant\MXD\GroundwaterElevations_Spring2021\Figure_BAP_March2021_GWFlowDirection_20211101.mxd - Meaghan.Schmidt - 11/09/2021





Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Interpreted Groundwater Elevation Contour
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 9/14/2021
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.7

N

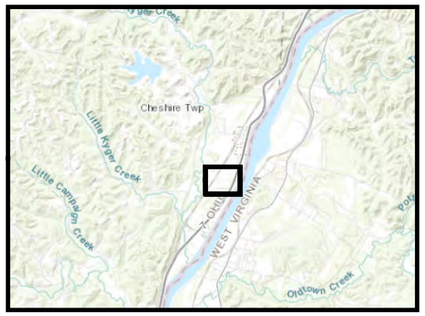
0 60 120 240 360 480
Feet

Figure A-12: September 2021 Groundwater Elevations and Flow Direction
Gavin Power, LLC
Cheshire, Ohio

ERM

Q:\Boston\Team\DM\MV\Clients_F_K\Gavin\Gavin\PowerPlant\MXD\GroundwaterElevations_Fall2021\Figure_GAP_ September2021_GWFlowDirection_20211029.mxd - Meaghan.Schmidt - 11/09/2021





Legend

- Federal Sampling Program Groundwater Monitoring Well
- 539.85 Groundwater Elevation (ft)
- Interpreted Groundwater Elevation Contour
- Interpreted Groundwater Flow Direction

NOTES:
1. Locations are approximate
2. Groundwater elevations based on measurements made on 3/21/2022
3. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.8

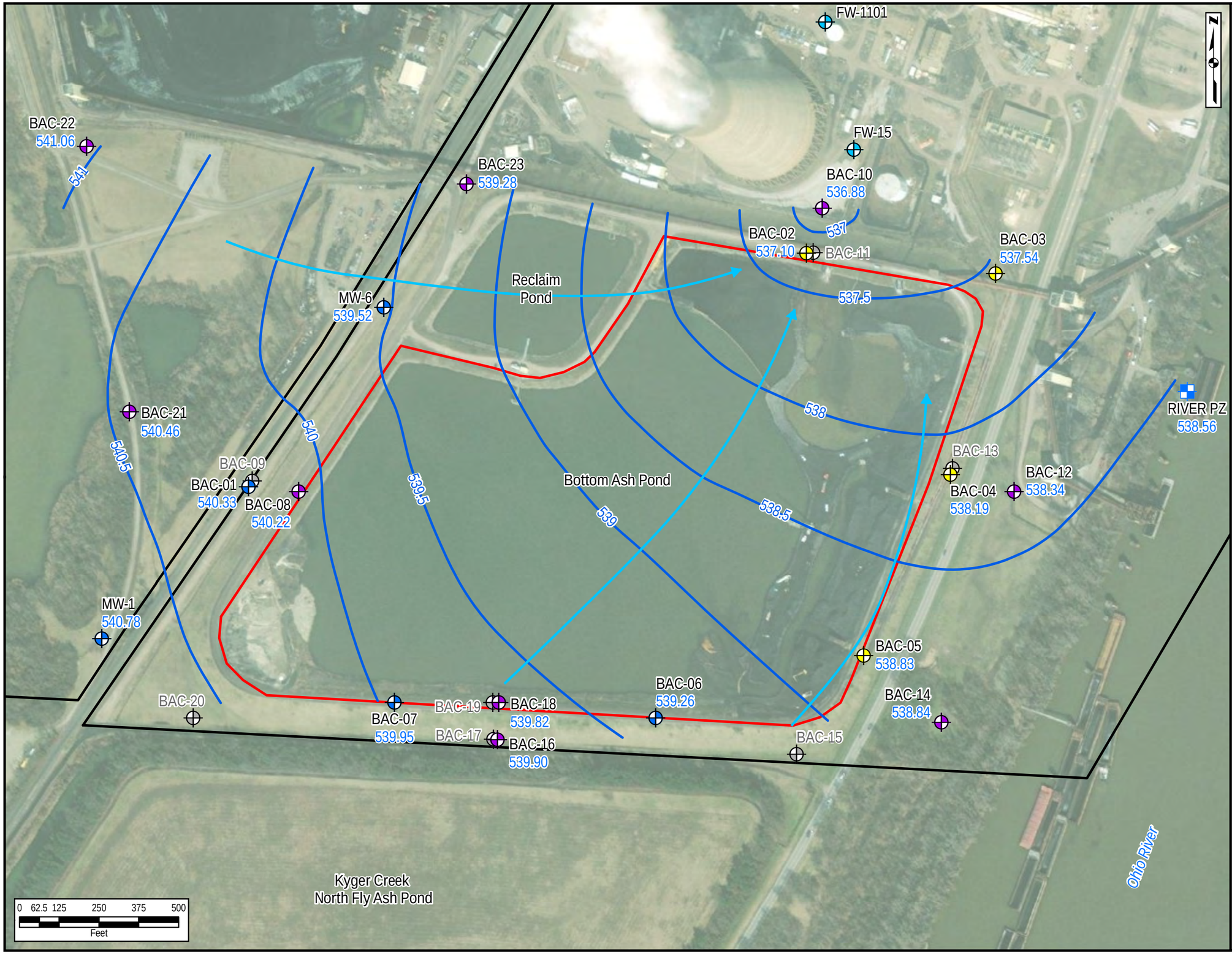
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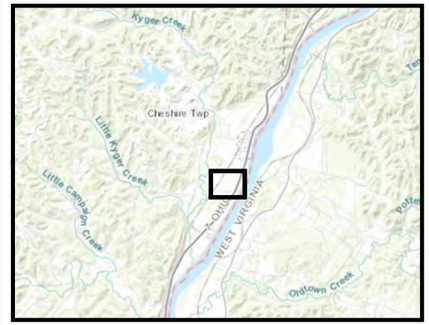
0 60 120 240 360 480
Feet

Figure **A-13**: Interpreted Groundwater Potentiometric Contour Map
Spring 2022
Gavin Power, LLC
Cheshire, Ohio

ERM

Q:\Boston\Team\DMMV\Clients_F_K\Gavin\GavinPowerPlant\MXD\GroundwaterElevations_Spring2022\Figure3_1_BAP_March2022_GWFlowDirection_20220728.mxd - nathan.roberts - 8/1/2022





Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.85 Groundwater Elevation (ft)
- Interpreted Groundwater Elevation Contours
- Interpreted Groundwater Flow Direction
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary

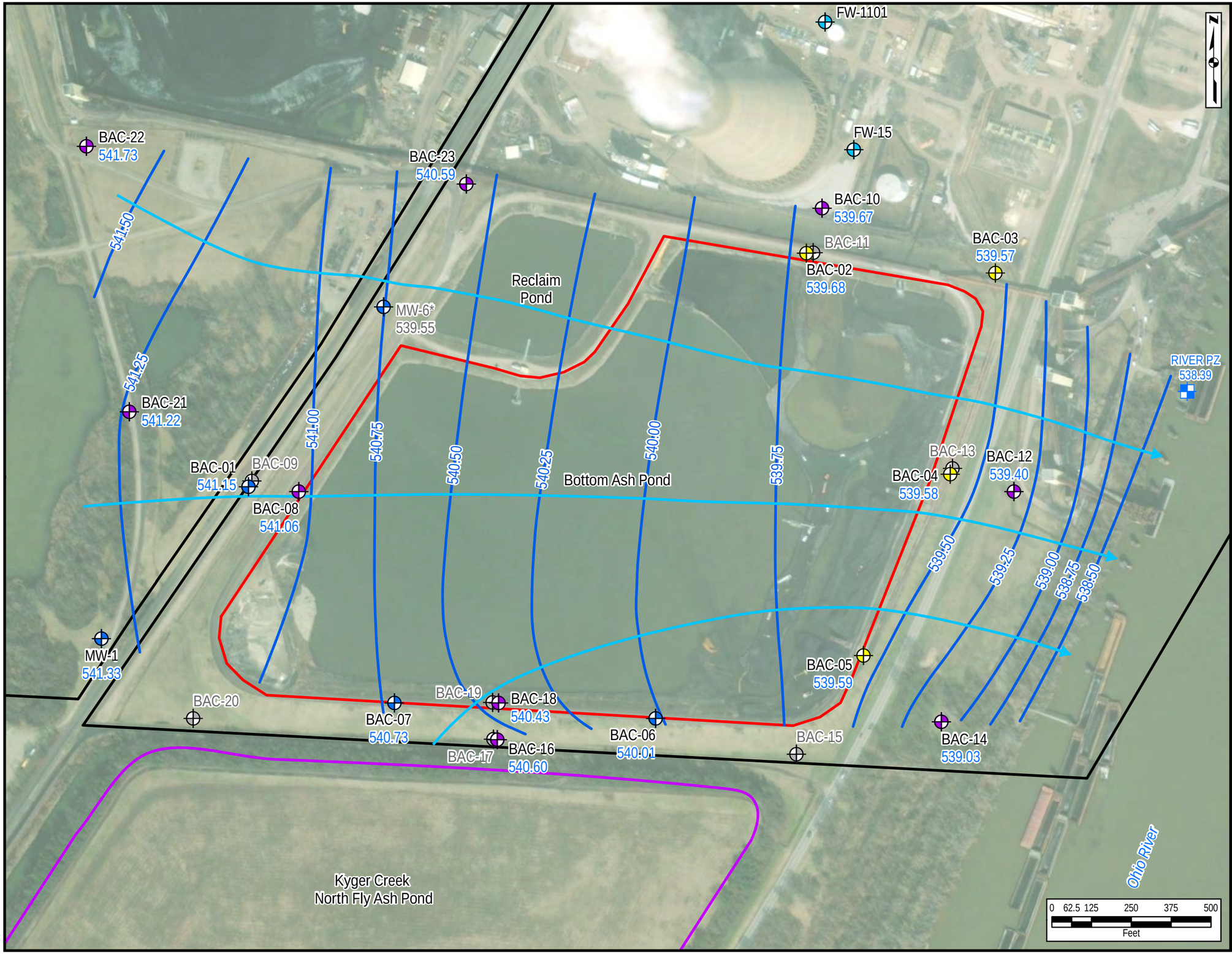
NOTES:

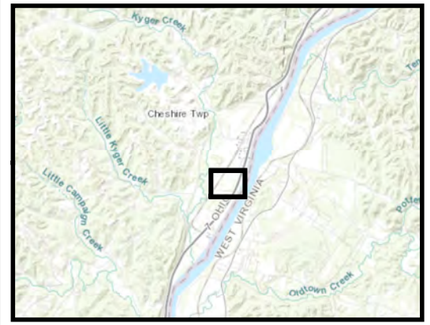
1. Monitoring wells were gauged on 9 September 2022.
2. Ohio River elevation obtained from pressure transducer that was collecting data at this time. Value is the average for the day.
3. gal/min = gallons per minute
4. Water supply wells FW-15 and FW-1101 were operating during the gauging event. Average pumping rate for FW-15 was 650 gal/min and FW-1101 was 550 gal/min.
5. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.8

Figure **A-14**: Interpreted Groundwater Potentiometric Contour Map (9 September - Pumping)
Gavin Generating Station
Cheshire, Ohio

ERM

M:\0_5\Projects\A-C\Blacksbrne_Ophi\Gavin\PowerPlant\MXD\2022_BAP_ASD_Report\Figure2_2_BAP_GWContours_Pumping_Sept2022_20221228.mxd - Jonathan.Mills - 1/23/2023





Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.85 Groundwater Elevation (ft)
- Spring 2023 Interpreted Groundwater Elevation Contours
- Spring 2023 Interpreted Groundwater Flow Direction
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

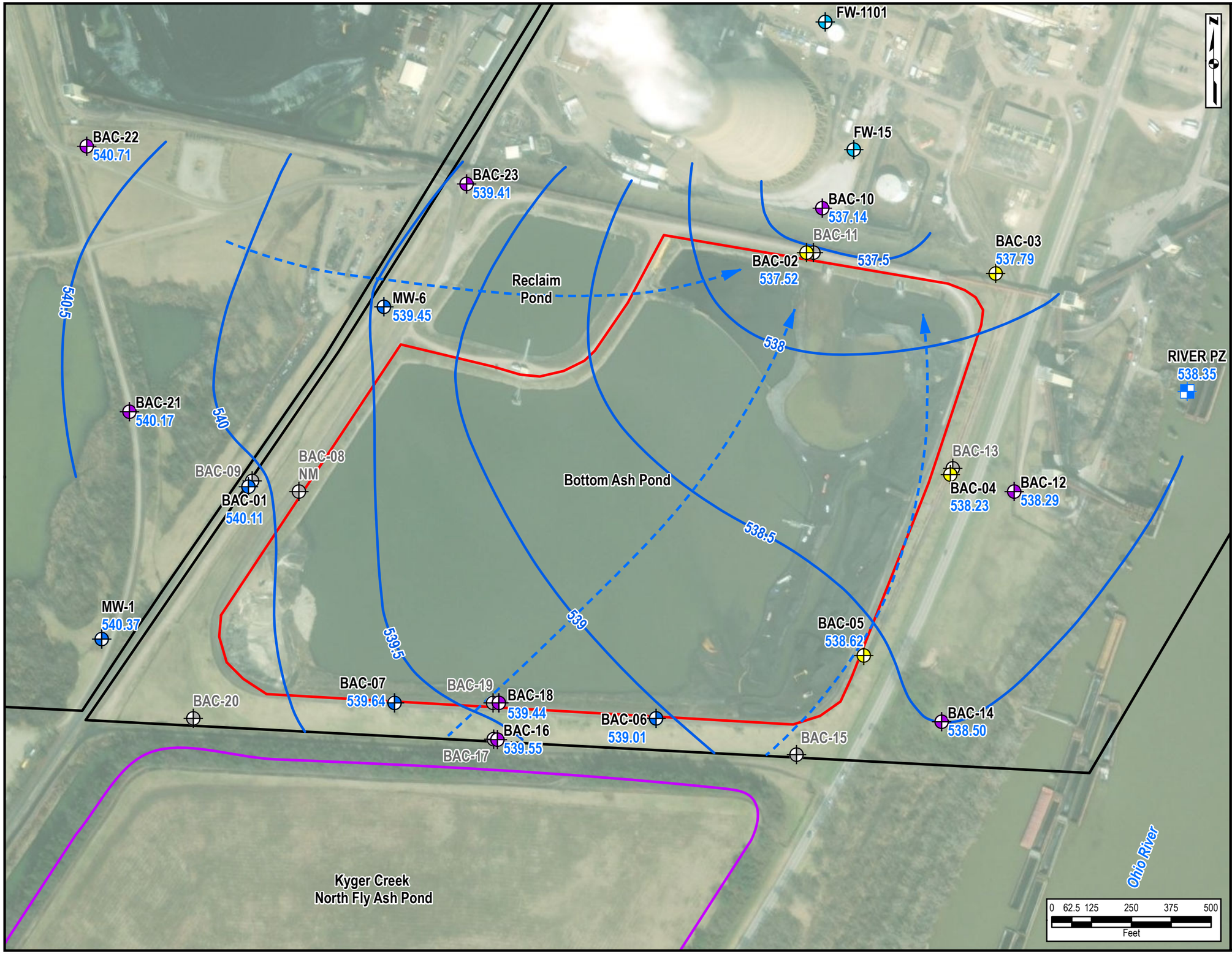
1. Monitoring wells were gauged on 3/23/2023 and 3/24/2023.
2. Wells not used for contouring of the Alluvium include wells screened in silt/clay or bedrock.
3. Flow lines indicate a general groundwater flow direction within alluvium beneath the Bottom Ash Pond. They do not represent all potential flow paths within the alluvium, nor do they represent preferential flow paths or convergence of flow.
4. *MW-6 not included in contour interpretation.
5. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.8

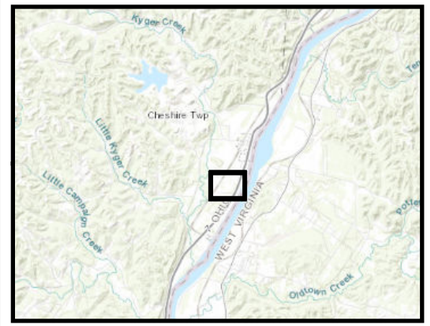
Figure **A-15**: Interpreted Groundwater Potentiometric Contour Map Spring 2023 - Non-Pumping Conditions

Gavin Generating Station
Cheshire, Ohio

ERM

M:\US\Projects\AC\base\site_cpl\client\PowerFarm\MXD\Groundwater\Figures_Spring2023\Figure3_2_GW_Contours_NonPumping_Spring2023_BAC02_20230517.mxd - Kelly.Mizzell - 5/26/2023





Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.85 Potentiometric Elevation (ft)
- Interpreted Groundwater Elevation Contours
- Interpreted Groundwater Flow Direction
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

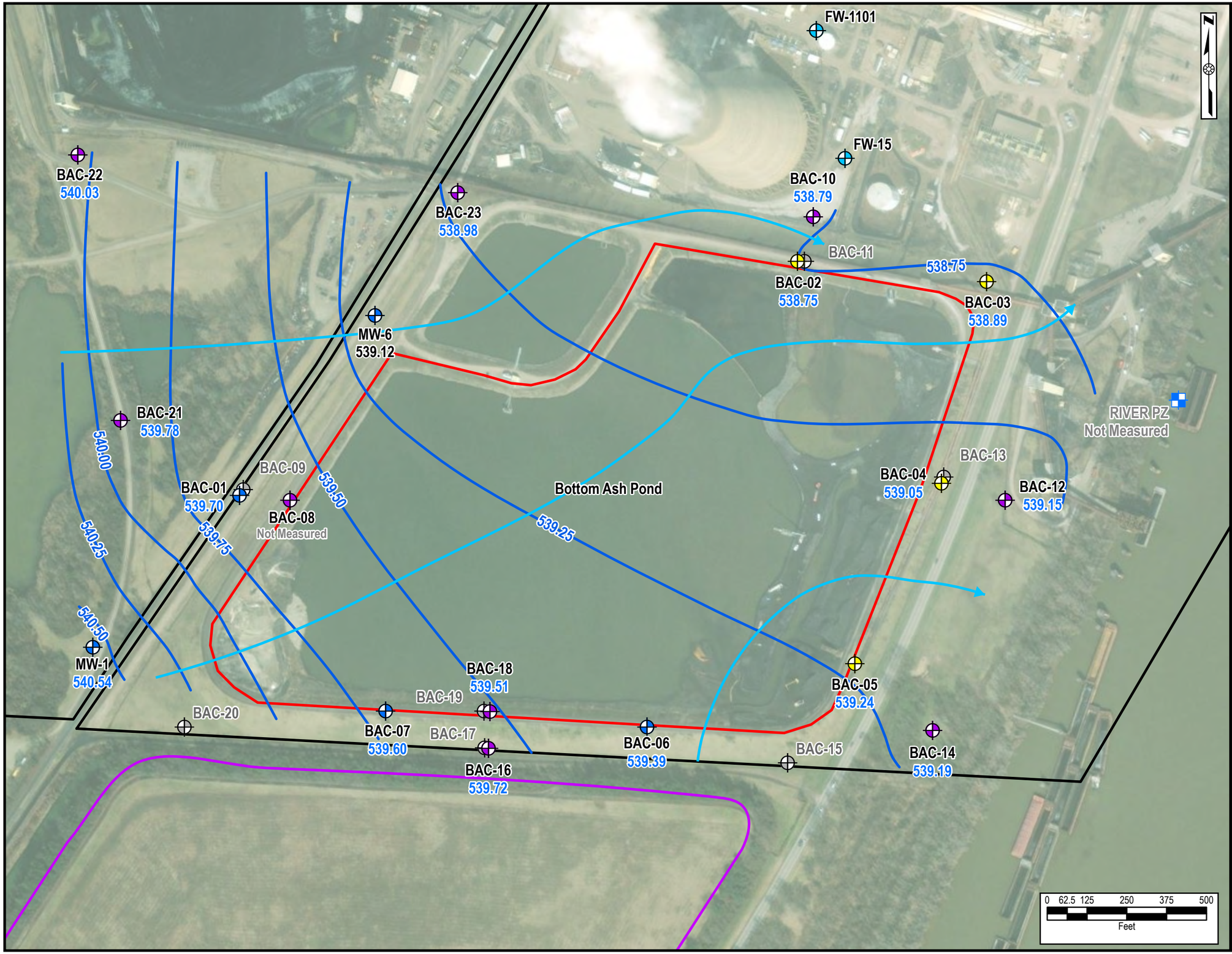
NOTES:

1. Monitoring wells were gauged on 11 September 2023.
2. Ohio River elevation obtained from pressure transducer that was collecting data at this time. Value is the average for the day.
3. Flow lines indicate a general groundwater flow direction within alluvium beneath the Bottom Ash Pond. They do not represent all potential flow paths within the alluvium, nor do they represent preferential flow paths or convergence of flow.
4. Water supply wells FW-15 and FW-1101 were operating during the gauging event. Average pumping rate for FW-15 was 650 gal/min and FW-1101 was 550 gal/min.
5. BAC-08 not able to be measured because water level in well is below the pump.
6. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.8

Figure A-16: Interpreted Groundwater Potentiometric Contour Map Fall 2023 - Pumping Conditions
Gavin Generating Station
Cheshire, Ohio

ERM

M:\GIS\Projects\AOB\Beckstone_Cpr\Gavin\PowerPlant\MXD\GroundwaterElevations_Fall2023\Figure2_2_3\AP_GWContours_Pumping_Fall2023_20240125.mxd - Catherine.Shea - 1/26/2024





Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.85 Potentiometric Elevation (ft)
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary
- Fall 2023 Interpreted Groundwater Elevation Contours
- Fall 2023 Interpreted Groundwater Flow Direction

NOTES:

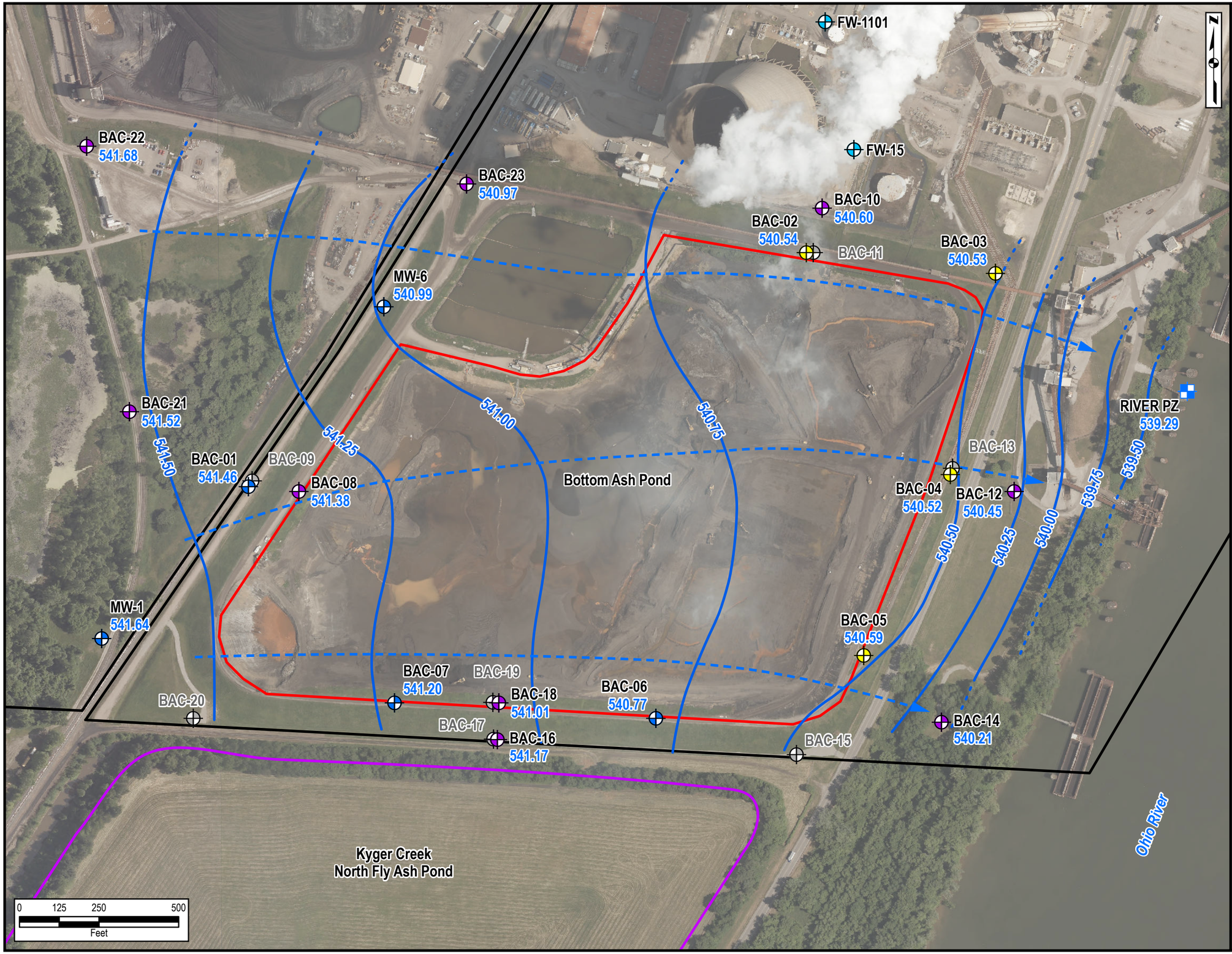
1. Monitoring wells were gauged on 11/29/2023.
2. Wells not used for contouring of the Alluvium include wells screened in silt/clay or bedrock.
3. Flow lines indicate a general groundwater flow direction within alluvium beneath the Bottom Ash Pond. They do not represent all potential flow paths within the alluvium, nor do they represent preferential flow paths or convergence of flow.
4. Not Measured: Transducer was frozen in place in River PZ during data retrieval on 1/17/2024.
5. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS Pro 3.2

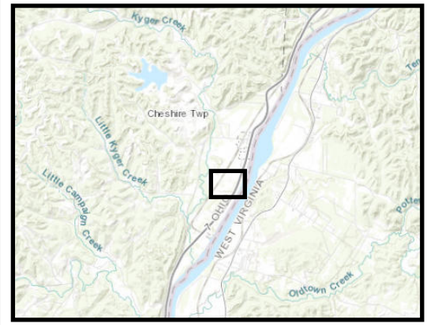
Figure A-17: Interpreted Groundwater Potentiometric Contour Map Fall 2023 - Non-Pumping Conditions

Gavin Generating Station
Cheshire, Ohio

ERM

M:\US\Projects\AC\Blackstone_Grp\GavinPowerPlant\MXD\GroundwaterElevations_Fall2023\Figure2_3_BAP_GWContours_NonPumping_Fall2023_BAC02_20240119 - Joseph.Haskam - 1/20/2024





Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.85 Groundwater Elevation (ft)
- Spring 2024 Interpreted Groundwater Potentiometric Contour
- Spring 2024 Interpreted Generalized Groundwater Flow Direction
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

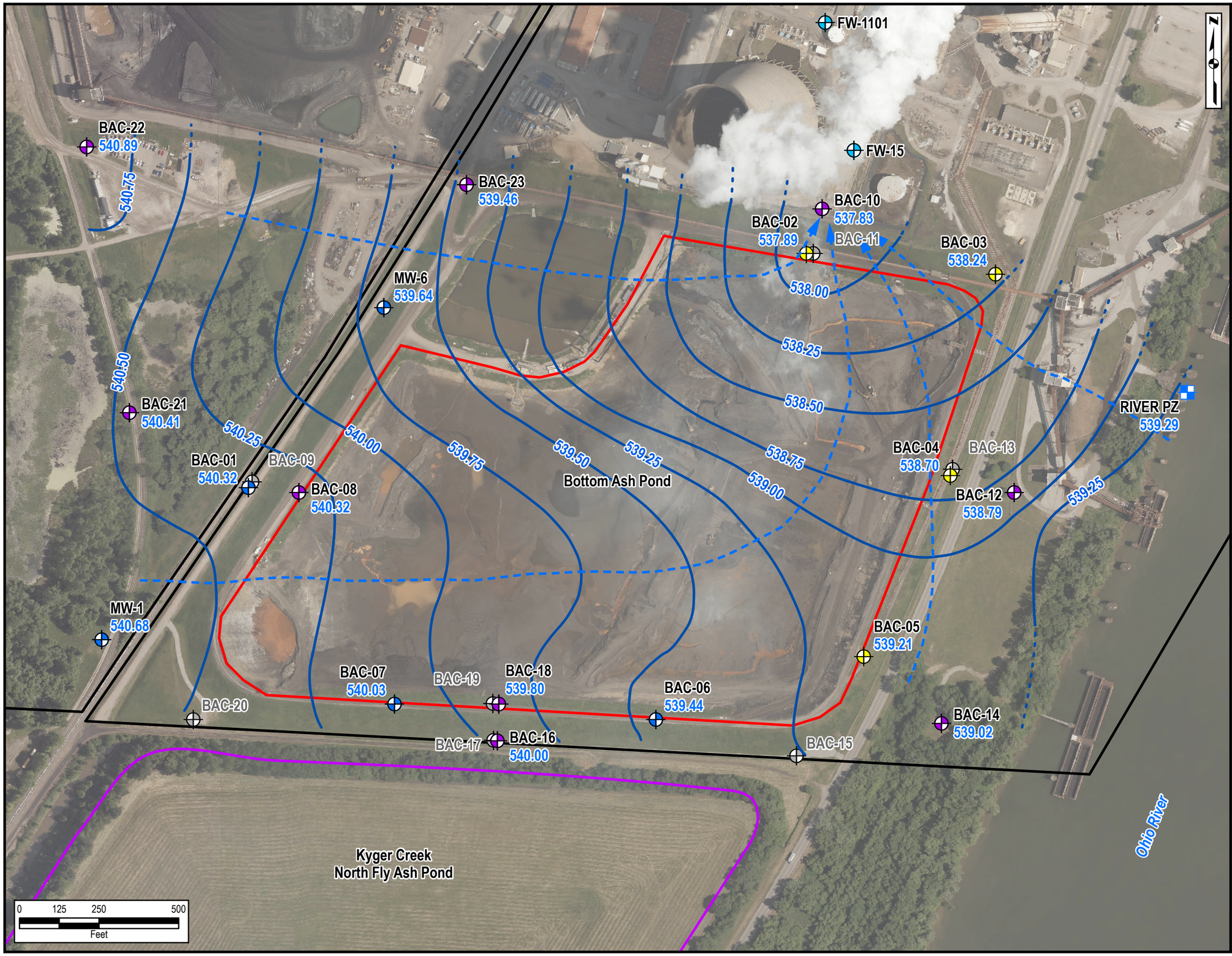
NOTES:

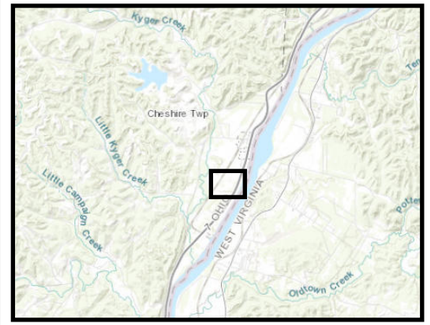
- Monitoring wells were gauged on 3/4/2024 and 3/5/2024.
- Wells not used for contouring of the Alluvium include wells screened in silt/clay or bedrock.
- Flow lines indicate a general groundwater flow direction within alluvium beneath the Former Bottom Ash Pond. They do not represent all potential flow paths within the alluvium, nor do they represent preferential flow paths or convergence of flow.
- Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.8
- H1 refers to the first half of 2024

Figure A-18: Interpreted Groundwater Potentiometric Contour Map
H1 2024 - Non-Pumping Conditions
Gavin Generating Station
Cheshire, Ohio

ERM

M:\GIS\Projects\PCB\Gavin\mxd\MXDs\Groundwater\Levels_Spring2024\GroundwaterLevels_Spring2024.aprx - jeremyjessa - 11/5/2025





Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.85 Groundwater Elevation (ft)
- H2 2024 Interpreted Groundwater Potentiometric Contour
- H2 2024 Interpreted Generalized Groundwater Flow Direction
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

- Monitoring wells were gauged on 8/26/2024 - 8/27/2024.
- Wells not used for contouring of the Alluvium include wells screened in silt/clay or bedrock.
- Flow lines indicate a general groundwater flow direction within alluvium beneath the Former Bottom Ash Pond. They do not represent all potential flow paths within the alluvium, nor do they represent preferential flow paths or convergence of flow.
- Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.8
- H2 refers to the second half of 2024

Figure A-19: Interpreted Groundwater Potentiometric Contour Map
H2 2024 - Pumping Conditions
Gavin Generating Station
Cheshire, Ohio

ERM

APPENDIX B WELL CONSTRUCTION SUMMARY

Appendix B
Well Construction Details
Gavin Bottom Ash Pond
Cheshire, OH

Well ID	Boring Completion Date	Hydrogeologic Unit	Site Area	Latitude	Longitude	Top of Borehole Elevation (ft)	Top of Casing Elevation (ft)	Total Well Depth (ft bgs)	Total Well Depth (ft bTOC)	Screen Start Depth (ft NGVD)	Screen End Depth (ft NGVD)	Screen Length (ft)	Well Diameter (in)	Screen Material
Federal CCR Monitoring Wells														
MW-1		Alluvial Sand and Gravel	BAP	2074809.110	338727.030	567.86	570.85	67.4	70.39	510.46	500.46	10	2	PVC SCH 40
MW-6		Alluvial Sand and Gravel	BAP	2075695.120	339769.040	569.82	572.56	72.7	75.44	507.12	497.12	10	2	PVC SCH 40
BAC-01	12/8/2015	Alluvial Sand and Gravel	BAP	2075270.110	339204.030	568.1	570.62	44.4	46.92	533.7	524.1	9.6	2	PVC SCH 40
BAC-02	12/17/2015	Alluvial Sand and Gravel	BAP	2077022.130	339939.050	599.98	602.5	78.4	80.92	531.58	521.98	9.6	2	PVC SCH 40
BAC-03	12/11/2015	Alluvial Sand and Gravel	BAP	2077616.140	339875.060	573.78	576.43	55.5	58.15	528.68	519.08	9.6	2	PVC SCH 40
BAC-04	12/16/2015	Alluvial Sand and Gravel	BAP	2077474.140	339243.050	582.46	584.72	65.8	68.06	526.66	517.06	9.6	2	PVC SCH 40
BAC-05	12/29/2015	Alluvial Sand and Gravel	BAP	2077202.140	338675.050	590.28	592.36	74.5	76.58	525.78	516.18	9.6	2	PVC SCH 40
BAC-06	6/11/2020	Alluvial Sand and Gravel	BAP	2076549.323	338477.383	599.64	602.54	90	92.90	520	510	10	2	PVC SCH 80
BAC-07	6/15/2020	Alluvial Sand and Gravel	BAP	2075728.652	338526.105	599.71	602.76	90	93.05	520	510	10	2	PVC SCH 40
2022 Supplemental Monitoring Wells														
BAC-08	6/30/2022	Alluvial Sand and Gravel	BAP	2075428.2150	339189.2539	594.65	597.64	70.00	72.99	537	527	10	2	PVC SCH 40
BAC-09	6/16/2022	Cow Run	BAP	2075281.6130	339222.7325	567.93	570.53	93.50	96.10	487	477	10	2	PVC SCH 40
BAC-10	6/29/2022	Alluvial Sand and Gravel	BAP	2077071.6330	340079.4216	570.11	572.22	56.50	58.61	525	515	10	2	PVC SCH 40
BAC-11	6/15/2022	Cow Run	BAP	2077043.8330	339940.1411	600.18	602.98	135.00	137.80	477	467	10	2	PVC SCH 40
BAC-12	7/8/2022	Alluvial Sand and Gravel	BAP	2077674.4450	339189.0757	564.21	566.95	53.50	56.24	522	512	10	2	PVC SCH 40
BAC-13	6/14/2022	Cow Run	BAP	2077481.3420	339262.3239	582.30	584.71	117.50	119.91	477	467	10	2	PVC SCH 40
BAC-14	7/8/2022	Alluvial Sand and Gravel	BAP	2077446.3440	338465.3120	573.74	576.07	63.50	65.83	522	512	10	2	PVC SCH 40
BAC-15	7/7/2022	Silt and Clay	BAP	2076990.9390	338363.7073	569.06	571.39	34.50	36.83	546	536	10	2	PVC SCH 40
BAC-16	7/7/2022	Alluvial Sand and Gravel	BAP	2076051.7260	338410.2283	560.78	563.35	56.50	59.07	516	506	10	2	PVC SCH 40
BAC-17	7/7/2022	Silt and Clay/Sand and Gravel	BAP	2076039.6260	338411.7582	560.72	563.49	39.00	41.77	553.5	523.5	30	2	PVC SCH 41
BAC-18	7/7/2022	Alluvial Sand and Gravel	BAP	2076056.1260	338525.7186	599.32	601.95	85.50	88.13	524	514	10	2	PVC SCH 42
BAC-19	6/14/2022	Cow Run	BAP	2076037.4260	338526.4384	599.28	602.11	121.50	124.33	489	479	10	2	PVC SCH 40
BAC-20	6/23/2022	Silt and Clay	BAP	2075096.6140	338477.1691	562.57	564.89	23.50	25.83	551	541	10	2	PVC SCH 40
BAC-21	7/5/2022	Alluvial Sand and Gravel	BAP	2074896.1070	339439.5292	569.30	572.41	50.00	53.11	529	519	10	2	PVC SCH 40
BAC-22	7/1/2022	Alluvial Sand and Gravel	BAP	2074761.8020	340273.5097	572.28	574.85	71.50	74.07	512	502	10	2	PVC SCH 40
BAC-23	6/30/2022	Alluvial Sand and Gravel	BAP	2075954.8180	340155.1610	574.79	577.39	66.50	69.10	520	510	10	2	PVC SCH 40

Notes: Datum is SP/NAD83/NGVD29.

ft = feet; in = inches; bgs = below ground surface; NA = not available

APPENDIX C BORING AND WELL CONSTRUCTION LOGS

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,167.7 E 2,106,734.9**

GROUND ELEVATION **568.1** SYSTEM _____

Water Level, ft	▽	▼	▼
TIME			
DATE			

BORING NO. **BAC-01** DATE **7/7/16** SHEET **1** OF **3**

BORING START **12/8/15** BORING FINISH **12/9/15**

PIEZOMETER TYPE _____ WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.349** DIA **6**

DEPTH TO TOP OF WELL SCREEN **34.4** BOTTOM **44.0**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	16-50/3	.5					BOTTOM ASH ROAD BED MATERIAL		
2	SS	1.5	3.0	33-50/2	1.2							
3	SS	3.0	4.5	15-36-50/4	1.0							
4	SS	4.5	6.0	14-16-33	1.3		5			HARD MEDIUM DARK GRAY N4 BOTTOM ASH w/some clay		
5	SS	6.0	7.5	13-14-7	1.1					VERY STIFF MEDIUM GRAY N5 CLAY w/some bottom ash		
6	SS	7.5	9.0	5-2-3	1.2					MEDIUM STIFF PALE YELLOWISH BROWN 10YR 6/2 CLAY w/some bottom ash fragments		
7	SS	9.0	10.5	3-4-6	.9		10					
8	SS	10.5	12.0	3-2-6	1.4							
9	SS	12.0	13.5	3-5-6	1.5					STIFF PALE YELLOWISH BROWN 10YR 6/2 CLAY w/some fine sand		
10	SS	13.5	15.0	3-5-7	1.5							
11	SS	15.0	16.5	2-5-5	1.5		15					
12	SS	16.5	18.0	3-5-6	1.5							
13	SS	18.0	19.5	2-3-5	1.5							
14	SS	19.5	21.0	2-3-4	1.5					STIFF PALE YELLOWISH BROWN 10YR 6/2		

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

Continued Next Page

PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER _____

AEP GV BAC CCR COMPLIANCE.GPJ AEP.GDT 7/7/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-01** DATE **7/7/16** SHEET **2** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/8/15** BORING FINISH **12/9/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										CLAY w/silt and fine sand		
15	SS	21.0	22.5	2-2-3	1.5					MEDIUM STIFF PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY		
16	SS	22.5	24.0	WOR-2-2	1.2					SOFT STIFF PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY		
17	SS	24.0	25.5	2-2-2	1.5					SOFT PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY wet		
18	SS	25.5	27.0	WOR-2-1	1.5		25					
19	SS	27.0	28.5	WOR-WOR-2	1.5					VERY SOFT PALE YELLOWISH BROWN 10YR 6/2 SANDY SILTY CLAY wet		
20	SS	28.5	30.0	WOR-WOR-4	1.5					VERY SOFT PALE YELLOWISH BROWN 10YR 6/2 SANDY SILTY CLAY w/some sand and gravel, wet		
21	SS	30.0	31.5	6-11-10	.9		30			MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
22	SS	31.5	33.0	3-6-6	1.3					MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
23	SS	34.0	35.5	4-10-11	1.4		35			MEDIUM DENSE PALE BROWN 5YR 5/2 SAND AND GRAVEL		
24	SS	36.5	38.0	7-8-11	1.0					MEDIUM DENSE PALE BROWN 5YR 5/2 SAND AND GRAVEL 1.4 recovery and .4 heavage		
25	SS	39.0	40.5	8-12-17	1.2		40			MEDIUM DENSE PALE BROWN 5YR 5/2 SAND AND GRAVEL 1.5 recovery and .5 heavage		
26	SS	41.5	43.0	11-15-15	1.5					MEDIUM TO DENSE PALE BROWN 5YR 5/2 SAND AND GRAVEL		
27	SS	44.0	45.5	10-14-16	1.5							

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-01** DATE **7/7/16** SHEET **3** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/8/15** BORING FINISH **12/9/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
28	SS	46.5	48.0	9-12-18	1.5							

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER

COMPANY

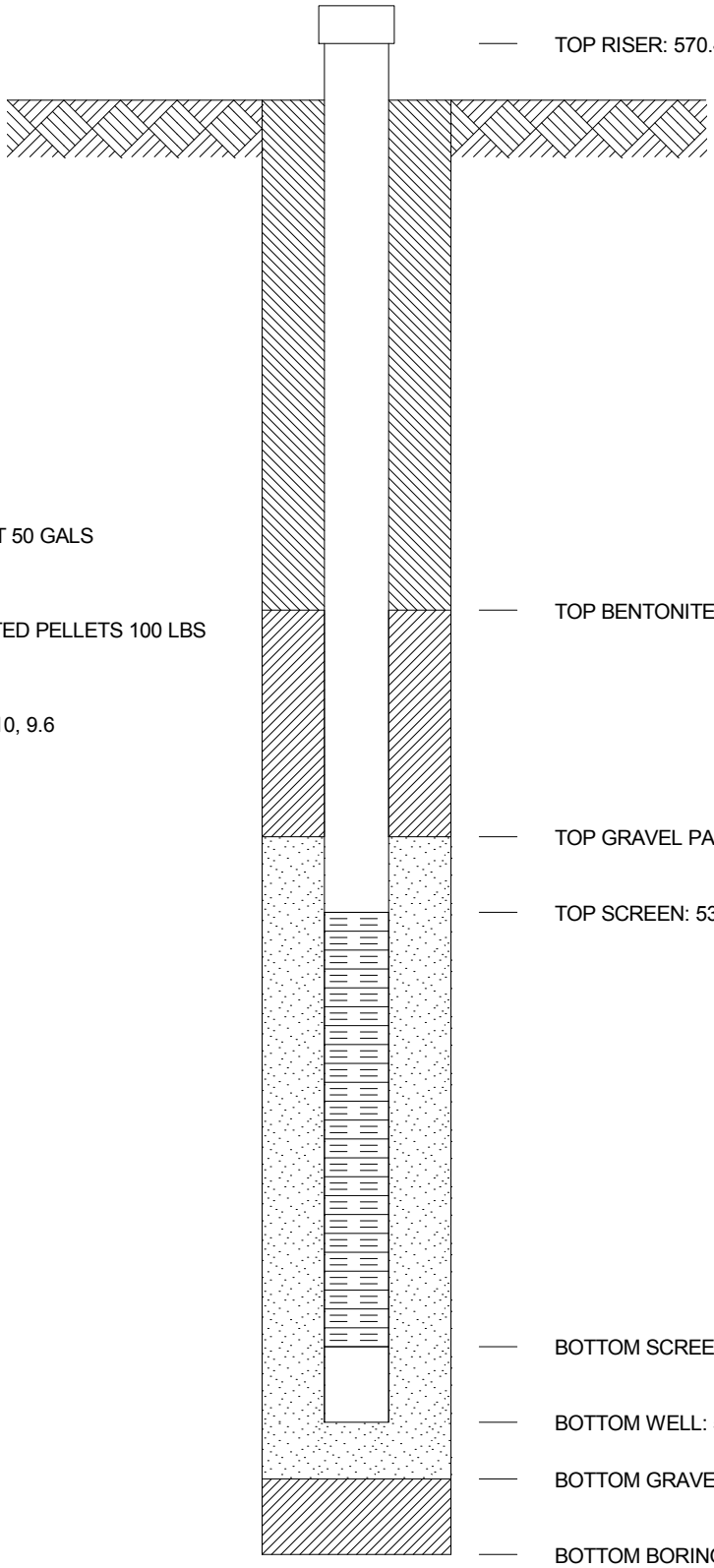
WELL No. **BAC-01** BORING No. **BAC-01** INSTALLED **12/9/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,167.7 E 2,106,734.9**

SYSTEM

GROUND ELEVATION 568.10 FT.



GROUT SEAL: QUICK GROUT 50 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 100 LBS

SCREEN: 2 dia., SLOTTED .010, 9.6

GRAVEL PACK: #5 100 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

GEOMCNST GV BAC CCR COMPLIANCE.GPJ AEP.GDT 1/27/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,902.8 E 2,108,487.2**

GROUND ELEVATION **600.0** SYSTEM _____

Water Level, ft	▽	▼	▼
TIME			
DATE			

BORING NO. **BAC-02** DATE **7/7/16** SHEET **1** OF **4**

BORING START **12/17/15** BORING FINISH **12/17/15**

PIEZOMETER TYPE _____ WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.258** DIA **6**

DEPTH TO TOP OF WELL SCREEN **68.4** BOTTOM **78.0**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SPT	0.0	1.5	10-11-12	1.1					VERY STIFF LIGHT BROWN 5YR 5/6 GRAVEL AND CLAY 4.0 tsf		
2	SPT	1.5	3.0	12-12-13	1.3							
3	SPT	3.0	4.5	5-7-9	1.4							
4	SPT	4.5	6.0	5-7-9	1.4		5					
5	SPT	6.0	7.5	4-7-9	1.3							
6	SPT	7.5	9.0	3-4-6	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 3.0 tsf		
7	SPT	9.0	10.5	3-4-5	1.4							
8	SPT	10.5	12.0	3-3-6	1.5		10					
9	SPT	12.0	13.5	5-5-6	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 2.5 tsf		
10	SPT	13.5	15.0	3-4-6	1.5							
11	SPT	15.0	16.5	3-4-7	1.5		15			STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 2.0 tsf		
12	SPT	16.5	18.0	3-4-5	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 2.5 tsf		
13	SPT	18.0	19.5	3-4-5	1.4							
14	SPT	19.5	21.0	3-5-7	1.3					STIFF LIGHT BROWN 5YR 5/6 SILT AND		

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

Continued Next Page

PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER _____

AEP GV BAC CCR COMPLIANCE.GPJ AEP.GDT 7/7/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-02** DATE **7/7/16** SHEET **2** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/17/15** BORING FINISH **12/17/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
15	SPT	21.0	22.5	4-4-6	1.4					CLAY 2.0 tsf		
16	SPT	22.5	24.0	3-4-6	1.3					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 2.5 tsf		
17	SPT	24.0	25.5	3-4-7	1.4		25					
18	SPT	25.5	27.0	3-6-8	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 3.0 tsf		
19	SPT	27.0	28.5	3-6-8	1.5					STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 3.5 tsf		
20	SPT	28.5	30.0	6-8-10	1.5					VERY STIFF LIGHT BROWN 5YR 5/6 SILT AND CLAY 4.0 tsf		
21	SPT	30.0	31.5	4-5-9	1.3		30			STIFF MODERATE BROWN 5YR 4/4 SILT AND CLAY 3.5 tsf		
22	SPT	31.5	33.0	6-8-12	1.5							
23	SPT	33.0	34.5	6-10-15	1.4					VERY STIFF MODERATE BROWN 5YR 4/4 SILT AND CLAY 4.0 tsf		
24	SPT	34.5	36.0	8-12-16	1.4							
25	SPT	36.0	37.5	4-5-9	1.5		35			STIFF MODERATE BROWN 5YR 4/4 SILT AND CLAY 3.0 tsf		
26	SPT	37.5	39.0	5-8-11	1.5					VERY STIFF DARK YELLOWISH ORANGE 10YR 6/6 SILT AND CLAY 4.0 tsf		
27	SPT	39.0	40.5	4-5-7	1.4					STIFF MODERATE BROWN 5YR 4/4 CLAY 4.0 tsf		
28	SPT	40.5	42.0	5-5-9	1.5		40			STIFF MODERATE BROWN 5YR 4/4 CLAY 3.5 tsf		
29	ST	42.0	44.0							STIFF MODERATE BROWN 5YR 4/4 CLAY		
30	SPT	45.0	46.5	4-7-10			45			VERY STIFF MODERATE BROWN 5YR 4/4 CLAY		

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-02** DATE **7/7/16** SHEET **3** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/17/15** BORING FINISH **12/17/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										2.5 tsf		
31	SPT	46.5	48.0	4-6-10						VERY STIFF LIGHT BROWN 5YR 6/4 CLAY AND SAND 1.5 tsf		
32	ST	48.0	50.0							STIFF LIGHT BROWN 5YR 6/4 CLAY LITTLE SAND PSI 500 / SEC 9 / PUSH 2.0 GRAVEL 0% SAND 14.9% FINES 85.1% TESTED SAMPLE #32		
							50					
33	SPT	51.0	52.5	4-4-6	1.4					STIFF LIGHT BROWN 5YR 6/4 CLAY AND SAND MC 25.5% LL 35.3% PI 13.5% TESTED SAMPLES #33 AND #34		
34	SPT	52.5	54.0	3-5-7	1.4							
35	SPT	54.0	55.5	3-6-6	1.5					MEDIUM DENSE LIGHT BROWN 5YR 6/4 SANDY SILTY CLAY MC 26.4% LL 24.6% PI 3.6% SAND 45.9% FINES 54.1% TESTED SAMPLES #36 AND #37		
							55					
36	SPT	55.5	57.0	4-6-8	1.5							
37	SPT	57.0	58.5	2-2-4	1.4					LOOSE LIGHT BROWN 5YR 6/4 SAND AND CLAY		
38	SPT	58.5	60.0	2-2-3	1.3							
							60					
39	SPT	60.0	61.5	3-3-5	1.5					LOOSE MEDIUM LIGHT GRAY N6 SAND AND CLAY		
40	SPT	61.5	63.0	4-12-18	1.5							
41	SPT	63.0	64.5	6-12-14	1.5					MEDIUM DENSE BROWN 5YR 5/6 SAND AND GRAVEL MEDIUM DENSE BROWN COARSE SAND AND GRAVEL wet		
							65					
42	SPT	65.5	67.0	8-11-11	1.4							
43	SPT	68.0	69.5	8-20-27	1.4					DENSE DARK YELLOWISH ORANGE 10YR 6/6 COARSE SAND AND GRAVEL		
							70					
44	SPT	70.5	72.0	13-26-27	1.5					DENSE BROWN 5YR 5/6 COARSE SAND AND GRAVEL wet		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-02** DATE **7/7/16** SHEET **4** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/17/15** BORING FINISH **12/17/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
45	SPT	73.0	74.5	10-11-6	1.3					MEDIUM DENSE BROWN 5YR 5/6 COARSE SAND AND GRAVEL wet		
							75					
46	SPT	75.5	77.0	8-5-9	1.4					MEDIUM DENSE BROWN 5YR 5/6 FINE SAND AND GRAVEL wet		
47	SPT	78.0	79.5	13-12-10	1.4					MEDIUM DENSE BROWN 5YR 5/6 COARSE TO FINE GRAIN SAND AND GRAVEL wet		

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

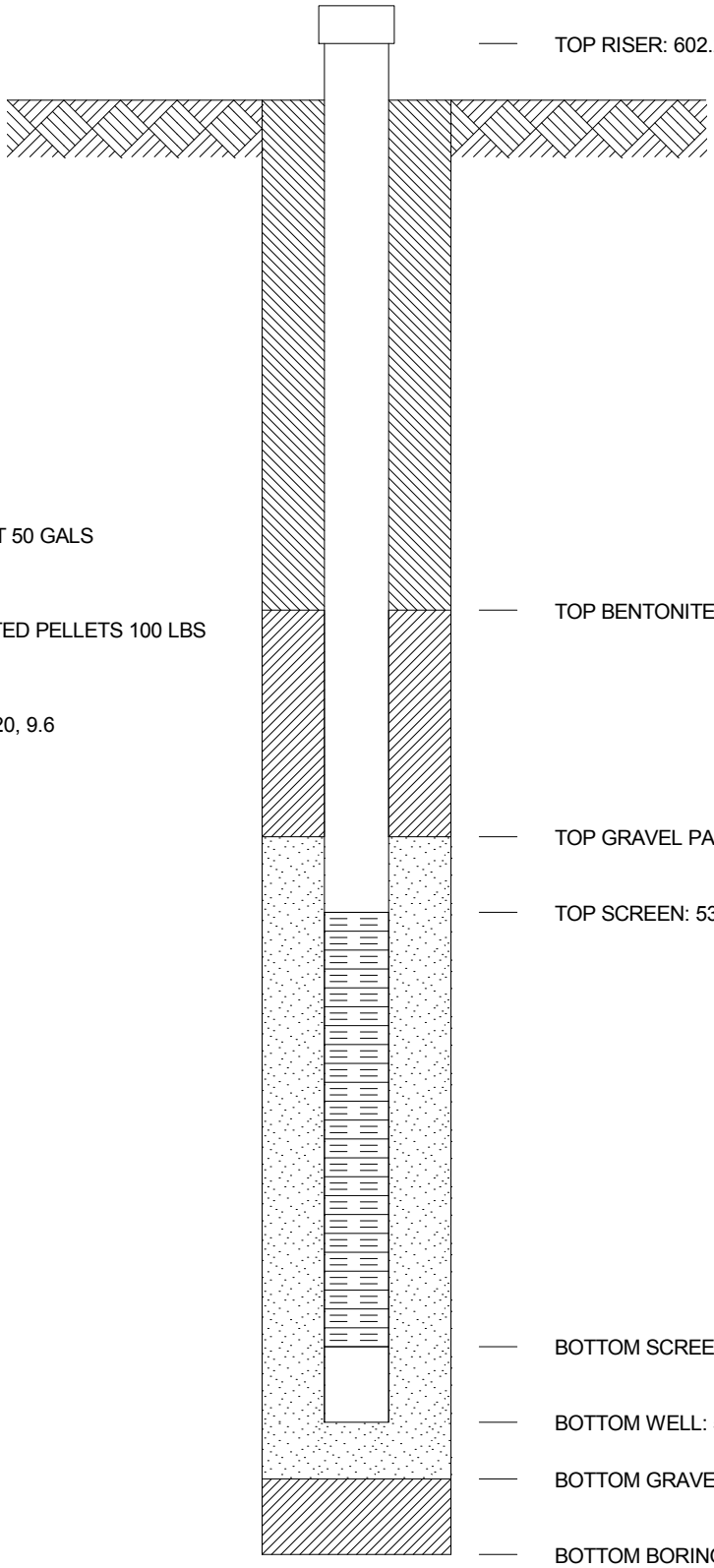
COMPANY _____ WELL No. **BAC-02** BORING No. **BAC-02** INSTALLED **12/17/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,902.8 E 2,108,487.2**

SYSTEM _____

GROUND ELEVATION 599.98 FT.



GROUT SEAL: QUICK GROUT 50 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 100 LBS

SCREEN: 2 dia., SLOTTED .020, 9.6

GRAVEL PACK: #5 250 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

GEOMCNST GV BAC CCR COMPLIANCE.GPJ AEP.GDT 1/27/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,839.3 E 2,109,080.6**

GROUND ELEVATION **573.8** SYSTEM _____

Water Level, ft	▽	▼	▼
TIME			
DATE			

BORING NO. **BAC-03** DATE **7/7/16** SHEET **1** OF **3**

BORING START **12/11/15** BORING FINISH **12/15/15**

PIEZOMETER TYPE _____ WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.433** DIA **6**

DEPTH TO TOP OF WELL SCREEN **45.1** BOTTOM **54.7**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	4-6-4	1.5					LOOSE GRAYISH BROWN 5YR 3/2 SAND AND GRAVEL		
2	SS	1.5	3.0	2-4-7	1.5					STIFF MEDIUM BROWN 5YR 3/4 CLAY 2.0 tsf, w/gravels		
3	SS	3.0	4.5	5-6-4	1.5					STIFF GRAYISH BROWN 5YR 3/2 CLAY AND ASH w/gravels		
4	SS	4.5	6.0	3-3-4	1.5		5			MEDIUM STIFF PALE BROWN 5YR 5/2 CLAY AND SAND 2.5 tsf		
5	SS	6.0	7.5	3-8-20	1.5					MEDIUM DENSE LIGHT GRAY N7 SAND/GRAVELS/LIMESTONE		
6	SS	7.5	9.0	9-8-8	.8					VERY STIFF MODERATE BROWN 5YR 3/4 CLAY SILT SAND AND LIMESTONE 3.5 tsf		
7	SS	9.0	10.5	4-3-4	.7					LOOSE LIGHT BROWN 5YR 5/6 SILTY GRAVEL LITTLE SAND 1.0 tsf, dry		
8	SS	10.5	12.0	2-2-3	1.5		10			MC 19.9% GRAVEL 29.3% SAND 21.7% FINES 49.0% TESTED SAMPLE #7		
9	SS	12.0	13.5	3-1-2	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY SAND SILT 0.5 tsf, moist		
10	SS	13.5	15.0	2-1-2	1.5					SOFT LIGHT BROWN 5YR 5/6 CLAY SOME SAND 0.5 tsf, wet MC 24.5% LL 29.5% PI 10.4% SAND 33.5% FINES 66.5% TESTED SAMPLE #9		
11	SS	15.0	16.5	3-1-2	.9		15			SOFT LIGHT BROWN 5YR 5/6 CLAY 2.0 tsf, moist		
12	ST	16.5	18.0							SOFT LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
13	ST	18.0	19.5							SOFT LIGHT BROWN 5YR 5/6 CLAY moist PSI 250 / SEC 10 / REC / DEPTH 17 - 19		
14	SS	19.5	21.0	1-1-2	.9					SOFT LIGHT BROWN 5YR 5/6 CLAY		

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

Continued Next Page

PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER _____

AEP GV BAC CCR COMPLIANCE.GPJ AEP.GDT 7/7/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-03** DATE **7/7/16** SHEET **2** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/11/15** BORING FINISH **12/15/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										1.5 tsf, moist		
15	SS	21.0	22.5	4-5-4	.3					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 0.5 tsf, moist		
16	SS	22.5	24.0	4-5-3	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 1.5 tsf, moist MC 24.1% LL 39.8% PI 19.9% SAND 3.4%		
17	SS	24.0	25.5	3-4-4	1.5					FINES 96.6% TESTED SAMPLE #16 MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
							25					
18	SS	25.5	27.0	2-3-4	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
19	SS	27.0	28.5	2-2-3	1.5					MEDIUM STIFF LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
20	SS	28.5	30.0	2-2-2	1.5							
							30					
21	SS	30.0	31.5	WOR-2-2	1.5					SOFT LIGHT BROWN 5YR 5/6 SILT CLAY w/sand fine, moist		
22	SS	31.5	33.0	WOR-2-2	1.5							
23	SS	33.0	34.5	WOR-2-2	1.5					SOFT MODERATE BROWN 5YR 4/4 SAND FINE moist		
24	SS	34.5	36.0	2-2-2	1.5							
							35			SOFT MODERATE BROWN 5YR 4/4 SILT CLAY w/sand fine, moist		
25	SS	36.0	37.5	WOR-2-3	1.5							
26	SS	37.5	39.0	1-3-4	1.5					MEDIUM STIFF MODERATE BROWN 5YR 4/4 SILT CLAY 0.5 tsf, w/sand fine, moist		
27	SS	39.0	40.5	7-14-9	1.5							
							40			MEDIUM DENSE LIGHT BROWN 5YR 5/6 SAND COARSE wet		
28	SS	40.5	42.0	7-10-12	1.5							
29	SS	41.5	43.0	5-7-11	1.3							
30	SS	44.0	45.5	9-11-16	1.5							
							45					

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-03** DATE **7/7/16** SHEET **3** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/11/15** BORING FINISH **12/15/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
31	SS	46.5	48.0	10-8-10	1.5							
32	SS	49.0	50.5	11-11-14	1.5		50					
33	SS	51.1	52.6	6-12-14	1.5							
34	SS	54.0	55.5	9-15-14	1.5							
35	SS	56.5	58.0	10-12-16	1.5							

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

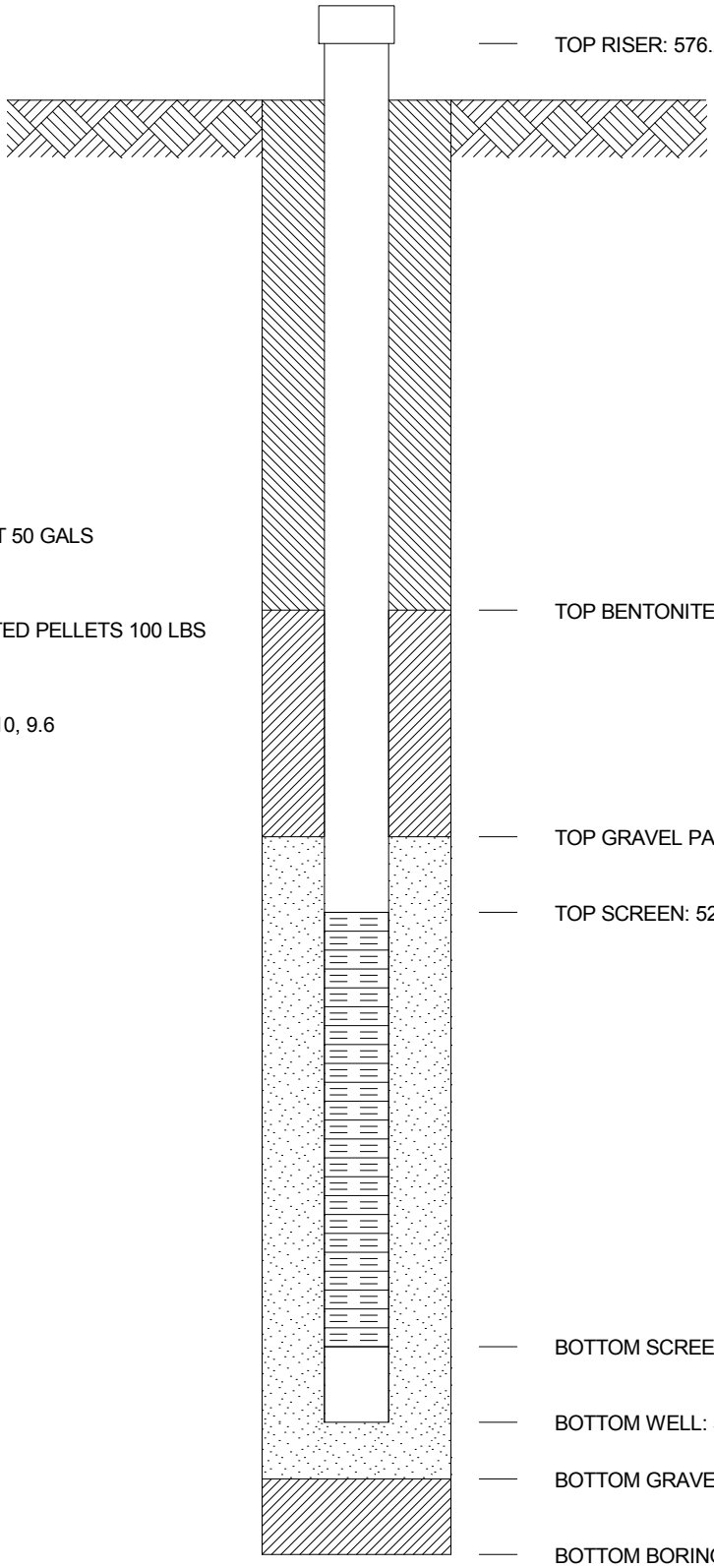
COMPANY _____ WELL No. **BAC-03** BORING No. **BAC-03** INSTALLED **12/15/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,839.3 E 2,109,080.6**

SYSTEM _____

GROUND ELEVATION 573.78 FT.



GROUT SEAL: QUICK GROUT 50 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 100 LBS

SCREEN: 2 dia., SLOTTED .010, 9.6

GRAVEL PACK: #5 150 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

GEOMCNST GV BAC CCR COMPLIANCE.GPJ AEP.GDT 1/27/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,206.5 E 2,108,938.6**

GROUND ELEVATION **582.5** SYSTEM _____

Water Level, ft	▽	▼	▼
TIME			
DATE			

BORING NO. **BAC-04** DATE **7/7/16** SHEET **1** OF **3**

BORING START **12/16/15** BORING FINISH **12/22/15**

PIEZOMETER TYPE _____ WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.188** DIA **6**

DEPTH TO TOP OF WELL SCREEN **55.8** BOTTOM **65.4**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	6-5-6	.1					MEDIUM DENSE LIMESTONE ROAD BED		
2	SS	1.5	3.0	2-5-6	1.0					STIFF GRAYISH BROWN 5YR 3/2 CLAY		
3	SS	3.0	4.5	4-5-9	1.3					STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace of bottom ash		
4	SS	4.5	6.0	6-4-6	1.2		5			STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY trace of bottom ash and river gravel		
5	SS	6.0	7.5	4-6-5	1.5							
6	SS	7.5	9.0	3-6-6	1.5					STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace of river gravel		
7	SS	9.0	10.5	3-5-7	1.5					STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace of bottom ash		
8	SS	10.5	12.0	3-4-7	1.5		10			STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace bottom and river gravel		
9	SS	12.0	13.5	4-7-11	1.5					VERY STIFF DUSKY BROWN 5YR 2/2 CLAY w/trace of sand fine		
10	SS	13.5	15.0	4-7-9	0					NO RECOVERY limestone cobble stuck in end of spoon		
11	SS	15.0	16.5	6-5-6	1.1		15			STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY SILT SAND MC 15.7% LL 23.9% PI 5.1% TESTED SAMPLES #11 AND #13 COMBINED		
12	SS	16.5	18.0	3-6-9	0					NO RECOVERY limestone cobble stuck in end of spoon		
13	SS	18.0	19.5	2-3-3	1.4					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 FINE CLAY SILT SAND SAND 52.9% FINES 47.1%		
14	SS	19.5	21.0	2-3-3	1.4					MEDIUM STIFF MODERATE YELLOWISH		

Continued Next Page

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER _____

AEP GV BAC CCR COMPLIANCE.GPJ AEP.GDT 7/7/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-04** DATE **7/7/16** SHEET **2** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/16/15** BORING FINISH **12/22/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										BROWN 10YR 5/4 CLAY AND SILT w/little sand		
15	SS	21.0	22.5	2-3-4	1.5					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/some silt		
16	SS	22.5	24.0	2-4-5	1.5							
17	SS	24.0	25.5	3-2-4	.8		25			MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY AND SILT w/little sand fine		
18	SS	25.5	27.0	2-2-3	1.5					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY		
19	SS	27.0	28.5	2-3-3	1.5							
20	SS	28.5	30.0	2-2-2	1.5		30					
1	ST	30.5	33.0							SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY PSI 700 / SEC 10 / REC 1.5		
21	SS	33.0	34.5	2-1-2	.9					SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SANDY SILTY CLAY		
22	SS	34.5	36.0	1-2-2	1.5		35			SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SANDY SILTY CLAY MC 22.5% LL 24.4% PI 5.8% GRAVEL 1.0% SAND 37.6% FINES 61.4% TESTED SAMPLES #21, #22, AND #23		
23	SS	36.0	37.5	2-2-3	1.5							
24	SS	37.5	39.0	1-1-1	1.5					VERY SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SANDY CLAYEY SILT w/some silt, wet MC 27% LL 24.7% PI 4.5% SAND 31.5% FINES 68.5% TESTED SAMPLE #26		
25	SS	39.0	40.5	WOR-2-2	1.5							
26	SS	40.5	42.0	1-1-1	1.5		40					
27	SS	42.0	43.5	1-1-1	1.5							
28	SS	43.5	45.0	3-2-3	1.5					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY w/some sand fine		
29	SS	45.0	46.5	1-3-2	1.5		45					

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-04** DATE **7/7/16** SHEET **3** OF **3**

PROJECT **GV BAC CCR Compliance** BORING START **12/16/15** BORING FINISH **12/22/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
30	SS	46.5	48.0	2-2-2	1.5					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY w/some sand fine		
31	SS	48.0	49.5	2-2-4	1.5					MEDIUM STIFF MEDIUM LIGHT GRAY N6 SILT AND CLAY w/some sand fine		
32	SS	49.5	51.0	3-5-7	1.5		50			MEDIUM STIFF MEDIUM LIGHT GRAY N6 SILT AND CLAY w/some sand fine		
33	SS	51.0	52.5	4-6-10	1.5					MEDIUM DENSE LIGHT BROWN 5YR 5/6 SAND FINE w/little silt		
34	SS	52.5	54.0	5-8-13	1.5					MEDIUM DENSE LIGHT BROWN 5YR 5/6 SAND FINE AND GRAVEL		
35	SS	54.0	55.5	9-8-10	1.5		55			MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
36	SS	55.5	57.0	7-13-15	1.0							
37	SS	58.0	59.5	6--7-13	1.0		60					
38	SS	60.5	62.0	9-11-13	.9							
39	SS	63.0	64.5	22-20-29	1.2		65			DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
40	SS	65.5	67.0	11-12-12	1.0					MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
41	SS	68.0	69.5	12-18-20	1.2							

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

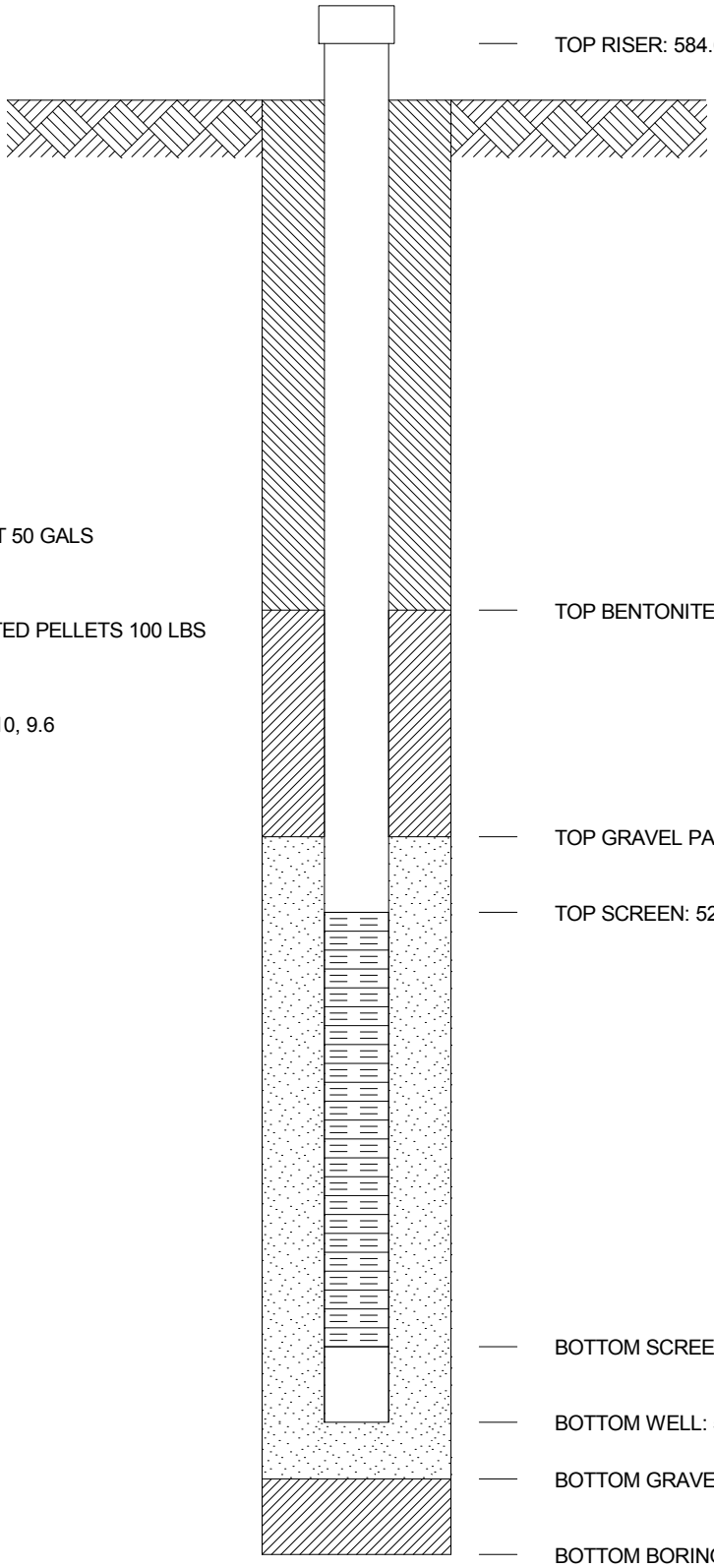
COMPANY _____ WELL No. **BAC-04** BORING No. **BAC-04** INSTALLED **12/22/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 339,206.5 E 2,108,938.6**

SYSTEM _____

GROUND ELEVATION 582.46 FT.



GROUT SEAL: QUICK GROUT 50 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 100 LBS

SCREEN: 2 dia., SLOTTED .010, 9.6

GRAVEL PACK: #5 400 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

GEOMCNST GV BAC CCR COMPLIANCE.GPJ AEP.GDT 1/27/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 338,638.9 E 2,108,667.3**

GROUND ELEVATION **590.3** SYSTEM _____

Water Level, ft	▽	▼	▼
TIME			
DATE			

BORING NO. **BAC-05** DATE **7/7/16** SHEET **1** OF **4**

BORING START **12/29/15** BORING FINISH **12/30/15**

PIEZOMETER TYPE _____ WELL TYPE **OW**

HGT. RISER ABOVE GROUND **1.73** DIA **6**

DEPTH TO TOP OF WELL SCREEN **64.5** BOTTOM **74.1**

WELL DEVELOPMENT **YES** BACKFILL **GROUT**

FIELD PARTY **MWJ / TAS** RIG **D-50**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	1-2-3	.9					STIFF BROWNISH GRAY 5YR 4/1 BOTTOM ASH 1.5 tsf, w/some soil, dry		
2	SS	1.5	3.0	14-10-15	.6					MEDIUM DENSE LIGHT BROWNISH GRAY 5YR 6/1 GRAVELS w/bottom ash, dry		
3	SS	3.0	4.5	5-5-4	1.3					STIFF MODERATE BROWN 5YR 4/4 CLAY 2.5 tsf, w/gravels, dry		
4	SS	4.5	6.0				5			NO RECOVERY limestone cobble in end of spoon		
5	SS	6.0	7.5	4-3-5	1.5					STIFF LIGHT BROWN 5YR 5/6 CLAY dry		
6	SS	7.5	9.0	3-3-4	1.5					MEDIUM STIFF PALE BROWN 5YR 5/2 CLAY dry		
7	SS	9.0	10.5	4-3-4						MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
8	SS	10.5	12.0	3-4-7	1.5		10			STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
9	SS	12.0	13.5	3-3-7	1.5					STIFF PALE YELLOWISH BROWN 10YR 6/2 CLAY dry		
10	SS	13.5	15.0	3-4-7	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
11	SS	15.0	16.5	3-4-5	1.5		15					
12	SS	16.5	18.0	3-3-5	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY w/sand fine		
13	SS	18.0	19.5	3-3-5	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
14	SS	19.5	21.0	4-4-6	1.3							

TYPE OF CASING USED

	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
	AIR HAMMER	8"

Continued Next Page

PIEZOMETER TYPE: PT = OPEN TUBE POROUS TIP, SS = OPEN TUBE SLOTTED SCREEN, G = GEONOR, P = PNEUMATIC

WELL TYPE: OW = OPEN TUBE SLOTTED SCREEN, GM = GEOMON

RECORDER _____

AEP GV BAC CCR COMPLIANCE.GPJ AEP.GDT 7/7/16

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-05** DATE **7/7/16** SHEET **2** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/29/15** BORING FINISH **12/30/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
15	SS	21.0	22.5	5-4-5	1.5							
16	SS	22.5	24.0	3-4-7	1.3					STIFF MODERATE BROWN 5YR 4/4 CLAY w/sand fine		
17	SS	24.0	25.5	4-5-6	1.5		25			STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
18	SS	25.5	27.0	3-4-5	1.5					STIFF MODERATE BROWN 5YR 4/4 SAND FINE w/silty clay		
19	SS	27.0	28.5	3-3-4	1.5					MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY		
20	SS	28.5	30.0	3-4-6	1.5					STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
21	SS	30.0	31.5	3-4-6	1.5		30					
22	SS	31.5	33.0	2-4-5	1.5							
23	ST	33.5	35.5							STIFF MODERATE BROWN 5YR 4/4 CLAY dry PSI 400 / SEC 10 / REC		
24	SS	36.0	37.5	2-3-4	1.5		35			MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
25	SS	37.5	39.0	2-3-4	1.5							
26	SS	39.0	40.5	WOH-WOH-3	1.5					SOFT MODERATE BROWN 5YR 4/4 CLAY 0.5 tsf, w/sands fine, moist		
27	SS	40.5	42.5	WOH-2-2	1.5		40			SOFT MODERATE BROWN 5YR 4/4 CLAY AND SILT 1.0 tsf, w/sands fine, moist		
28	SS	42.5	44.0	WOH-WOH-2	1.5					VERY SOFT MODERATE BROWN 5YR 4/4 CLAY AND SILT w/sands fine, moist		
29	SS	44.0	45.5	WOH-2-1	1.5							
30	SS	45.5	47.0	WOH-1-2	1.5		45			SOFT MODERATE BROWN 5YR 4/4 CLAY		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **BAC-05** DATE **7/7/16** SHEET **3** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/29/15** BORING FINISH **12/30/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
31	SS	47.0	48.5	WOH-1-2	1.5					AND SILT w/sands fine, wet		
32	SS	48.5	50.0	1-1-3	1.5							
33	SS	50.0	51.5	1-2-3	1.5		50			MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY AND SILT w/sands fine, moist		
34	SS	51.5	53.0	1-3-5	1.5					LOOSE MODERATE BROWN 5YR 4/4 SAND FINE wet		
35	SS	53.0	54.5	6-3-3	1.5							
36	SS	54.5	56.0	5-5-4	1.5		55					
37	SS	56.0	57.5	1-3-4	1.5					LOOSE MEDIUM LIGHT GRAY N5 SAND FINE wet		
38	SS	57.5	59.0	3-3-5	1.5					STIFF MEDIUM LIGHT GRAY N5 CLAY AND SILT 1.0 tsf, moist		
39	SS	59.0	60.5	4-3-7	1.4					STIFF MEDIUM LIGHT GRAY N5 CLAY AND SILT moist		
40	SS	60.5	62.0	7-24-20	1.5		60			DENSE MODERATE BROWN 5YR 3/4 SAND COARSE wet		
41	SS	62.0	63.5	12-21-28	1.5							
42	SS	64.5	66.0	13-23-38	1.3					VERY DENSE MODERATE BROWN 5YR 3/4 SAND COARSE wet		
43	SS	67.0	68.5	12-25-40	1.2		65					
44	SS	69.5	71.0	14-22-38	1.2							
							70					

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **BAC-05** DATE **7/7/16** SHEET **4** OF **4**

PROJECT **GV BAC CCR Compliance** BORING START **12/29/15** BORING FINISH **12/30/15**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
45	SS	73.0	74.5	14-19-35	1.3		75					
46	SS	75.5	77.0	17-14-30	1.0							
47	SS	78.0	79.5	13-23-19	.9							

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

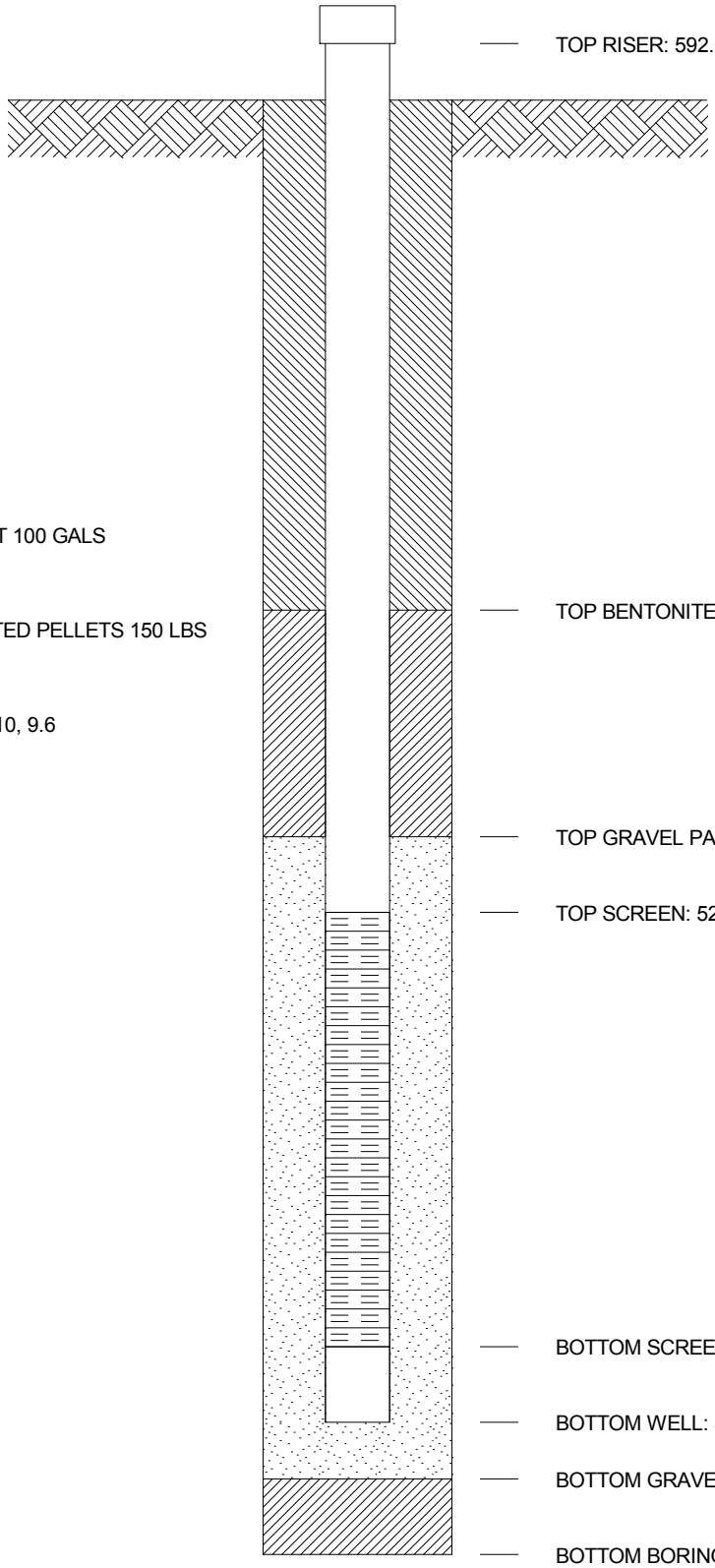
COMPANY _____ WELL No. **BAC-05** BORING No. **BAC-05** INSTALLED **12/30/15**

PROJECT **GV BAC CCR Compliance**

COORDINATES **N 338,638.9 E 2,108,667.3**

SYSTEM _____

GROUND ELEVATION 590.28 FT.



GROUT SEAL: QUICK GROUT 100 GALS

BENTONITE SEAL: 3/8" COATED PELLETS 150 LBS

SCREEN: 2 dia., SLOTTED .010, 9.6

GRAVEL PACK: #5 200 LBS

RISER PIPE: 2.0, dia., PVC

SPACERS, DEPTH:

GEOMCNST GV BAC CCR COMPLIANCE.GPJ AEP.GDT 1/27/16

ERM
1 Beacon Street; 5th Floor
Boston, Massachusetts 02108
Telephone: +1 (617) 646-7800

WELL BAC-06

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DATE STARTED: 6/10/2020
DATE COMPLETED: 6/11/2020
DRILLING CONTRACTOR: Enviroprobe Service, Inc.
DRILLING METHODS: Sonic Drilling
LOGGED BY: P. Gebhard
CHECKED BY: H. Usle
NOTES: 6-inch steel casing advanced to 80 ft bgs; 5-inch casing to termination depth.

TOTAL DEPTH: 90 ft bgs
DIAMETER: 5-6 inches
GROUND ELEVATION: 599.64 ft amsl (approx.)
PVC ELEVATION: 602.54 ft amsl
NORTHING: 338477.383
EASTING: 2076549.323

WELL DEVELOPMENT
METHOD(S): Air Lift
DATE STARTED: 8/5/2020
DATE ENDED: 8/5/2020
DTW AT START: 62.1 ft bgs
DTW AT END: 62.2 ft bgs
VOLUME PURGED: 17.5 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
					GP		GRAVEL, road base material. (0.0 – 1.0)
							Black, ASH, loose, dry. (1.0 – 2.0)
					SC-SM		Dark Brown, SILTY CLAY, very stiff, dry. (2.0 – 6.0)
5	595	SC	74				
							NO RECOVERY. (6.0 – 10.0)
10	590						
					CL		Dark Brown, CLAY, very stiff, dry. (10.0 – 11.0)
					GP		Gray, FINE TO COARSE GRAVEL, loose, wet. (11.0 – 12.0)
					CL		Dark Brown, CLAY, very stiff, dry. (12.0 – 17.5)
15	585	SC	76				
							NO RECOVERY. (17.5 – 20.0)
20	580						
					CL		Dark Brown, CLAY, 1-5% carboniferous material, dark gray mottling, very stiff, dry to moist, mottling. (20.0 – 25.0)
25	575						

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Well Riser (to 80 feet bgs) (2" SCH 40 PVC)
- Bentonite Seal (0.3 to 78 ft bgs)

SAMPLE TYPE

- Sonic Drilling

GRAPHIC LOG LEGEND

- GP Poorly-graded Gravel
- ASH Ash
- SC-SM Clayey and Silty Sand
- CL Low Plasticity Clay
- ML Silt
- SM Silty Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
ft = feet
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride
U.S.C.S. = Unified Soil Classification System

ERM
1 Beacon Street; 5th Floor
Boston, Massachusetts 02108
Telephone: +1 (617) 646-7800

WELL BAC-06

Client: Gavin Power, LLC **Project Name:** Residual Waste Landfill Monitoring Well Installation

Project Number: 0488799 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		SC	60				NO RECOVERY. *(continued)*	
30	570						30.0	
35	565	SC	120		CL		Dark Brown, CLAY, 1-5% carboniferous material, dark gray mottling, medium stiff, dry to moist.	Well Riser (to 80 feet bgs) (2" SCH 40 PVC)
40	560						40.0	Bentonite Seal (0.3 to 78 ft bgs)
45	555	SC	120		ML		Dark Brown, SILT, minor carboniferous material, dark gray mottling, medium stiff, moist, mottling.	
50	550						50.0	
							NO RECOVERY.	
							51.0	
					SC-SM		Medium Brown, SILTY FINE SAND, and clay, soft, moist to very moist.	

SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
SC-SM Clayey and Silty Sand
CL Low Plasticity Clay
ML Silt
SM Silty Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
ft = feet
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride
U.S.C.S. = Unified Soil Classification System

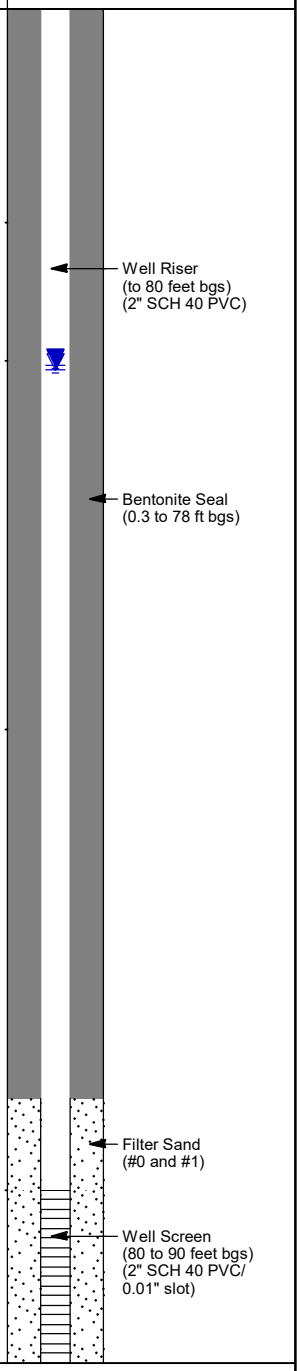
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Boston, Massachusetts 02108
Telephone: +1 (617) 646-7800

WELL BAC-06

Client: Gavin Power, LLC **Project Name:** Residual Waste Landfill Monitoring Well Installation

Project Number: 0488799 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
55	545	SC	108		SC-SM		Medium Brown, SILTY FINE SAND, and clay, soft, moist to very moist. *(continued)*
							59.0
60	540				SC-SM		Dark Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, soft to medium stiff, moist.
							62.0
65	535	SC	120		SC-SM		Dark Gray, FINE SILTY TO CLAYEY SAND, loose to medium dense, moist.
70	530						70.0
75	525	SC	NR				NO RECOVERY, Drilling refusal at 75 feet bgs; no soil logging from 70 to 75 feet bgs. Redrilled to 80 feet bgs.
80	520						80.0
							NO RECOVERY.



SAMPLE TYPE

- Sonic Drilling

GRAPHIC LOG LEGEND

- GP Poorly-graded Gravel
- ASH Ash
- SC-SM Clayey and Silty Sand
- CL Low Plasticity Clay
- ML Silt
- SM Silty Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
ft = feet
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride
U.S.C.S. = Unified Soil Classification System

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WELL BAC-06

Client: Gavin Power, LLC **Project Name:** Residual Waste Landfill Monitoring Well Installation

Project Number: 0488799 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
85	515	SC	48				NO RECOVERY. *(continued)*	Well Screen (80 to 90 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
							86.0	
					SM		Dark Brown, MEDIUM SILTY SAND, well sorted, loose, wet.	
							87.0	
					SM		Dark Brown, COARSE SILTY SAND, trace well rounded gravel, (0.5" diameter), poorly sorted, loose, wet.	Filter Sand (#0 and #1)
							89.0	
90	510				SM		Dark Brown, COARSE SILTY SAND, and well rounded gravel, (0.5" diameter), possible close proximity to bedrock, poorly sorted.	End Cap
							90.0	
							Bottom of Boring @ 90.00 feet bgs	
95	505							
100	500							
105	495							
110	490							

SAMPLE TYPE

- Sonic Drilling

GRAPHIC LOG LEGEND

- GP Poorly-graded Gravel
- ASH Ash
- SC-SM Clayey and Silty Sand
- CL Low Plasticity Clay
- ML Silt
- SM Silty Sand

ACRONYM LEGEND

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WELL BAC-07

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DATE STARTED: 6/12/2020
DATE COMPLETED: 6/15/2020
DRILLING CONTRACTOR: Enviroprobe Service, Inc.
DRILLING METHODS: Sonic Drilling
LOGGED BY: P. Gebhard
CHECKED BY: H. Usle
NOTES: 6-inch steel casing advanced to 80 ft bgs; 5-inch casing to termination depth.

TOTAL DEPTH: 90 ft bgs
DIAMETER: 5-6 inches
GROUND ELEVATION: 599.71 ft amsl (approx.)
PVC ELEVATION: 602.76 ft amsl
NORTHING: 338526.105
EASTING: 2075728.652

WELL DEVELOPMENT
METHOD(S): Air Lift
DATE STARTED: 8/5/2020
DATE ENDED: 8/5/2020
DTW AT START: 61.4 ft bgs
DTW AT END: 61.4 ft bgs
VOLUME PURGED: 20 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
					GP		GRAVEL, road base material.
							1.0
							Black, ASH, loose, dry.
							2.0
					CL-ML		Dark Brown, SILTY CLAY, very stiff, dry.
5	595	SC	76				
							6.0
							NO RECOVERY.
10	590						
							13.0
					GP		COARSE GRAVEL, "fill-like" material.
15	585	SC	84				15.0
					CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, very stiff, dry.
20	580						20.0
							NO RECOVERY.
							22.0
					CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor mica, soft, very moist.
25	575						25.0



SAMPLE TYPE
- Sonic Drilling

GRAPHIC LOG LEGEND
- GP Poorly-graded Gravel
- ASH Ash
- CL-ML Silty Clay
- ML Silt
- CL Low Plasticity Clay
- SC-SM Clayey and Silty Sand

ACRONYM LEGEND
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WELL BAC-07

Client: Gavin Power, LLC **Project Name:** Residual Waste Landfill Monitoring Well Installation

Project Number: 0488799 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		SC	96		CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor carboniferous material, minor mica, very stiff, slightly moist. *(continued)*	
30	570						30.0	
					ML		Dark Gray, SILT, minor dark brown mottling, very soft to soft, very moist to wet.	
							33.0	
35	565	SC	NM		CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor carboniferous material, minor mica, very stiff, slightly moist.	Well Riser (to 80 feet bgs) (2" SCH 40 PVC)
40	560						40.0	Bentonite Seal (0.3 to 76 ft bgs)
							NO RECOVERY.	
							43.5	
45	555	SC	78		CL-ML		Dark Brown, SILTY CLAY, soft, wet.	
							46.0	
					CL-ML		Dark Gray, SILTY CLAY, thin laminations of dark brown clay, plant material on bedding plane, stiff to very stiff, dry to moist.	
							48.5	
50	550				CL		Dark Brown, CLAY, dark gray mottling, minor mica, very stiff, moist.	
							50.0	
					CL-ML		Dark Brown, SILTY CLAY, soft, wet.	
							53.0	
					CL		Dark Brown, CLAY, dark gray mottling, minor mica, minor roots, very stiff, moist.	

SAMPLE TYPE

Sonic Drilling

GRAPHIC LOG LEGEND

GP Poorly-graded Gravel
ASH Ash
CL-ML Silty Clay
ML Silt
CL Low Plasticity Clay
SC-SM Clayey and Silty Sand

ACRONYM LEGEND

amsl = above mean sea level
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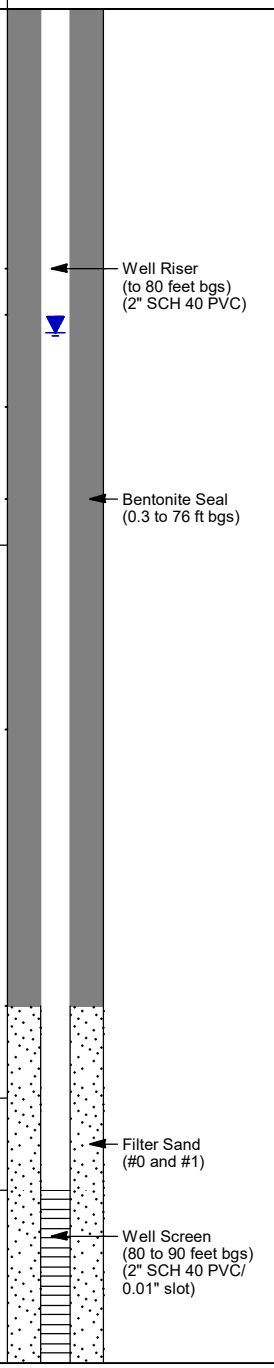
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WELL BAC-07

Client: Gavin Power, LLC **Project Name:** Residual Waste Landfill Monitoring Well Installation

Project Number: 0488799 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
55	545	SC	120		CL		Dark Brown, CLAY, dark gray mottling, minor mica, minor roots, very stiff, moist. *(continued)*
60	540						60.0
							NO RECOVERY.
							61.0
					CL-ML		Dark Brown, SILTY CLAY, very soft, wet.
							63.0
					CL-ML		Dark Gray, SILTY CLAY, dark brown mottling, soft to medium stiff, moist.
65	535	SC	108				65.0
					CL-ML		Dark Gray, SILTY CLAY, dark brown mottling, stiff, moist.
							66.0
					SC-SM		Dark Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, dense, moist.
70	530						70.0
							NO RECOVERY.
75	525	SC	48				76.0
					SC-SM		Light Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, poorly sorted, medium dense, wet.
							78.0
					SP		Light Brown, FINE SAND AND COBBLES, well rounded silty, poorly sorted, loose, dry.
80	520						80.0
					SM		Light Brown, MEDIUM TO COARSE SILTY SAND, very loose, very moist.



SAMPLE TYPE

- Sonic Drilling

GRAPHIC LOG LEGEND

- GP Poorly-graded Gravel
- ASH Ash
- CL-ML Silty Clay
- ML Silt
- CL Low Plasticity Clay
- SC-SM Clayey and Silty Sand

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WELL BAC-07

Client: Gavin Power, LLC **Project Name:** Residual Waste Landfill Monitoring Well Installation

Project Number: 0488799 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
85	515	SC	120		SM		Light Brown, MEDIUM TO COARSE SILTY SAND, very loose, very moist. *(continued)*	Well Screen (80 to 90 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
							87.0	
					SM		Dark Brown, MEDIUM TO COARSE SILTY SAND, very loose, wet.	Filter Sand (#0 and #1)
90	510						90.0	End Cap
							Bottom of Boring @ 90.00 feet bgs	
95	505							
100	500							
105	495							
110	490							

SAMPLE TYPE

- Sonic Drilling

GRAPHIC LOG LEGEND

- GP Poorly-graded Gravel
- ASH Ash
- CL-ML Silty Clay
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PAGE 1 OF 2

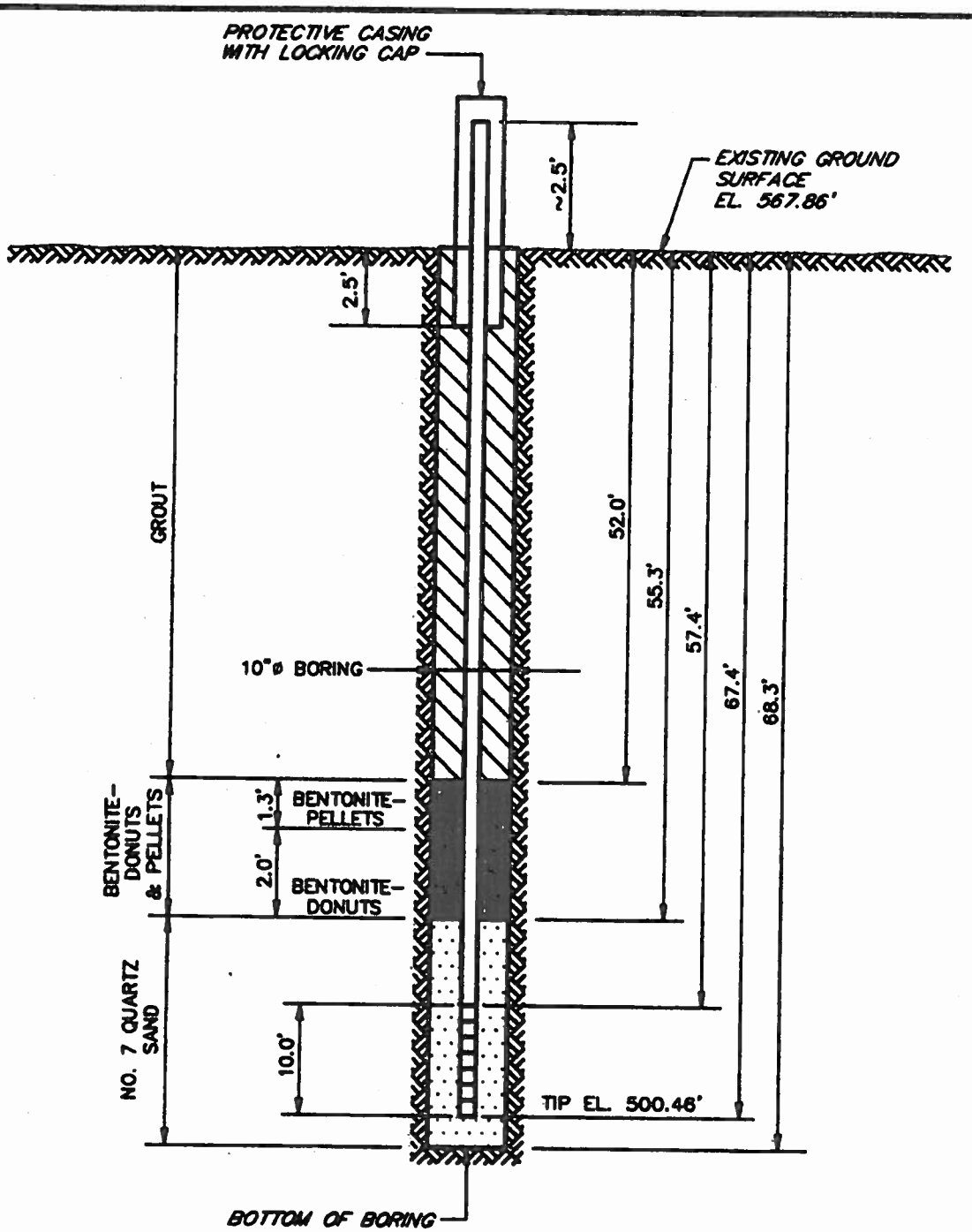
PROJECT NO: 313579 | BORING NO: MW-1 | PROJECT NAME: AEP GAVIN PLANT
DATE BEGAN: 7-15-93 | DATE FINISHED: 7-19-93 | FIELD ENGINEER: M. HARDNER
DRILLER: C. ROUSH/R. YATES | N: 6900.00' | E: 8950.00'
GROUND SURFACE ELEV.: 567.86' | GWL DATE/TIME: NA | GWL DEPTH: NA
DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER | EQUIPMENT: B-K 81 RIG
CONTRACTOR: AEP ENVIRONMENTAL | CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	PROFILE	DESCRIPTION	USCS	HNU READINGS (PPM)	REMARKS
	0.00	S 1	12-12-11-13	1.17		Loose, dark brown, topsoil, over hard, medium to dark brown, silty CLAY, trace pebbles, 10% coal (small pieces), dry		3.0	PID READINGS 1045 hrs. HNU - 0 ppm LEL - 0%
565.0	-5.00								
560.0		S 2	5-5-7-12	1.33		Hard, medium brown, mottled gray silty CLAY, trace coal pieces, slightly to non-plastic, dry		3.5	1100 hrs. HNU - 0 ppm LEL - 0%
	-10.00								
555.0		S 3	5-5-7-8	1.58		Hard, medium brown, silty CLAY, slight-medium plasticity, dry	cl	2.5	1115 HNU - 0 ppm LEL - 0%
	-15.00								
550.0		S 4	2-3-5-8	1.25		Hard, medium brown, silty CLAY, slightly plastic, dry		2.5	1120 hrs. HNU - 0 ppm LEL - 0%
	-20.00								
545.0		S 5	2-3-4-4	1.67		Hard, medium brown, silty CLAY, medium plasticity, moist		2.25	1128 hrs. HNU - 0 ppm LEL - 0%
	-25.00					27.0'			
540.0		S 6	2-3-5-9	1.75		Soft, gray brown clayey SILT, medium plasticity, moist	ml	0.5	1132 hrs. HNU - 0 ppm LEL - 0%
	-30.00					32.0'			
535.0		S 7	2-3-7-8	1.25		Loose GRAVEL, pebble size, 2" thick, over brown fine to coarse grained SAND with gravel, pebble size, wet	gp/sw		1140 hrs. HNU - 0 ppm LEL - 0%
	-35.00					37.0'			END 07/15/93 BEGIN 07/16/93
530.0		S 8	8-8-9-12	1.0		Medium dense, medium brown, some orange and dark brown SAND, medium to coarse grained, with 10% pebble gravel, wet	sw		0805 hrs. HNU - 0 ppm LEL - 0%
	-40.00								

PROJECT NO: 313579 | BORING NO: MW-1 | PROJECT NAME: AEP GAVIN PLANT
DATE BEGAN: 7-15-93 | DATE FINISHED: 7-19-93 | FIELD ENGINEER: M. HARDNER
DRILLER: C. ROUSH/R. YATES | N: 6900.00' | E: 8950.00'
GROUND SURFACE ELEV.: 567.86' | GWL DATE/TIME: NA | GWL DEPTH: NA
DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER | EQUIPMENT: B-K 81 RIG
CONTRACTOR: AEP ENVIRONMENTAL | CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	METHOD	DESCRIPTION	USCS	REMARKS
	40.00							
							sw	
						42.0'		
525.0		S 9	8-9-9-10	1.25		Medium dense, medium brown, pebble GRAVEL, some fine to coarse SAND (20%), wet		0825 hrs. HNU - 0 ppm LEL - 0%
	45.00						gw	
						47.0'		
520.0		S 10	10-8-6-6	1.58		Medium dense, medium brown SAND, fine to coarse grained with 5" of medium brown pebble to cobble GRAVEL at 8" above 49.0'		0840 hrs. HNU - 0 ppm LEL - 0%
	50.00						sp/gp	
515.0						54.0'		
	55.00	S 11	5-4-4-9-	1.42		Loose, medium brown SAND, fine to medium grained, wet		0850 hrs. HNU - 0 ppm LEL - 0%
510.0								
		S 12	9-10-11-14	1.33		Medium dense, medium brown SAND, wet	sp	0900 hrs. HNU - 0 ppm LEL - 0% CUTTINGS VERY WET
505.0						64.0'		
	65.00	S 13	11-12-13-17	1.17		Medium dense, light brown to medium brown SAND, medium grained, some fine grained, trace pebble to cobble gravel, wet	sw	0930 hrs. HNU - 0 ppm LEL - 0%
500.0								
	70.00	S 14	8-50/3"	1.33		Light brown SAND as above with medium to dark brown, some black, pebble to cobble gravel at 69.0', wet	NA	0945 hrs. HNU = 0 ppm LEL = 0%
495.0						BOTTOM OF BORING AT 70.0'		NOTE: HNU OF BACKGROUND = 0.1 ppm 7/15/93 = 0.6 ppm 7/19/93
	75.00					BEDROCK AT 69.5' BEDROCK IS GREEN-GRAY FISSILE SHALE		
490.0								
	80.00							

DRAWN BY	NAM	26SEP93
CHECKED BY		
APPROVED BY		
DRAWING NUMBER	313579-A1	



NOTES:

1. RISER PIPE IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, THREADED, FLUSH-JOINTED.
2. SCREEN IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, CONTINUOUS SLOT SCREEN (0.010 IN. SLOT SIZE).
3. LOWER END OF SCREEN IS CAPPED.
4. DATE OF COMPLETION 08/10/93.

INSTALLATION DIAGRAM
MONITORING WELL MW-1

PREPARED FOR

AEP GAVIN PLANT
CHESHIRE, OHIO

IT INTERNATIONAL TECHNOLOGY CORPORATION

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PAGE 1 OF 2

PROJECT NO: 313579 BORING NO: MW-6 PROJECT NAME: AEP GAVIN PLANT

DATE BEGAN: 7-20-93 DATE FINISHED: 7-20-93 FIELD ENGINEER: M. HARDNER

DRILLER: C. ROUSH/R. YATES N: 8277.67' E: 9491.54'

GROUND SURFACE ELEV.: 569.82' GWL DATE/TIME: NA GWL DEPTH: NA

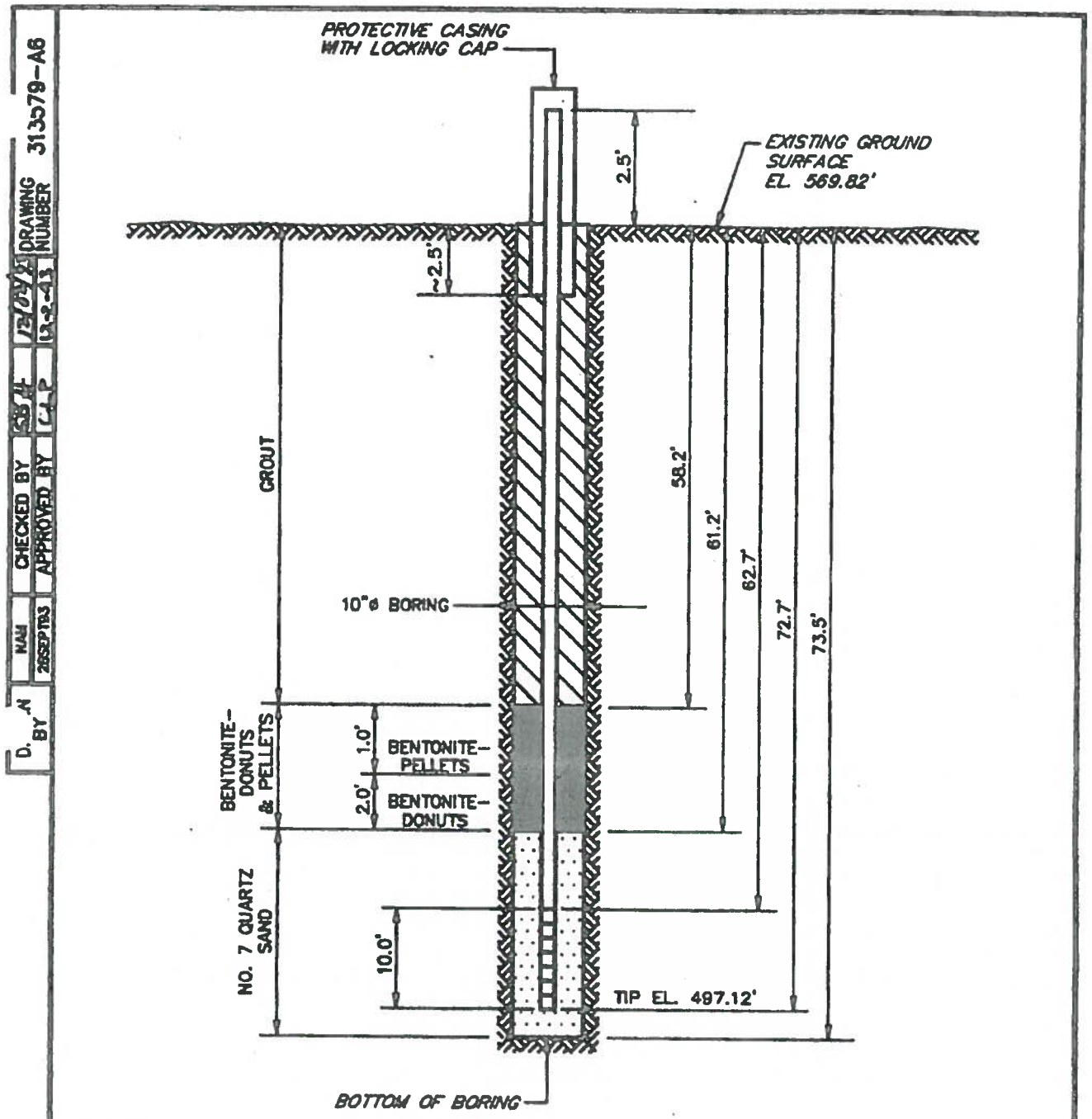
DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER EQUIPMENT: B-K 81 RIG

CONTRACTOR: AEP ENVIRONMENTAL CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	PROFILE	DESCRIPTION	USCS	HNU (PPM)	REMARKS
	0.00	S 1*	NA	NA		FILL, (loose, dark brown, black, silty clay, trace pebbles, dry) 2.0'	NA	NA	PID READINGS 1300 HNU - 0 ppm LEL - 0%
565.0	-5.00					Hard, yellow brown, mottled tan, silty CLAY, low plasticity, dry			
		S 2	27-12-12-14	1.17		Hard, yellow brown, mottled tan, silty CLAY, low plasticity, dry		4.0	1345 HNU - 0 ppm LEL - 0%
560.0	-10.00								
		S 3*	7-9-10-12	1.83		Hard, orange brown, some mottled red brown, silty CLAY, low plasticity, dry	cl	3.5	1350 HNU - 0 ppm LEL - 0%
555.0	-15.00								
		S 4	2-3-6-5	1.5		Firm, light brown, silty CLAY, medium plasticity, moist, light brown, silty sand, wet (at 18.0'-18.5')		1.0	1400 HNU - 0 ppm LEL - 0%
550.0	-20.00					22.0'			
		S 5*	3-6-6-7	1.5		Medium dense, light brown fine grained SAND, moist, light brown, silty CLAY, medium plasticity, moist to wet	sp/cl	NA	1405 HNU - 0 ppm LEL - 0%
545.0	-25.00					27.0'			
		S 6	9-10-11-14	1.33		Medium dense, light brown SAND and GRAVEL, sand medium to coarse grained with 30% pebble gravel, moist	sw	NA	1410 HNU - 0 ppm LEL - 0%
540.0	-30.00					32.0'			
		S 7*	6-7-7-9	1.42		Medium dense, medium brown SAND and GRAVEL, (sand 90%) sand fine to coarse grained, pebble gravel wet	gp	NA	1410 HNU - 0 ppm LEL - 0%
535.0	-35.00					37.0'			
		S 8	16-17-10-10	1.33		Dense, light brown SAND and pebble GRAVEL, sand fine to coarse grained, wet	sw	NA	1455 HNU - 0 ppm LEL - 0%
530.0	-40.00								

PROJECT NO: 313579 BORING NO: MW-6 PROJECT NAME: AEP GAVIN PLANT
DATE BEGAN: 7-20-93 DATE FINISHED: 7-20-93 FIELD ENGINEER: M. HARDNER
DRILLER: C. ROUSH/R. YATES N: 8277.67' E: 9491.54'
GROUND SURFACE ELEV.: 569.82' GWL DATE/TIME: NA GWL DEPTH: NA
DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER EQUIPMENT: B-K 81 RIG
CONTRACTOR: AEP ENVIRONMENTAL CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	PROFILE	DESCRIPTION	U.S.C.S.	HNU READINGS (PPM)	REMARKS
	40.00					42.0'	SW		
525.0	45.00	S 9	5-26-29-42	1.33		Very dense, light brown, medium grained SAND, over dark brown gravel, medium to coarse grained sand and pebble (gravel 40%)	SP	NA	1510 HNU - 0 ppm LEL - 0%
520.0	50.00	S 10	26-15-15-19	1.75		Medium dense, light brown, medium grained SAND, over dark brown SAND and pebble gravel (30%), wet Gravel at 48.0'		NA	1525 HNU - 0 ppm LEL - 0%
						54.0'	SW	NA	
515.0	55.00	S 11	5-6-7-9	1.0		Medium dense, light brown medium grained SAND with a little pebble gravel over light greenish-gray, coarse grained sand and pebble gravel (40%) at 53.5', wet			1535 HNU - 0 ppm LEL - 0%
						59.0'	GW/SP	NA	
510.0	60.00	S 12	10-12-15-16	1.58		Medium dense, medium to coarse grained SAND and GRAVEL (60%), over light brown, medium grained sand, wet			1625 HNU - 0 ppm LEL - 0%
						64.0'			
505.0	65.00	S 13	8-12-15-19	1.67		Medium dense, light brown, fine to medium grained SAND, trace pebbles/cobbles, wet	SP	NA	1692 HNU - 0 ppm LEL - 0%
						69.0'			
500.0	70.00	S 14	24-28-27-26	1.67		Very dense, medium brown, GRAVEL, pebble to cobble size, trace coarse sand, wet	GW		1700 HNU - 0 ppm LEL - 0%
							NA		
495.0	75.00	S 15	50/2"	0.3		NO SAMPLE, AUGER REFUSAL AT 73.1' BOTTOM OF BORING AT 73.1'		NA	NOTE: (1) HNU READINGS ABOVE BACKGROUND OF 0.6 ppm (2) * = LAB SAMPLE (3) LOCATED 10.0' SE OF MW6 (BORING FOR SPLIT SPOON SAMPLES)
490.0	80.00								



NOTES:

1. RISER PIPE IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, THREADED, FLUSH-JOINTED.
2. SCREEN IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, CONTINUOUS SLOT SCREEN (0.010 IN. SLOT SIZE).
3. LOWER END OF SCREEN IS CAPPED.
4. DATE OF COMPLETION 08/24/93.

INSTALLATION DIAGRAM
MONITORING WELL MW-6

PREPARED FOR

AEP GAVIN PLANT
CHESHIRE, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWING NUMBER 313579-A6
CHECKED BY SBH 12/09/93
APPROVED BY CAP 12-2-93
NAM 2652P183
BY D. N

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BORING BAC-08

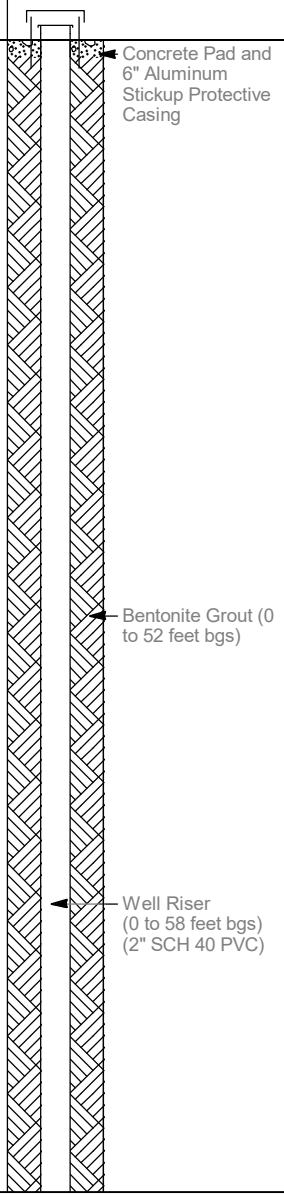
Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 6/30/2022
DATE COMPLETED: 6/30/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 70 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 594.650
PVC ELEVATION: 597.64
NORTHING: 339189.254
EASTING: 2075428.215

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/7/2022
DATE ENDED: 7/7/2022
DTW AT START: 55.9 feet bgs
DTW AT END: NM
VOLUME PURGED: 42 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Dark Brown, SANDY SILT, few subangular gravel, (0.5-1" diameter), organics, poorly sorted, damp.
						1.0
						Black, MEDIUM SAND, trace silt, poorly graded, loose, damp.
						2.0
		SC	60			Light Brown, SILT, and angular gravel, (0.5-2" diameter), poorly sorted, loose, damp.
5	590					5.0
		SC	56			Brown, SILT, trace clay, gray mottling, compact, wet.
10	585					10.0
						Black, MEDIUM SAND, trace silt, poorly graded, loose, wet.
						12.0
15	580	SC	67			Brown, CLAYEY SILT, gray to black mottling, compact, wet.
20	575					20.0



CORING TYPE
Sonic Drilling (SC)

GRAPHIC LOG LEGEND
Sandy Silt; Poorly-graded Sand; Gravelly Silt; Silt; Silty Clay; Low Plasticity Clay

ACRONYM LEGEND
amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

ERM
1 Beacon Street, 5th Floor
Boston MA, 02108
Telephone: 617-646-7800

BORING BAC-08

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Brown, CLAYEY SILT, gray mottling, compact, wet. *(continued)*	
						21.0	
						Gray Brown, CLAYEY SILT, little brown mottling, increasing clay with depth, compact, wet.	
						23.0	
25	570	SC	120			Brown, SILT, trace clay, gray mottling decreasing with depth, compact, wet.	Bentonite Grout (0 to 52 feet bgs)
30	565					30.0	Well Riser (0 to 58 feet bgs) (2" SCH 40 PVC)
						Gray Brown, SILT, little clay, compact, wet.	
						32.0	
						Brown, CLAYEY SILT, lots of gray and red-brown mottling, compact, wet.	
35	560	SC	120			36.0	
						Brown, CLAY, some silt, little fine sand, low plasticity, wet.	
40	555					40.0	
						Brown, SANDY CLAY, medium plasticity, saturated.	
						41.0	
						Brown, SANDY CLAY, and silt, low plasticity, saturated.	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Sandy Silt
Poorly-graded Sand
Gravelly Silt
Silt
Silty Clay
Low Plasticity Clay

ACRONYM LEGEND

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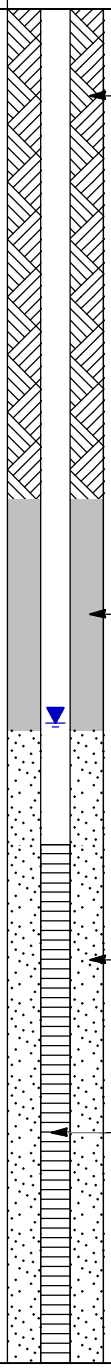
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BORING BAC-08

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	550	SC	96			Brown, SANDY CLAY, and silt, low plasticity, saturated. *(continued)*
						46.0
						Brown, CLAYEY SILT, trace fine sand, compact, saturated.
						49.5
50	545					50.0 Brown, FINE SAND, some clay, cohesive, saturated.
						Brown, CLAYEY SAND, finer sand at 65 feet bgs, medium plasticity, saturated.
						54.0
55	540	SC	84			Brown, MEDIUM SAND, and subrounded gravel, (0.5-2" diameter), poorly sorted, loose, saturated.
60	535					60.0
						60.4 Gray, GRAVEL, subrounded (0.5-1.5" diameter), poorly sorted, loose, saturated.
						Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), dark gray sand at 63 feet bgs, poorly sorted, loose, satruated.
65	530	SC	95			

WELL DIAGRAM



CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Sandy Silt
- Poorly-graded Sand
- Gravelly Silt
- Silt
- Silty Clay
- Low Plasticity Clay

ACRONYM LEGEND

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BORING BAC-08

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
70	525					Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), dark gray sand at 63 feet bgs, poorly sorted, loose, satruated. *(continued)*	Sump (2" SCH 40 PVC/2' long)
						70.0	
						Bottom of Boring @ 70.00 feet bgs	
75	520						
80	515						
85	510						
90	505						

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Sandy Silt
- Poorly-graded Sand
- Gravelly Silt
- Silt
- Silty Clay
- Low Plasticity Clay

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-09

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 6/16/2022
DATE COMPLETED: 6/16/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: RQD only applicable for bedrock wells

TOTAL DEPTH: 94 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 567.930
PVC ELEVATION: 570.53
NORTHING: 339222.733
EASTING: 2075281.613

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/7/2022
DATE ENDED: 7/7/2022
DTW AT START: 34.51 feet bgs
DTW AT END: NM
VOLUME PURGED: 25 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		SC	24			Dark Brown, FINE TO MEDIUM SAND, and angular gravel, (0.5" diameter), little silt, poorly sorted, hard, dry.
						2.0
		SC	24			Black, MEDIUM SAND, trace silt, and subrounded Gravel (0.5-1" diameter), poorly sorted, loose, dry.
		SC	12			
5	563					5.0
						Black, MEDIUM SAND, little silt, and subrounded Gravel, (0.5-1" diameter), poorly sorted, hard, wet.
		SC	60			7.3
						Brown, CLAYEY SILT, some gray mottling, black medium to coarse sands at 9.7 feet bgs, hard, wet.
10	558					10.0
						Brown, SILTY CLAY, wet.
						12.0
						Brown, CLAYEY SILT, trace fine sand, gray mottling, increasing clay with depth, compact, wet.
15	553					

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Well Riser (0 to 81 feet bgs) (2" SCH 40 PVC)
- Bentonite Grout (0 to 75 feet bgs)

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Gravelly Sand
- Poorly-graded Sand
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Gravel
- Clayey Sand

ACRONYM LEGEND

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DTW = depth to water
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PVC = polyvinyl chloride

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BORING BAC-09

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		SC	98			Brown, CLAYEY SILT, trace fine sand, gray mottling, increasing clay with depth, compact, wet. *(continued)*	
20	548					20.0	Bentonite Grout (0 to 75 feet bgs)
						Brown, CLAY, trace fine sand, low plasticity, saturated.	
						21.0	
25	543	SC	98			Brown, SILTY CLAY, and fine sand, more sand with depth, trace medium sand towards 38 feet bgs, medium plasticity, saturated.	Well Riser (0 to 81 feet bgs) (2" SCH 40 PVC)
						28.5	
						Brown To Dark Brown, MEDIUM SAND, and rounded gravel, (0.5" diameter), poorly sorted, loose, saturated.	
30	538					30.0	
						Dark Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Gravelly Sand
- Poorly-graded Sand
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Gravel
- Clayey Sand

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BORING BAC-09

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						33.0	
35	533	SC	113			Dark Brown, COARSE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
						35.8	
						Dark Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), some fine sand at 37 feet bgs, poorly sorted, loose, saturated.	
40	528					40.0	Bentonite Grout (0 to 75 feet bgs)
						Gray, GRAVEL, rounded (0.5-1" diameter), poorly sorted, loose, saturated.	
						40.7	
						Brown, COARSE SAND, some rounded gravel, (0.5" diameter), poorly sorted, loose, saturated.	
						41.3	
						Brown, FINE TO MEDIUM SAND, few subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
						42.0	
						Brown, MEDIUM SAND, some subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
45	523	SC	95				Well Riser (0 to 81 feet bgs) (2" SCH 40 PVC)
						47.0	
						Brown, FINE TO MEDIUM SAND, few subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.	
50	518						

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Gravelly Sand
- Poorly-graded Sand
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Gravel
- Clayey Sand

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BORING BAC-09

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Brown, FINE TO MEDIUM SAND, few subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated. *(continued)*	
						51.0	
						Brown, CLAYEY SAND, well sorted, loose, saturated.	
						52.5	
55	513	SC	112				
						Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), trace clay, medium sand at 58 feet bgs, poorly sorted, loose, saturated.	
60	508					60.0	Bentonite Grout (0 to 75 feet bgs)
						Brown, FINE SAND, little coarse sand at 65 feet bgs, well sorted, loose, saturated.	
65	503					65.0	Well Riser (0 to 81 feet bgs) (2" SCH 40 PVC)
		SC	156			Black, FINE TO MEDIUM SAND, and subrounded gravel, (0.5-1.5" diameter), trace silt, poorly sorted, loose, saturated.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Gravelly Sand
- Poorly-graded Sand
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Gravel
- Clayey Sand

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BORING BAC-09

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						68.0	
70	498					Blue Gray, CLAYSTONE, less competent with depth, brittle, damp.	Bentonite Grout (0 to 75 feet bgs)
						72.0	Well Riser (0 to 81 feet bgs) (2" SCH 40 PVC)
						Brown To Orange-Brown, CLAYSTONE, dry.	
						73.0	
75	493	RC	14.4	0		SILTSTONE, some gravel, brittle.	
						76.0	
80	488	RC	46.8	0		Gray To Brown, SILTSTONE, natural fractures at 76, 77.4, and 78.9 feet bgs. Slicken lines seen at 78.9 feet bgs. Rubble zone at 77.7 to 78.6 feet bgs. Fossil seen at 76 feet bgs.	Bentonite Seal (75 to 79 feet bgs)
						81.0	
85	483	RC	57.6	5		Gray, SANDSTONE, lithified, micaceous. Natural fractures at 81.8, 83, 84.2 feet bgs. Rubble zone at 81-81.4 feet bgs. Shale layers at 82.6, 83.2, and 84.2-85 feet bgs. (Cow Run).	Well Screen (81 to 91 feet bgs) (2" SCH 40 PVC/ 0.01" slot) Filter Sand (79 to 93 feet bgs) (Global #5)

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Gravelly Sand
- Poorly-graded Sand
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Gravel
- Clayey Sand

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BORING BAC-09

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						86.0	
90	478	RC	84	27		Gray, SANDSTONE, coarser grained, natural fractures at 87, 90.5, 91, and 87.8-89 feet bgs. Weathering at 87.7-90 feet bgs. Shale layer at 87.3 feet bgs (Cow Run).	Filter Sand (79 to 93 feet bgs) (Global #5) Well Screen (81 to 91 feet bgs) (2" SCH 40 PVC/ 0.01" slot) Sump (2" SCH 40 PVC/2' long)
						94.0	Bentonite Seal (93.5 to 94 feet bgs)
95	473					*Bottom of Boring @ 94.00 feet bgs*	
100	468						

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Gravelly Sand
- Poorly-graded Sand
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Gravel
- Clayey Sand

ACRONYM LEGEND

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BORING BAC-10

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 6/29/2022
DATE COMPLETED: 6/29/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 57 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 570.110
PVC ELEVATION: 572.35
NORTHING: 340079.422
EASTING: 2077071.633

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/7/2022
DATE ENDED: 7/7/2022
DTW AT START: 32.2 feet bgs
DTW AT END: NM
VOLUME PURGED: 20 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		SC	60			Brown, SANDY SILT, some black medium sands, brittle, moist.
						1.2
						Brown, MEDIUM SAND, some angular gravel, (1-6" diameter), poorly sorted, loose, moist.
						3.0
5	565					Brown, SILTY CLAY, some fine sand, trace subangular gravel (0.5" diameter), poorly sorted, low plasticity, wet.
						5.0
		SC	56			Brown, SILTY CLAY, and sand, some gravel, poorly sorted, low plasticity, saturated.
						7.0
10	560					Brown, SILT, some subrounded gravel, (0.5-1" diameter), some gray mottling, trace clay, poorly sorted, saturated.
						10.0
						Brown, SANDY CLAY, with subangular gravel, (0.5-1" diameter), medium sands, some silt, poorly sorted, low plasticity, saturated.
						11.5
15	555	SC	114			Brown, SILT, little clay, red brown to gray mottling, compact, moist.
20	550					20.0

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Bentonite Grout (0 to 39 feet bgs)
- Well Riser (0 to 45 feet bgs) (2" SCH 40 PVC)

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Sandy Silt
- Poorly-graded Sand
- Silty Clay
- Silt
- Low Plasticity Sandy Clay
- Clayey Sand

ACRONYM LEGEND

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PVC = polyvinyl chloride

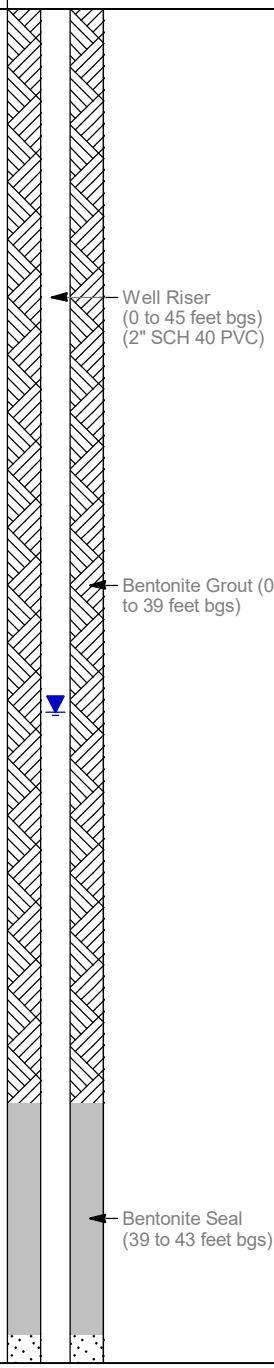
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BORING BAC-10

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Brown, CLAYEY SILT, with fine sand, medium plasticity, saturated. *(continued)*
						22.8
25	545	SC	106			Brown, CLAYEY SAND, some silt, medium plasticity, saturated.
						29.0
30	540					Brown, FINE SAND, with clay, some varving, well sorted, cohesive, saturated.
						30.0
						Brown, FINE SAND, with clayey silt, black organics at 32 and 33 feet bgs, brown to orange brown mottling at 33.5 feet bgs, well sorted, low plasticity, saturated.
						33.5
						33.9 Orange, MEDIUM SAND, some clay, wet.
						34.5 Gray, CLAY, with fine sand, trace subangular gravel (0.5" diameter), cohesive, wet.
35	535	SC	120			35.0 Gray Brown, CLAYEY SILT, with fine sand, low plasticity, wet.
						Brown, MEDIUM SAND, and rounded gravel, (0.5-1" diamater), little clay at 35 feet bgs, poorly sorted, saturated.
40	530					40.0
						40.4 GRAVEL, subrounded (0.5-1.5" diamater), poorly sorted, loose, saturated.
						Orange Brown, COARSE TO MEDIUM SAND, and gravel, (0.5-2" diameter), larger gravel at 43 feet bgs (4" diameter), poorly sorted, saturated.
						43.0
						Orange Brown, FINE TO MEDIUM SAND, and rounded gravel, (0.5" diameter), some

WELL DIAGRAM



CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Sandy Silt
- Poorly-graded Sand
- Silty Clay
- Silt
- Low Plasticity Sandy Clay
- Clayey Sand

ACRONYM LEGEND

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NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-10

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
45	525	SC	106			larger subanagaulr gravel (6" diameter) at 44 feet bgs, poorly sorted, saturated. Orange Brown, FINE TO MEDIUM SAND, and rounded gravel, (0.5" diameter), some larger subanagaulr gravel (6" diameter) at 44 feet bgs, poorly sorted, saturated. *(continued)*	Filter Sand (43 to 57 feet bgs) (Global #5)
						44.5	
						Gray Brown, GRAVEL, with subrounded coarse sand, poorly sorted, saturated.	
						47.0	
50	520	SC	84			Gray Brown, FINE TO MEDIUM SAND, some subrounded gravel, (0.5-1" diameter), poorly sorted, saturated.	Well Screen (45 to 55 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
55	515					57.0	Sump (2" SCH 40 PVC/2' long)
						Bottom of Boring @ 57.00 feet bgs	
60	510						
65	505						

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Sandy Silt
- Poorly-graded Sand
- Silty Clay
- Silt
- Low Plasticity Sandy Clay
- Clayey Sand

ACRONYM LEGEND

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NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-11

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 6/15/2022
DATE COMPLETED: 6/15/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 135 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 600.180
PVC ELEVATION: 602.99
NORTHING: 339940.141
EASTING: 2077043.833

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/7/2022
DATE ENDED: 7/7/2022
DTW AT START: 62.04 feet bgs
DTW AT END: NM
VOLUME PURGED: 48 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
5	595	SC	47			Dark Brown, SILT, orange and black mottling, hard, moist.
						5.0
10	590	SC	57			Dark Brown, SILT, some subrounded gravel, (0.5" diameter), poorly sorted, hard, wet.
						10.0
						Brown, CLAYEY GRAVEL, little silt, subangular, (0.5-1" diameter), poorly sorted, loose, wet.
						11.3
15	585	SC	90			Brown, SILT, some red brown mottling, black medium sands at 19.5 feet bgs, hard, wet.
20	580					

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)
- Bentonite Grout (0 to 117 feet bgs)

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Poorly-graded Gravel with Clay
- Silty Clay
- Sandy Silt
- Poorly-graded Sand with Clay
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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1 Beacon Street, 5th Floor
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Telephone: 617-646-7800

BORING BAC-11

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Brown, SILT, some red brown mottling, black medium sands at 19.5 feet bgs, hard, wet. *(continued)*	
						24.0	
25	575	SC	103			24.7 Dark Gray, SILT, organics (root and plant material), wet.	
						Brown, SILT, little clay, some gray mottling, wet.	
30	570					30.0	Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)
35	565	SC	94			Brown, SILT, little clay, no mottling after 37 feet bgs, root material at 36.8 feet bgs, wet.	
40	560					40.0	Bentonite Grout (0 to 117 feet bgs)
						Brown, SILT, little clay, more clay with depth, wet.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Poorly-graded Gravel with Clay
- Silty Clay
- Sandy Silt
- Poorly-graded Sand with Clay
- Poorly-graded Gravelly Sand

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BORING BAC-11

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
45	555	SC	120			Brown, SILT, little clay, more clay with depth, wet. *(continued)*	
						45.0	Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)
						Brown, SILTY CLAY, some fine sand, low plasticity, wet.	
						47.3	
						Brown, SANDY SILT, and clay, loose, wet.	
50	550					50.0	
55	545	SC	111			Brown, SANDY CLAY, trace silt, medium plasticity, saturated.	Bentonite Grout (0 to 117 feet bgs)
60	540					62.5	
65	535	SC	94			Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), some gravel (4" diameter), poorly sorted, loose, saturated.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Poorly-graded Gravel with Clay
- Silty Clay
- Sandy Silt
- Poorly-graded Sand with Clay
- Poorly-graded Gravelly Sand

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BORING BAC-11

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
70	530					Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), some gravel (4" diameter), poorly sorted, loose, saturated. *(continued)*	Bentonite Grout (0 to 117 feet bgs)
						72.0	
75	525	SC	80			Brown, COARSE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)
						78.0	
						Brown, MEDIUM TO COARSE SAND, little subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.	
						78.5	
						Brown, FINE SAND, well sorted, loose, saturated.	
80	520					80.0	
						Brown, FINE TO MEDIUM SAND, little subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
85	515	SC	106				
						88.0	
						Brown, GRAVEL, and medium sand, subrounded, (0.5-1.5" diameter), poorly sorted, loose, saturated.	
90	510					90.0	
						Brown, GRAVEL, little medium sand, poorly sorted, loose, saturated.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Poorly-graded Gravel with Clay
- Silty Clay
- Sandy Silt
- Poorly-graded Sand with Clay
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

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BORING BAC-11

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						91.0 Brown, GRAVEL, little medium sand, poorly sorted, loose, saturated. *(continued)*	
						91.5 GRAVEL, (0.5-2" diameter), cobble at 91.5 feet bgs (5" diameter), loose, saturated.	
						Brown, MEDIUM SAND, and gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
95	505	SC	101				
						96.0	
						96.4 GRAVEL, rounded (0.5" diameter), poorly sorted, loose, saturated.	
						Brown, MEDIUM SAND, some gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
100	500					100.0	Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)
						Brown, FINE TO MEDIUM SAND, trace subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
						101.5	
						Brown, GRAVEL, and medium sand, subrounded, (0.5-1.5" diameter), poorly sorted, loose, wet.	
						102.3	
						Grayish Blue, CLAYSTONE, trace brown mottling, soft, moist.	
						104.0	
105	495	SC	107				Bentonite Grout (0 to 117 feet bgs)
						Gray, CLAYSTONE, brittle, dry.	
						108.0	
						Gray, CLAYSTONE, pulverized, dry.	
110	490					110.0	
		RC	6	0		Blue Gray, SILTSTONE, highly fractured and weathered , rubble zone at 111-112.7 feet bgs.	
						112.7	
		RC	40.8	1.5		Red Brown, SILTSTONE, brittle, natural fracture at 112.9 feet bgs, rubble zone at 113-116 feet bgs.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Poorly-graded Gravel with Clay
- Silty Clay
- Sandy Silt
- Poorly-graded Sand with Clay
- Poorly-graded Gravelly Sand

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BORING BAC-11

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Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
115	485					Red Brown, SILTSTONE, brittle, natural fracture at 112.9 feet bgs, rubble zone at 113-116 feet bgs. *(continued)*
						116.0
		RC	60	32		Red Brown, SILTSTONE, brittle, purple, orange and gray coloration within the red brown matrix, natural fractures at 117.3, 117.5, 117.7, 117.9 feet bgs.
120	480					121.0
						Gray, LIMESTONE, competant.
						123.0
		RC	60	24		Red Brown, SILTSTONE, brittle, purple, orange and gray coloration within the red brown matrix, natural fractures at 121.5, 122.7-123, 123-124.4, 124.4-124.6, 124.9-125.2 feet bgs.
125	475					126.0
		RC	52.8	0		Gray, SANDSTONE, with shale, medium to coarse grained sandstone, natural fractures at 126.7, 126.8, 127, 127.7, 127.9, 130.4, rubble zone with shaley layers at 128.6-129.4 feet bgs (Cow Run).
130	470					
		RC	40	0		
135	465					135.0
						Bottom of Boring @ 135.00 feet bgs

WELL DIAGRAM

- Bentonite Grout (0 to 117 feet bgs)
- Bentonite Seal (117 to 121 feet bgs)
- Filter Sand (121 to 135 feet bgs) (Global #5)
- Well Screen (123 to 133 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
- Sump (2" SCH 40 PVC/2' long)

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Poorly-graded Gravel with Clay
- Silty Clay
- Sandy Silt
- Poorly-graded Sand with Clay
- Poorly-graded Gravelly Sand

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BORING BAC-12

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/8/2022
DATE COMPLETED: 7/8/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: RQD only applicable for bedrock wells

TOTAL DEPTH: 54 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 564.210
PVC ELEVATION: 567.01
NORTHING: 339189.076
EASTING: 2077674.445

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 8/12/2022
DATE ENDED: 8/12/2022
DTW AT START: 27.44 feet bgs
DTW AT END: NM
VOLUME PURGED: 17 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						0.5 Brown, MEDIUM SAND, some silt, organics (grass, roots), poorly sorted, loose, damp.
		SC	26			Dark Brown, SILT, some red, orange, and gray mottling, little black staining, brittle, damp.
5	559					5.0
						Gray, CLAYEY SILT, orange brown mottling, compact, moist.
		SC	60			7.0 Brown, CLAYEY SILT, orange mottling at 7-8 feet bgs, no mottling after 8 feet bgs, compact, moist.
10	554					10.0
						Brown, SILT, trace clay, compact, wet.
15	549	SC	102			15.0
						Brown, CLAY, little silt, trace fine sand, medium plasticity, wet.
20	544					20.0

WELL DIAGRAM:
- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Bentonite Grout (0 to 36 feet bgs)
- Well Riser (0 to 42 feet bgs) (2" SCH 40 PVC)

CORING TYPE
- Sonic Drilling (SC)

GRAPHIC LOG LEGEND
- Poorly-graded Sand
- Silt
- Silty Clay
- Low Plasticity Clay
- High Plasticity Clay
- Low Plasticity Sandy Clay

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BORING BAC-12

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Brown, CLAY, little silt, trace fine sand, high plasticity, wet. *(continued)*
25	539	SC	120			25.0
						Gray, CLAY, trace silt, medium plasticity, wet.
						29.0
						Gray, CLAY, trace silt, trace fine sand, low plasticity, wet.
30	534					30.0
35	529	SC	120			Gray, SILTY CLAY, increasing silt with depth, less plasticity with depth, medium plasticity, saturated.
						39.5
40	524					40.0 SILT, some subrounded gravel, (0.5" diameter), dry tan silt layer then a wet silt and gravel layer, poorly sorted, compact, saturated.
						Gray, CLAY, and sand, low plasticity, saturated.
						41.0
						Light Brown, FINE SAND, with subrounded gravel, (0.5-1.5" diameter), poorly sorted, loose, saturated.
						42.0
						Brown To Orange-Brown, MEDIUM TO COARSE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.
						43.5

WELL DIAGRAM

- Well Riser (0 to 42 feet bgs) (2" SCH 40 PVC)
- Bentonite Grout (0 to 36 feet bgs)
- Bentonite Seal (36 to 40 feet bgs)
- Filter Sand (40 to 54 feet bgs) (Global #5)

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Sand; Silt; Silty Clay; Low Plasticity Clay; High Plasticity Clay; Low Plasticity Sandy Clay

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BORING BAC-12

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
45	519	SC	100			44.0 Brown, FINE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated. *(continued)* 44.5 GRAVEL, subrounded (0.5-1" diameter), poorly sorted, loose, saturated.	Filter Sand (40 to 54 feet bgs) (Global #5)
							Well Screen (42 to 52 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
50	514					Brown, MEDIUM SAND, and subrounded gravel, (0.5-2" diameter), some fine sand at 50 feet bgs, poorly sorted, loose, saturated.	
						54.0	Sump (2" SCH 40 PVC/2' long)
55	509					*Bottom of Boring @ 54.00 feet bgs*	
60	504						
65	499						

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Poorly-graded Sand
- Silt
- Silty Clay
- Low Plasticity Clay
- High Plasticity Clay
- Low Plasticity Sandy Clay

ACRONYM LEGEND

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BORING BAC-13

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

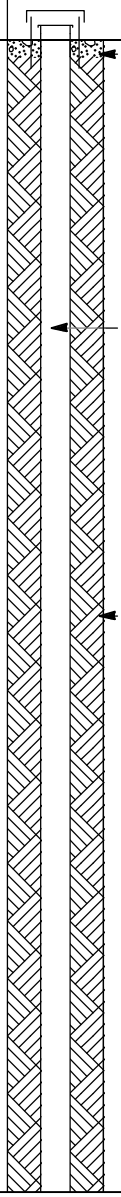
DATE STARTED: 6/14/2022
DATE COMPLETED: 6/14/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: RQD only applicable for bedrock wells

TOTAL DEPTH: 118 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 592.300
PVC ELEVATION: 584.71
NORTHING: 339262.324
EASTING: 2077481.342

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/6/2022
DATE ENDED: 7/7/2022
DTW AT START: 34.4 feet bgs
DTW AT END: NM
VOLUME PURGED: 40.92 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
5	587	SC	48			Brown, MEDIUM SAND, some silt, organics (grass, roots), poorly sorted, loose, damp.
10	582	SC	60			10.0
						Dark Brown, SILT, and gravel, some black medium sands with depth, decreasing gravel with depth, brittle, damp.
						12.5
15	577	SC	120			Red Brown, SILT, silt breaks in disks, loose, damp.
						17.0
						Brown, SANDY SILT, some clay, fine sands, loose, wet.
						18.5
20	572					Brown, SANDY SILT, and clay, fine sands, loose, wet.
						20.0

WELL DIAGRAM



CORING TYPE
- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND
- Poorly-graded Sand
- Silt
- Sandy Silt
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Sand with Clay

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BORING BAC-13

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25	567	SC	120			Brown, CLAYEY SILT, increasing clay with depth, compact, wet. *(continued)*	
30	562					30.0	
						30.5 Brown, CLAY, little silt, low plasticity, wet.	Well Riser (0 to 106 feet bgs) (2" SCH 40 PVC)
						Brown, SANDY CLAY, medium plasticity, saturated.	
35	557	SC	120			35.0	
						Brown, FINE SAND, interbedded clayey silt, some organic matter, soft, saturated.	
40	552					40.0	Bentonite Grout (0 to 100 feet bgs)
						Brown, FINE SAND, interbedded clayey silt, orange sands, more clay, increasing organics, soft, saturated.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Sand
- Silt
- Sandy Silt
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Sand with Clay

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BORING BAC-13

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						44.0	
45	547	SC	120			Gray, SILT, some clay, organic matter, wet.	Well Riser (0 to 106 feet bgs) (2" SCH 40 PVC)
						47.0	
50	542					Orange Brown, MEDIUM SAND, trace rounded gravel, (0.5-1" diameter), poorly sorted, loose, wet.	
						53.0	
						Light Brown, MEDIUM SAND, some rounded gravel, (0.5-1" diameter), poorly sorted, loose, wet.	
						54.0	
55	537	SC	97			MEDIUM TO COARSE SAND, and rounded gravel, (0.5-1.5" diameter), color variation (about 4 inches each) from red brown, light brown, medium brown red, dark gray, poorly sorted, loose, wet.	Bentonite Grout (0 to 100 feet bgs)
						56.0	
60	532					Light Brown To Brown, MEDIUM SAND, some rounded gravel, (0.5" diameter), trace clay, less gravel with depth, poorly sorted, loose, wet.	
						64.0	
65	527	SC	98			Brown, MEDIUM TO COARSE SAND, and rounded gravel, (0.5" diameter), few gravel (3" diameter), poorly sorted, loose, wet.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Sand
- Silt
- Sandy Silt
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Sand with Clay

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BORING BAC-13

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						68.0 Brown, MEDIUM TO COARSE SAND, and rounded gravel, (0.5" diameter), few gravel (3" diameter), poorly sorted, loose, wet. *(continued)*	
70	522					70.0 Brown, MEDIUM SAND, some subrounded gravel, (2-2.5" diameter), poorly sorted, loose, wet.	Bentonite Grout (0 to 100 feet bgs)
						Brown, GRAVELLY SAND, subrounded to subangular (0.5-2" diameter), medium to fine sands, finer with depth, poorly sorted, loose, wet.	
						74.0	
75	517	SC	92			74.7 Black, SILTY GRAVEL, trace medium sand, organic-like odor, angular gravel, poorly sorted, loose, wet.	Well Riser (0 to 106 feet bgs) (2" SCH 40 PVC)
						Brown, MEDIUM TO COARSE SAND, and subrounded gravel, (0.5-2" diameter), some larger gravel (5" diameter), poorly sorted, loose, wet.	
						76.5 Brown, GRAVEL, rounded (0.5-2" diameter), poorly sorted, loose, wet.	
						78.0 Brown, MEDIUM SAND, some subrounded gravel, (0.5-1" diameter), trace silt, poorly sorted, loose, wet.	
80	512					80.0	
						80.5 Brown, GRAVEL, rounded (0.5-2" diameter), poorly sorted, loose, wet.	
						81.5 Brown, COARSE SAND, and rounded gravel, (0.5-1" diameter), poorly sorted, loose, wet.	
						82.0 Brown, FINE TO MEDIUM SAND, trace rounded gravel, (0.5-1" diameter), poorly sorted, loose, wet.	
		SC	60			82.5 Gray, CLAYSTONE, weathered, dry.	
						Red Brown, CLAYSTONE, weathered, dry.	
						83.5	
85	507					Gray, CLAYSTONE, pulverized, dry.	
						85.0	
		RC	6	0		86.0 Gray, GRAVEL, gravel stuck in drill bit.	
						Blue Gray, SILTSTONE, thinly layered, brittle, numerous mechanical fractures, pyrite at 86.2 feet bgs.	
		RC	26.4	0			
90	502						

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Sand
- Silt
- Sandy Silt
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Sand with Clay

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

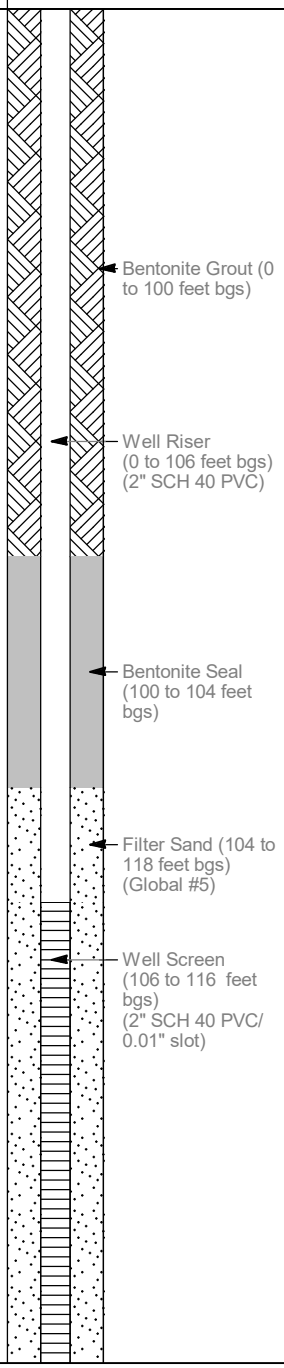
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BORING BAC-13

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						91.0
		RC	0	0		NO RECOVERY.
95	497					
						96.0
		RC	42	1.5		Red Brown, SILTSTONE, orange brown, and olive green coloration throughout, natural fractures at 98.3, 98.5, 99.0 feet bgs.
100	492					
						101.0
		RC	60	0		Gray To Blue Gray, SANDSTONE, trace mica, natural fracture with healing at 103.4 and 103.5 feet bgs, rubble zone at 103.5-105.5 feet bgs (Cow Run).
105	487					
						106.0
		RC	52.8	0		Gray To Blue Gray, SANDSTONE, brachiopod at 106 feet bgs, rubble zone at 106.3 feet bgs, natural fractures at 107, 110.2, 110.5 feet bgs (Cow Run).
110	482					
						111.0
						Gray To Blue Gray, SANDSTONE, natural weathered fracture at 111.2, 113.6 feet bgs, natural fracture with slicken lines at 112.9, 113 feet bgs, sincline shale layering at 114 feet bgs, shale layer at 114.5 feet bgs (Cow Run).

WELL DIAGRAM



CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Sand
- Silt
- Sandy Silt
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Sand with Clay

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-13

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115	477	RC	54	0		Gray To Blue Gray, SANDSTONE, natural weathered fracture at 111.2, 113.6 feet bgs, natural fracture with slicken lines at 112.9, 113 feet bgs, sincline shale layering at 114 feet bgs, shale layer at 114.5 feet bgs (Cow Run). *(continued)*	Well Screen (106 to 116 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
						118.0	Sump (2" SCH 40 PVC/2' long)
						Bottom of Boring @ 118.00 feet bgs	
120	472						
125	467						
130	462						
135	457						

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Poorly-graded Sand
- Silt
- Sandy Silt
- Silty Clay
- Low Plasticity Clay
- Poorly-graded Sand with Clay

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-14

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/8/2022
DATE COMPLETED: 7/8/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 64 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 573.740
PVC ELEVATION: 576.22
NORTHING: 338465.312
EASTING: 2077446.344

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 8/12/2022
DATE ENDED: 8/12/2022
DTW AT START: 36.85 feet bgs
DTW AT END: NM
VOLUME PURGED: 80 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Gray, GRAVEL, rip rap from newly installed road.
1.0						
5	569	SC	24			Brown, CLAYEY SILT, and subrounded to subangular gravel, (0.5-1.5" diameter), poorly sorted, compact, wet.
10	564					
10.0						Gray, CLAYEY SILT, few subrounded gravel, (0.5" diameter), black and brown mottling, poorly sorted, compact, wet.
15	559					
15.0						

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Bentonite Grout (0 to 46 feet bgs)
- Well Riser (0 to 52 feet bgs) (2" SCH 40 PVC)

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel
Silty Clay
Low Plasticity Clay
Poorly-graded Sand with Clay
Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-14

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		SC	89			Gray Brown, CLAYEY SILT, little black staining at 18 feet bgs, more brown than gray with depth, compact, wet. *(continued)*	
20	554					20.0	Well Riser (0 to 52 feet bgs) (2" SCH 40 PVC)
25	549	SC	120			Brown, CLAYEY SILT, increasing clay content with depth, increasing moisture with depth, compact, wet.	Bentonite Grout (0 to 46 feet bgs)
30	544					30.0	
						Brown, CLAY, with silt, medium plasticity, wet.	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel
Silty Clay
Low Plasticity Clay
Poorly-graded Sand with Clay
Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-14

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
35	539	SC	98			Brown, CLAY, with silt, medium plasticity, wet. *(continued)*	Bentonite Grout (0 to 46 feet bgs)
						37.0 — Brown, CLAY, trace fine sand, medium plasticity, saturated.	
						39.0 — Brown, SANDY CLAY, medium plasticity, saturated.	
40	534					40.0 — Gray Brown, CLAY, some silt, low plasticity, saturated.	Well Riser (0 to 52 feet bgs) (2" SCH 40 PVC)
						43.0 — Gray, SILTY CLAY, trace fine sand, low plasticity, saturated.	
45	529	SC	99				Bentonite Seal (46 to 50 feet bgs)
						49.0 — Gray, FINE SAND, and clay, cohesive, saturated.	
50	524					50.0	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel; Silty Clay; Low Plasticity Clay; Poorly-graded Sand with Clay; Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
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PVC = polyvinyl chloride

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BORING BAC-14

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Brown, MEDIUM SAND, and subrounded gravel, (1-1.5" diameter), poorly sorted, loose, saturated. *(continued)*	Filter Sand (50 to 64 feet bgs) (Global #5)
						52.0	
55	519						
		SC	106			Orange Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	Well Screen (52 to 62 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
60	514						Sump (2" SCH 40 PVC/2' long)
						64.0	
65	509					*Bottom of Boring @ 64.00 feet bgs*	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel
Silty Clay
Low Plasticity Clay
Poorly-graded Sand with Clay
Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-15

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/7/2022
DATE COMPLETED: 7/7/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 40 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 569.060
PVC ELEVATION: 571.50
NORTHING: 338363.707
EASTING: 2076990.939

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/8/2022
DATE ENDED: 7/8/2022
DTW AT START: 6.33 feet bgs
DTW AT END: NM
VOLUME PURGED: 6 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
0.5						Gray, GRAVEL, gravel from newly installed road.
5	564	SC	76			
10	559					Brown, CLAYEY SILT, trace black medium to coarse sands at 8 feet bgs, compact, wet.
15	554	SC	120			
20	549					20.0

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Bentonite Grout (0 to 17 feet bgs)
- Well Riser (0 to 23 feet bgs) (2" SCH 40 PVC)
- Bentonite Seal (17 to 21 feet bgs)

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel
Silty Clay
Low Plasticity Sandy Clay
Poorly-graded Gravelly Sand

ACRONYM LEGEND

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bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-15

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25	544	SC	36			Brown, CLAYEY SILT, and fine sand, cohesive, saturated. *(continued)*	Filter Sand (21 to 35 feet bgs) (Global #5)
30	539						Well Screen (23 to 33 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
33.0						Gray, CLAY, and fine sand, cohesive, saturated.	Sump (2" SCH 40 PVC/2' long)
35	534	SC	120				
36.0						Orange Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	Borehole Collapse
40	529						
40.0						*Bottom of Boring @ 40.00 feet bgs*	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel
Silty Clay
Low Plasticity Sandy Clay
Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
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NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-16

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/6/2022
DATE COMPLETED: 7/7/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 57 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 560.780
PVC ELEVATION: 563.39
NORTHING: 338410.228
EASTING: 2076051.726

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/8/2022
DATE ENDED: 7/8/2022
DTW AT START: 22.15 feet bgs
DTW AT END: NM
VOLUME PURGED: 65 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Gray, GRAVEL, loose, dry.
						1.0
5	556	SC	64			Brown, CLAYEY SILT, lots of gray mottling, some black medium to coarse sand, compact, wet.
10	551					10.0
						Brown, CLAYEY SILT, some angular gravel, (0.5-1" diameter), black medium to coarse sand from 10-13 feet bgs, poorly sorted, compact, wet.
						13.0
						Brown, SILTY CLAY, gray mottling, low plasticity, wet.
15	546	SC	116			15.0
						Brown, CLAY, trace fine sand, medium plasticity, wet.
						18.5
						Brown, SANDY CLAY, medium plasticity, wet.
20	541					20.0

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Bentonite Grout (0 to 39 feet bgs)
- Well Riser (0 to 45 feet bgs) (2" SCH 40 PVC)

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Poorly-graded Gravel
- Silty Clay
- Low Plasticity Clay
- Low Plasticity Sandy Clay
- Silt
- Well-graded Sand

ACRONYM LEGEND

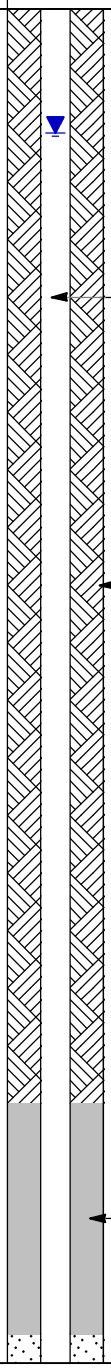
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BORING BAC-16

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						20.5 Brown, SANDY CLAY, medium plasticity, wet. *(continued)*
						Gray Brown, CLAYEY SILT, some fine sand, sand lenses, low plasticity, wet.
						22.5
						23.0 Gray Brown, FINE SAND, with clay, medium plasticity, saturated.
						Gray, CLAY, little silt, some orange brown sand lenses, medium plasticity, saturated.
25	536	SC	120			25.0
						Gray, FINE SAND, with clay, medium plasticity, saturated.
						27.0
						Gray, SILT, some clay, white flakes, compact, saturated.
						29.0
30	531					Gray, CLAY, medium plasticity, saturated.
						31.5
						Orange, FINE SAND, cohesive, saturated.
						32.5
						33.0 Gray, SILT, and fine sand, poorly sorted, compact, saturated.
						33.5 Orange, FINE SAND, saturated.
35	526	SC	104			Orange Brown, MEDIUM SAND, and subrounded gravel, (0.5-1.5" diameter), some subangular gravel (4" diameter) at 36 feet bgs, poorly sorted, loose, saturated.
						36.0
						Brown, MEDIUM SAND, trace subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.
						37.0
						Brown, FINE TO MEDIUM SAND, trace subrounded gravel, (0.5" diameter), some orange sands at 37-38 feet bgs, finer sands with depth, poorly sorted, loose, saturated.
40	521					40.0
						Brown, FINE TO MEDIUM SAND, trace subrounded gravel, (0.5" diameter), increasing gravel with depth, poorly sorted, loose, saturated.



CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel
Silty Clay
Low Plasticity Clay
Low Plasticity Sandy Clay
Silt
Well-graded Sand

ACRONYM LEGEND

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bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-16

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
45	516	SC	112			Brown, FINE TO MEDIUM SAND, trace subrounded gravel, (0.5" diameter), increasing gravel with depth, poorly sorted, loose, saturated. *(continued)*	Filter Sand (43 to 57 feet bgs) (Global #5)
50	511						Well Screen (45 to 55 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
55	506						Sump (2" SCH 40 PVC/2' long)
						57.0	
						Bottom of Boring @ 57.00 feet bgs	
60	501						
65	496						

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Poorly-graded Gravel
- Silty Clay
- Low Plasticity Clay
- Low Plasticity Sandy Clay
- Silt
- Well-graded Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-17

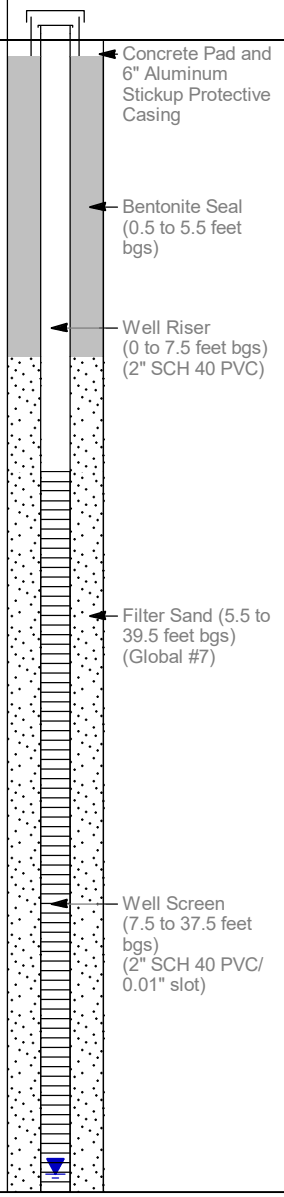
Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/7/2022
DATE COMPLETED: 7/7/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: RQD only applicable for bedrock wells

TOTAL DEPTH: 39.5 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 560.720
PVC ELEVATION: 563.49
NORTHING: 338411.758
EASTING: 2076039.626

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/8/2022
DATE ENDED: 7/8/2022
DTW AT START: 19.7 feet bgs
DTW AT END: NM
VOLUME PURGED: 65 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Gray, GRAVEL, loose, dry.
						1.0
5	556	SC	64			Brown, CLAYEY SILT, lots of gray mottling, some black medium sand, compact, wet.
10	551					10.0
						Brown, CLAYEY SILT, some angular gravel, (0.5-1" diameter), black medium to coarse sand from 10-13 feet bgs, poorly sorted, compact, wet.
						13.0
						Brown, SILTY CLAY, gray mottling, low plasticity, wet.
15	546	SC	116			15.0
						Brown, CLAY, trace fine sand, medium plasticity, wet.
						18.5
						Brown, SANDY CLAY, medium plasticity, wet.
20	541					20.0



CORING TYPE
Sonic Drilling (SC)

GRAPHIC LOG LEGEND
Poorly-graded Gravel; Silty Clay; Low Plasticity Clay; Poorly-graded Sand with Clay; Silt; Poorly-graded Sand

ACRONYM LEGEND
amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-17

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						20.5 Brown, SANDY CLAY, medium plasticity, wet. *(continued)*	
						Gray Brown, CLAYEY SILT, some fine sand, sand lenses, low plasticity, wet.	
						22.5	
						23.0 Gray Brown, FINE SAND, with clay, medium plasticity, saturated.	Well Screen (7.5 to 37.5 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
						Gray, CLAY, little silt, some orange brown sand lenses, medium plasticity, saturated.	
25	536	SC	120			25.0	
						Gray, FINE SAND, with clay, medium plasticity, saturated.	
						27.0	
						Gray, SILT, some clay, white flakes, compact, saturated.	
						29.0	
30	531					Gray, CLAY, medium plasticity, saturated.	
						31.5	
						Orange, FINE SAND, cohesive, saturated.	
						32.5	
						33.0 Gray, SILT, and fine sand, poorly sorted, compact, saturated.	
						33.5 Orange, FINE SAND, saturated.	
						Orange Brown, MEDIUM SAND, and subrounded gravel, (0.5-1.5" diameter), some subangular gravel (4" diameter) at 36 feet bgs, poorly sorted, loose, saturated.	Filter Sand (5.5 to 39.5 feet bgs) (Global #7)
35	526	SC	104			36.0	
						Brown, MEDIUM SAND, trace subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.	
						37.0	
						Brown, FINE TO MEDIUM SAND, trace subrounded gravel, (0.5" diameter), some orange sands at 37-38 feet bgs, finer sands with depth, poorly sorted, loose, saturated.	Sump (2" SCH 40 PVC/2' long)
						39.5	
40	521					*Bottom of Boring @ 39.50 feet bgs*	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel; Silty Clay; Low Plasticity Clay; Poorly-graded Sand with Clay; Silt; Poorly-graded Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-18

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

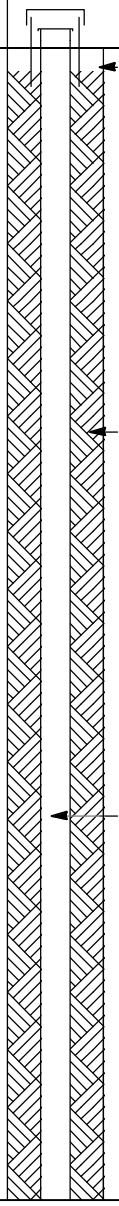
DATE STARTED: 7/7/2022
DATE COMPLETED: 7/7/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 90 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 599.320
PVC ELEVATION: 601.95
NORTHING: 338525.719
EASTING: 2076056.126

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/5/2022
DATE ENDED: 7/5/2022
DTW AT START: 58.25 feet bgs
DTW AT END: NM
VOLUME PURGED: 25 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
5	594	SC	60			Brown, SILT, trace clay, trace black medium sand, hard, wet.
10	589	SC	48			10.0
15	584					Brown, SILT, trace clay, trace black medium sand until 18 feet bgs, some gray mottling, hard, wet.

WELL DIAGRAM



CORING TYPE
- Sonic Drilling (SC)

GRAPHIC LOG LEGEND
- Silt
- Low Plasticity Clay
- Low Plasticity Sandy Clay
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND
amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

ERM
1 Beacon Street, 5th Floor
Boston MA, 02108
Telephone: 617-646-7800

BORING BAC-18

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		SC	100			Brown, SILT, trace clay, trace black medium sand until 18 feet bgs, some gray mottling, hard, wet. *(continued)*	
20	579					20.0	Bentonite Grout (0 to 69 feet bgs)
25	574	SC	120			Brown, SILT, trace clay, some black medium sand, some gray mottling, hard, wet.	Well Riser (0 to 75 feet bgs) (2" SCH 40 PVC)
30	569					30.0	
						Brown, SILT, trace clay, some gray mottling, hard, wet.	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Silt
Low Plasticity Clay
Low Plasticity Sandy Clay
Sandy Silt
Poorly-graded Sand
Poorly-graded Gravelly Sand

ACRONYM LEGEND

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NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-18

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Brown, SILT, trace clay, some gray mottling, hard, wet. *(continued)*	
35	564	SC	108			35.0	Bentonite Grout (0 to 69 feet bgs)
						Gray, SILT, brown mottling, hard, wet.	
						37.5	
						Brown, SILT, hard, wet.	
40	559					40.0	
						Gray, SILT, little clay, some brown mottling, clay content increasing with depth, hard, wet.	
45	554	SC	120				Well Riser (0 to 75 feet bgs) (2" SCH 40 PVC)
						48.0	
						Brown, CLAY, some silt, trace fine sand, low plasticity, wet.	
50	549					50.0	

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Silt
- Low Plasticity Clay
- Low Plasticity Sandy Clay
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

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PVC = polyvinyl chloride

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BORING BAC-18

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
55	544	SC	98			Brown, SANDY CLAY, some silt, sand content increases with depth to a clayey sand, medium plasticity, saturated. *(continued)*	
						58.7	
						Gray, SANDY CLAY, with silt, fine sands, some orange sands, low plasticity, saturated.	
60	539					60.0	Bentonite Grout (0 to 69 feet bgs)
						Gray Brown, SANDY CLAY, some silt, low plasticity, saturated.	
						64.5	
65	534	SC	97			Gray, SANDY SILT, little clay, some light gray mottling, compact, saturated.	Well Riser (0 to 75 feet bgs) (2" SCH 40 PVC)

CORING TYPE

- Sonic Drilling

GRAPHIC LOG LEGEND

- Silt
- Low Plasticity Clay
- Low Plasticity Sandy Clay
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

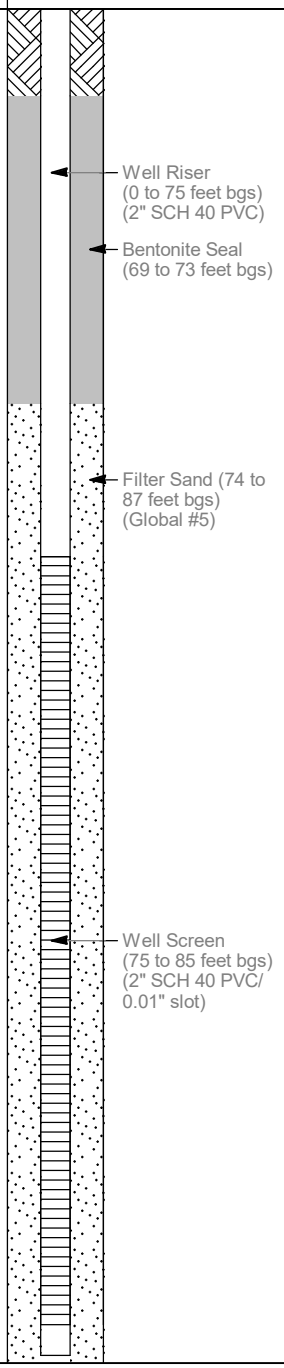
amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
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NM = not measured
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PVC = polyvinyl chloride

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BORING BAC-18

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Gray, SANDY SILT, little clay, some light gray mottling, compact, saturated. *(continued)*
70	529					70.0
						Gray, FINE TO MEDIUM SAND, little clay, some brown sand, loose, wet.
						71.0
						Brown, MEDIUM SAND AND GRAVEL, trace clay, rounded, (0.5-1" diameter), poorly sorted, loose, wet.
75	524	SC	120			75.7
						Brown, MEDIUM TO COARSE SAND, and gravel, 4 inches of orange sand at 77 feet bgs, 3 inches of dark gray sand at 77.5 feet bgs, loose, wet.
						77.5
80	519					Dark Brown, MEDIUM SAND, and rounded gravel, (0.5" diameter), poorly sorted, loose, wet.
		SC	95			83.7
						Brown, COARSE SAND, lithic sand, loose, wet.
						84.5
85	514					Brown, CLAYEY SAND, trace rounded gravel, (0.5-2" diameter), gravel ends at 85 feet bgs, some gray mottling towards 90 feet bgs, poorly sorted, loose, wet.



CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Silt
- Low Plasticity Clay
- Low Plasticity Sandy Clay
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-18

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
90	509					Brown, CLAYEY SAND, trace rounded gravel, (0.5-2" diameter), gravel ends at 85 feet bgs, some gray mottling towards 90 feet bgs, poorly sorted, loose, wet. *(continued)*	Sump (2" SCH 40 PVC/2' long)
						90.0	Borehole Collapse
						Bottom of Boring @ 90.00 feet bgs	
95	504						
100	499						

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Silt
Low Plasticity Clay
Low Plasticity Sandy Clay
Sandy Silt
Poorly-graded Sand
Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-19

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

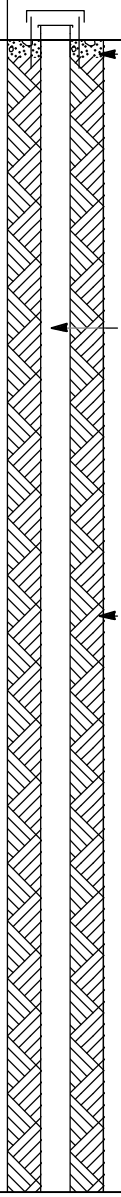
DATE STARTED: 6/14/2022
DATE COMPLETED: 6/14/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: RQD only applicable for bedrock wells

TOTAL DEPTH: 122 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 599.280
PVC ELEVATION: 602.11
NORTHING: 338526.438
EASTING: 2076037.426

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/5/2022
DATE ENDED: 7/5/2022
DTW AT START: 58.2 feet bgs
DTW AT END: NM
VOLUME PURGED: 25 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
5	594	SC	60			Brown, SILT, trace clay, trace bottom ash, hard, wet.
10	589	SC	48			10.0
15	584	SC	100			Brown, SILT, trace clay, trace bottom ash until 18 feet bgs, some gray mottling, hard, wet.
20	579					20.0

WELL DIAGRAM



CORING TYPE
- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND
- Silt
- Low Plasticity Clay
- Clayey Sand
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND
amsl = above mean sea level
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PVC = polyvinyl chloride

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BORING BAC-19

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25	574	SC	120			Brown, SILT, trace clay, some bottom ash, some gray mottling, hard, wet. *(continued)*	
30	569					30.0	Well Riser (0 to 110 feet bgs) (2" SCH 40 PVC)
						Brown, SILT, trace clay, some gray mottling, hard, wet.	
35	564	SC	108			35.0	
						Gray, SILT, brown mottling, hard, wet.	
						37.5	
						Brown, SILT, hard, wet.	
40	559					40.0	Bentonite Grout (0 to 104 feet bgs)
						Gray, SILT, little clay, some brown mottling, increasing clay content with depth, hard, wet.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Low Plasticity Clay
- Clayey Sand
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

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BORING BAC-19

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
45	554	SC	120			Gray, SILT, little clay, some brown mottling, increasing clay content with depth, hard, wet. *(continued)*	Well Riser (0 to 110 feet bgs) (2" SCH 40 PVC)
						48.0	
50	549					Brown, CLAY, some silt, trace fine sand, low plasticity, wet.	
						50.0	
55	544	SC	98			Brown, SANDY CLAY, some silt, sand content increases with depth to a clayey sand, medium plasticity, saturated.	
						58.7	
60	539					Gray, SANDY CLAY, with silt, some fine sands, some orange sands, low plasticity, saturated.	Bentonite Grout (0 to 104 feet bgs)
						60.0	
						Gray Brown, SANDY CLAY, some silt, low plasticity, saturated.	
						64.5	
65	534	SC	97			Gray, SANDY SILT, little clay, some light gray mottling, compact, saturated.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Low Plasticity Clay
- Clayey Sand
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

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BORING BAC-19

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Gray, SANDY SILT, little clay, some light gray mottling, compact, saturated. *(continued)*	
70	529					70.0	Bentonite Grout (0 to 104 feet bgs)
						Gray, FINE TO MEDIUM SAND, little clay, some brown sand, loose, wet.	
						71.0	
						Brown, MEDIUM SAND AND GRAVEL, trace clay, rounded, (0.5-1" diameter), poorly sorted, loose, wet.	
75	524	SC	120				Well Riser (0 to 110 feet bgs) (2" SCH 40 PVC)
						75.7	
						Brown, MEDIUM TO COARSE SAND, and gravel, 4 inches of orange sand at 77 feet bgs, 3 inches of dark gray sand at 77.5 feet bgs, loose, wet.	
						77.5	
80	519					Dark Brown, MEDIUM SAND, and rounded gravel, (0.5" diameter), poorly sorted, loose, wet.	
						83.7	
						Brown, COARSE SAND, lithic sand, loose, wet.	
						84.5	
85	514	SC	95			Brown, CLAYEY SAND, trace rounded gravel, (0.5-2" diameter), gravel ends at 85 feet bgs, some gray mottling towards 90 feet bgs, poorly sorted, loose, wet.	
90	509					90.0	
						Gray, FINE SANDY SILT, some clay, some orange mottling, loose, wet.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Low Plasticity Clay
- Clayey Sand
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

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BORING BAC-19

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Gray, FINE SANDY SILT, some clay, some orange mottling, loose, wet. *(continued)*	
						92.5	
95	504	SC	103			Brown, GRAVEL, some coarse sand, subrounded to subangular, poorly sorted, loose, saturated.	Bentonite Grout (0 to 104 feet bgs)
						97.0	
						Brown, COARSE SAND, some subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
100	499					100.0	Well Riser (0 to 110 feet bgs) (2" SCH 40 PVC)
						Brown, GRAVELLY SAND, rounded (2.5-3" diameter), may be beginning of the Round Knob, poorly sorted, loose, saturated.	
						103.0	
						Gray, SILT, weathered, lots of brown mottling, wet.	
						104.0	
105	494	SC	108			Gray, CLAYSTONE, (Round Knob), brittle, dry.	Bentonite Seal (104 to 108 feet bgs)
						109.0	Filter Sand (108 to 122 feet bgs) (Global #5)
110	489	RC	0	0		NO RECOVERY.	
						111.0	Well Screen (110 to 120 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
		RC	39.6	0		Red Brown, CLAYSTONE, (Round Knob), natural fractures seen at 111.5-111.9, 112.6, 113.0-113.4, and 113.8 feet bgs.	

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Low Plasticity Clay
- Clayey Sand
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

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PVC = polyvinyl chloride

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BORING BAC-19

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115	484						Well Screen (110 to 120 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
		RC	72			Red Brown, CLAYSTONE, (Round Knob), natural fractures seen at 111.5-111.9, 112.6, 113.0-113.4, and 113.8 feet bgs. *(continued)*	
120	479						Filter Sand (108 to 122 feet bgs) (Global #5)
						122.0	Sump (2" SCH 40 PVC/2' long)
						Bottom of Boring @ 122.00 feet bgs	
125	474						
130	469						
135	464						

CORING TYPE

- Sonic Drilling (SC)
- Wireline Rock Coring (RC)

GRAPHIC LOG LEGEND

- Silt
- Low Plasticity Clay
- Clayey Sand
- Sandy Silt
- Poorly-graded Sand
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
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DTW = depth to water
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BORING BAC-20

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 6/23/2022
DATE COMPLETED: 6/23/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 30 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 562.570
PVC ELEVATION: 565.06
NORTHING: 338477.169
EASTING: 2075096.614

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/5/2022
DATE ENDED: 7/6/2022
DTW AT START: 20.2 feet bgs
DTW AT END: NM
VOLUME PURGED: 1.25 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		SC	36			Gray, GRAVEL, rip rap from the newly installed road, dry.
						1.1
						Brown, SILTY CLAY, compact, wet.
5	558					
		SC	55			
						7.5
						Dark Brown, SILT, trace clay, some gray mottling, brittle, wet.
10	553					10.0
						Brown, CLAYEY GRAVEL, some silt, subangular, (1-2" diameter), poorly sorted, loose, saturated.
						14.5
15	548					Brown, SILT, and clay, compact, saturated.

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Well Riser (0 to 12 feet bgs) (2" SCH 40 PVC)
- Bentonite Seal (0.3 to 10 feet bgs)
- Filter Sand (10 to 25 feet bgs) (Global #7)
- Well Screen (12 to 22 feet bgs) (2" SCH 40 PVC/ 0.01" slot)

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel; Silty Clay; Silt; Clayey Gravel; Clayey Sand; Poorly-graded Gravelly Sand

ACRONYM LEGEND

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DTW = depth to water
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NR = no recovery
PVC = polyvinyl chloride

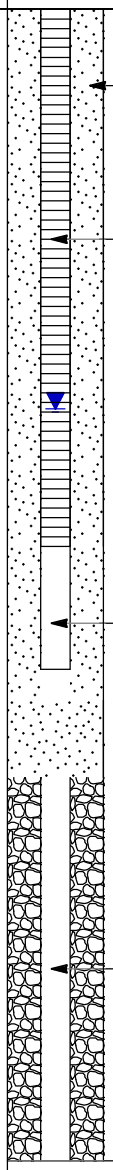
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BORING BAC-20

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
20	543	SC	114			Brown, SILT, and clay, compact, saturated. *(continued)*
						24.0
						Brown, SANDY CLAY, medium plasticity, saturated.
25	538	SC	108			25.0
						Brown To Dark Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.
30	533					30.0
						Bottom of Boring @ 30.00 feet bgs

WELL DIAGRAM



CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Gravel
Silty Clay
Silt
Clayey Gravel
Clayey Sand
Poorly-graded Gravelly Sand

ACRONYM LEGEND

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bgs = below ground surface
DTW = depth to water
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NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-21

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/5/2022
DATE COMPLETED: 7/5/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 60 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 569.300
PVC ELEVATION: 572.41
NORTHING: 339439.529
EASTING: 2074896.107

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/7/2022
DATE ENDED: 7/7/2022
DTW AT START: 35.0 feet bgs
DTW AT END: NM
VOLUME PURGED: 27 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
5	564	SC	37			Black To Brown, MEDIUM SAND, poorly sorted, loose, damp.
5.0						
10	559	SC	47			Black To Brown, MEDIUM SAND, trace subangular gravel, (1-2" diameter), poorly sorted, loose, damp.
10.0						
15	554					Black To Brown, MEDIUM SAND, trace subangular gravel, (1-2" diameter), wet at 20 feet bgs, poorly sorted, loose, moist.

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Bentonite Grout (0 to 34 feet bgs)
- Well Riser (0 to 40 feet bgs) (2" SCH 40 PVC)

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Poorly-graded Sand
- Low Plasticity Clay
- High Plasticity Clay
- Silty Clay
- Poorly-graded Gravelly Sand
- Poorly-graded Sandy Gravel

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-21

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
20	549	SC	108			Black To Brown, MEDIUM SAND, trace subangular gravel, (1-2" diameter), wet at 20 feet bgs, poorly sorted, loose, moist. *(continued)*	Bentonite Grout
						20.0 — Brown, CLAY, trace silt, low plasticity, wet. 20.5	
						Brown, CLAY, some silt, medium plasticity, wet.	
						23.0 — Gray Brown, CLAY, high plasticity, wet.	
25	544	SC	114				Well Riser (0 to 40 feet bgs) (2" SCH 40 PVC)
						26.0 — Brown, CLAY, little silt, medium plasticity, wet.	
30	539					30.0 — Gray, SILTY CLAY, with fine sand, sand increases with depth, increasing silt at 33-36 feet bgs, tan and brown mottling, white fragments from 37-39 feet bgs, low plasticity, saturatred.	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Sand; Low Plasticity Clay; High Plasticity Clay; Silty Clay; Poorly-graded Gravelly Sand; Poorly-graded Sandy Gravel

ACRONYM LEGEND

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BORING BAC-21

Client: Gavin Power, LLC
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Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
35	534	SC	115			Gray, SILTY CLAY, with fine sand, sand increases with depth, increasing silt at 33-36 feet bgs, tan and brown mottling, white fragments from 37-39 feet bgs, low plasticity, saturatred. *(continued)*
						39.0
40	529					Orange Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), little black staining, poorly sorted, loose, saturated.
						40.0
						Orange Brown, GRAVEL, and coarse sand, subrounded, (0.5-1.5" diameter), poorly sorted, loose, saturated.
						43.0
						Orange Brown, MEDIUM TO COARSE SAND, some subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.
						44.0
45	524	SC	118			Light Brown, MEDIUM SAND, little subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.
						45.0
						Orange Brown, GRAVEL, some coarse sand, subrounded, (0.5-1" diameter), poorly sorted, loose, saturatred.
						47.0
						Gray, GRAVEL, some coarse sand, subrounded, (0.5-1" diameter), poorly sorted, loose, saturated.
						48.0
						Gray, GRAVEL, little coarse sand, subrounded to subangular, (0.5-1.5" diameter), poorly sorted, loose, saturated.
						49.0
						Gray, MEDIUM SAND, trace subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.
						49.5
50	519					Gray, SILTY CLAY, and subrounded gravel, (0.5" diameter), poorly sorted, firm, saturated.
						50.0

WELL DIAGRAM

- Well Riser (0 to 40 feet bgs) (2" SCH 40 PVC)
- Bentonite Seal (34 to 38 feet bgs)
- Filter Sand (38 to 52 feet bgs) (Global #5)
- Well Screen (40 to 50 feet bgs) (2" SCH 40 PVC/ 0.01" slot)

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Poorly-graded Sand
- Low Plasticity Clay
- High Plasticity Clay
- Silty Clay
- Poorly-graded Gravelly Sand
- Poorly-graded Sandy Gravel

ACRONYM LEGEND

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BORING BAC-21

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Gray, GRAVEL, and coarse sand, subrounded, (0.5-1" diameter), poorly sorted, loose, saturated. *(continued)*	
						51.0	Sump (2" SCH 40 PVC/2' long)
						Light Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), poorly sorted, cohesive, saturated.	
						54.0	
55	514	SC	107			Gray Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), trace subrounded gravel (4" diameter), poorly sorted, cohesive, saturated.	Borehole Collapse
						57.0	
						Dark Gray, MEDIUM SAND, and subrounded to subangular gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
60	509					60.0	
						Bottom of Boring @ 60.00 feet bgs	
65	504						

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Poorly-graded Sand
Low Plasticity Clay
High Plasticity Clay
Silty Clay
Poorly-graded Gravelly Sand
Poorly-graded Sandy Gravel

ACRONYM LEGEND

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bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-22

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

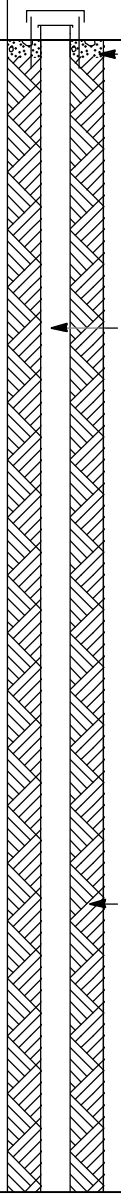
DATE STARTED: 7/1/2022
DATE COMPLETED: 7/1/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 75 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 572.280
PVC ELEVATION: 574.88
NORTHING: 340273.51
EASTING: 2074761.802

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/6/2022
DATE ENDED: 7/6/2022
DTW AT START: 27.9 feet bgs
DTW AT END: NM
VOLUME PURGED: 35 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Brown, CLAYEY SILT, compact, saturated.
						3.0
						Dark Brown, MEDIUM SAND, and subrounded gravel, (0.5-2" diameter), poorly sorted, loose, moist.
5	567	SC	112			5.0
						Brown, SILT, and subrounded gravel, (0.5-1" diameter), poorly sorted, compact, moist.
10	562					10.0
		SC	47			Brown, COARSE SAND, and subrounded to subangular gravel, (0.5-1.5" diameter), some dark gray to black sands, poorly sorted, loose, saturated.
						13.0
15	557					Dark Gray To Black, MEDIUM TO COARSE SAND, some clay, poorly sorted, compact, saturated.
						16.5
		SC	58			17.0 Dark Gray To Black, MEDIUM TO COARSE SAND, some clay, poorly sorted, compact, saturated.
						Gray, CLAYEY SILT, compact, wet.
20	552					20.0

WELL DIAGRAM



CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Silty Clay
Poorly-graded Gravelly Sand
Gravelly Silt
Poorly-graded Sand
Low Plasticity Clay
Poorly-graded Sand with Clay

ACRONYM LEGEND

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bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-22

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25	547	SC	114			Brown, CLAYEY SILT, more clay with depth, gray mottling begins at 24 feet bgs, compact, wet. *(continued)*	Bentonite Grout (0 to 54 feet bgs)
30	542					30.0	Well Riser (0 to 60 feet bgs) (2" SCH 40 PVC)
						Brown, CLAYEY SILT, low plasticity, wet.	
						33.0	
35	537	SC	109			Gray, CLAY, trace fine sand, trace silt, high plasticity, wet.	
40	532					40.0	
						Gray, CLAY, trace fine sand, more silt with depth, medium plasticity, wet.	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Silty Clay
Poorly-graded Gravelly Sand
Gravelly Silt
Poorly-graded Sand
Low Plasticity Clay
Poorly-graded Sand with Clay

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
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PVC = polyvinyl chloride

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BORING BAC-22

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
45	527	SC	119			Gray, CLAY, trace fine sand, more silt with depth, medium plasticity, wet. *(continued)*	
						47.0	Bentonite Grout (0 to 54 feet bgs)
						Gray, FINE SAND, and clay, black wood fragment at 47.5 feet bgs, cohesive, wet.	
50	522					50.0	Well Riser (0 to 60 feet bgs) (2" SCH 40 PVC)
						Gray, GRAVEL, and medium sand, subrounded, (0.5-1" diameter), poorly sorted, loose, saturated.	
						52.5	
						Gray, FINE TO MEDIUM SAND, trace subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.	
						53.0	
						Gray, GRAVEL, subangular (0.5-2" diameter), poorly sorted, loose, saturated.	
						53.5	
55	517	SC	112			Gray, FINE TO MEDIUM SAND, finer sands with depth, cohesive, saturated.	Bentonite Seal (54 to 58 feet bgs)
							Filter Sand (58 to 72 feet bgs) (Global #5)
60	512					60.0	
		SC	60			Gray, FINE TO MEDIUM SAND, cohesive, saturated.	
65	507					65.0	Well Screen (60 to 70 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
						Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), trace gravel at 68 feet bgs, poorly sorted, loose, saturated.	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Silty Clay
Poorly-graded Gravelly Sand
Gravelly Silt
Poorly-graded Sand
Low Plasticity Clay
Poorly-graded Sand with Clay

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-22

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
70	502	SC	112			Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), trace gravel at 68 feet bgs, poorly sorted, loose, saturated. *(continued)*	Filter Sand (58 to 72 feet bgs) (Global #5)
						72.0	Well Screen (60 to 70 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
							Sump (2" SCH 40 PVC/2' long)
						Blue Gray, CLAYSTONE, dry.	Borehole Collapse
75	497					75.0	
						Bottom of Boring @ 75.00 feet bgs	
80	492						
85	487						
90	482						

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Silty Clay
- Poorly-graded Gravelly Sand
- Gravelly Silt
- Poorly-graded Sand
- Low Plasticity Clay
- Poorly-graded Sand with Clay

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PVC = polyvinyl chloride

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BORING BAC-23

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 6/30/2022
DATE COMPLETED: 6/30/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Well ran dry during development, RQD only applicable for bedrock wells

TOTAL DEPTH: 67 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 574.790
PVC ELEVATION: 577.47
NORTHING: 340155.161
EASTING: 2075954.818

WELL DEVELOPMENT
METHOD(S): Grundfos & Buffalo Pump
DATE STARTED: 7/6/2022
DATE ENDED: 7/6/2022
DTW AT START: 36.35 feet bgs
DTW AT END: NM
VOLUME PURGED: 15 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Dark Brown, SANDY SILT, few subangular gravel, (0.5-1" diameter), organics, poorly sorted, damp.
						1.0
						Black, MEDIUM TO COARSE SAND, trace silt, poorly sorted, loose, damp.
						2.0
		SC	60			Light Brown, SILT, and angular gravel, (0.5-2 diameter), poorly sorted, loose, damp.
5	570					5.0
						Brown, SILT, trace subrounded gravel, (1" diameter), little gray mottling, some black medium to coarse sand, trace clay, poorly sorted, compact, moist.
		SC	60			7.5
						Brown, SILT, with subrounded gravel, (0.5-1" diameter), poorly sorted, brittle, moist.
10	565					10.0
						Brown, SILT, with subrounded gravel, (0.5-1" diameter), trace gravel, poorly sorted, brittle, moist.
						12.0
						Brown, CLAYEY SILT, trace fine sand, loose, wet.
15	560					

WELL DIAGRAM: Concrete Pad and 6" Aluminum Stickup Protective Casing; Bentonite Grout (0 to 49 feet bgs); Well Riser (0 to 55 feet bgs) (2" SCH 40 PVC)

CORING TYPE
- Sonic Drilling (SC)

GRAPHIC LOG LEGEND
- Sandy Silt
- Poorly-graded Sand
- Gravelly Silt
- Silt
- Silty Clay
- Poorly-graded Gravelly Sand

ACRONYM LEGEND
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Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
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Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						15.3 Brown, CLAYEY SILT, trace fine sand, loose, wet. *(continued)*	
						Brown, CLAYEY SILT, some gray mottling, compact, wet.	
						17.0	
		SC	118			Brown, SANDY SILT, trace clay, trace fine sand, cohesive, wet.	
20	555					20.0	Well Riser (0 to 55 feet bgs) (2" SCH 40 PVC)
25	550	SC	53			Brown, FINE SAND, little silt, some black organics, trace medium sands, loose, wet.	Bentonite Grout (0 to 49 feet bgs)
30	545					30.0	
						Brown, MEDIUM SAND, trace rounded gravel, (0.5" diameter), poorly sorted, wet.	

CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Sandy Silt
Poorly-graded Sand
Gravelly Silt
Silt
Silty Clay
Poorly-graded Gravelly Sand

ACRONYM LEGEND

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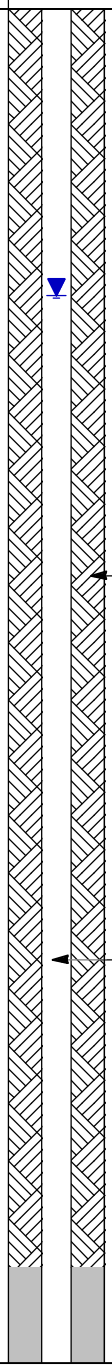
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BORING BAC-23

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
35	540	SC	39			Brown, MEDIUM SAND, trace rounded gravel, (0.5" diameter), poorly sorted, wet. *(continued)*
40	535					40.0
45	530	SC	112			Brown, MEDIUM SAND, trcae rounded gravel, (0.5" diameter), poorly sorted, wet.
						47.0
						Brown, MEDIUM TO COARSE SAND, and subrounded gravel, (0.5" diameter), trace angular gravel (4" diameter) gravel at 49 feet bgs, poorly sorted, wet.
						49.5
50	525					Orange Brown, COARSE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, saturated.
						50.0
						Brown, FINE SAND, well sorted, saturated.

WELL DIAGRAM



CORING TYPE

Sonic Drilling (SC)

GRAPHIC LOG LEGEND

Sandy Silt
Poorly-graded Sand
Gravelly Silt
Silt
Silty Clay
Poorly-graded Gravelly Sand

ACRONYM LEGEND

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BORING BAC-23

Client: Gavin Power, LLC
Project Name: Bottom Ash Pond Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Brown, FINE SAND, well sorted, saturated. *(continued)*	Bentonite Seal (49 to 53 feet bgs)
						52.0	
							Filter Sand (53 to 67 feet bgs) (Global #5)
55	520						
		SC	64				
						Brown, MEDIUM SAND, and subrounded gravel, (0.5-1.5" diameter), finer sand at 65 feet bgs, poorly sorted, saturated.	
60	515						Well Screen (55 to 65 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
65	510						Sump (2" SCH 40 PVC/2' long)
						67.0	
						Bottom of Boring @ 67.00 feet bgs	

CORING TYPE

- Sonic Drilling (SC)

GRAPHIC LOG LEGEND

- Sandy Silt
- Poorly-graded Sand
- Gravelly Silt
- Silt
- Silty Clay
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
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PVC = polyvinyl chloride

APPENDIX D GAVIN BOTTOM ASH POND FIRST SEMIANNUAL SAMPLING EVENT OF 2024 ALTERNATE SOURCE DEMONSTRATION REPORT

First Semiannual Sampling Event of 2025 Alternate Source Demonstration Report

Gavin Bottom Ash Pond

PREPARED FOR
Gavin Power, LLC

DATE
2 September 2025

REFERENCE
0767401

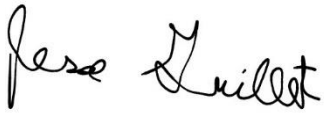
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First Semiannual Sampling Event of 2025 Alternate Source Demonstration Report

Gavin Bottom Ash Pond

0767401





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ACRONYMS AND ABBREVIATIONS

Acronym	Description
AEP	American Electric Power Service Corporation
ASD	Alternate Source Demonstration
BAC	Bottom Ash Complex
BAP	Bottom Ash Pond
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
ERM	Environmental Resources Management, Inc.
ft	feet
Gavin	Gavin Power, LLC
K	Hydraulic Conductivity
H2	Second Semiannual
mg/L	milligrams per liter
NFAP	North Fly Ash Pond
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
ORSANCO	Ohio River Valley Water Sanitation Commission
OVEC	Ohio Valley Electric Corporation
Plant	General James M. Gavin Power Plant
PTI	Permit–to-Install
SFAP	South Fly Ash Pond
SSI	Statistically significant increase
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
uS/cm	microsiemens per centimeter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

1. INTRODUCTION

1.1 REGULATORY AND LEGAL FRAMEWORK

In accordance with Title 40 Code of Federal Regulations (CFR), Part 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments (CCR Rule) – Gavin Power, LLC (Gavin) has been implementing the groundwater monitoring requirements of 40 CFR § 257.90 et seq. for the Bottom Ash Pond (BAP) CCR Surface Impoundment at the General James M. Gavin Power Plant (Plant). Gavin calculated background levels and conducted statistical analyses for Appendix III constituents in accordance with 40 CFR § 257.93(h). Currently, Gavin is performing detection monitoring at the BAP in accordance with 40 CFR § 257.94. Statistically significant increases (SSIs) over background concentrations were detected in downgradient monitoring wells for some Appendix III constituents for the first semiannual (H1) groundwater sampling event of 2025 and are explained in this Alternate Source Demonstration (ASD) Report. The first semiannual groundwater sampling event of 2025 was performed at the BAP from March 18, 2025 to April 9, 2025. Review of data for quality assurance and statistical comparison was completed on June 4, 2025. Pursuant to 40 CFR § 257.94(e)(1), Gavin must establish an assessment monitoring program at the BAP if an Alternate Source Demonstration (ASD) is not completed and certified by a Professional Engineer within 90 days. This ASD Report, which was prepared and certified by September 2, 2025, will be included with the 2025 annual groundwater monitoring and corrective action report required under CFR § 257.90(e), which is due January 31, 2026.

An SSI for one or more Appendix III constituents is a *potential* indication of a release of constituents from a CCR unit to groundwater. In the event of an SSI, the CCR Rule provides that "… the owner or operator may demonstrate that a source other than the CCR unit caused the SSI over background levels for a constituent or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality…" (40 CFR § 257.94(e)(2)). If it is demonstrated that the SSI is the result of a source other than the CCR unit, then the CCR unit may remain in the Detection Monitoring Program instead of transitioning to an Assessment Monitoring Program. To implement this demonstration, an ASD must be made in writing and the accuracy of the information must be verified through certification by a qualified Professional Engineer (40 CFR § 257.94(e)(2)).

The United States Environmental Protection Agency (USEPA) guidance document, "Solid Waste Disposal Facility Criteria Technical Manual, EPA530-R-93-017, Subpart E" (USEPA 1993), specifies the following six lines of evidence that must be addressed to determine whether an SSI resulted from a source other than the regulated disposal unit:

- an alternative source exists;
- a hydraulic connection exists between the alternative source and the well with a statistically significant increase;
- constituent(s) (or precursor constituents) are present at the alternative source or along the flow path from the alternative source prior to possible release from the unit;

- the relative concentration and distribution of constituents in the zone of contamination are more strongly linked to the alternative source than to the unit when the fate and transport characteristics of the constituents are considered;
- the concentration observed in groundwater could not have resulted from the unit given the waste constituents and concentrations in the unit leachate and wastes, and the site hydrogeologic conditions; and
- the data supporting conclusions regarding the alternative source are historically consistent with the hydrogeologic conditions and findings of the monitoring program.

Environmental Resources Management, Inc. (ERM) has prepared this ASD Report on behalf of Gavin to address each of these lines of evidence for the SSIs detected in groundwater collected from downgradient compliance wells at the BAP. The groundwater monitoring program and ASD have been prepared utilizing accepted practices incorporating regional information that has been confirmed with site specific information. In 2022, the USEPA provided feedback on the groundwater monitoring program at the BAP (USEPA 2022), and Gavin formally responded to the concerns (Gavin 2022). In consideration of this feedback, Gavin installed additional monitoring wells and conducted supplemental characterization at the BAP to refine the conceptual site model. Findings and updates were originally provided in the 2022, 2023, and 2024 Annual Groundwater Monitoring and Corrective Action Reports (ERM 2023, 2024, 2025) and are also discussed below.

Some of the topics discussed in this report are also addressed in USEPA's November 22, 2022 Final Decision: Denial of Alternative Closure Deadline for General James M. Gavin Plant, Cheshire, Ohio (Final Decision). In other documents, Gavin has explained how the approaches described and documented in this report are consistent with USEPA regulations and guidance as well as with best engineering practices and judgment. Gavin has contested USEPA's findings in the Final Decision from a factual, technical, and legal perspective.

1.2 BACKGROUND

The Plant is a coal-fired generating station located in Cheshire, Gallia County, Ohio (Figure 1-1), and is bounded to the east by the Ohio River. The BAP is one of three CCR units at the Plant that are subject to regulation under the CCR Rule and is located adjacent to and immediately south of the main Plant area (Figure 1-2). Adjacent to the BAP is the smaller Reclaim Pond (Figure 1-3) which, along with the BAP, make up the Bottom Ash Complex (BAC) that started operating in 1974. The Reclaim Pond was not designed to retain an accumulation of CCR; did not and does not receive any significant amount of CCR; and did not and does not treat, store, or dispose of CCR. Therefore, it is not subject to the CCR Rule.

The certified groundwater monitoring well network (ERM 2021a) consists of three upgradient monitoring wells (BAC-01, MW-1, and MW-6) along the western perimeter of the BAP, two upgradient monitoring wells (BAC-06 and BAC-07) along the southern perimeter, and four downgradient monitoring wells (BAC-02, BAC-03, BAC-04, and BAC-05) positioned along the northern and eastern perimeter of the BAP (Figure 1-3). These wells are herein referred to as "network" wells for the purposes of this report.

Consistent with the CCR Rule and the Groundwater Monitoring Plan developed for Gavin (ERM 2017), an interwell prediction limit approach was used to identify potential impacts to groundwater. Upper prediction limits, and a lower prediction limit specifically for pH, were established based on the upgradient groundwater data. The 2017 Annual Groundwater Monitoring and Corrective Action Report was prepared to document the status of the groundwater monitoring program for the BAP (ERM 2018a) and included results from eight background sampling events performed from August 2016 to July 2017. The 2017 report and each subsequent Annual Groundwater Monitoring and Corrective Action Report have included comparisons of the sampling results obtained from downgradient wells during each semiannual detection monitoring event with the upper and lower prediction limits calculated based on the initial eight background samples taken from upgradient wells. ASD reports (ERM 2018b; ERM 2019; ERM 2020; ERM 2021b; ERM 2022; ERM 2023; ERM 2024; ERM 2025) were prepared to address SSIs that were identified during the initial and subsequent reporting periods.

Sixteen additional monitoring wells were installed in key areas around the BAP in 2022 (Figure 1-3). Collectively, these wells were installed to provide supplemental characterization of the conditions at the BAP and to support ASDs. Potentiometric elevations and analytical results from these wells have been incorporated in this report.

1.3 GEOLOGY

The geology in the vicinity of the BAP is visualized in Figure 1-4 and features 50 to 100 feet (ft) of unconsolidated deposits overlying deeper bedrock units. At the surface, a fine-grained unit consisting of clays and silts extends 10-40 ft below ground surface depending on surface topography. This unit overlays a layer with fine-grained sands intermixed within the clay and silt matrix. Together, these two layers make up the separation layer. In some portions of the BAP, a thin (less than 5 ft) layer of sand and clay is present directly beneath the separation layer. Below this layer, there is an approximately 20 to 40 ft thick layer of medium-to-coarse grained glacial sand and gravel. In some cores collected around the BAP in 2022, smaller lenses (less than 5 ft) of the finer silt and clay materials observed in the upper layers are interbedded within the sand and gravel layer (ERM 2023). The alluvial aquifer lies directly above the uppermost of the bedrock layers in the area – a claystone/siltstone layer (interpreted to be the Round Knob) atop the underlying sandstone stratum (interpreted to be the Cow Run).

1.4 SITE HYDROLOGY AND HYDROGEOLOGY

The uppermost aquifer beneath the BAP area is the approximately 20 to 40 ft thick layer of coarser-grained sands and gravels described in Section 3.2, though some fine sand is also present. Also referred to as the alluvial aquifer, the uppermost aquifer is confined by the clay and silt separation layer above and by the siltstone/claystone bedrock unit below (Figure 1-4). The Ohio River acts as a hydraulic boundary to the east that is dynamic in nature due to fluctuations in river stage. Two water supply wells operated by the Plant (FW-15 and FW-1101) exist approximately 400 to 700 feet north of the BAP (Figure 1-3). These wells have 20-to-30-foot screens positioned within the alluvial aquifer and can have a significant combined influence on groundwater flow at the BAP. The use of the wells is variable in both duration and frequency and is

dependent on Plant needs; however, when in use, the pumping rates are consistent at 550 and 650 gallons per minute for FW-1101 and FW-15, respectively. Two additional water supply wells (FW-17 and FW-1102) exist approximately 0.4 to 0.5 miles further north and are not expected to have a significant influence on groundwater at the BAP due to their distance from the BAP and infrequency of their use.

Five undisturbed Shelby tube samples of the clay and silt separation layer (mentioned above, located between the uppermost aquifer and the bedrock unit below) were collected from a barge within the BAP in 2020 for laboratory grain size distribution and permeameter testing (ERM 2021b). The samples ranged from 0.9% to 32.3% sand and 67.7% to 99.1% silt and clay. The permeameter testing of these samples yielded hydraulic conductivity (K) values ranging from 1.44 x 10^{-8} centimeters per second (cm/sec) to 1.18 x 10^{-7} cm/sec. Thus, even the samples with a higher amount of sand yielded very low K values. These data are direct evidence that the separation layer beneath the BAP acts as an aquitard to downward migration of water stored in the BAP.

1.5 2025 H1 GROUNDWATER SAMPLING EVENT

The data from the first semiannual groundwater sampling event from 2025 were compared to the upper and lower prediction limits for the respective parameters, and SSIs for Appendix III analytes were identified. Table 1-1 summarizes occurrences of SSIs from the March/April 2025 sampling event.

TABLE 1-1: SSIS IN GROUNDWATER BENEATH THE BAP

Analyte	Monitoring Well			
	BAC-02	BAC-03	BAC-04	BAC-05
Boron	SSI	SSI	SSI	SSI
Calcium	SSI	ϕ	ϕ	ϕ
Chloride	SSI	SSI	SSI	SSI
Fluoride	SSI	ϕ	ϕ	SSI
pH	SSI	SSI	SSI	SSI
Sulfate	SSI	SSI	SSI	SSI
TDS	SSI	SSI	SSI	SSI

Notes: ϕ = No SSI; SSI = statistically significant increase; BAP = Bottom Ash Pond; TDS = total dissolved solids. Results are for the downgradient wells sampled in March/April 2025.

This ASD Report identifies the regional, naturally-occurring brine discharging from the bedrock as the source of calcium, chloride, fluoride, and total dissolved solids (TDS), and the Kyger Creek North Fly Ash Pond (NFAP) is identified as the source of boron, sulfate, and low pH. Supporting information and additional discussion of each of the lines of evidence are presented in subsequent sections of this ASD Report.

2. DESCRIPTION OF ALTERNATE SOURCES

Identified alternate sources for the Appendix III constituents that are observed at the BAP include Regional Brine and the Kyger Creek Generating Station Closed NFAP.

- Regional Brine – Naturally occurring brine originating from bedrock (i.e., Cow Run Sandstone) as observed in shallow groundwater in and around Gavin. Identified as the alternate source of calcium, chloride, fluoride, and TDS.
- Kyger Creek Generating Station Closed NFAP – CCR-impacted groundwater migrating from the Closed NFAP. Identified as the alternate source for boron, low pH, and sulfate.

Additional influence on groundwater quality at the BAP is observed from mixing of the alternate sources and upgradient alluvial aquifer groundwater from west of the BAP and/or surface water from the Ohio River.

A summary of each of these alternate sources and influences on groundwater quality is provided below.

2.1 REGIONAL BRINE

Naturally occurring brine, which is known in the Ohio River Valley to have elevated levels of chloride, fluoride, and other trace elements, exists in the subsurface (Stout et al. 1932; ORSANCO 1984; ODNR 1995). The discharge of brine is seen at a regional scale, with shallow wells near the Ohio River observing brine impacts as a result of the vertical head gradient driving overall flow upwards from bedrock to alluvium (USGS 1997). The Cow Run Sandstone is the shallowest sandstone of any importance in Ohio where brine of marine origin has been observed (Phalen 1919; Stout et al. 1932). Brine was discovered at the land surface approximately 10 miles southwest of the Plant in Gallipolis, Ohio and was utilized for the commercial production of salt beginning in 1807 (Stout et al. 1932). Naturally occurring brine was also identified at the land surface in Jackson, Ohio approximately 30 miles west of the Plant (ODNR 1995). The regional presence of shallow brine indicates the potential for naturally occurring brine to contribute Appendix III constituents to groundwater at the Plant. Evidence of brine impacts near the Plant includes specific conductivity measurements at several monitoring wells upgradient of the Residual Waste Landfill that are consistently greater than 30,000 microsiemens per centimeter (µS/cm) and reach as high as 55,485 µS/cm. A brine signature was also observed in supplemental BAP monitoring well BAC-11 during sampling in March/April 2025. This signature included a specific conductivity field measurement of 57,370 µS/cm, TDS of 31,000 mg/L, and chloride levels of 27,000 mg/L. For reference, the approximate specific conductivity of seawater is 50,000 µS/cm (USGS 2019).

Based on a review of permit applications for historical oil and gas wells installed within the Gavin property by prior owners, the Ohio Department of Natural Resources (ODNR) routinely required applicants to identify the company responsible for collecting, transporting, and disposing of salt water to be produced by the proposed well. Oil and gas wells in the vicinity of the Gavin Plant were typically drilled to a depth of approximately 1,800 feet below ground surface and recovered brine was temporarily stored in pits at the wellsite prior to offsite disposal. In addition, the

permits demonstrate that the boreholes were typically not sealed below 250 feet below ground surface if oil and gas were not found, which would leave an unsealed borehole that could allow the upward migration of brine to shallower strata, including the Cow Run. These ODNR records demonstrate the naturally occurring presence of brine at the Gavin property in geologic strata located beneath the Cow Run Sandstone and the potential for upward migration of brine through unsealed boreholes (ODNR 2024).

The background groundwater data set is discussed further in Section 4.

2.2 KYGER CREEK NORTH FLY ASH POND

The Kyger Creek Generating Station, owned and operated by Ohio Valley Electric Corporation, is located along the Ohio River in Gallia County, south of and adjacent to the Plant (Figure 2-1). The Kyger Creek Fly Ash Pond complex consists of the 110-acre NFAP (which is closed) and 60-acre South Fly Ash Pond (SFAP) (which is active). The ponds were constructed in 1955 using locally available native materials (i.e. soil). Between 2 and 10 feet of silty clay soils were removed to create base elevations of 550 feet above mean sea level for the SFAP and 558 feet above mean sea level for the NFAP. No liner was installed at either of the ponds prior to emplacement of CCR materials. The NFAP cap includes 5 feet of boiler slag, 2 feet of compacted clay and one foot of topsoil. (AEP 2016; AEP 1994; CHA, 2010; OEPA 1996). According to the approved Ohio Environmental Protection Agency (OEPA) Permit–to-Install (PTI), construction activities to close the NFAP were initiated in March 1998 and concluded in October 2000 (OVEC 2017). Semiannual groundwater sampling for PTI compliance at the NFAP has been performed since October 1997 and currently includes sampling of six monitoring wells (OEPA 1996). Per the PTI, samples are collected semiannually for:

- Groundwater Contamination Indicator Parameters – alkalinity, specific conductivity, sulfate, and TDS; and
- Groundwater Quality Parameters – barium, calcium, chloride, iron, lead, magnesium, manganese, selenium, sodium, gross alpha and gross beta, and pH.

Groundwater monitoring for federal CCR compliance is performed at the SFAP only.

The closed Kyger Creek NFAP is located less than 300 feet south of the Gavin BAP, and the units share an approximately 2,000-foot-long border (Figure 2-1). Gavin's network wells BAC-06 and BAC-07 were installed in 2020 at the top of the south berm of the BAP along this boundary and screened within the alluvial aquifer. Six supplemental monitoring wells were installed along the south berm between the BAP and the Kyger Creek NFAP in 2022 to better understand the hydraulic relationship between the BAP and the NFAP and groundwater quality along the boundary. These supplemental wells include alluvial aquifer wells BAC-16 and BAC-18, separation layer wells BAC-15 and BAC-20, bedrock well BAC-19, and separation layer and alluvial aquifer well BAC-17.

The Kyger Creek NFAP has a higher potential to impact groundwater than the BAP because the Kyger Creek NFAP contains fly ash (approximately 1.7 million cubic yards), which when compared to bottom ash, has a greater potential to leach CCR constituents due to higher concentrations of CCR constituents and increased surface area due to smaller particle size (Cox et al. 1978; OEPA 1996; Jones et al. 2012), as described further in Section 7. The NFAP also contains approximately

900,000 cubic yards of boiler slag and boiler slag fines used to construct the NFAP berm and as cover material (OEPA 1996).

2.3 UPGRADIENT ALLUVIAL AQUIFER GROUNDWATER

Groundwater from upgradient of the BAP is observed at upgradient monitoring locations west of the BAP, including network wells MW-1, MW-6 and BAC-01, and supplemental wells BAC-08, BAC-21, BAC-22, and BAC-23. The upgradient status of these locations is confirmed by potentiometric surface maps which consistently show higher potentiometric elevations west of the BAP than in wells north, south, or east of the BAP. Potentiometric surface maps are presented and discussed further in Section 3. Groundwater from west of the BAP flows through the alluvial aquifer beneath the BAP where it ultimately mixes with groundwater migrating northward from the Kyger Creek NFAP, groundwater discharging upward from bedrock, and surface water from the Ohio River.

2.4 OHIO RIVER

The Ohio River extends approximately 981 river miles from Pittsburgh, Pennsylvania to Cairo, Illinois and drains approximately 205,000 square miles (ORSANCO 2018). The Ohio River is located approximately 700 feet east of the BAP, and the alluvial aquifer beneath the BAP is hydraulically connected to the river.

While the Ohio River is not considered a source of impacts to groundwater under the BAP, the mixing of Ohio River surface water with groundwater does influence groundwater quality at the BAP through interaction of groundwater and river water (see Section 3). Surface water from the Ohio River enters the alluvial aquifer and interacts with groundwater beneath the BAP, driven by induced infiltration caused by pumping of the onsite water supply wells and during periods of rapidly rising and high river stage conditions (i.e., flooding). When the Ohio River floods, water from the river mixes with groundwater within the alluvial aquifer (ERM 2018b) beneath the BAP. The quality of the Ohio River water that mixes with groundwater is discussed in Section 4.

3. HYDRAULIC CONNECTIONS TO THE ALTERNATE SOURCES

Explanations of the hydraulic connections between potential alternate sources and the downgradient wells of the BAP were previously provided in the first ASD Report for the BAP (ERM 2018b). An updated summary of each of these connections is provided below.

3.1 HYDRAULIC CONNECTION TO REGIONAL BRINE

Regional groundwater within the fractured sedimentary bedrock in the Ohio River Valley generally flows from areas of higher topographic elevation towards areas of lower elevation, ultimately discharging to the Ohio River (ORSANCO 1984). Precipitation infiltrates the land surface to recharge the underlying aquifers below, and flow of groundwater within these aquifers is driven by the gravitational force on groundwater (differences in hydraulic head) within the bedrock.

At the BAP, groundwater discharges upward from shallow fractured bedrock into the overlying alluvial aquifer under certain hydraulic conditions. This upward discharge of groundwater from the bedrock aquifer to the overlying alluvial aquifer is attributable to three primary drivers:

- Hydraulic pressure (head) in the bedrock aquifer compared to the alluvial aquifer driven by recharge at the adjacent higher elevation ridges;
- Areas of high hydraulic conductivity related to the interconnected fracture network within the bedrock; and
- Active pumping conditions related to operation of the two water supply wells directly north of the BAP (FW-15 and FW-1101).

3.1.1 EVALUATION OF VERTICAL GRADIENTS

As water is removed from the alluvial aquifer via pumping, it creates a hydraulic gradient toward the water supply well. As described in the 2022 H2 Alternate Source Demonstration Report (ERM 2023), upward vertical gradients between the bedrock aquifer and the alluvial aquifer were observed. A long-term transducer study performed in 2024 indicated that upward vertical gradients are observed in periods of active pumping at the BAP and during times of a declining river stage.

In order to evaluate the nature of vertical gradients beneath the BAP, transducers were deployed in several alluvial & bedrock well couplets around the BAP, and continuous long-term, high-resolution potentiometric elevation data were collected from January through June 2025. Transducer data were evaluated to determine the direction of vertical gradients and the conditions that lead to upward vertical gradients. Hydrographs of alluvium-bedrock well pairs at the northern (BAC-02/BAC-11), eastern (BAC-04/BAC-13), southern (BAC-18/BAC-19), and western (BAC-01/ BAC-09) boundaries of the BAP are shown in Figures 3-1, 3-2, 3-3, and 3-4, respectively. Periods of upward hydraulic gradient can be seen in the hydrograph figures where the bedrock groundwater potentiometric elevation (black line) is above the alluvial aquifer potentiometric elevation (green line). Due to equipment error, data for well BAC-02 and the Ohio River could not be obtained for the complete January to June 2025 period. Available data is presented on Figures 3-1 through 3-4.

Alluvial wells located to the north of the BAP are most sensitive to pumping activities (Figure 3-1). When pumping was active at the water supply wells (as evidenced by frequent oscillation of groundwater elevations at BAC-02), and the river stage was low, there were periods of upward vertical gradients observed in late February, early March, late April and early May. Upward vertical gradients were observed at the southern well couplet (Figure 3-3) during an extended period in March and shorter periods in April and May. At the western well couplet (Figure 3-4), an extended period of upward vertical gradients persisted in January.

3.1.2 HYDRAULIC CONDUCTIVITY

Groundwater flow within bedrock occurs primarily via flow through the network of interconnected and saturated fractures, which provides a much higher effective porosity (fracture/secondary porosity) than does the bedrock aquifer matrix (primary porosity). This is due to the effective pore size of the fractures (the ratio of volume of open fractures to the bulk volume of the bedrock matrix) as compared to the miniscule pore sizes between sedimentary grains making up the bedrock matrix. Consequently, the fracture network provides a flow system with significantly higher hydraulic conductivity than the overall bedrock matrix porosity.

This network of fractures is highly heterogeneous, varying greatly in connectivity and conductivity from location to location. The fracture network is also anisotropic, which means the hydraulic conductivity varies in magnitude depending on the direction of measurement. As such, the occurrence of fracture interconnectivity and saturation varies greatly at a regional scale. In the Ohio River Valley, stress relief fracturing in bedrock provides a structural framework for bedrock to be hydraulically interconnected to overlying coarse glacial outwash alluvial deposits. The degree of stress fracturing is generally greatest in bedrock directly underlying the alluvial valley bottom, driving enhanced transmissivity of the fracture network in these areas (USGS 1981).

Heterogeneity and anisotropy of the fracture network is clearly observed in the bedrock wells installed around the BAP. Hydraulic conductivity was measured to be 4.17×10^{-2} cm/sec at bedrock well BAC-11 where observations of significant fractures were made during drilling and geophysical logging. This high K value in BAC-11 is similar to K values measured in the alluvial aquifer. Conversely, substantially lower K values were measured at bedrock wells BAC-09 (2.26×10^{-6} cm/sec) and BAC-19 (3.18×10^{-7} cm/sec), where fewer fractures were observed. This difference in hydraulic conductivity values between wells screened within the same bedrock unit exemplifies the effect of fracture network connectivity on hydraulic conductivity and helps to explain why some portions of the alluvial aquifer can be impacted by regional discharge (i.e., near BAC-02) while other areas may not be substantially influenced (i.e., near BAC-01 and BAC-18). The periods of upward hydraulic gradients (see Section 3.1.1) and the transmissive nature of the fractured bedrock aquifer provide evidence that there is a hydraulic connection between the brine-impacted bedrock aquifer (see Section 2.1 and Section 4.1) and the overlying alluvial aquifer.

3.2 HYDRAULIC CONNECTION TO KYGER CREEK NORTH FLY ASH POND

Groundwater flow directions around the BAP are heavily influenced by pumping of Gavin water supply wells FW-15 and FW-1101. Based on 2024 transducer data from monitoring wells around

the BAP, the alluvial aquifer continued to have an immediate response to pumping, similar to observations in 2022 & 2023, regardless of whether one or both wells were active.

During the H1 2025 groundwater gauging event in February 2025, pumping at the water supply wells was active and the river stage was low, resulting in an interpreted direction of groundwater flow to the north, towards the water supply wells (Figure 3-5).

Transducer data from the first half of 2025 was evaluated to analyze the effects of pumping on horizontal hydraulic gradients and flow directions in the alluvial aquifer beneath the BAP. Horizontal gradients were calculated for each day from January 1, 2025, through June 25, 2025, using an R tool that calculates the best fit of a 2D plane to the potentiometric elevations based on the geometry of a given well-network. The approach was adapted from the EPA On-line Hydraulic Gradient Magnitude and Direction tool (USEPA 2021). The tool output is an overall flow vector frequency and direction for the transducer network. The frequency and direction of groundwater flow in 2025 is diagrammed in Figure 3-6. During this time period, the predominant direction of groundwater flow was to the northeast and north-northeast. On a minority of days (less than 15% of the data set), groundwater flow was to the northwest or north-northwest. These findings are consistent with those observed historically (ERM 2023) and confirm the following key points:

- Due to the prevailing northeasterly groundwater flow direction, the Kyger Creek NFAP is not situated upgradient of the monitoring wells located along the western and northwestern areas of the Gavin BAP (BAC-01, BAC-08, BAC-21, BAC-22, BAC-23, MW-1, MW-6);
- Monitoring wells on the south side of the BAP are located downgradient of the Kyger Creek NFAP and upgradient of the BAP (BAC-06, BAC-07, BAC-16, BAC-17, BAC-18);
- During all groundwater flow conditions (pumping and non-pumping), the Kyger Creek NFAP is hydraulically upgradient of the monitoring wells along the southern and southeastern areas of the BAP; and
- During pumping conditions, the Kyger Creek NFAP is hydraulically upgradient of the monitoring wells along the southern, eastern, and northeastern areas of the BAP (BAC-02, BAC-03, BAC-04, BAC-05, BAC-10, BAC-12, BAC-14).

It is evident that the Kyger Creek NFAP is hydraulically connected to the downgradient BAP monitoring wells based on the prevalent northeasterly direction of groundwater flow and the presence of the same alluvial aquifer beneath both the Kyger Creek NFAP and the BAP. Pumping activity of water supply wells FW-15 and FW-1101 creates a clear and nearly immediate influence on groundwater flow directions around the BAP, shifting groundwater flow northward, especially across the eastern half of the BAP. This shift in localized groundwater flow directions orients the Kyger Creek NFAP as upgradient to a larger area of the BAP and results in an increased hydraulic connection between the Kyger Creek NFAP and the aquifer beneath the BAP.

4. CONSTITUENTS ARE PRESENT AT THE ALTERNATE SOURCES OR ALONG THE FLOW PATHWAYS

Groundwater quality at the BAP is influenced by multiple sources, as described in Sections 2 and 3. The Kyger Creek NFAP is identified as the source of boron, low pH, and sulfate. Regional brine is identified as the source of calcium, chloride, fluoride and TDS in BAP downgradient groundwater. The mixing of upgradient alluvial groundwater and water from the Ohio River also affects groundwater chemistry downgradient of the BAP. A summary of the constituents present at these sources is provided below.

4.1 REGIONAL BRINE

Regional brine is present in the area of the Plant and locally in bedrock under the BAP. Supplemental monitoring wells BAC-09, BAC-11, BAC-13, and BAC-19, which are installed in the Cow Run Sandstone at the BAP, all have chemical signatures indicating the presence of brine. As described in Section 3.1, the bedrock wells are upgradient of compliance wells BAC-02, BAC-03, BAC-04, and BAC-05 during certain portions of the year when upward vertical gradients exist. The ranges for calcium, chloride, fluoride and TDS in bedrock groundwater and downgradient alluvial groundwater (BAC-02, BAC-03, BAC-04 and BAC-05) at the BAP are presented in Table 4-1.

TABLE 4-1: COMPARISON OF BEDROCK GROUNDWATER TO DOWNGRADIENT BAP GROUNDWATER

Analyte	Units	Bedrock Groundwater at BAP	Downgradient Alluvial Groundwater at BAP
Calcium	mg/L	110-2,600	82-150
Chloride	mg/L	960-27,000	26-75
Fluoride	mg/L	0.56-1.1	0.071-0.21
TDS	mg/L	1,700-31,000	530-800

Notes: BAP = Bottom Ash Pond; mg/L = milligrams per liter; TDS = total dissolved solids.
Results from samples collected in March/April 2025.
Bedrock Groundwater at BAP includes data from BAC-09, BAC-11, BAC-13, and BAC-19.
Downgradient Alluvial Groundwater at BAP includes data from BAC-02, BAC-03, BAC-04, and BAC-05.

Cross section view figures for calcium (Figure 4-1a and 4-1b), chloride (Figure 4-2a and 4-2b), TDS (Figure 4-3a and 4-3b), and fluoride (Figures 4-4a and 4-4b) depict the distribution of concentrations for these four constituents within bedrock and the alluvial aquifer around the area of the BAP. Concentrations of calcium, chloride, fluoride, and TDS are generally higher, and in some cases one to two orders of magnitude higher in bedrock than in the overlying alluvial aquifer, consistent with a regional brine signature. Therefore, the higher concentrations of calcium, chloride, fluoride, and TDS in the bedrock groundwater indicate these constituents are present at the alternate source and the observed upward hydraulic gradients indicate the SSIs are attributable to the discharge of groundwater from bedrock to the overlying alluvial aquifer.

4.2 KYGER CREEK NORTH FLY ASH POND

4.2.1 BORON

Figure 4-5 depicts the distribution of boron concentrations across the BAP monitoring well network and the general horizontal flow path of boron from the northern boundary of the Kyger Creek NFAP. The plume orientation is consistent with the 2025 average observed daily groundwater flow vector as depicted on Figure 3-6 and included within Figure 4-5 for reference, which is predominantly towards the northeast. The vector diagram summarizes transducer data collected from January 1, 2025 through June 25, 2025. Boron concentrations and the approximate extent of boron impacts along the primary flow directions (northeast) from the Kyger Creek NFAP are also presented in cross section views (Figures 4-6a and 4-6b).

Key observations from the distribution of boron across the BAP network (Figure 4-5) and the cross sections (Figures 4-6a and 4-6b) are summarized in the following points:

- BAC-17 was installed in 2022 as a replicant monitoring point for B-0904 (which historically had a higher boron concentration than any BAP well; located on Kyger Creek Generating Station property and no longer accessible for sampling). BAC-17 is located downgradient of the Kyger Creek NFAP and upgradient of the BAP and is screened in both the separation layer and into the underlying alluvial aquifer, mirroring the well screen of B-0904. The concentration of boron in BAC-17 was 4.0 mg/L in March 2025, a higher concentration than was observed in any downgradient well at the BAP in H1 2025.
- The highest boron concentrations in BAP downgradient wells were measured at wells BAC-04 and BAC-05, which are located nearest to and downgradient from the Kyger Creek NFAP.
- Concentrations of boron decrease with distance downgradient from the Kyger Creek NFAP, along the northeastern flow path (i.e., from BAC-05 to BAC-03).
- Monitoring wells BAC-06 and BAC-07 demonstrated lower concentrations than measured in groundwater from monitoring well BAC-17 (and historically monitoring well B-0904), likely due to the slightly deeper position of the well screens within the alluvial aquifer.

Correspondence obtained from the OEPA regarding Kyger Creek NFAP concluded that groundwater below the NFAP appears to be impacted by a release from the Kyger Creek NFAP and that an assessment of groundwater should be conducted (Appendix A and Appendix B). Although groundwater around the Kyger Creek NFAP is not sampled for boron, the Kyger Creek SFAP data suggest that boron is present in groundwater below both Kyger Creek fly ash ponds. Table 4-2 summarizes boron analytical results from two groundwater sampling events conducted in March/April and October 2024 at monitoring wells downgradient of the Kyger Creek SFAP (AGES 2025). The highest concentrations were observed on the northeastern and southeastern boundaries of the Kyger Creek SFAP. The northeastern boundary was interpreted to be downgradient from the Kyger Creek NFAP in 2020 (AGES 2021).

TABLE 4-2: KYGER CREEK SFAP BORON 2024 RESULTS

Analyte	Units	Maximum	Average
Boron	mg/L	16	7.98

Notes: mg/L = milligrams per liter; SFAP = South Fly Ash Pond.

The average concentration of boron (7.98 mg/L) in the Kyger Creek SFAP for 2024 is substantially higher than the maximum concentration of boron measured in groundwater beneath the BAP (2.7 mg/L) in spring 2025 from network wells. The Kyger Creek SFAP and the now-closed NFAP both contain fly ash generated at the Kyger Creek Generating Station. As such, it is reasonable to expect that the chemical characteristics of the fly ash are similar in both units. Given the elevated boron concentrations in groundwater downgradient of the Kyger Creek SFAP and considering that both units are unlined, elevated concentrations of boron in groundwater downgradient of the Kyger Creek NFAP would be expected. Thus, this evidence supports the conclusion that boron is present in groundwater at the alternate source, the Kyger Creek Generating Station.

4.2.2 SULFATE

Figure 4-7 depicts the distribution of sulfate in groundwater across the BAP monitoring well network and includes results from the four monitoring wells screened in the alluvial aquifer located around the Kyger Creek NFAP. The figure also depicts the location of three additional Kyger Creek monitoring wells on the western boundary of the NFAP that were not sampled for sulfate. Figure 4-7 also depicts the general horizontal flow path of sulfate from the northern boundary of the Kyger Creek NFAP under pumping conditions, along with the approximated extent of sulfate impacts from the Kyger Creek NFAP around the BAP. This plume is consistent with the 2024 average observed daily groundwater flow vector as depicted on Figure 3-6 and included within Figure 4-7 for reference, which is predominantly towards the northeast.

According to the December 2024 Kyger Creek Generating Station Closed North Fly Ash Pond Groundwater Semiannual Data Analysis (OVEC 2024; Appendix A), sulfate is present in wells surrounding the NFAP at concentrations exceeding those observed in groundwater around the BAP. In October 2024, sulfate was present in monitoring well KC-9507 (located to the southeast of NFAP) at 963 mg/L, in monitoring well KC-9502 (located to the northeast of the NFAP adjacent to the Gavin property boundary) at 356 mg/L, and in monitoring well KC-9504 (located to the southeast of NFAP) at 365 mg/L. Toxicity Characteristic Leaching Procedure (TCLP) data included with the Permit to Install for the Ohio Valley Electric-Kyger Creek Plant North Fly Ash Pond Closure Project indicate that fly ash produced at Kyger Creek Generating Station and placed in the NFAP had a sulfate concentration in leachate of 559 mg/L (OEPA 1996).

4.2.3 PH

The pH of groundwater emanating from the Kyger Creek NFAP was previously measured in well B-0904 and was historically slightly acidic (ERM 2018b). Acidic pH results of 5.49 and 5.76 were measured at B-0904 replicant well BAC-17 and Kyger Creek NFAP well KC-9502 (located at the northeast corner of Kyger Creek Generating Station property) in March 2025 and October 2024,

respectively (OVEC 2024; Appendix A). The low pH at KC-9502 has been observed since 1997 (Appendix A) and was identified by OEPA in 1998 (OEPA 1998; Appendix B). Table 4-3 summarizes the pH data in groundwater in sources around the BAP.

TABLE 4-3: GROUNDWATER AND SURFACE WATER PH VALUES

Location	pH (SU)
Kyger Creek NFAP: Upgradient BAP Groundwater (KC-9502; 22 October 2024)	5.76
BAP: Upgradient Groundwater – West (BAC-01, MW-1, and MW-6; March/April 2025)	6.84-7.48
BAP: Upgradient Groundwater – South (BAC-06, BAC-07, and BAC-17; March 2025)	5.49-6.83
BAP: Downgradient Groundwater (BAC-02 through BAC-05; March 2025)	5.93-6.27
BAP: Bedrock Groundwater (BAC-09, BAC-11, BAC-13, and BAC-19; March 2025)	7.16-7.80
Ohio River (April 2025)	7.98

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond; SU = Standard pH Units.

The spring 2025 results remain consistent with previous ASD Reports for the BAP (ERM 2018b; ERM 2019; ERM 2020; ERM 2021b; ERM 2022; ERM 2023; ERM 2024; ERM 2025). As shown in Figure 4-8, the distribution of pH and the northeastward flow direction demonstrate that low pH groundwater flows on-site from the Kyger Creek NFAP, where it mixes with upgradient alluvial groundwater, bedrock discharge, and water from the Ohio River, resulting in the intermediate pH observed in groundwater downgradient of the BAP. Monitoring wells BAC-06 and BAC-07 are not impacted to the same degree as BAC-17 by acidic groundwater migrating from the Kyger Creek NFAP, as evidenced by their higher pH. This is attributable to the well screens of BAC-06 and BAC-07 being substantially deeper than the well screens at B-0904 and BAC-17, lending to more influence by the regional discharge of groundwater from bedrock to the alluvial aquifer, as described further in Section 6.

5. LINKAGES OF CONSTITUENT CONCENTRATIONS AND DISTRIBUTIONS BETWEEN ALTERNATE SOURCES AND DOWNGRADIENT WELLS

5.1 REGIONAL BRINE

As discussed in Section 4.1, the concentrations of calcium, chloride, fluoride and TDS are significantly higher in bedrock groundwater compared to alluvial groundwater, in particular at bedrock monitoring well BAC-11. Table 5-1 demonstrates that the concentrations of calcium, chloride, fluoride, and TDS range from 7 to 532 times higher in bedrock compared to alluvial groundwater. Brine impacted bedrock groundwater is the alternate source of calcium, chloride, fluoride, and TDS. As described in Section 3.1, groundwater discharges from bedrock upward into the overlying alluvial aquifer (uppermost aquifer) under certain hydraulic conditions. The presence of higher concentrations of calcium, chloride, fluoride, and TDS establishes bedrock groundwater as the source, and the presence of upward hydraulic gradients and interconnected bedrock fractures is the linkage (i.e., the means to migrate) between the alternate source and downgradient wells.

TABLE 5-1: RATIO OF BEDROCK GROUNDWATER TO DOWNGRADIENT BAP GROUNDWATER FOR REGIONAL BRINE

Analyte	Units	Maximum Brine-Impacted Groundwater in Bedrock Beneath BAP (As measured at BAC-11/ BAC-13)	Average Downgradient Well at BAP	Bedrock to Alluvial Aquifer Ratio
Calcium	mg/L	2,600	116.4	22:1
Chloride	mg/L	27,000	50.75	532:1
Fluoride	mg/L	1.0	0.14	7:1
TDS	mg/L	31,000	602.5	51:1

Notes: BAP = Bottom Ash Pond; mg/L = milligrams per liter; TDS = total dissolved solids.
Results from samples collected in March/April 2025.

5.2 KYGER CREEK NORTH FLY ASH POND

As described in Section 3.3, the average direction of groundwater flow in the alluvial aquifer is generally to the northeast from the Kyger Creek NFAP underneath the BAP towards the water supply wells. Figures 4-5, 4-7, and 4-8 show the linkage between the alternate source and the downgradient monitoring wells for boron, sulfate, and low pH, respectively.

5.2.1 BORON AND SULFATE

The maximum boron concentration measured in onsite groundwater monitoring wells at the BAP was 4.0 mg/L at BAC-17 (Figure 4-5). The average boron concentration observed at the Kyger Creek SFAP in 2024 was 7.98 mg/L, with a maximum boron concentration reported to be 16 mg/L. Groundwater at the Kyger Creek NFAP is not analyzed for boron, but it is expected to have similar concentrations due to the same materials placed both at the Kyger Creek SFAP and the

NFAP. The maximum sulfate concentration measured in upgradient onsite groundwater monitoring wells along the southern boundary of the BAP was 190 mg/L at BAC-06 in spring 2025, while the maximum sulfate concentrations observed at the Kyger Creek NFAP in fall 2024 were 365 mg/L in well KC-9504 and 963 mg/L in well KC-9507 located in the southeast corner of the Kyger Creek NFAP (Figure 4-7). The ratio of the maximum Kyger Creek fly ash pond concentrations to the maximum downgradient BAP well is provided in Table 5-2. These ratios, and the predominance of pumping-influenced flow directions to the northeast, demonstrate the linkage between boron and sulfate observed in downgradient BAP wells and the Kyger Creek NFAP, the alternate source.

TABLE 5-2: RATIO OF KYGER CREEK GROUNDWATER TO DOWNGRADIENT BAP GROUNDWATER FOR BORON/SULFATE

		Maximum Concentration		Ratio: Kyger Creek Fly Ash Ponds to Downgradient BAP
Analyte	**Units**	**Kyger Creek NFAP/SFAP (2023)**	**Downgradient BAP Well (BAC-05/BAC-02)**	
Boron	mg/L	16	2.7	5.9:1
Sulfate	mg/L	963	330	2.9:1

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond; SFAP = South Fly Ash Pond; mg/L = milligrams per liter.
Results from Gavin samples collected in March 2025, Kyger Creek NFAP samples collected in October 2024, and Kyger Creek SFAP samples collected in 2023/2024.

5.2.2 PH

Table 5-3 summarizes the range of pH values measured at the Kyger Creek NFAP, the BAP and the Ohio River. The observed pH SSIs at the BAP were below the lower prediction limit of 6.63, which was derived based on background data from MW-1, BAC-01 and MW-6. BAP background groundwater, BAP bedrock groundwater, and water from the Ohio River all have relatively neutral to slightly alkaline pH. Groundwater migrating from Kyger Creek NFAP has an acidic pH, as confirmed by the October 2024 pH measurement of 5.76 at monitoring well KC-9502, which is located approximately 150 feet south of the BAP. As discussed in Section 4.2.3, the low pH at KC-9502 has been observed since 1997 and was identified by OEPA in 1998 (Appendix B). As discussed in Section 3, groundwater migrating northward from the Kyger Creek NFAP mixes with upgradient groundwater migrating from the west and can mix with Ohio River water during high river stage conditions. This mixing of neutral to slightly alkaline waters from background sources and acidic waters migrating northward from the Kyger Creek NFAP causes groundwater at the downgradient BAP wells to become slightly acidic. These observations demonstrate the linkage between low pH groundwater observed in downgradient BAP wells and low pH groundwater from the Kyger Creek NFAP, the alternate source.

TABLE 5-3: COMPARISON OF BEDROCK, KYGER CREEK NFAP, AND DOWNGRADIENT BAP GROUNDWATER FOR PH

Analyte	Units	Lowest Measured		Upgradient Wells West of BAP	Bedrock Wells	Ohio River	Downgradient BAP Wells (Mixing Area)
		Onsite BAP Well (BAC-03)	Kyger Creek NFAP (KC-9502)				
pH	SU	5.93	5.76	6.84-7.48	7.16-7.80	7.98	5.93-6.27

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond; SU = Standard pH Units.
Results from Gavin samples collected in March/April 2025, Kyger Creek NFAP samples collected in October 2024, and Ohio River sample collected March/April 2025.

6. DATA INDICATES THAT THE BAP IS NOT THE SOURCE

6.1 EVALUATION OF POTENTIAL GROUNDWATER MOUNDING AT THE BAP

From August 2022 through November 2023, programmable electronic data loggers equipped with a pressure-sensitive water level transducer were installed at four pairs of alluvial aquifer monitoring wells (eight monitoring wells) at the southern, western, northern, and eastern boundaries of the BAP to evaluate the potential for groundwater mounding. These monitoring well pairs were chosen based on their proximity to one another, and to the BAP. Each well pair included a well directly adjacent to the BAP, and the other located approximately 150-250 ft away from the BAP, which allowed for the evaluation of hydraulic heads and resulting hydraulic gradients between each couplet. A signature of mounding would be identified by consistently higher potentiometric elevations at the well located closer to the BAP compared to its counterpart located further from the BAP. The four well couplet pairs included the following:

- BAC-01 (further from BAP) and BAC-08 (closer to BAP), installed at the western boundary of the BAP;
- BAC-10 (further from BAP) and BAC-02 (closer to BAP), installed at the northern boundary of the BAP;
- BAC-12 (further from BAP) and BAC-04 (closer to BAP), installed at the eastern boundary of the BAP; and
- BAC-16 (further from BAP) and BAC-18 (closer to BAP), installed at the southern boundary of the BAP.

Mounding was not observed at the BAP (ERM 2024). The potentiometric elevation at the northern boundary of the BAP is largely controlled by the operation of the pumping wells located north of the BAP. Well BAC-10 is located closer to the pumping wells and typically has a lower potentiometric surface during times of pumping. This signature is consistent with greater drawdown at BAC-10 because it is closer to the water supply wells than BAC-02 and is not a result of mounding at the northern boundary at the BAP. At the eastern, southern, and western boundaries of the BAP, potentiometric elevations in the wells located further from the BAP were consistently very similar to or higher than the potentiometric elevations in the wells located closer to the BAP. These observations are not consistent with mounding at the BAP.

Dewatering activities at the BAP began the week of March 20, 2023 and continued through May 31, 2023. After this date, the BAP was considered drained and has not contained appreciable quantities of water, making mounding unlikely under the current conditions. The lack of evidence for groundwater mounding at the BAP supports the conclusion that the BAP is not the source of the SSIs.

6.2 OBSERVED BORON CONCENTRATIONS

Surface water samples at the BAP and Reclaim Pond were collected during each groundwater sampling event between 2016 and 2022. Prior to dewatering of the BAP, boron was consistently detected in surface water at 0.50 mg/L or lower, except for one event in 2019 when boron was measured at 1.30 mg/L. Table 6-1 compares the boron concentrations measured in surface water

and monitoring wells. Based on this data, the boron concentration in the BAP surface water was too low to be the source of boron to the downgradient BAP wells. In contrast, groundwater flowing towards the BAP from under the Kyger Creek NFAP has consistently had a boron concentration higher than what is detected in downgradient groundwater. The average concentration at B-0904 from March 2018 to March 2020 was 3.95 mg/L, and BAC-17 had an average boron concentration of 3.89 mg/L from October 2022 to March 2025, making the Kyger Creek NFAP the most likely source.

Boron in the environment typically exists as boric acid or the borate ion. Both species are water-soluble and are not sensitive to redox conditions. Although adsorption/desorption reactions occur, adsorption is strongest in slightly-to-moderately basic conditions (pH 7.5-10), which are not observed in alluvial groundwater around the BAP (ATSDR 2010). Therefore, it is not likely that oxidizing conditions present in surface water would impact boron concentrations in the BAP, nor is it likely that adsorption/desorption processes are significantly impacting the concentrations of boron in groundwater surrounding the BAP. Boron is expected to act as a conservative tracer due to its high solubility and mobility in groundwater.

TABLE 6-1: BAP BORON RESULTS

Analyte	Units	Bottom Ash Pond[a]	Reclaim Pond[a]	Downgradient BAP Wells[b]
Boron	mg/L	0.44	0.51	2.2

[a] Average sample results from February 2018 to October 2022.
[b] Average sample results from BAC-02, BAC-03, BAC-04, and BAC-05 in March 2025.

6.3 LEACHING DATA

Based on leaching testing performed on bottom ash from the BAP, the CCR material present in the BAP does not yield concentrations of Appendix III parameters above background (or below background in the case of pH). Therefore, the BAP does not constitute a source of impact to groundwater.

Gavin collected composite bottom ash samples annually from the BAP. These samples were extracted by modified TCLP following method ASTM D3987 to evaluate the leaching potential of bottom ash material from the BAP. A summary of the results is included in Table 6-2, including minimum, maximum, and average leachate concentrations for the bottom ash samples from 2016 to 2023. Table 6-2 also includes applicable LPL and UPL values derived for the BAP Appendix III parameters, as well as the average of 11 samples collected from monitoring well BAC-21, located west of the BAP to represent groundwater quality hydraulically upgradient and distant from the BAP.

TABLE 6-2: BAP TCLP RESULTS

Appendix III Parameter	Units	App III LPL	App III UPL	BAC-21 (Avg)	Gavin Modified TCLP			
					n	Min	Max	Avg
Fluoride	mg/L	-	0.161	0.08	8	<0.01	0.059	0.053
Chloride	mg/L	-	24.7	66.8	8	0.174	0.91	0.621
Sulfate	mg/L	-	140	123.8	8	2.1	42	10
TDS	mg/L	-	505	520	8	<10.0	56	29
pH	SU	6.63	7.22	6.82	8	6.5	9.7	8.02
Calcium	mg/L	-	123.7	126.2	4	3	12	6.1
Boron	mg/L	-	0.177	0.35	4	<0.1	<0.1	<0.1

Notes: n = number of samples available from 2016 to 2023; < = not detected at the listed reporting limit; SU = standard units.

These results indicate that the Appendix III parameters do not leach from Gavin bottom ash at concentrations above the Appendix III UPLs. We note that the pH SSI is for pH levels lower than the LPL, so the fact that the average pH level in the TCLP results is not only above the LPL but also above the UPL is further indication that the BAP is not the source of the low pH SSI. Leaching results are generally lower than background groundwater observed west of the BAP. Accordingly, concentrations observed in downgradient wells must be caused by a source other than the BAP.

6.4 CHEMICAL FINGERPRINTS

The geochemical fingerprints of surface water from the BAP, upgradient groundwater west of the BAP, groundwater flowing from the Kyger Creek NFAP, and surface water from the Ohio River were evaluated using the concentrations of parameters that are not expected to sorb strongly or participate in redox reactions. Boron, chloride, and potassium were chosen for these comparisons due to their higher water solubility, limited redox chemistry, and presence in groundwater around the BAP. Boron-chloride and boron-potassium plots are shown in Figure 6-1 and Figure 6-2, respectively.

The samples presented on the concentration plots were collected from 2016 through 2025. The primary observations based on the concentration plots (Figures 6-1 and 6-2) are the following:

- Multiple samples collected from a single location (e.g., the Ohio River or Well BAC-01) tended to be tightly clustered, indicating that the chemical signatures of individual locations were consistent over time.
- Monitoring wells collected from a similar environment (e.g., upgradient wells located west of the BAP) tended to have similar concentrations and plot near each other.
- Groundwater from BAP upgradient wells MW-1, BAC-01, and MW-6 has a unique signature with relatively low boron, chloride, and potassium. The Ohio River has similar concentrations of boron and chloride but generally has a higher concentration of potassium.
- Groundwater migrating from the Kyger Creek NFAP is sampled at monitoring wells B-0904 and BAC-17, which was installed to replace B-0904. Concentrations of boron, chloride, and potassium at these wells are similar. These wells are characterized by high boron and low chloride and potassium.

- Groundwater from BAP downgradient wells BAC-02, BAC-03, BAC-04, and BAC-05 has a signature similar to groundwater migrating onto Gavin from the Kyger Creek NFAP (B-0904 and BAC-17). BAC-05, which is located closest to the Kyger Creek NFAP, plots closest to the Kyger Creek NFAP groundwater, followed by BAC-04, BAC-03, and BAC-02, respectively. This is consistent with their distance from the Kyger Creek NFAP. Groundwater at these wells is characterized by high boron, with elevated chloride and potassium relative to Kyger Creek NFAP groundwater due to the influence of bedrock groundwater. Supplemental monitoring wells BAC-12 and BAC-14 have chemical fingerprints consistent with other BAP downgradient wells.
- Groundwater from monitoring wells BAC-06 and BAC-07 shows a distinct signature with similar concentrations of chloride and potassium to Kyger Creek NFAP groundwater, with lower but still elevated concentrations of boron. These wells are screened at a deeper interval than B-0904 and BAC-17, indicating that the boron plume flowing from the Kyger Creek NFAP is primarily located in the upper part of the alluvial aquifer.
- Groundwater from supplemental bedrock wells BAC-09, BAC-11, BAC-13, and BAC-19 has a unique signature with moderate concentrations of boron (comparable to those observed at some upgradient locations) and very high chloride. Chloride concentrations are up to three orders of magnitude higher in bedrock groundwater than in alluvial background groundwater, which is consistent with the interpretation of brine influencing Cow Run groundwater quality.
- Groundwater from supplemental upgradient monitoring wells located farther to west/northwest (BAC-21, BAC-22, and BAC-23) has a signature similar to the network upgradient wells (MW-1, BAC-01 and MW-6), but with slightly higher boron and potassium.
- Groundwater from supplemental separation layer monitoring well BAC-15 has a distinct signature characterized by moderate boron and potassium and very low chloride. This well has limited connectivity to surrounding groundwater due to the low hydraulic conductivity of the separation layer.
- BAP surface water through 2023 had a signature distinct from downgradient groundwater, characterized by moderate boron and chloride, with potassium concentrations higher than both upgradient and downgradient groundwater.

Based on the data summarized above and the chemical fingerprints of the groundwater at issue, the BAP is not the source of the SSIs.

7. ALTERNATE SOURCE DATA ARE HISTORICALLY CONSISTENT WITH HYDROGEOLOGIC CONDITIONS AND FINDINGS OF THE MONITORING PROGRAM

7.1 REGIONAL BRINE

The existence of Regional Brine in the area surrounding the plant is supported by historical studies and data. Regional groundwater flow regimes through fractured bedrock upgradient of the BAP were established after the last deglaciation, which occurred approximately 14,000 years ago (Hansen 2017). Enhancement of transmissivity in the Ohio River Valley from stress-relief fracturing in bedrock provides conditions for bedrock to be interconnected to coarse glacial outwash alluvial deposits (USGS 1981; USGS, 1997). Regional groundwater within the fractured sedimentary bedrock in the Ohio River Valley generally flows from areas of higher topographic elevation towards areas of lower elevation, ultimately discharging to the Ohio River (ORSANCO 1984). Assuming a conservatively high effective porosity of 1 percent, estimated groundwater velocity values for the Morgantown Sandstone and Cow Run Sandstone units are approximately 77 to 79 feet per year and 31 to 32 feet per year, respectively. These flow rates would allow ample time for groundwater to migrate from upgradient regional background sources to Plant property. The data supporting these conclusions are historically consistent with hydrogeologic conditions and findings of the BAP monitoring program.

The discharge of brines is seen at a regional scale along the Ohio River with shallow wells near the Ohio River observing saltwater impacts; whereas, further from the Ohio River shallow wells report little to no brine impacts (USGS 1997). At the site, upward gradients between bedrock and alluvial wells near the Ohio River have been observed, and locations with the strongest observed upward gradients generally have high hydraulic conductivities, which supports the conclusion that bedrock and alluvial aquifers are hydraulically connected on-site. Additionally, the influence of pumping conditions further contributes to upward vertical gradients, as described in previous sections. TDS concentrations observed in bedrock wells around the BAP are consistent with observations seen at brine-freshwater mixing zones at other brine-impacted sites (Yager et al. 2017). The regional and site-specific data are in strong agreement and support the conclusion that regional brines are discharging under the BAP and mixing with alluvial groundwater underneath the BAP.

7.2 KYGER CREEK NORTH FLY ASH POND

The Kyger Creek NFAP was constructed in 1955 on a native soil base and without an engineered liner system to capture and contain leachate. The unit was used to manage fly ash until it was drained and closed from 1998 to 2000. However, despite closure, ash is still present within the Kyger Creek NFAP (AEP 1994). The NFAP was capped with boiler slag and clay but did not include synthetic materials that would be more likely to prevent infiltration of precipitation, subsequent migration of water through highly leachable CCR materials in the subsurface and resulting recharge of sulfate and boron-impacted water to the alluvial aquifer. Approximately 900,000 cubic yards of boiler slag and boiler slag fines were also used as surface fill and as material to build berms. Both materials yielded low pH samples during leachability testing (OEPA 1996).

Groundwater in the alluvial aquifer flows from the Kyger Creek NFAP in a northeasterly direction toward the BAP. Given the six decades that this unit has contained fly ash and the alluvial aquifer groundwater velocity estimates of 130 to 200 feet per year, ample time has passed for groundwater to migrate from the Kyger Creek NFAP beneath the BAP. The following evidence therefore supports that the Kyger Creek NFAP is the alternate source of boron, sulfate, and low pH.

- The low concentration of boron in water from the BAP compared to the higher concentrations of boron in groundwater beneath the BAP (Section 4 and Section 6).
- Analytical results from groundwater samples collected for the Kyger Creek NFAP and SFAP suggest boron and sulfate are present in Kyger Creek groundwater and groundwater has an acidic pH. Given the similarity in construction and types of CCR managed, it is reasonable to interpret Kyger Creek SFAP groundwater results for boron are also representative of Kyger Creek NFAP groundwater quality (Section 4).
- TCLP data indicates that material placed in the Kyger Creek NFAP leaches high sulfate and low pH, while bottom ash from the BAP leaches low sulfate, low boron, and near-neutral pH.
- The chemical fingerprinting evidence suggests groundwater from the Kyger Creek NFAP mixes with upgradient groundwater from west of the BAP, groundwater discharging from the bedrock, and water from the Ohio River water under the eastern portion of the BAP (Section 6).
- The OEPA has concluded that groundwater appears to be impacted by a release (i.e., elevated conductivity, sulfate, TDS, and low pH) from the Kyger Creek NFAP (Appendix A and Appendix B).

A comparison of the materials managed in the BAP provides evidence that the BAP is not the source of boron and that the Kyger Creek NFAP is a more likely source of boron. The Kyger Creek NFAP has contained fly ash since 1955, while the BAP has been used primarily for the management of bottom ash since 1974. Bottom ash and fly ash have different physical and chemical properties; laboratory investigations have demonstrated elements (including Appendix III constituents) have a much greater potential to leach from fly ash compared to bottom ash (Cox et al. 1978; Jones et al. 2012). The higher concentrations of boron observed in Kyger Creek SFAP groundwater compared to the lower concentration of boron observed in groundwater downgradient of the BAP are consistent with the known leaching properties of fly ash and bottom ash. Boron, therefore, is more likely to leach from the Kyger Creek SFAP/NFAP than the BAP based on the historical use of each unit. These observations support the conclusion that the Kyger Creek NFAP, and not the BAP, is the source of boron in groundwater under the BAP. Thus, the data supporting these conclusions are historically consistent with hydrogeologic conditions and findings of the BAP monitoring program.

8. CONCLUSIONS

The SSIs identified in this ASD Report are based on results from downgradient BAP monitoring well samples collected in March/April 2025. Review of data for quality assurance and statistical comparison was completed on June 4, 2025. In response to the SSIs, this ASD Report was prepared and certified by September 2, 2025, within the required 90-day period, in accordance with 40 CFR § 257.94(e)(2).

SSIs in the downgradient BAP monitoring wells have been determined to result from alternate sources based on analysis of the gathered data: discharge of regional brine present in bedrock and the Kyger Creek Power Plant NFAP. Table 8-1 summarizes the six lines of evidence for each of the SSIs.

In conclusion, the BAP is not the source of the SSIs associated with the first semiannual sampling event groundwater results for 2025. Thus, Gavin will continue detection monitoring at the BAP in accordance with 40 CFR § 257.94(e)(2).

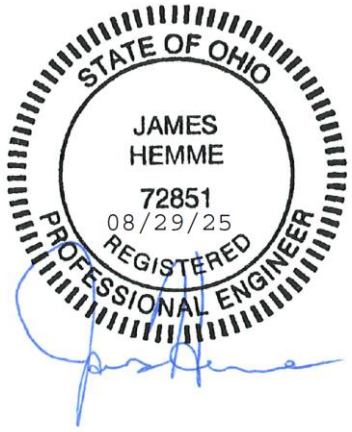
TABLE 8-1: BAP ASD SUMMARY

Analyte	SSI Location	Six Lines of Evidence from USEPA Guidance					
		Alternate Source	Hydraulic Connection	Constituent Present at Source or along Flow Path	Constituent Distribution More Strongly Linked to Alternate Source	Constituent Could Not Have Resulted from the BAP	Data Are Historically Consistent with Hydrogeologic Conditions
Boron	BAC-02 BAC-03 BAC-04 BAC-05	Kyger Creek NFAP	X	X	X	X	X
Calcium	BAC-02	Regional Brine	X	X	X	X	X
Chloride	BAC-02 BAC-03 BAC-04 BAC-05	Regional Brine	X	X	X	X	X
Fluoride	BAC-02 BAC-05	Regional Brine	X	X	X	X	X
pH	BAC-02 BAC-03 BAC-04 BAC-05	Kyger Creek NFAP	X	X	X	X	X
Sulfate	BAC-02 BAC-03 BAC-04 BAC-05	Kyger Creek NFAP	X	X	X	X	X
TDS	BAC-02 BAC-03 BAC-04 BAC-05	Regional Brine	X	X	X	X	X

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond; SSI = statistically significant increase; TDS = total dissolved solids; USEPA = United States Environmental Protection Agency.

9. PROFESSIONAL ENGINEER CERTIFICATION

I hereby certify that I, or an agent under my review, have prepared this Alternate Source Demonstration Report for the Bottom Ash Pond and it meets the requirements of 40 CFR § 257.94(e)(2). To the best of my knowledge, the information contained in this Report is true, complete, and accurate.



James A. Hemme, P.E.
State of Ohio License No.: 72851

Date: 8/29/2025

10. REFERENCES

AEP (American Electric Power Service Corporation). 1994. Hydrogeologic Site Investigation Work Plan for the Proposed North Fly Ash Pond Closure, Kyger Creek Station, Ohio Valley Electric Corporation, Gallia County, Ohio. Prepared by American Electric Power Service Corporation.

AEP. 2016. *History of Construction, CFR 257.73(c)(1) South Fly Ash Pond*, Kyger Creek Station, Ohio Valley Electric Corporation, Gallia County, Ohio.

AGES (Applied Geology and Environmental Science, Inc.). 2021. *Coal Combustion Residual Regulation 2020 Groundwater Monitoring and Corrective Action Report, Ohio Valley Electric Corporation, Kyger Creek Station*. Prepared for Ohio Valley Electric Corporation.

AGES. 2025. *Coal Combustion Residual Regulation 2024 Groundwater Monitoring and Corrective Action Report, Ohio Valley Electric Corporation, Kyger Creek Station*. Prepared for Ohio Valley Electric Corporation.

ATSDR (Agency for Toxic Substances and Disease Registry). 2010. *Toxicological profile for Boron*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

CHA. 2010. *Assessment of Dam Safety of Coal Combustion Surface Impoundments (Task 3) Final Report,* Ohio Valley Electric Corporation, Kyger Creek Power Station, Gallipolis, Ohio. Prepared for Lockheed Martin, Edison, New Jersey.

Cox, J.A., G.L. Lundquist, A. Przyjazny, and C.D. Schmulbach. 1978. "Leaching of Boron from Coal Ash"*. Environmental Science and Technology*, Vol. 12, No. 6: 72–723.

ERM (ERM Consulting & Engineering, Inc.). 2017. *Groundwater Monitoring Plan. Bottom Ash Complex, Fly Ash Reservoir, and Residual Waste Landfill*. Gavin Plant, Cheshire, Ohio.

ERM. 2018a. *2017 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2018b. *Gavin Bottom Ash Complex Alternate Source Demonstration.* Gavin Plant, Cheshire, Ohio.

ERM. 2019. *2018 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2020. *2019 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2021a. *Updated Groundwater Monitoring System Evaluation and Certification-40 CFR 257.91, Gavin Bottom Ash Pond.* Gavin Plant, Cheshire, Ohio.

ERM. 2021b. *2020 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2021c. *Gavin Bottom Ash Pond Investigation*. Gavin Plant, Cheshire, Ohio.

ERM. 2022. *2021 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2023. *2022 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2024. *2023 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2025. *2024 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

Gavin (Gavin Power, LLC). 2022. *Comments of Gavin Power, LLC on EPA's Proposed Denial of Alternative Closure Deadline for General James M. Gavin Plant*. Cheshire, OH. https://www.regulations.gov/comment/EPA-HQ-OLEM-2021-0590-0076

Hansen. 2017. *The Ice Age in Ohio*. Education Leaflet No. 7, Revised Edition 2017. Columbus, Ohio: Ohio Department of Natural Resources, Division of Geological Survey.

Jones, K.B., L.F. Rupert, and S.M. Swanson. 2012. "Leaching of Elements from Bottom Ash, Economizer Fly Ash, and Fly Ash from Two Coal-Fired Power Plants". *International Journal of Coal Geology*, Vol. 94: 337–348. 1 May 2012.

ODNR (Ohio Department of Natural Resources). 1995. *GeoFacts No. 7. The Scioto Saline—Ohio's Early Salt Industry.* Ohio Department of Natural Resources, Division of Geological Survey.

OEPA (Ohio Environmental Protection Agency). 1996. *Division of Surface Water Report on the Combined Application for Permit to Install for the Ohio Valley Electric-Kyger Creek Plant North Fly Ash Pond Closure Project, Cheshire, Gallia County, Ohio*, PTI 06-4916. Southeast District Office – December 5, 1996.

Ohio River Valley Water Sanitation Commission (ORSANCO). 1984. *A Primer on Groundwater Resources in the Compact of the Ohio River Basin.* Cincinnati, Ohio: ORSANCO.

ORSANCO. 2018. *River Facts*. Cincinnati, Ohio. http://www.orsanco.org/river-facts/

Ohio Valley Electric Corporation (OVEC). 2017. Alteration Request – North Fly Ash Pond Permit to Install. December 4, 2017.

OVEC. 2024. *Ohio Valley Electric Corporation Kyger Creek Station- Closed North Fly Ash Pond Groundwater Semiannual Data Analysis*, dated 12/6/2024.

Phalen, W.C. 1919. Salt Resources of the United States. USGS Bulletin 669.

Stout, W., R.E. Lamborn, and Schaaf Downs. 1932. "Brines of Ohio". *Fourth Series, Bulletin 37*. Columbus, Ohio: Geological Survey of Ohio.

USEPA (United States Environmental Protection Agency). 1993. *The Solid Waste Disposal Facility Criteria Technical Manual, EPA530-R-93-017, Subpart E*. Washington, D.C: USEPA.

USEPA. 2021. EPA On-line Tools for Site Assessment Calculation. https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/gradient4plus-ns.html.

USEPA. 2022. Proposed Denial of Alternative Closure Deadline for General James M. Gavin Plant, EPA-HQ-OLEM-2021-0590. Washington, D.C: USEPA.

USGS (United States Geologic Survey). 1981. Hydrologic Effects of Stress-Relief Fracturing in an Appalachian Valley. Paper 2177.

USGS. 1997. Ground-Water Hydrology of the Area Bordering the Ohio River Between Chester and Waverly, West Virginia. Report 95-710.

USGS. 2019. Specific Conductance, from Chapter 6.3 of Section A, National Field Manual for the Collection of Water-Quality Data; Book 9, Handbooks for Water-Resources Investigations, revised February.

Yager, R.M., McCoy, K. J., Voss, C. I., Sandford, W. E., and Winston, R. B. 2017. "The Role of Uplift and Erosion in the Persistence of Saline Groundwater in the Shallow Subsurface". Geophys. Res. Lett., Vol. 4, 3672-3681

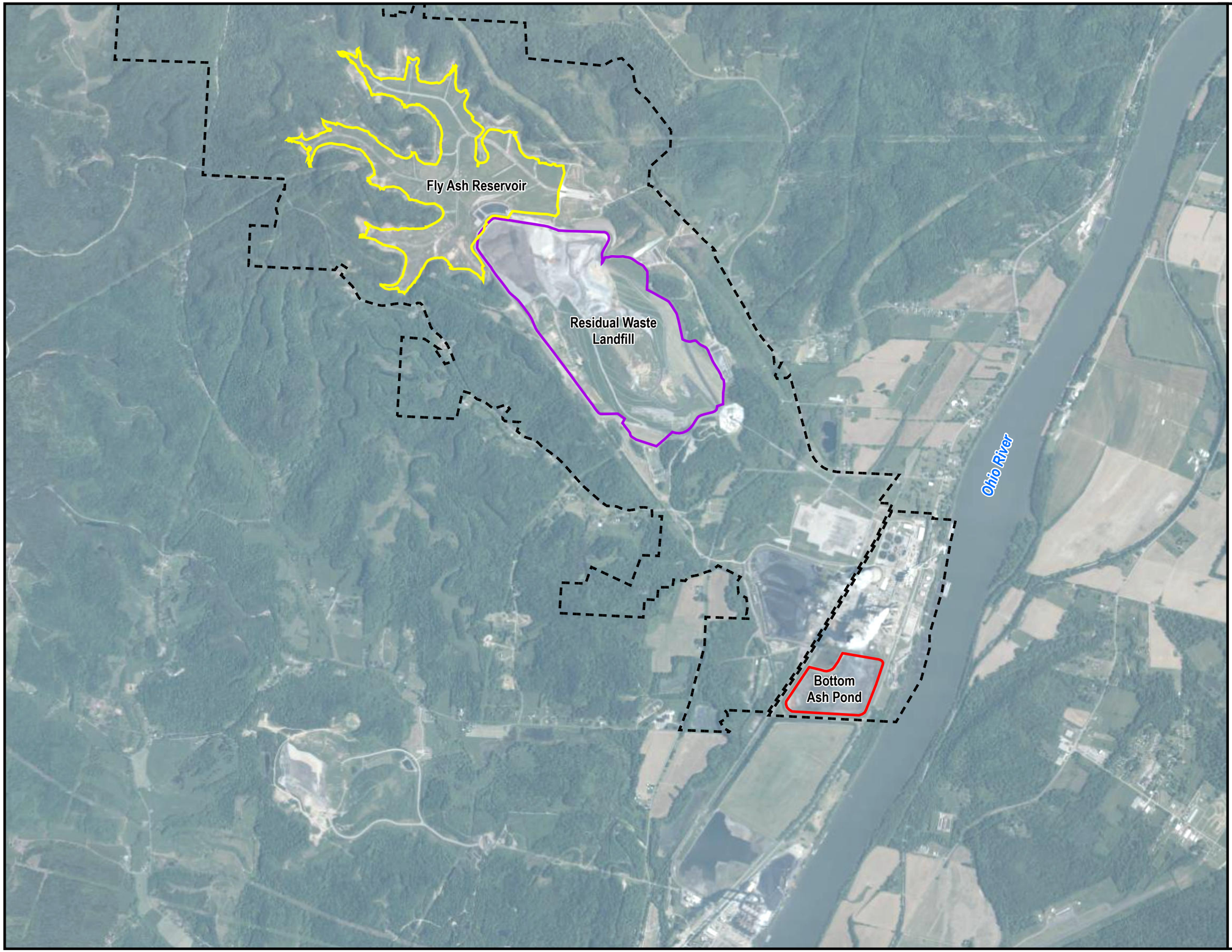
FIGURES

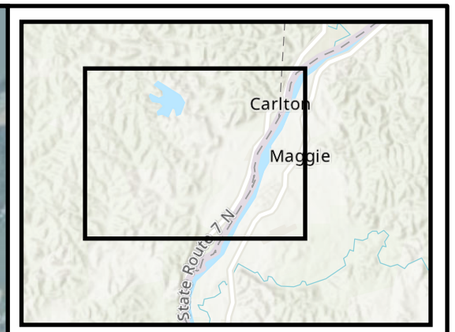


Figure 1-1: Gavin Plant Location
Gavin Generating Station
Cheshire, Ohio

ERM

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Legend

- Fly Ash Reservoir
- Residual Waste Landfill
- Bottom Ash Pond
- Property Boundary

NOTES:

1. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

N

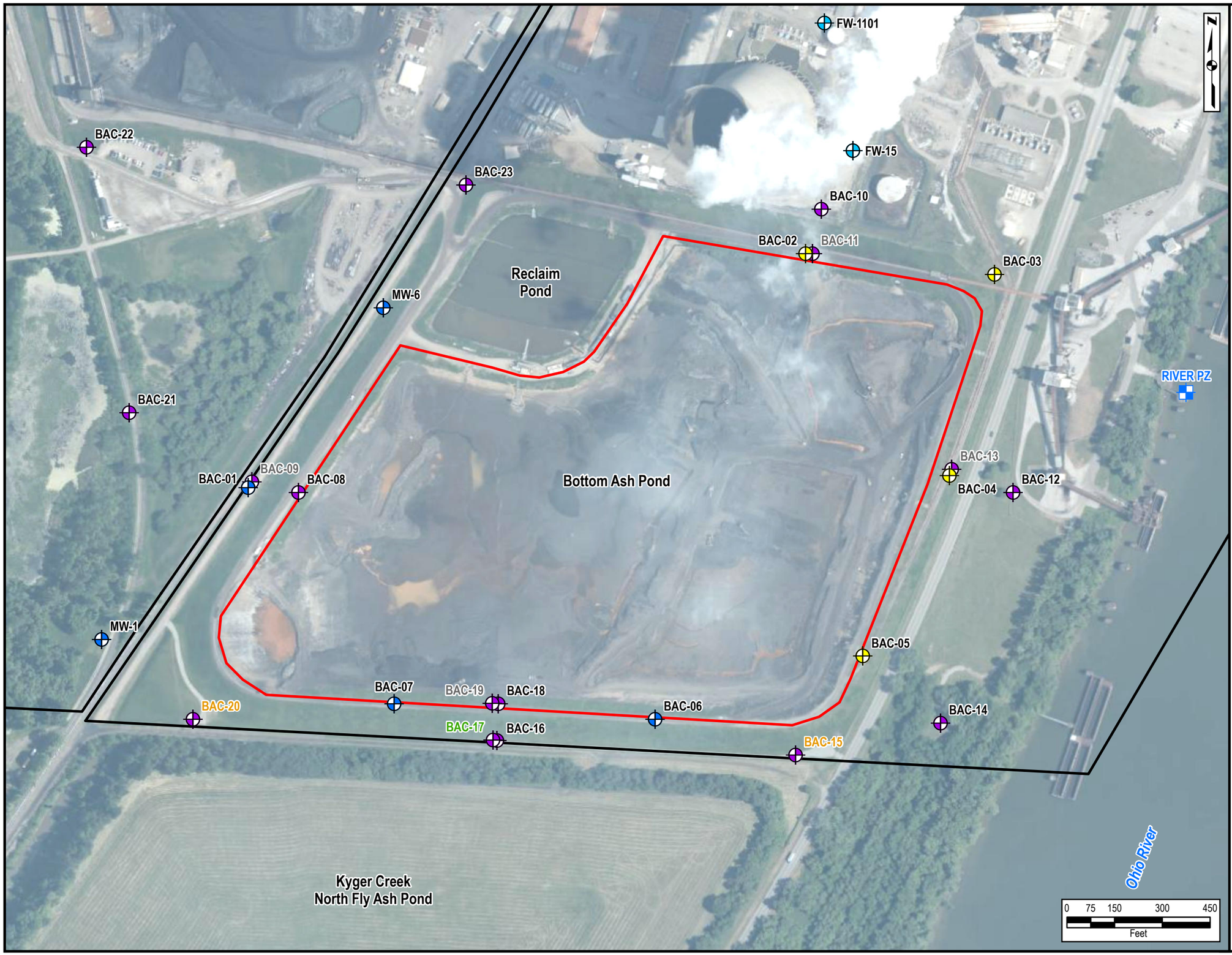
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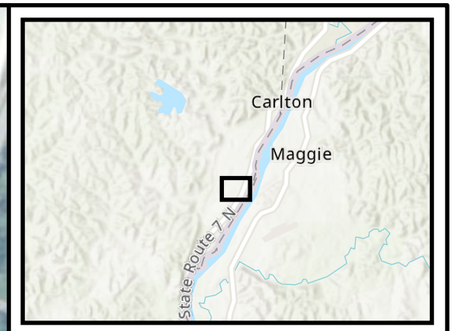
Feet

Figure 1-2: Former Bottom Ash Pond Location
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM

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Legend

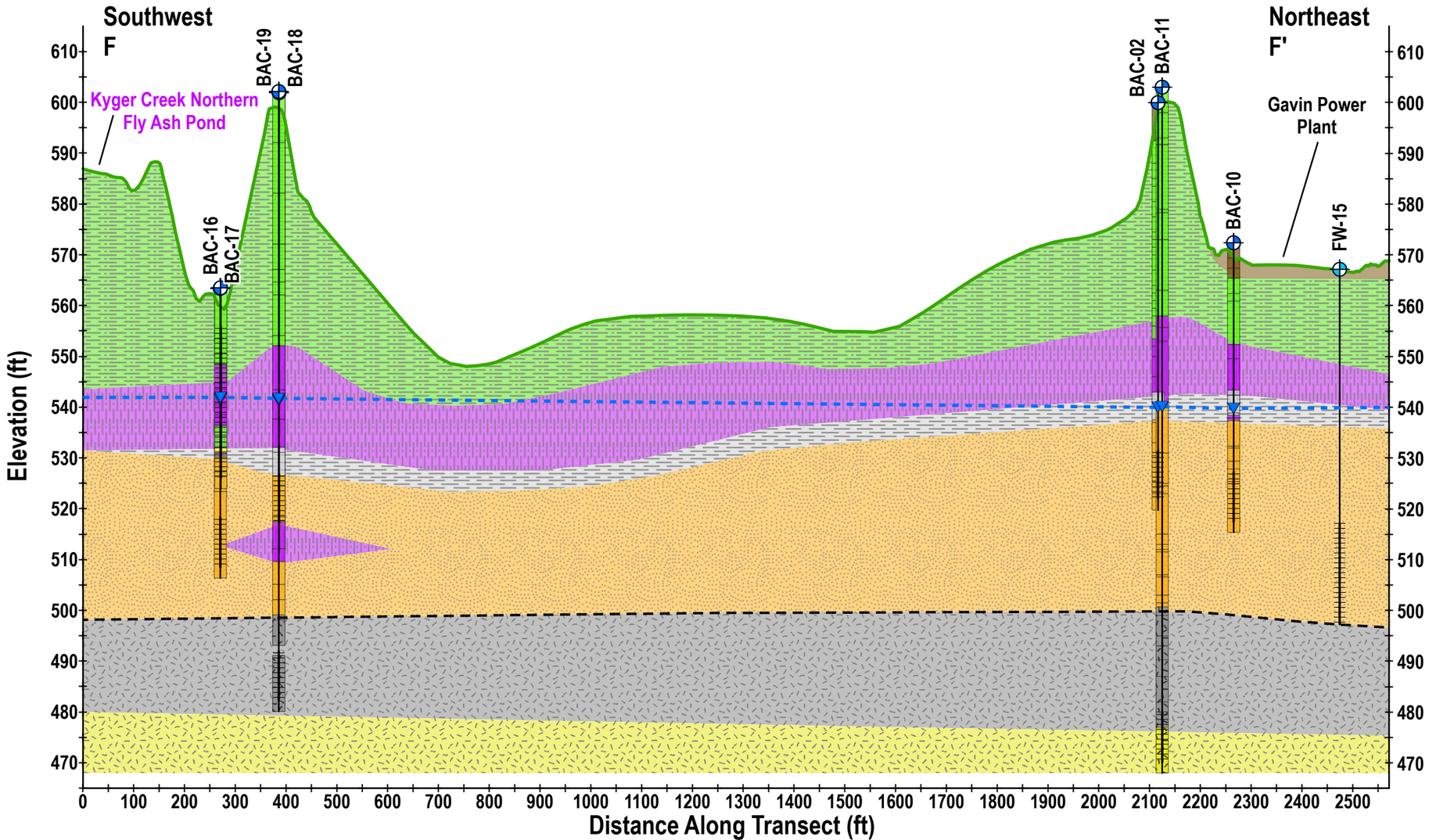
- 2022 Monitoring Well (Not in Federal Program)
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Water Supply Well
- Piezometer
- BAC Alluvium Well
- BAC Silt and Clay/Alluvium Well
- BAC Silt and Clay Well
- BAC Bedrock Well
- Approximate location of Bottom Ash Pond boundary
- Gavin Property Boundary

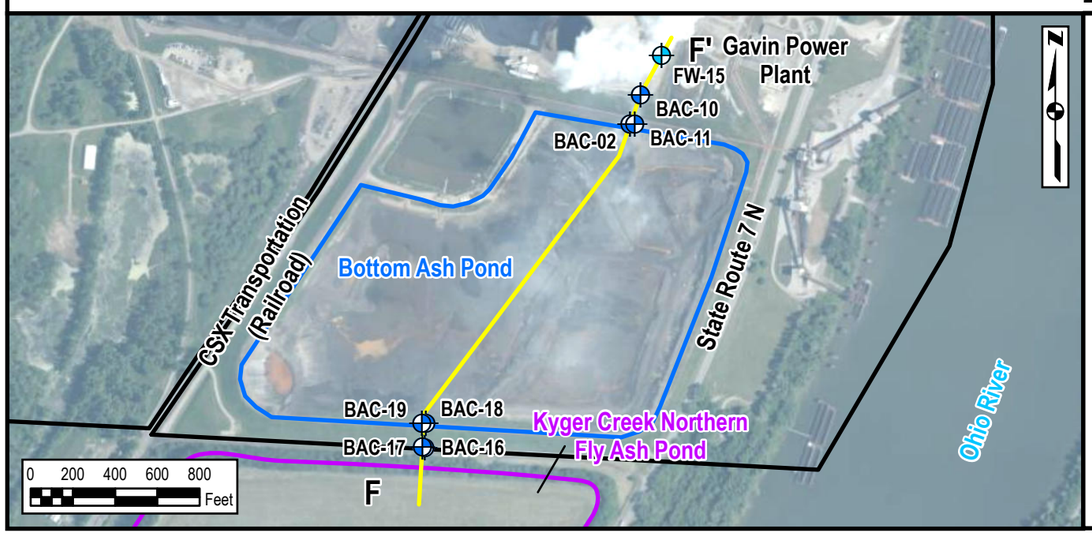
NOTES:

1. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 1-3: Bottom Ash Pond Monitoring Well Network
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM





Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Generalized Lithology

- Road Material
- Clay and Silt — Separation Layer
- Sandy Clay and Silt — Separation Layer
- Sand and Clay
- Sand and Gravel — Alluvial Aquifer
- Sand — Alluvial Aquifer
- Claystone/Siltstone — Bedrock Units
- Sandstone — Bedrock Units

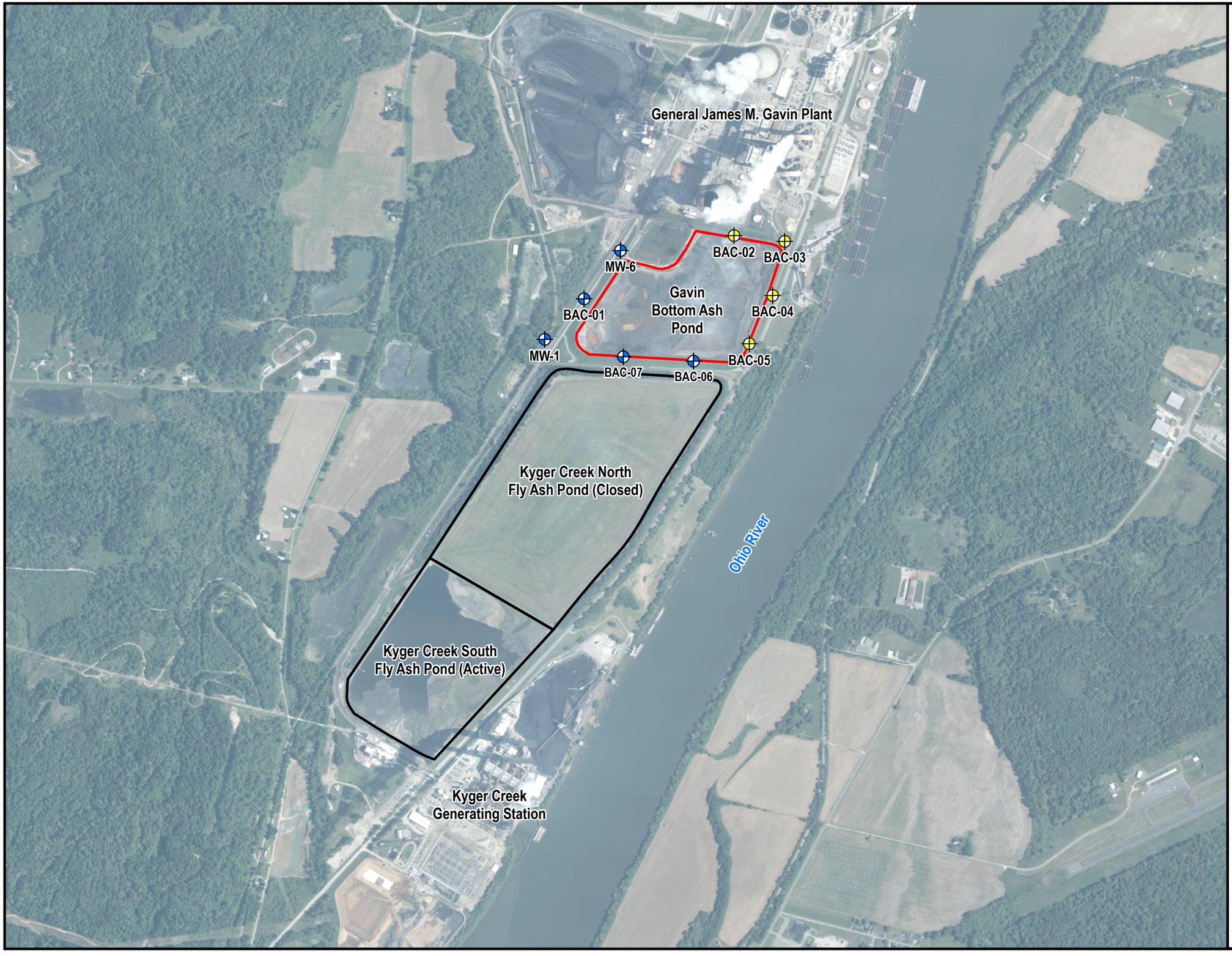
Figure 1-4: Bottom Ash Pond Cross Section
Gavin Power, LLC
Cheshire, Ohio

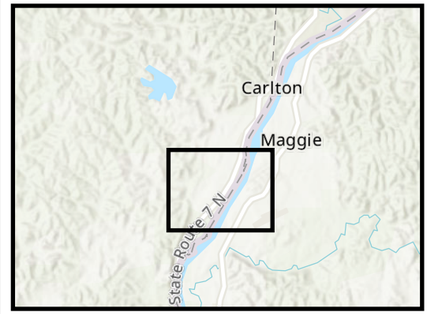
NOTES:

1. Potentiometric elevations from 02/24/25.
2. Surface profile from OGRIP LiDAR 2020.
3. Elevation is exaggerated 10X.
4. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
5. The geology is generalized based on the lithology descriptions.
6. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

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Legend

- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Gavin Bottom Ash Pond
- Kyger Creek Fly Ash Ponds

NOTES:

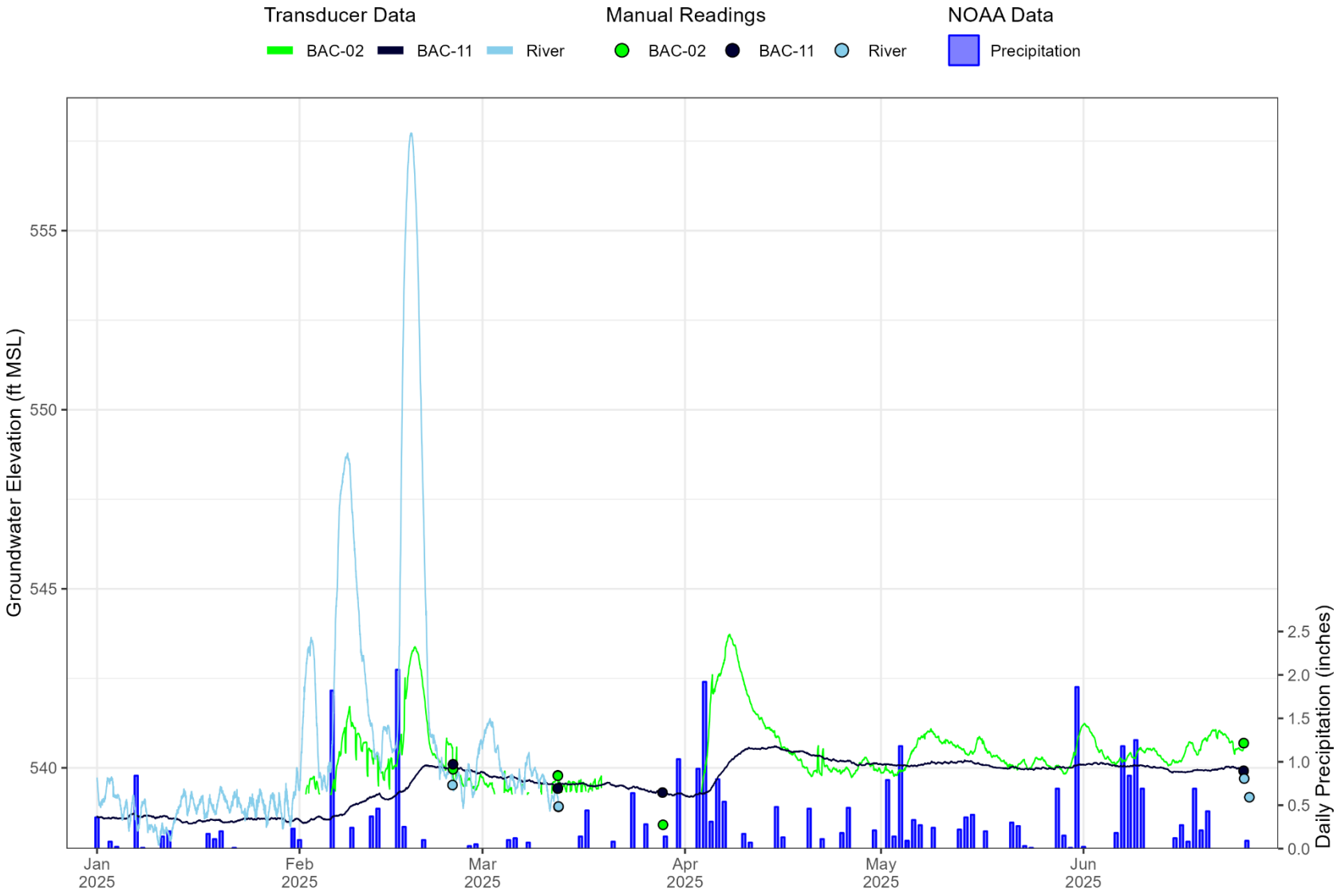
1. Kyger Creek features are from AEP. 1994. Hydrogeologic Site Investigation Plan for the Proposed North Fly Ash Pond Closure, Kyger Creek Station, Ohio Valley Electric Corporation, Gallia County, Ohio.
2. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

N

0 300 600 1,200 1,800
Feet

Figure 2-1: Kyger Creek Generating Station Location
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM

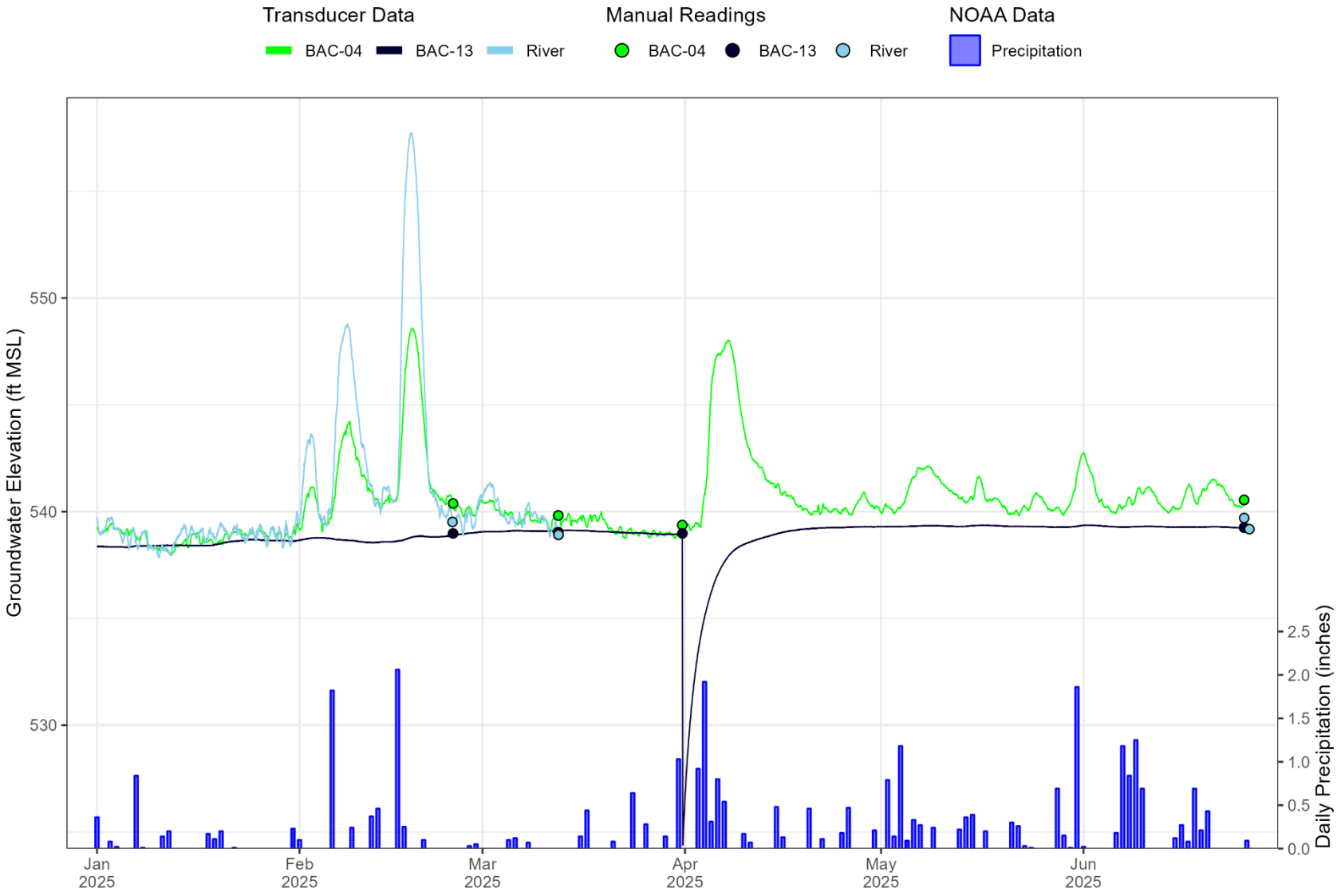


Notes:
1.) River data from on-site stilling well
2.) Transducer reading frequency was set to 15min
3.) Precipitation Source: NOAA Cheshire, OH, Albany, OH & Parkersburg WV

Figure 3-1: BAC-02 and BAC-11 Hydrograph

Gavin Power, LLC
Cheshire, Ohio

ERM

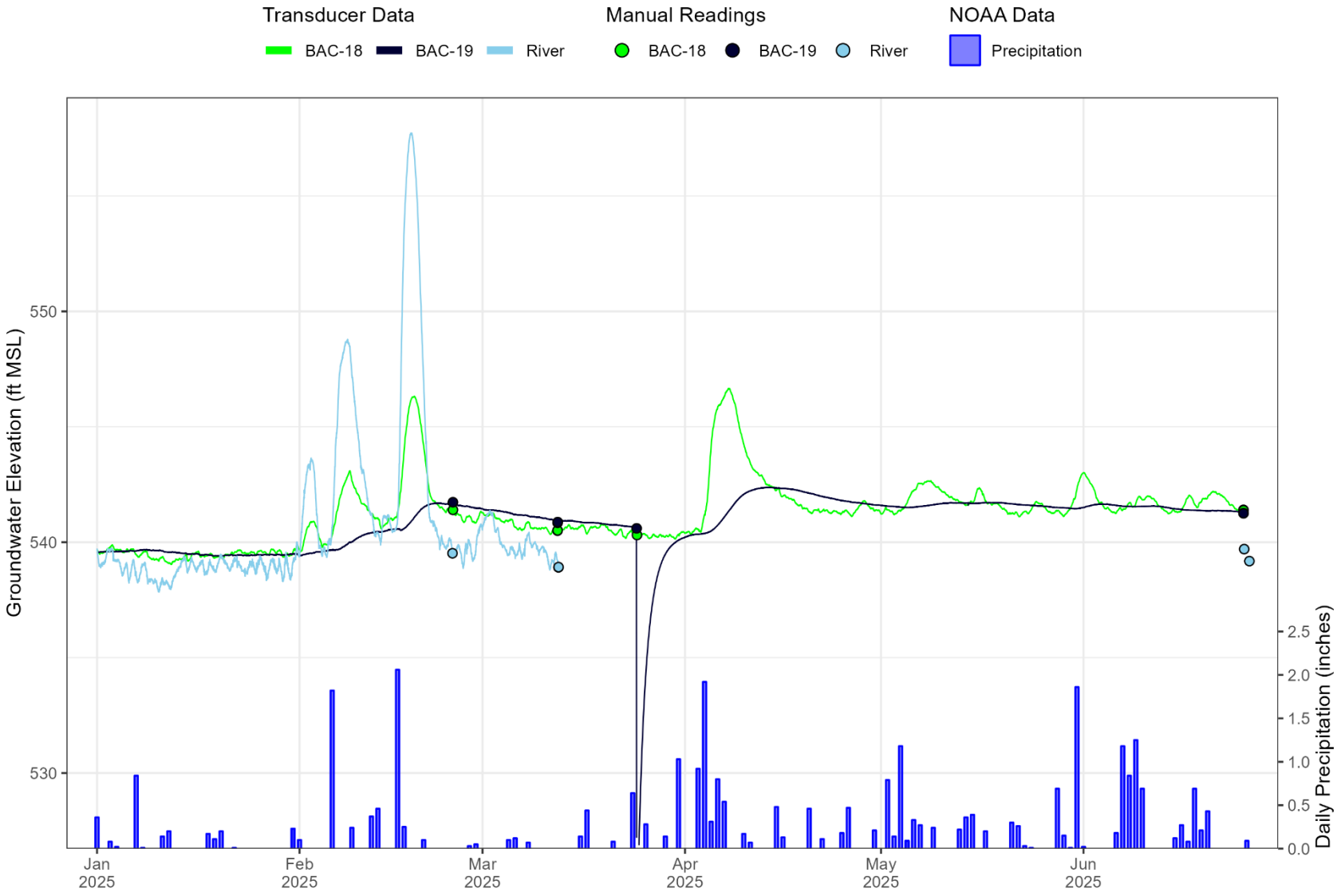


Notes:
1.) River data from on-site stilling well
2.) Transducer reading frequency was set to 15min
3.) Precipitation Source: NOAA Cheshire, OH, Albany, OH & Parkersburg WV

Figure 3-2: BAC-04 and BAC-13 Hydrograph

Gavin Power, LLC
Cheshire, Ohio

ERM

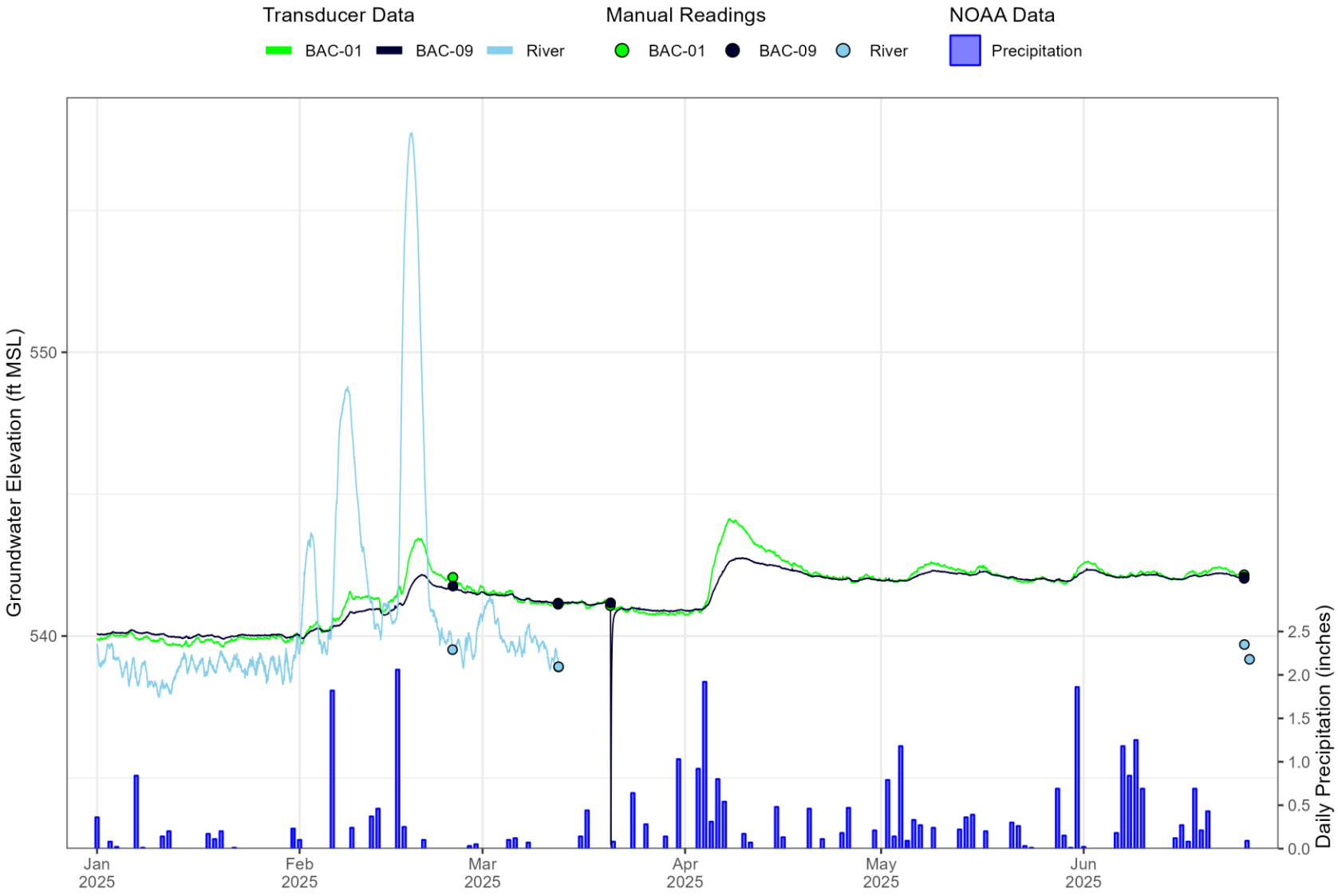


Notes:
1.) River data from on-site stilling well
2.) Transducer reading frequency was set to 15min
3.) Precipitation Source: NOAA Cheshire, OH, Albany, OH & Parkersburg WV

Figure 3-3: BAC-18 and BAC-19 Hydrograph

Gavin Power, LLC
Cheshire, Ohio

ERM

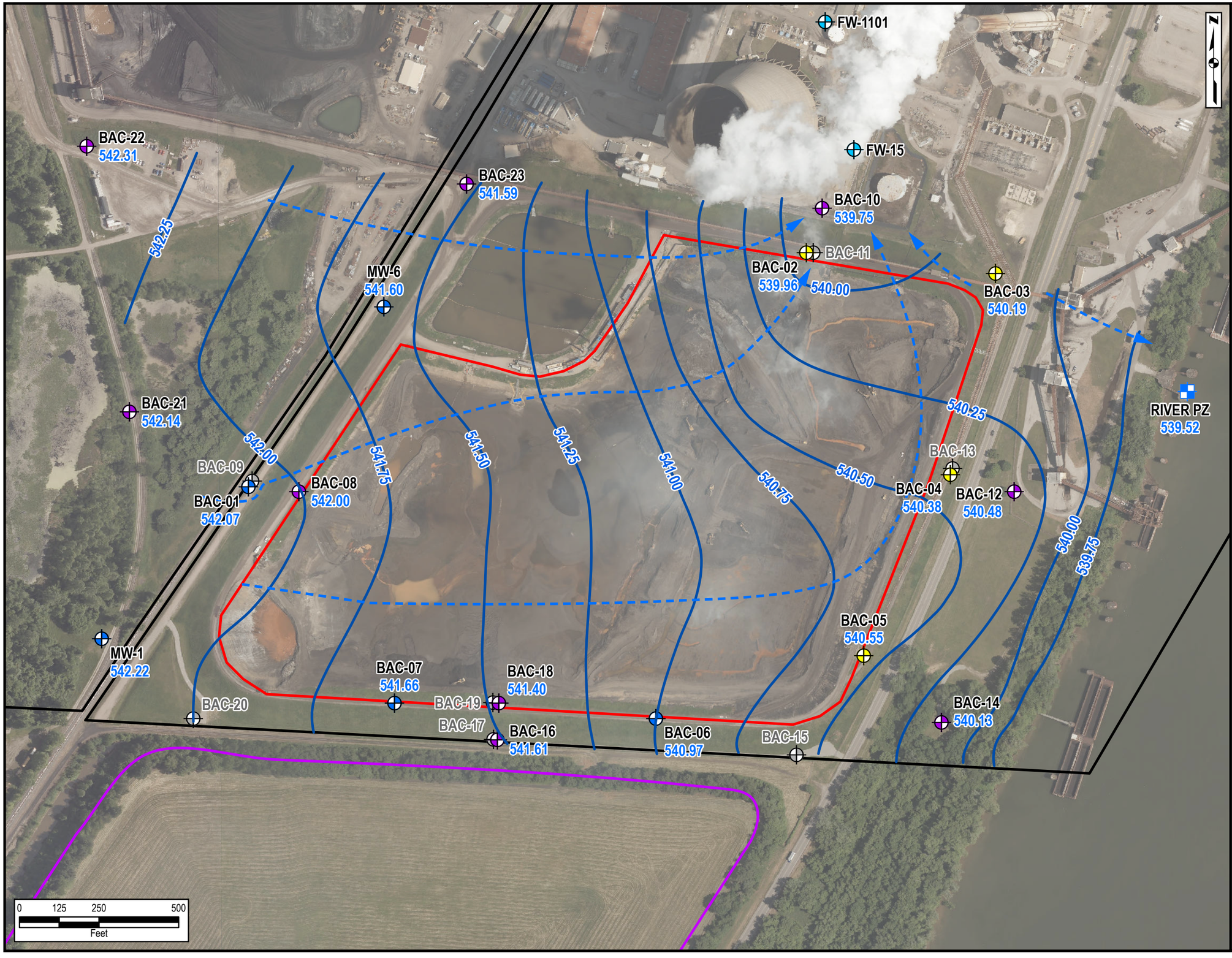


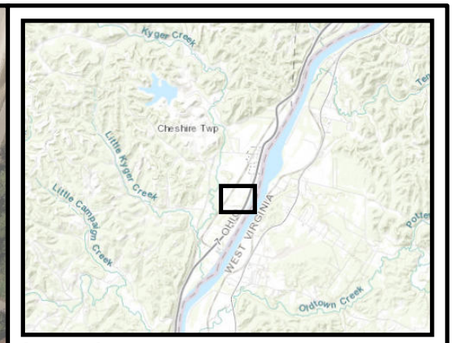
Notes:
1.) River data from on-site stilling well
2.) Transducer reading frequency was set to 15min
3.) Precipitation Source: NOAA Cheshire, OH, Albany, OH & Parkersburg WV

Figure 3-4: BAC-01 and BAC-09 Hydrograph

Gavin Power, LLC
Cheshire, Ohio

ERM





Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.85 Groundwater Elevation (ft)
- H1 2025 Interpreted Groundwater Potentiometric Contour
- H1 2025 Interpreted Generalized Groundwater Flow Direction
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

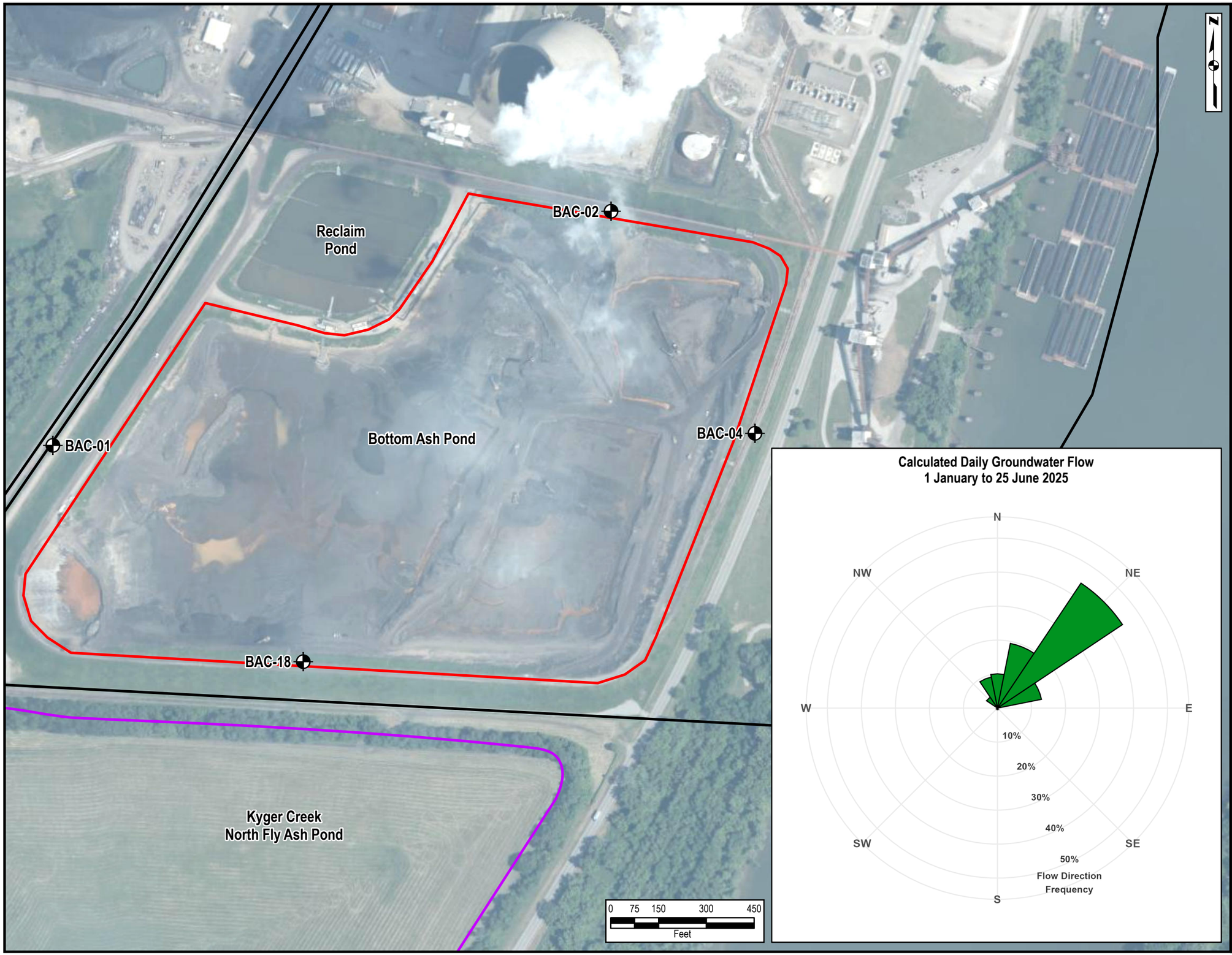
NOTES:

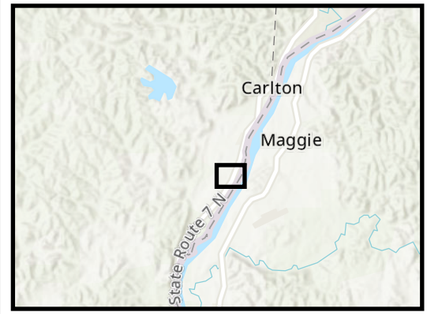
- Monitoring wells were gauged on 2/24/2025 - 2/25/2025.
- Wells not used for contouring of the Alluvium include wells screened in silt/clay or bedrock.
- Flow lines indicate a general groundwater flow direction within alluvium beneath the Former Bottom Ash Pond. They do not represent all potential flow paths within the alluvium.
- Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS Pro 3.4.2
- H1 refers to the first half of 2025.

Figure 3-5: Interpreted Groundwater Potentiometric Contour Map
H1 2025 - Pumping Conditions
Gavin Generating Station
Cheshire, Ohio

ERM

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Legend

- Groundwater Monitoring Locations
- Frequency of Vector Flow Direction (% Days)
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

1. Groundwater flow vector diagrams calculated using an R Studio Shiny application.
2. The approach was adapted from the EPA On-line Hydraulic Gradient Magnitude and Direction tool.
3. Interpreted groundwater flow directions calculated based on data from transducers installed in the four displayed wells.
4. Transducer data were collected from 1 January 2025 through 25 June 2025.
5. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 3-6: Interpretated 2025 Groundwater Flow Directions
Gavin Power, LLC
Cheshire, Ohio

ERM

West
B

East
B'

CSX Transportation
(Railroad)

State Route
7 N

BAC-21
BAC-01
BAC-09
BAC-08
BAC-04
BAC-13
BAC-12

River
PZ

Ohio
River

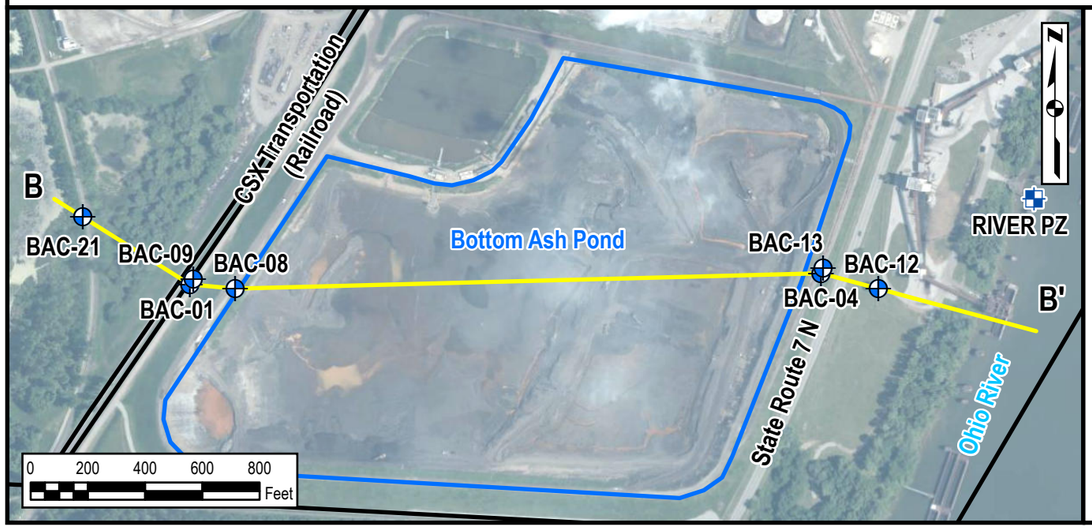
92
100
86
360
100
86
25
210

Elevation (ft)

610
600
590
580
570
560
550
540
530
520
510
500
490
480
470

0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400 1,500 1,600 1,700 1,800 1,900 2,000 2,100 2,200 2,300 2,400 2,500 2,600 2,700 2,800 2,900 3,000 3,100 3,200 3,300 3,400 3,500

Distance Along Transect (ft)



Legend

- Monitoring Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary

Calcium Concentrations in Groundwater (mg/L)

- <129
- 129 - 200
- 200 - 500
- 500 - 1,000
- >1,000

Generalized Lithology

- Road Material
- Separation Layer: Clay and Silt; Sandy Clay and Silt; Sand and Clay
- Alluvial Aquifer: Sand and Gravel; Sand
- Bedrock Units: Claystone/Siltstone; Sandstone

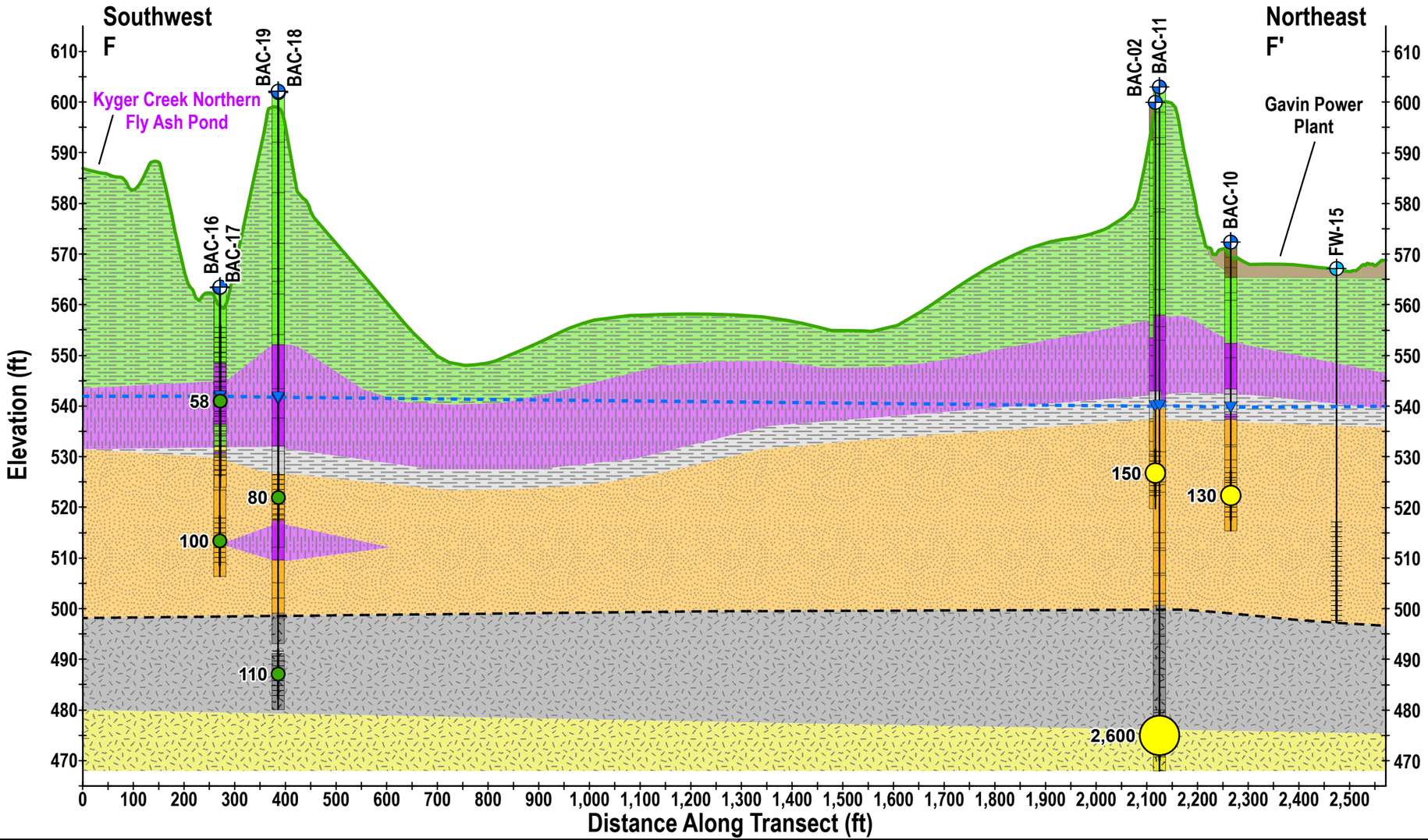
Figure 4-1a: Calcium Concentrations in Groundwater (Cross Section View 1)
Gavin Power, LLC
Cheshire, Ohio

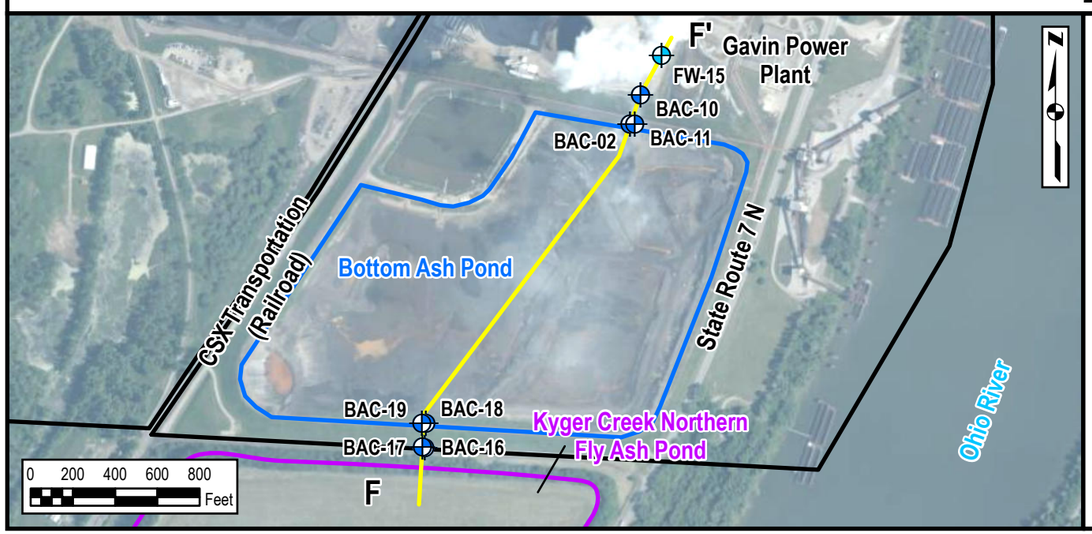
NOTES:

1. Potentiometric elevations from 02/24/25.
2. Groundwater and Ohio River samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

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Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Calcium Concentrations in Groundwater (mg/L)

- <129
- 129 - 200
- 200 - 500
- 500 - 1,000
- >1,000

Generalized Lithology

- Road Material
- Clay and Silt — Separation Layer
- Sandy Clay and Silt — Separation Layer
- Sand and Clay
- Sand and Gravel — Alluvial Aquifer
- Sand — Alluvial Aquifer
- Claystone/Siltstone — Bedrock Units
- Sandstone — Bedrock Units

Figure 4-1b: Calcium Concentrations in Groundwater (Cross Section View 2)
Gavin Power, LLC
Cheshire, Ohio

NOTES:

1. Potentiometric elevations from 02/24/25.
2. Groundwater samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

West
B

East
B'

CSX Transportation
(Railroad)

State Route
7 N

BAC-21
BAC-01
BAC-09
BAC-08
BAC-04
BAC-13
BAC-12

River
PZ

Ohio
River

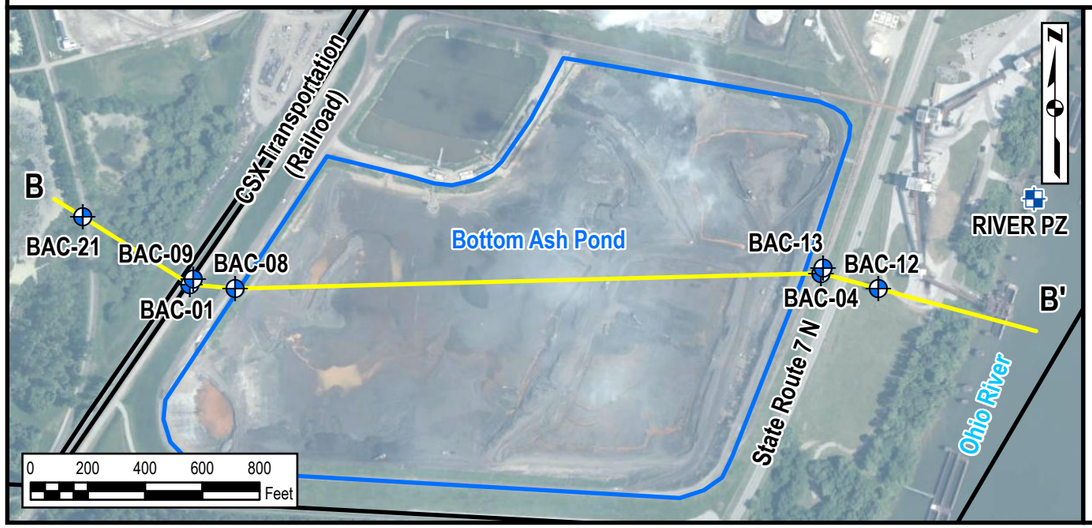
32
16
15
42
81
27
2400
2000

Elevation (ft)

610 600 590 580 570 560 550 540 530 520 510 500 490 480 470

0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400 1,500 1,600 1,700 1,800 1,900 2,000 2,100 2,200 2,300 2,400 2,500 2,600 2,700 2,800 2,900 3,000 3,100 3,200 3,300 3,400 3,500

Distance Along Transect (ft)



Legend

- Monitoring Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary

Chloride Concentrations in Groundwater (mg/L)

- <24.7
- 24.7 - 100
- 100 - 1,000
- 1,000 - 10,000
- >10,000

Generalized Lithology

- Road Material
- Separation Layer: Clay and Silt; Sandy Clay and Silt; Sand and Clay
- Alluvial Aquifer: Sand and Gravel; Sand
- Bedrock Units: Claystone/Siltstone; Sandstone

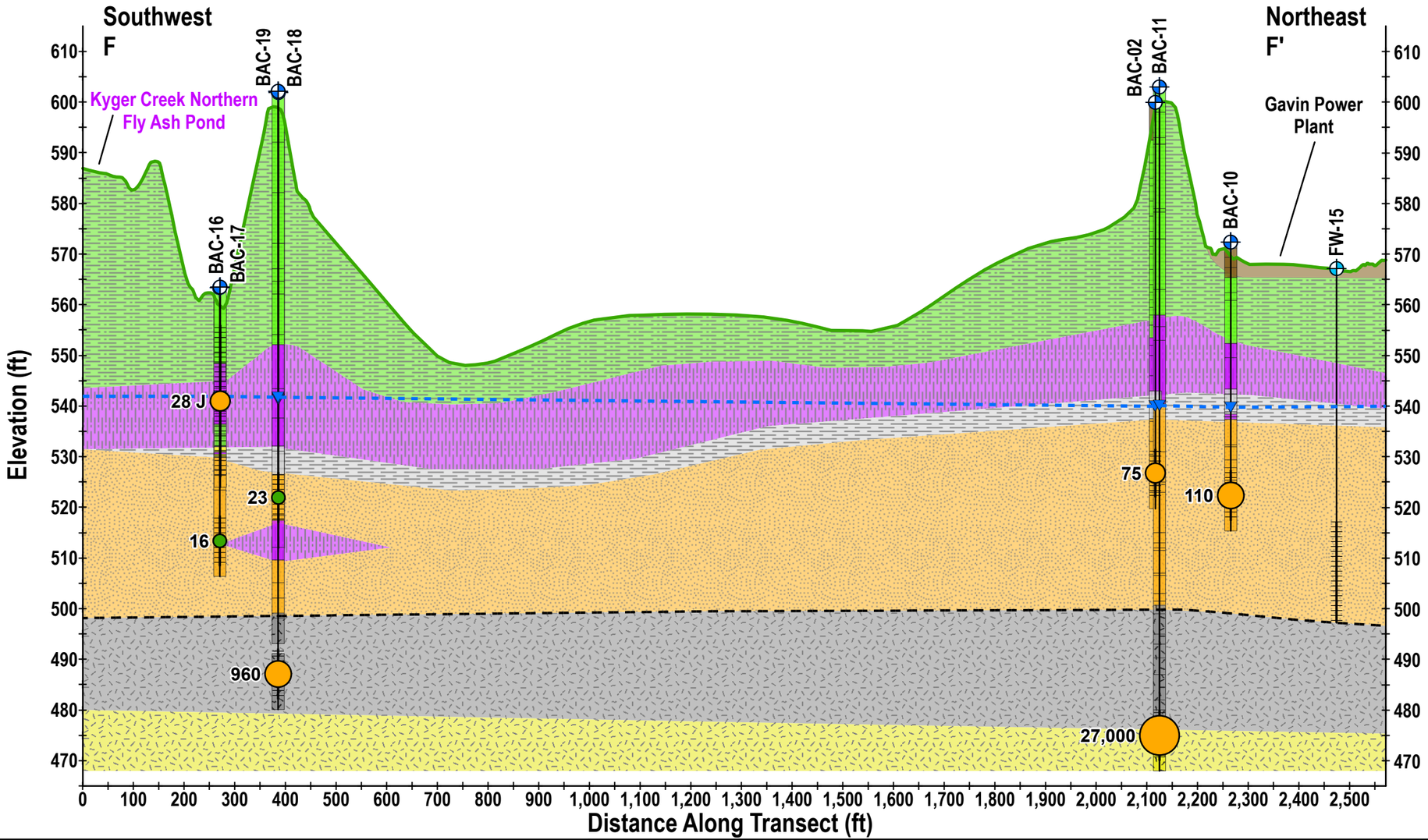
Figure 4-2a: Chloride Concentrations in Groundwater (Cross Section View 1)
Gavin Power, LLC
Cheshire, Ohio

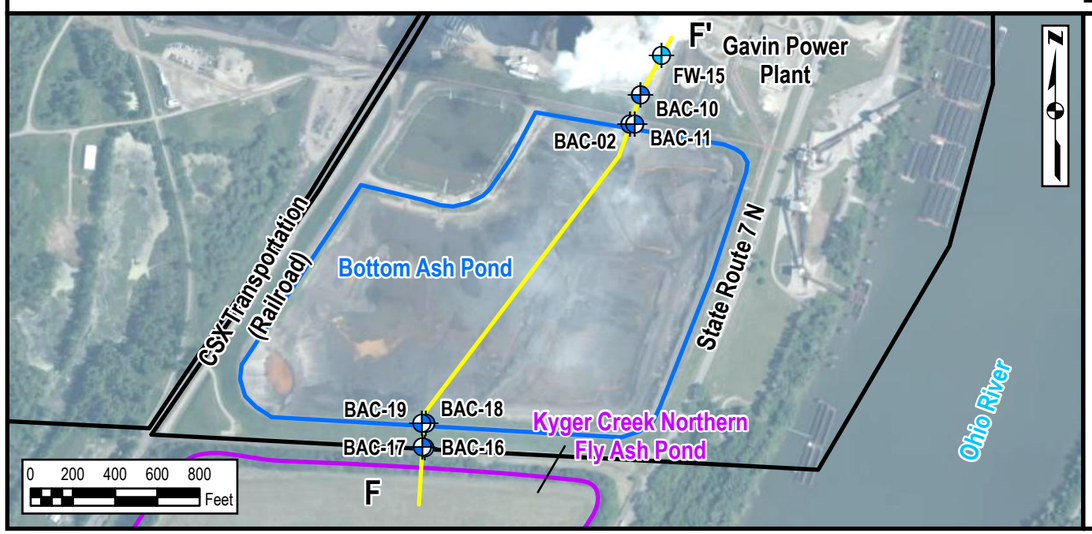
NOTES:

1. Potentiometric elevations from 02/24/25.
2. Groundwater and Ohio River samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Chloride Concentrations in Groundwater (mg/L)

- <24.7
- 24.7 - 100
- 100 - 1,000
- 1,000 - 10,000
- >10,000

Generalized Lithology

- Road Material
- Clay and Silt — Separation Layer
- Sandy Clay and Silt — Separation Layer
- Sand and Clay
- Sand and Gravel — Alluvial Aquifer
- Sand — Alluvial Aquifer
- Claystone/Siltstone — Bedrock Units
- Sandstone — Bedrock Units

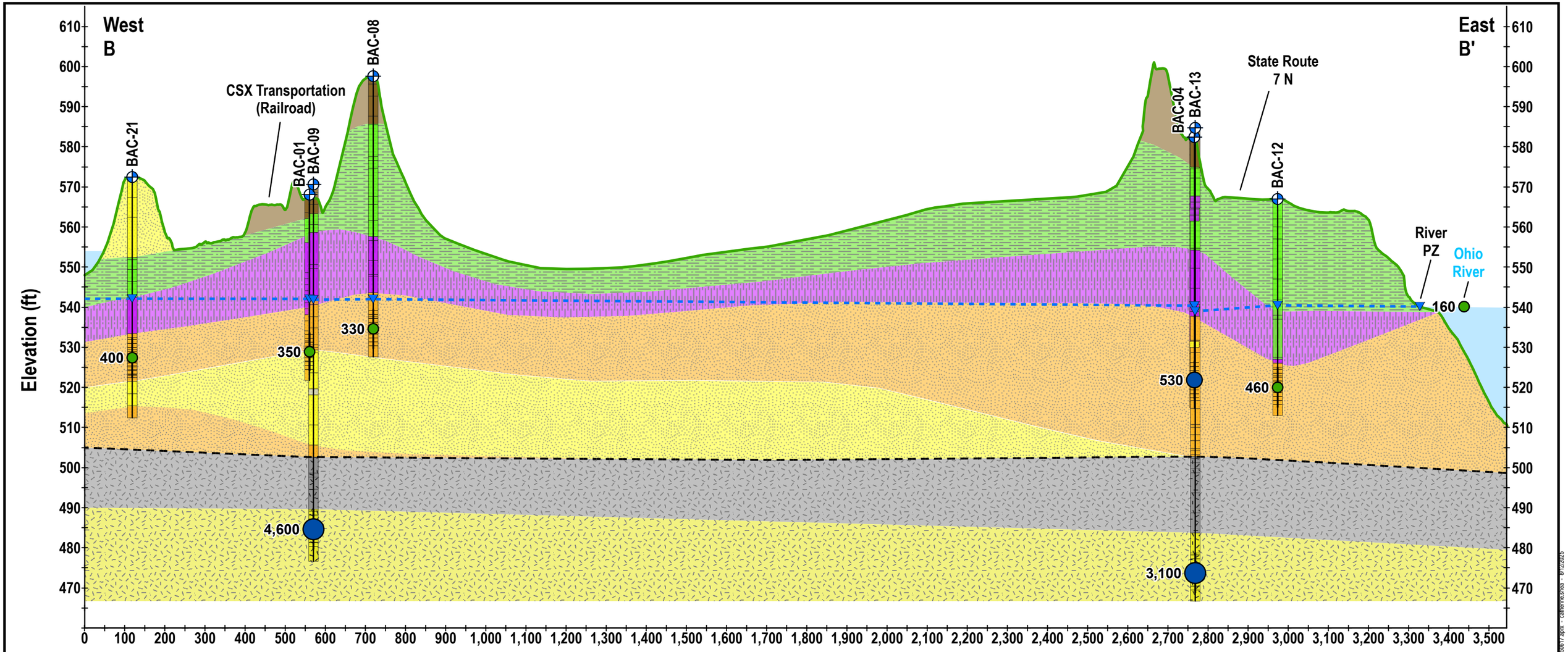
Figure 4-2b: Chloride Concentrations in Groundwater (Cross Section View 2)
Gavin Power, LLC
Cheshire, Ohio

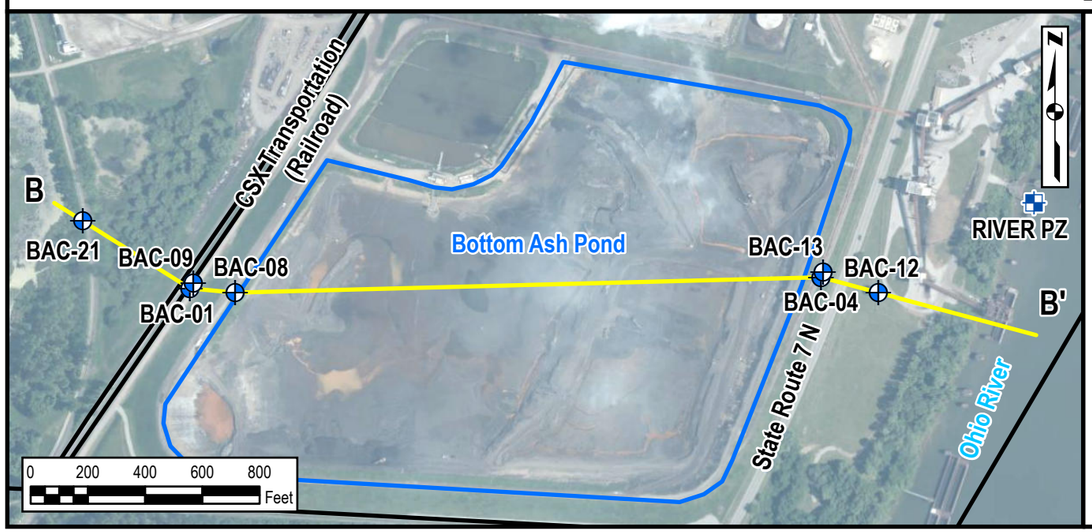
NOTES:

1. Potentiometric elevations from 02/24/25.
2. Groundwater samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Monitoring Well
- Piezometer
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary

Total Dissolved Solids Concentrations in Groundwater (mg/L)

- < 505
- 505 - 1,000
- 1,000 - 10,000
- 10,000 - 20,000
- >20,000

Generalized Lithology

- Road Material
- Separation Layer: Clay and Silt; Sandy Clay and Silt; Sand and Clay
- Alluvial Aquifer: Sand and Gravel; Sand
- Bedrock Units: Claystone/Siltstone; Sandstone

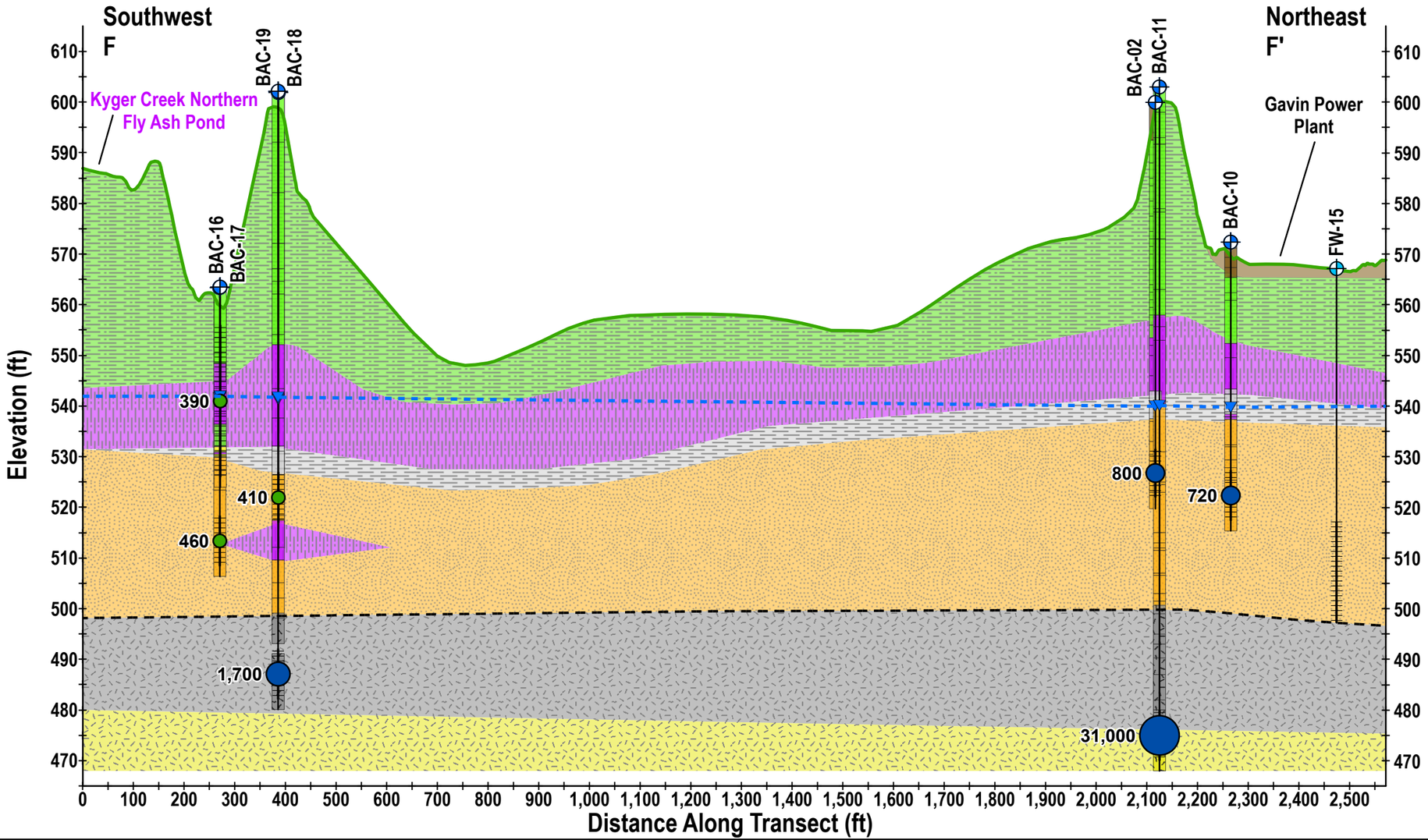
Figure 4-3a: TDS Concentrations in Groundwater (Cross Section View 1)
Gavin Power, LLC
Cheshire, Ohio

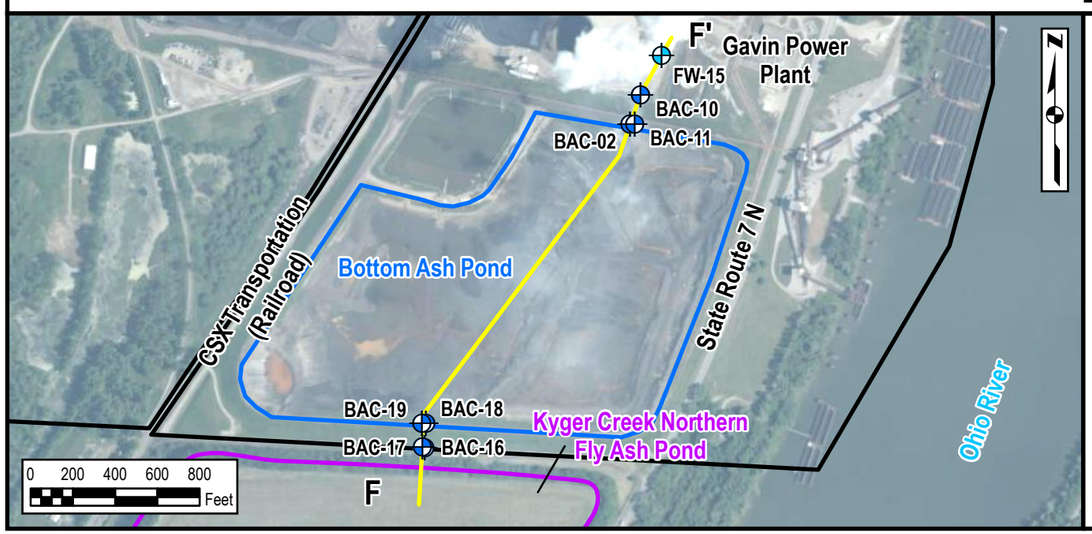
NOTES:

1. Potentiometric elevations from 02/24/25.
2. Groundwater and Ohio River samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Monitoring well
- Water Supply Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Total Dissolved Solids Concentrations in Groundwater (mg/L)

- < 505
- 505 - 1,000
- 1,000 - 10,000
- 10,000 - 20,000
- > 20,000

Generalized Lithology

- Road Material
- Separation Layer: Clay and Silt; Sandy Clay and Silt
- Sand and Clay
- Alluvial Aquifer: Sand and Gravel; Sand
- Bedrock Units: Claystone/Siltstone; Sandstone

Figure 4-3b: TDS Concentrations in Groundwater (Cross Section View 2)
Gavin Power, LLC
Cheshire, Ohio

NOTES:
1. Potentiometric elevations from 02/24/25.
2. Groundwater samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.
8. BAC-11 result has J qualifier due to being reanalyzed outside of holding time.

ERM

West
B

East
B'

CSX Transportation
(Railroad)

State Route
7 N

BAC-21
BAC-01
BAC-09
BAC-08
BAC-04
BAC-13
BAC-12
River
PZ
Ohio
River

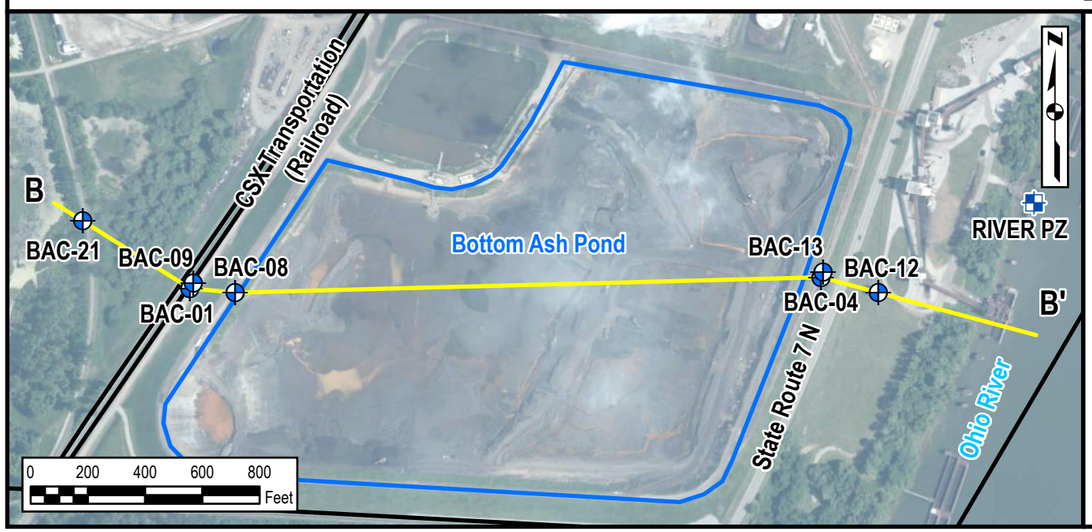
0.18
0.091
0.15
0.09
0.28
0.093
1.1
1

Elevation (ft)

610 600 590 580 570 560 550 540 530 520 510 500 490 480 470

0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400 1,500 1,600 1,700 1,800 1,900 2,000 2,100 2,200 2,300 2,400 2,500 2,600 2,700 2,800 2,900 3,000 3,100 3,200 3,300 3,400 3,500

Distance Along Transect (ft)



Legend

- Monitoring Well
- Piezometer
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary

Fluoride Concentrations in Groundwater (mg/L)

- <0.161
- 0.161 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- >0.4

Generalized Lithology

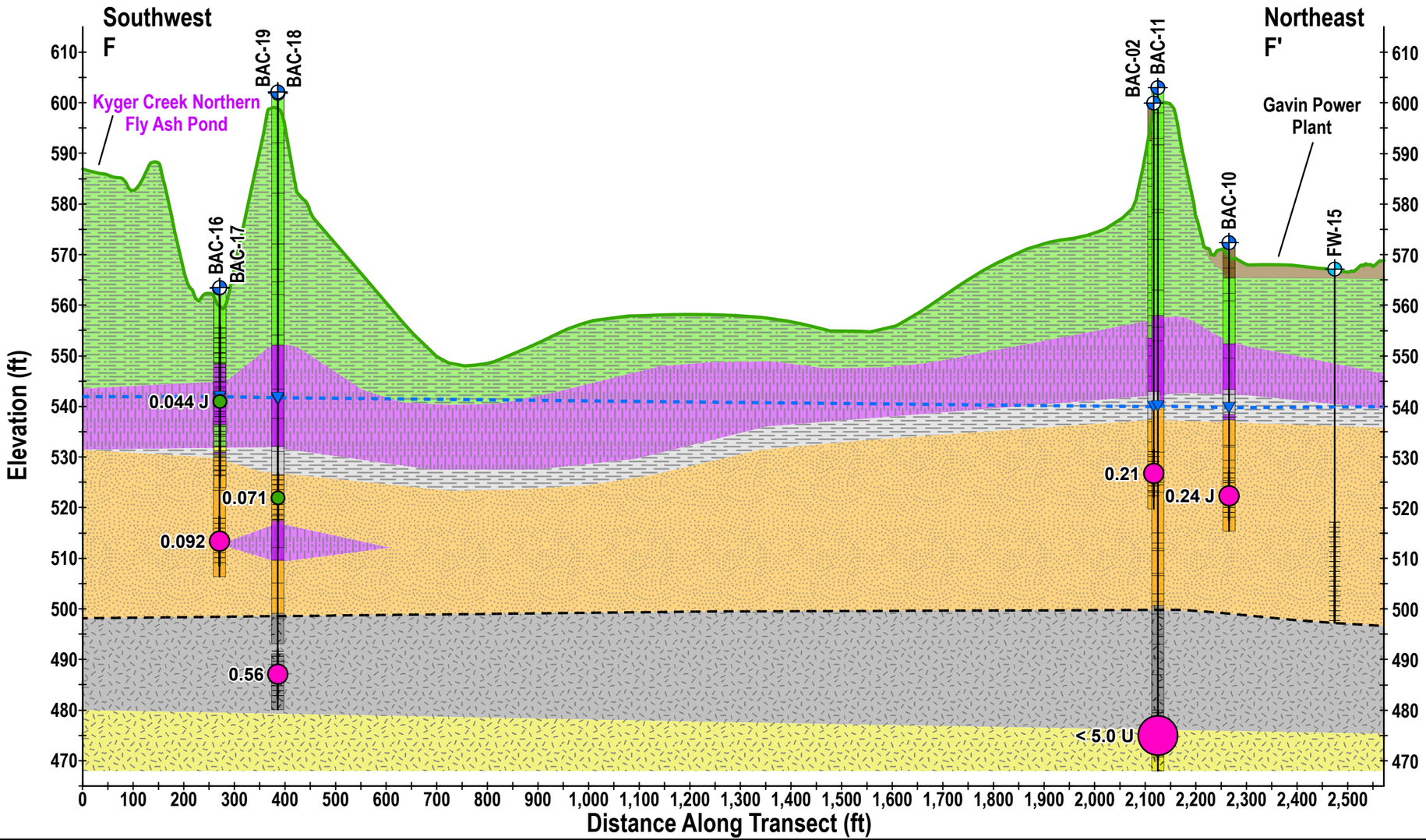
- Road Material
- Separation Layer
  - Clay and Silt
  - Sandy Clay and Silt
  - Sand and Clay
- Alluvial Aquifer
  - Sand and Gravel
  - Sand
- Bedrock Units
  - Claystone/Siltstone
  - Sandstone

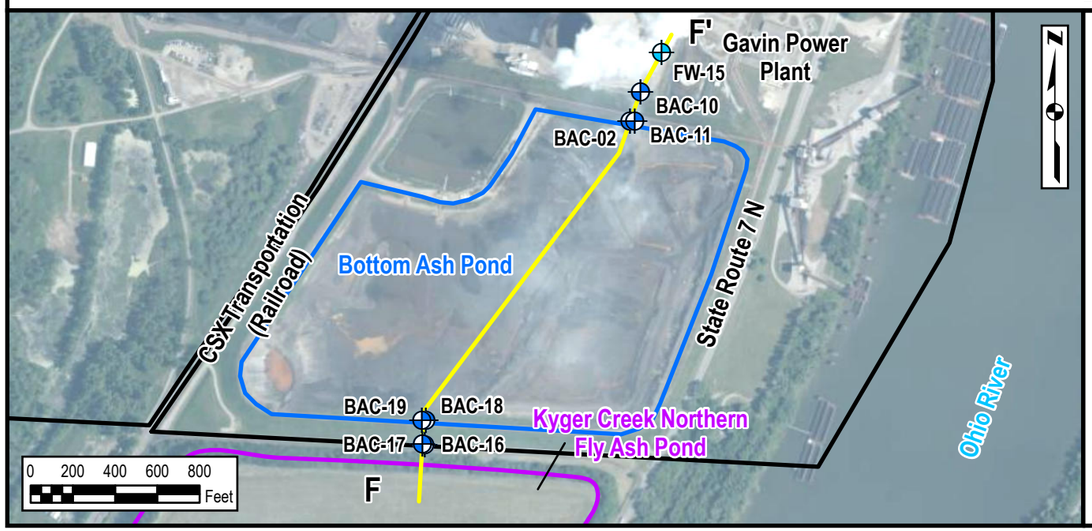
Figure 4-4a: Fluoride Concentrations in Groundwater (Cross-Section View 1)
Gavin Power, LLC
Cheshire, Ohio

NOTES:
1. Potentiometric elevations from 02/24/25.
2. Groundwater and Ohio River samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Fluoride Concentrations in Groundwater (mg/L)

- <0.161
- 0.161 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- >0.4

Generalized Lithology

- Road Material
- Separation Layer: Clay and Silt; Sandy Clay and Silt
- Sand and Clay
- Alluvial Aquifer: Sand and Gravel; Sand
- Bedrock Units: Claystone/Siltstone; Sandstone

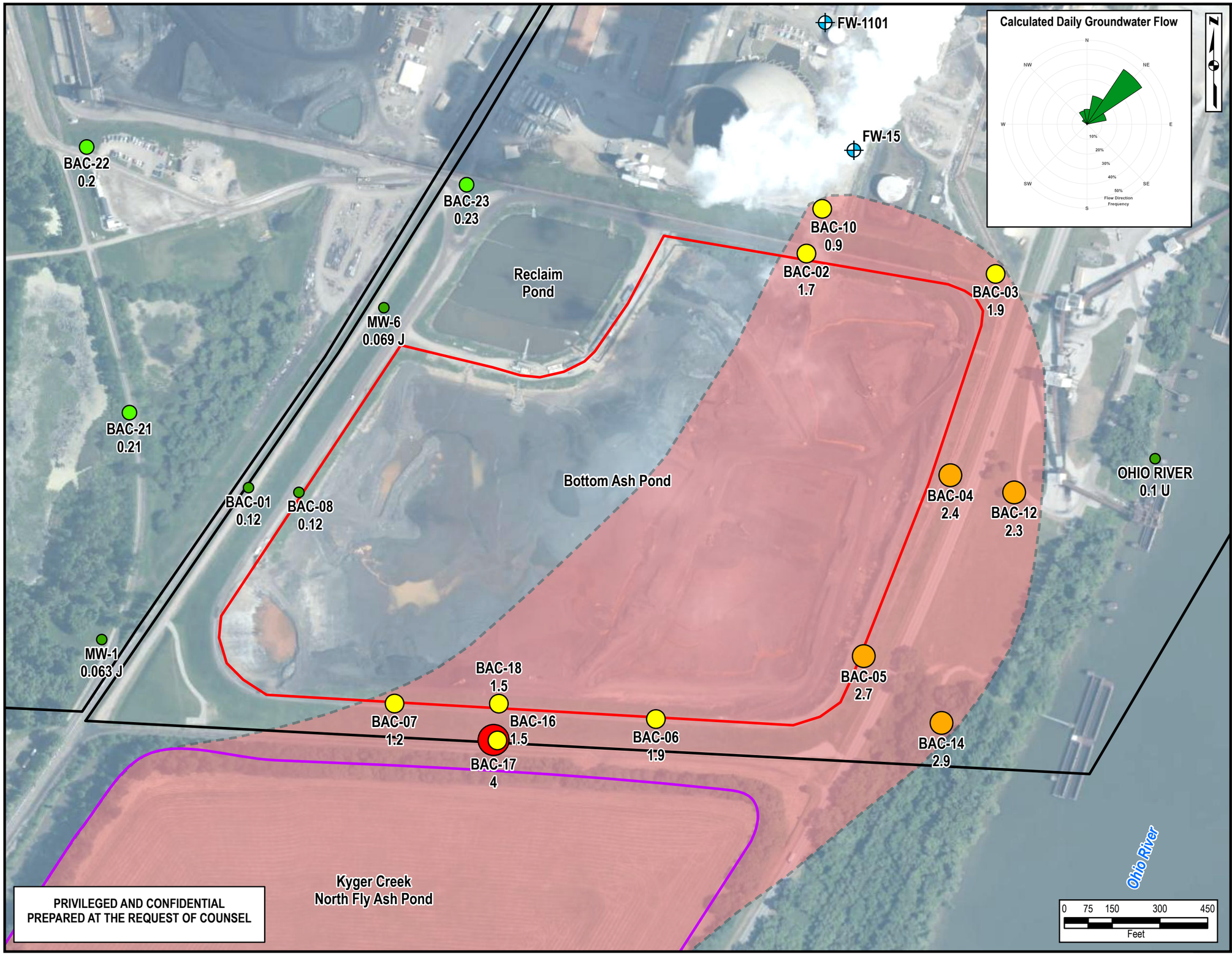
Figure 4-4b: Fluoride Concentrations in Groundwater (Cross-Section View 2)
Gavin Power, LLC
Cheshire, Ohio

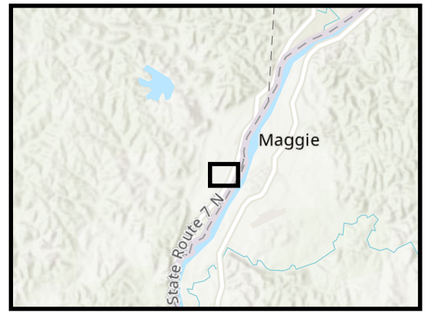
NOTES:

1. Potentiometric elevations from 02/24/25.
2. Groundwater samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.
8. BAC-11 reporting limit elevated due to sample dilution.

ERM

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Legend

Boron Concentrations in Groundwater (mg/L)

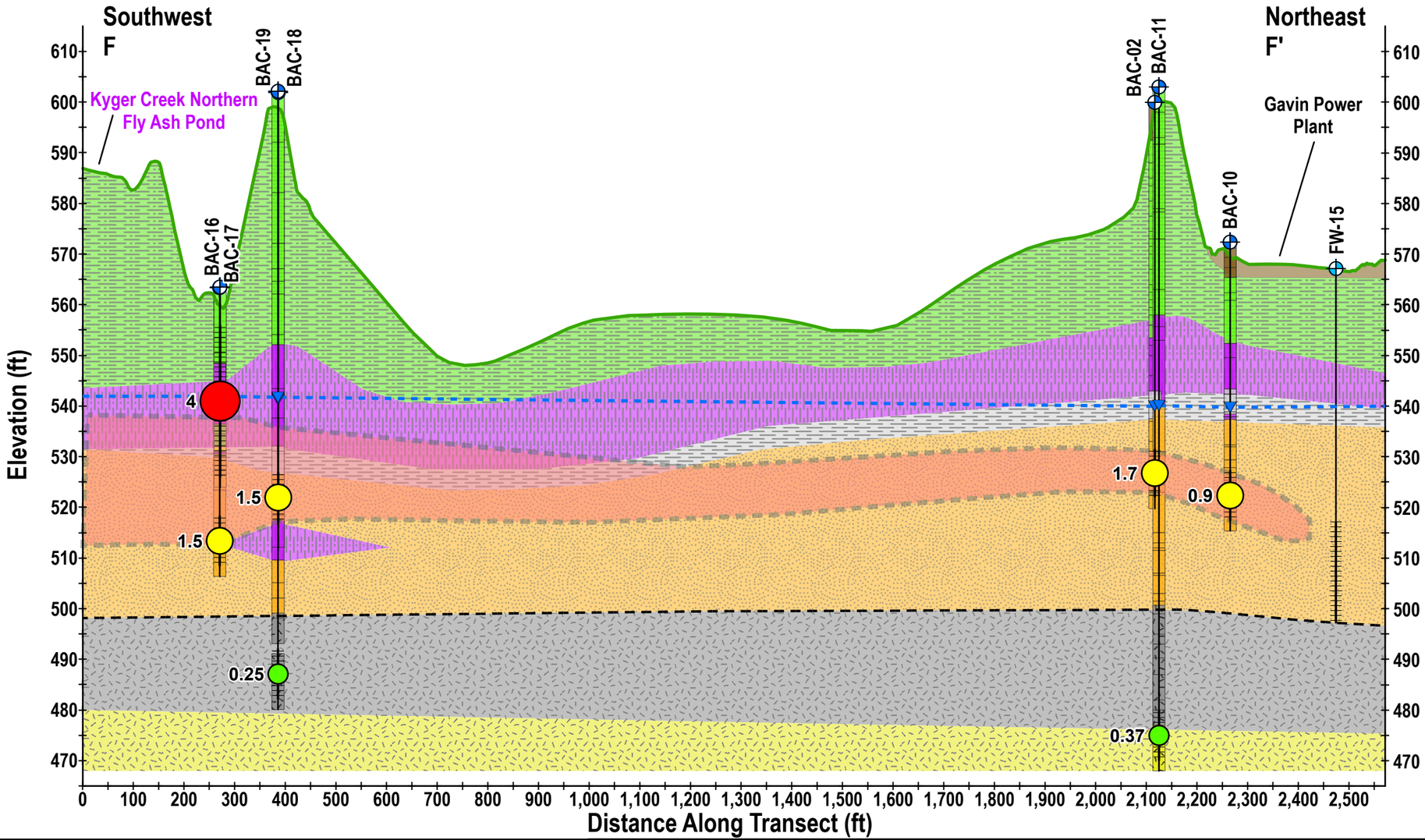
- <0.17
- 0.17 - 0.5
- 0.5 - 2
- 2 - 3
- >3
- Not Sampled
- Water Supply Well Location
- Approximated Boron Plume
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

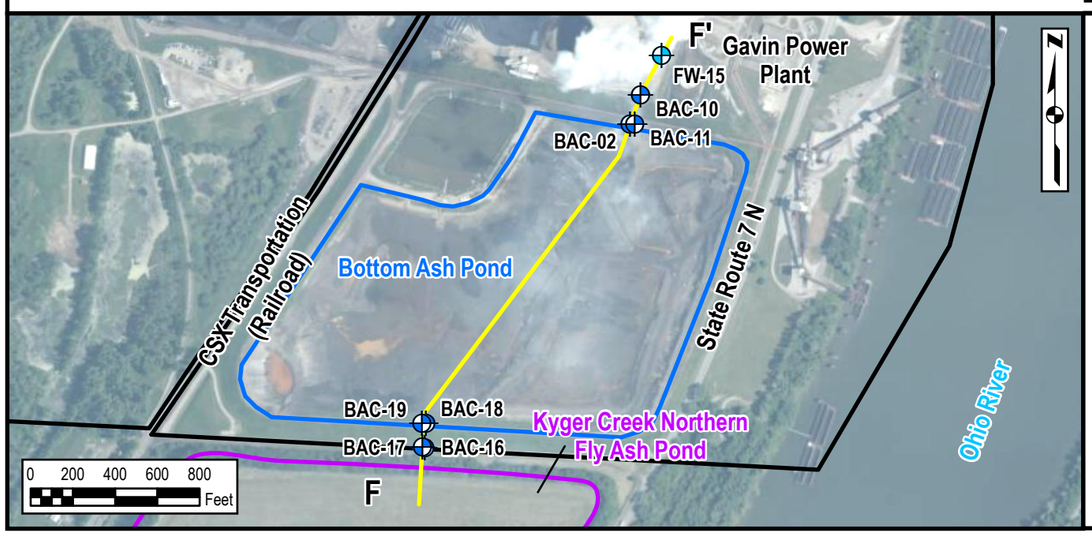
NOTES:

1. mg/L = milligrams per liter
2. Groundwater and Ohio River samples collected from 03/18/25 to 04/09/25.
3. Surface water data is from 04/02/25.
4. Daily groundwater flow direction calculated based on transducer data collected from 1 January 2025 through 25 June 2025.
5. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 4-5: Boron Distribution in Groundwater (Map View)
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM





Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond
- Approximated Boron Plume

Boron Concentrations in Groundwater (mg/L)

- <0.177
- 0.177 - 0.5
- 0.5 - 2
- 2 - 3
- >3

Generalized Lithology

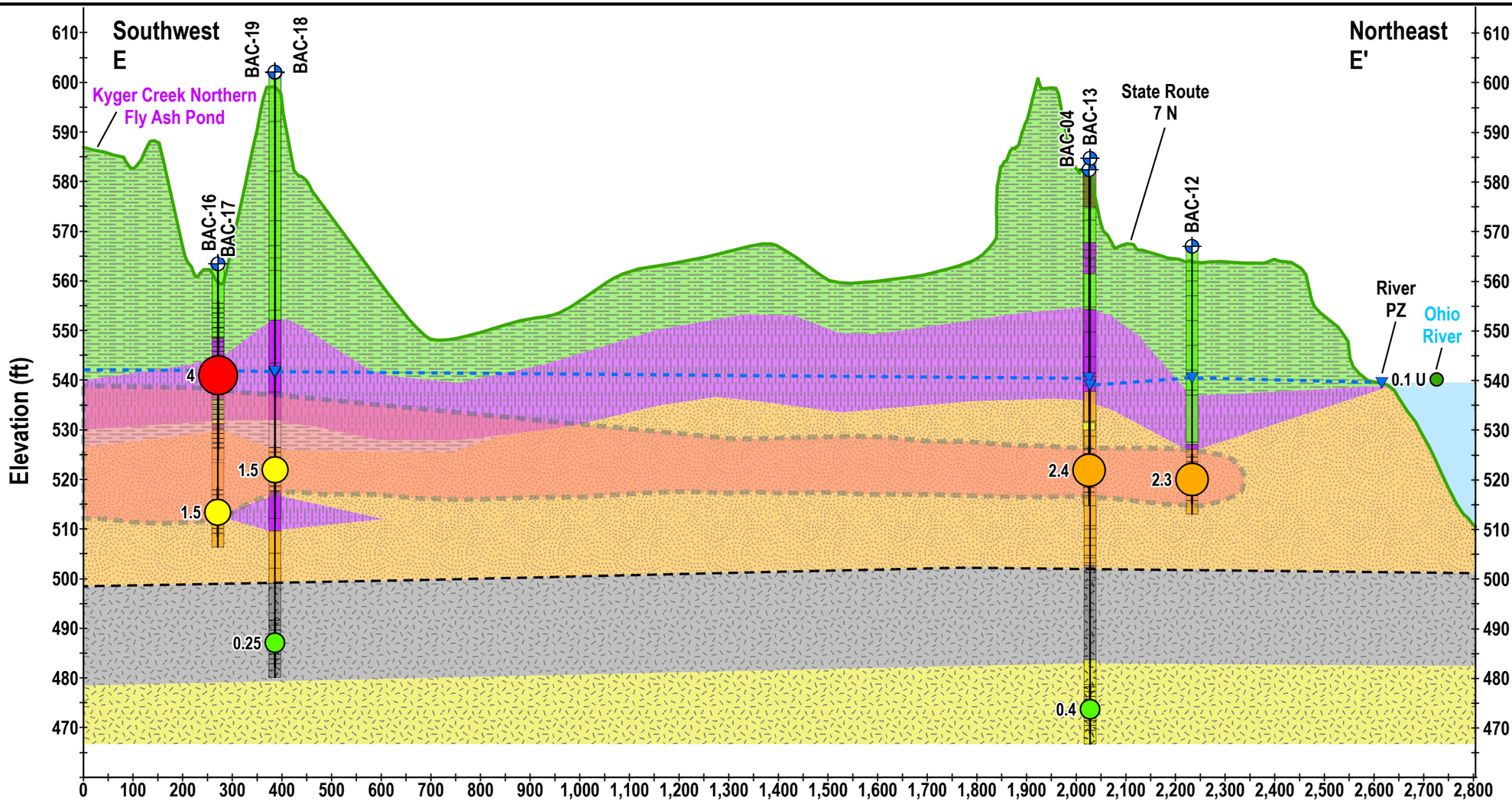
- Road Material
- Separation Layer: Clay and Silt; Sandy Clay and Silt; Sand and Clay
- Alluvial Aquifer: Sand and Gravel; Sand
- Bedrock Units: Claystone/Siltstone; Sandstone

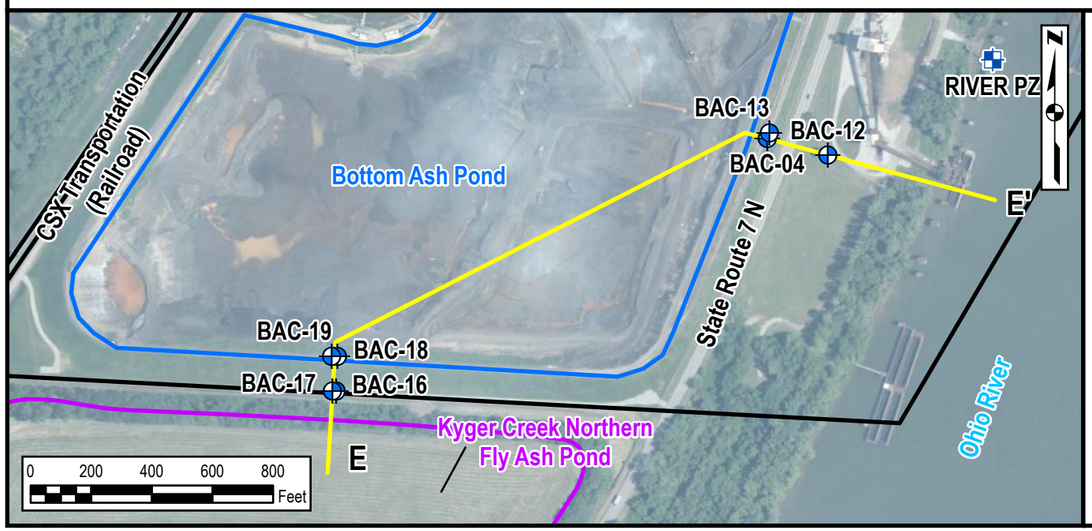
Figure 4-6a: Boron Concentrations in Groundwater (Cross-Section View 1)
Gavin Power, LLC
Cheshire, Ohio

NOTES:
1. Potentiometric elevations from 02/24/25.
2. Groundwater samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Monitoring Well
- Potentiometric Elevation (Spring 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Boron Concentrations in Groundwater (mg/L)

- <0.177
- 0.177 - 0.5
- 0.5 - 2
- 2 - 3
- >3

- Approximated Boron Plume

Generalized Lithology

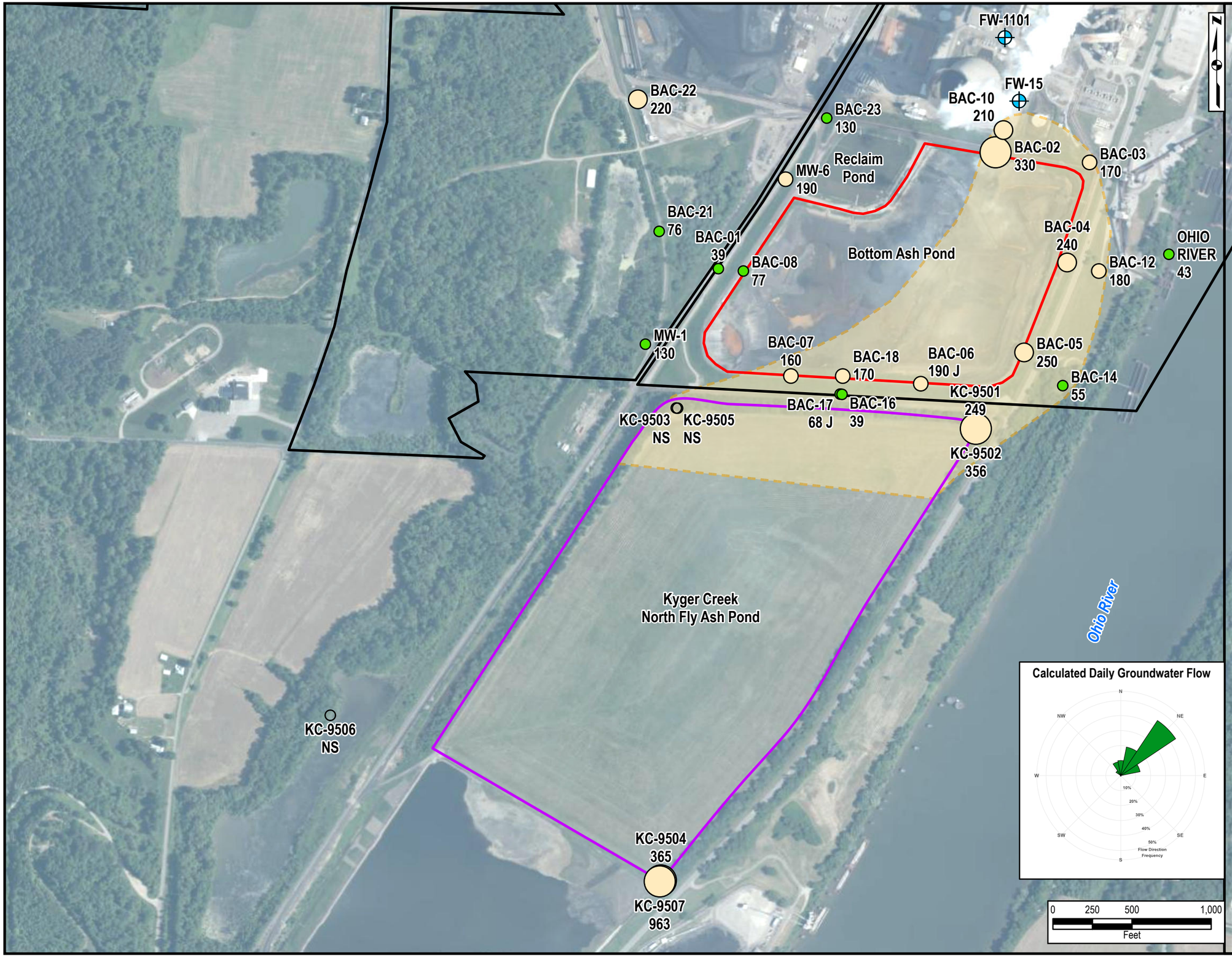
- Road Material
- Separation Layer
  - Clay and Silt
  - Sandy Clay and Silt
- Sand and Clay
- Alluvial Aquifer
  - Sand and Gravel
  - Sand
- Bedrock Units
  - Claystone/Siltstone
  - Sandstone

Figure 4-6b: Boron Concentrations in Groundwater (Cross-Section View 2)
Gavin Power, LLC
Cheshire, Ohio

NOTES:
1. Potentiometric elevations from 02/24/25.
2. Groundwater samples collected from 03/18/25 to 04/09/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

Sulfate Concentration (mg/L)

- <140
- 140 - 200
- 200 - 260
- 260 - 320
- >320
- Not Sampled
- Water Supply Well Location
- Approximated Sulfate Plume
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

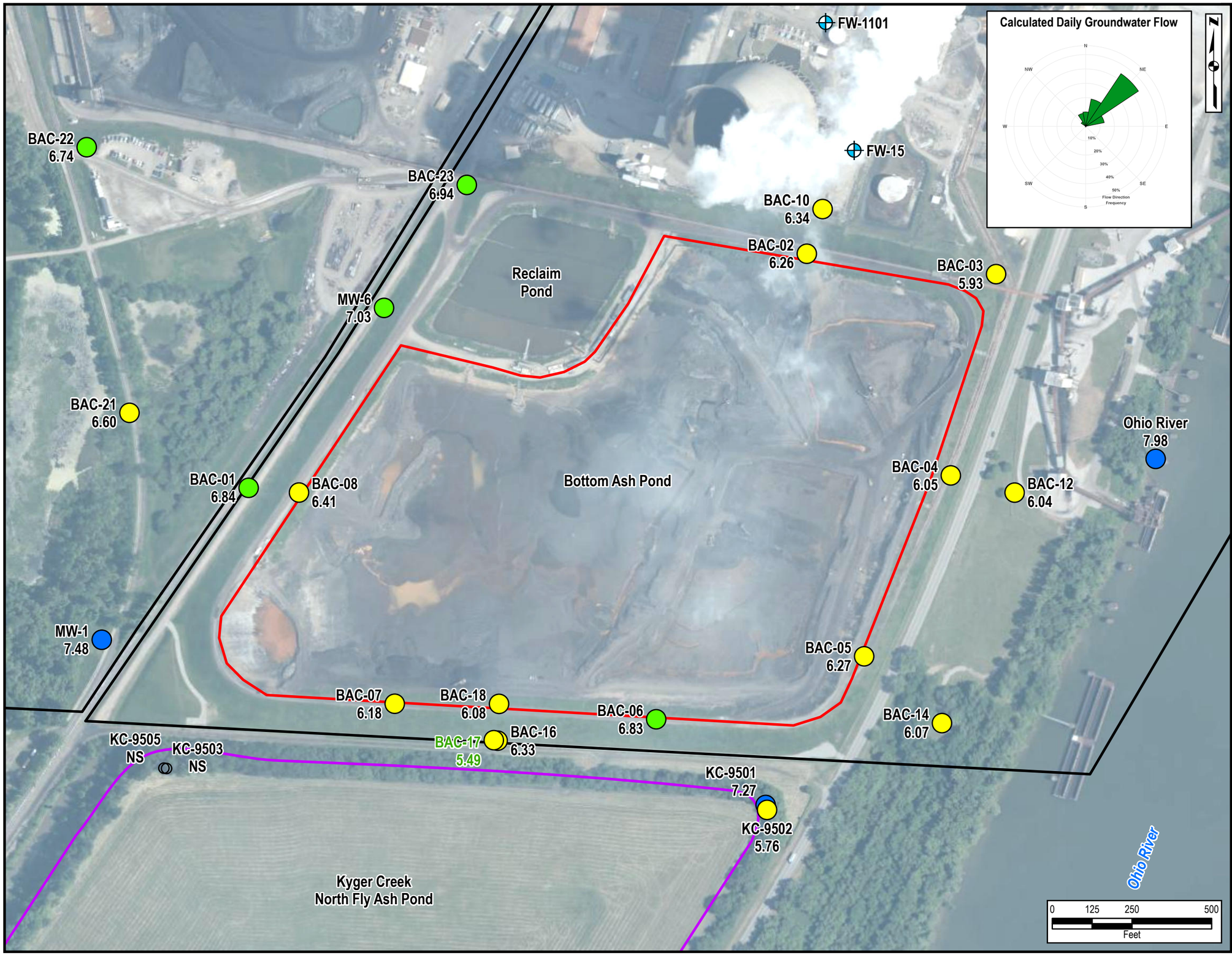
NOTES:

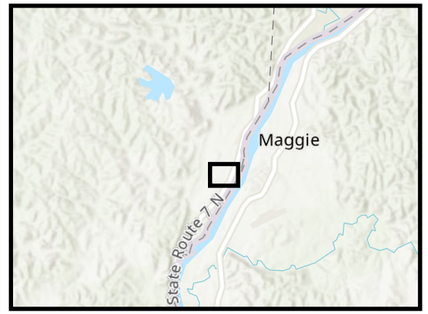
1. mg/L = milligrams per liter
2. NS = Not Sampled
3. Gavin groundwater and surface water samples were collected 03/18/25 through 04/09/25.
4. Kyger Creek groundwater samples results collected 10/22/2024 to 10/23/2024.
5. Daily groundwater flow direction calculated based on transducer data collected from 1 January 2025 through 25 June 2025.
6. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 4-7: Sulfate Distribution in Groundwater (Map View)
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM

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Legend

pH Concentrations in Groundwater (SU)

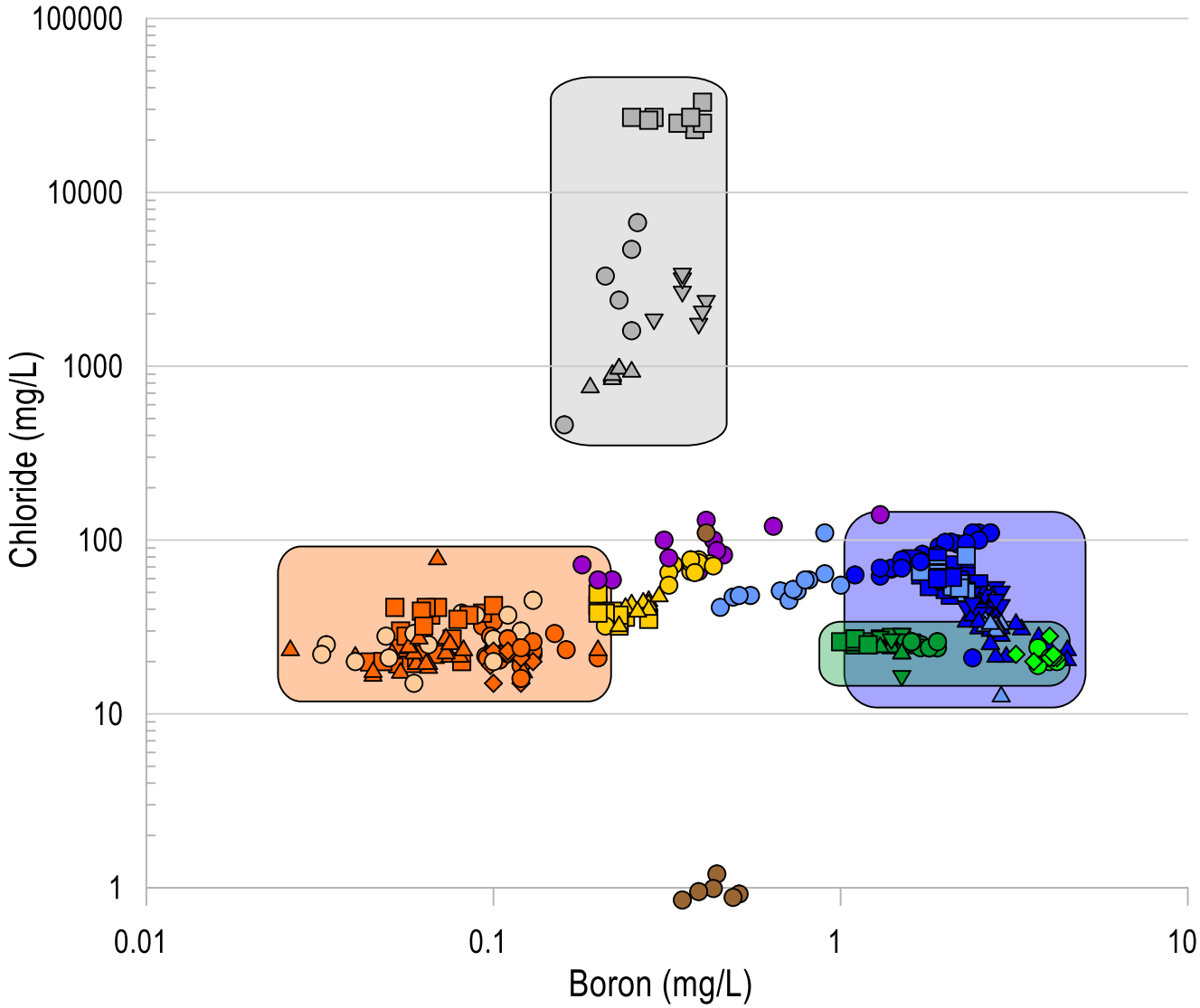
- <6.63
- 6.63 - 7.22
- >7.22
- Not Sampled
- Water Supply Well
- BAC — Alluvial Aquifer Well
- BAC — Separation Layer and Alluvial Aquifer Well
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

1. SU = standard units
2. NS = Not Sampled
3. Gavin groundwater and surface water samples were collected 03/18/25 through 04/09/25.
4. Kyger Creek groundwater samples results collected 10/22/2024 to 10/23/2024.
5. Daily groundwater flow direction calculated based on transducer data collected from 1 January 2025 through 25 June 2025.
6. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 4-8: pH Distribution in Groundwater (Map View)
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM



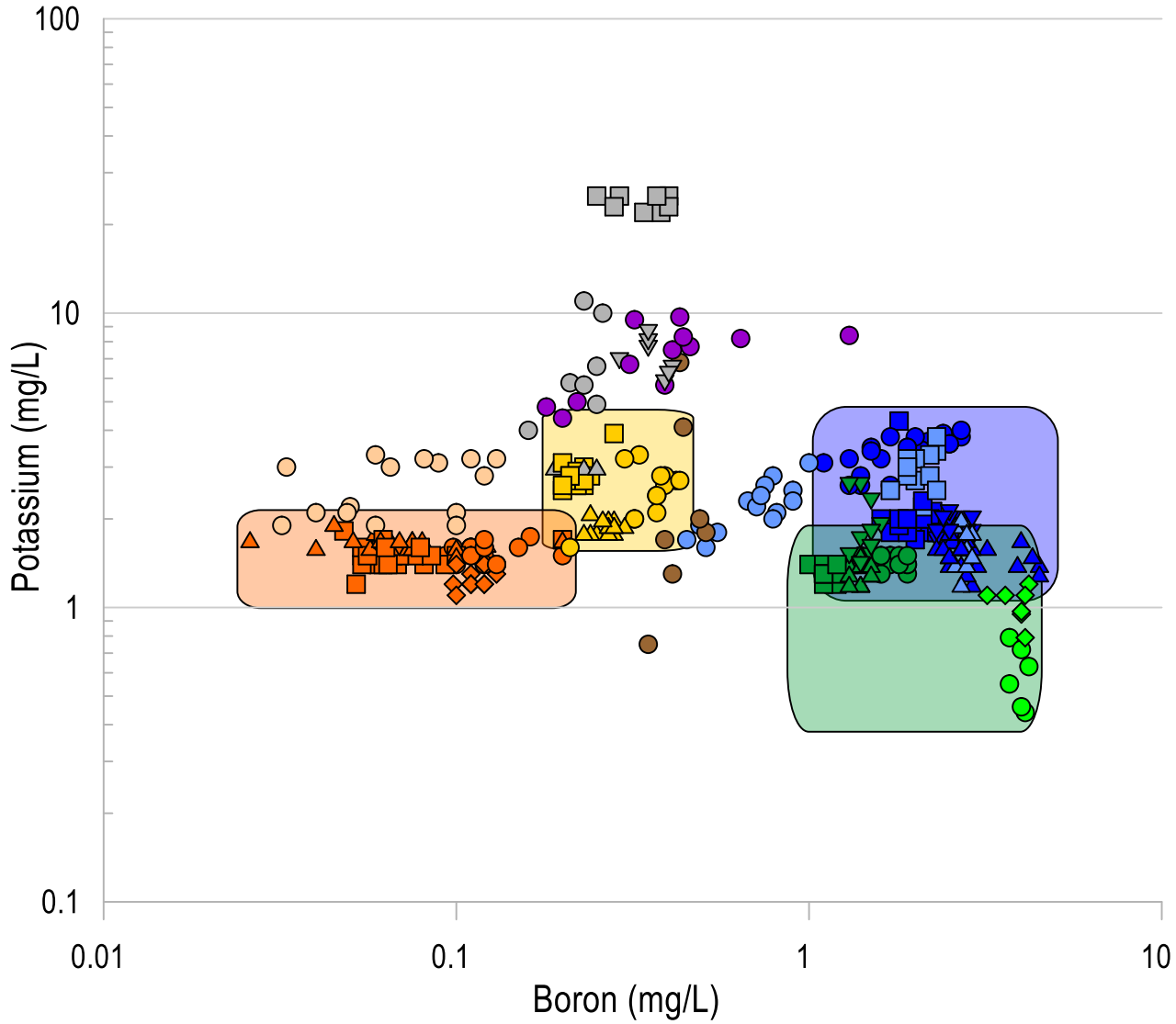
Legend

BAC-01, MW-1, MW-6	Historical Upgradient Wells
BAC-02, BAC-03, BAC-04, BAC-05	Historical Downgradient Wells
B-0904	Historical Kyger Creek Groundwater
BAC-06, BAC-07	2020 Southern Boundary Wells
BAC-09, BAC-11, BAC-13, BAC-19	2022 Bedrock Wells
BAC-21, BAC-22, BAC-23	2022 Northwestern Wells
BAC-08	2022 Upgradient Well
BAC-10, BAC-12, BAC-14	2022 Downgradient Wells
BAC-16, BAC-18	2022 Southern Boundary Wells
BAC-17	2022 Kyger Creek Groundwater
BAC-15	2022 Silt and Clay Well
Ohio River	
Bottom Ash Pond	

NOTES:
1. Historical Upgradient and Downgradient well data ranges from Aug 2016 to Apr 2025
2. B-0904 data ranges from Mar 2018 to Mar 2020
3. 2020 Southern Boundary well data ranges from Sept 2020 to Mar 2025
4. 2022 Well data ranges from Oct 2022 to Apr 2025
5. Ohio River data ranges from Feb 2018 to Mar 2025
6. Bottom Ash Pond data ranges from Feb 2018 to Oct 2022

ERM

Figure 6-1. Boron-Chloride Concentration Plot
Gavin Generating Station
Cheshire, Ohio



Legend

BAC-01, MW-1, MW-6	Historical Upgradient Wells
BAC-02, BAC-03, BAC-04, BAC-05	Historical Downgradient Wells
B-0904	Historical Kyger Creek Groundwater
BAC-06, BAC-07	2020 Southern Boundary Wells
BAC-09, BAC-11, BAC-13, BAC-19	2022 Bedrock Wells
BAC-21, BAC-22, BAC-23	2022 Northwestern Wells
BAC-08	2022 Upgradient Well
BAC-10, BAC-12, BAC-14	2022 Downgradient Wells
BAC-16, BAC-18	2022 Southern Boundary Wells
BAC-17	2022 Kyger Creek Groundwater
BAC-15	2022 Silt and Clay Well
Ohio River	
Bottom Ash Pond	

NOTES:
1. Historical Upgradient and Downgradient well data ranges from Aug 2016 to Apr 2025
2. B-0904 data ranges from Mar 2018 to Mar 2020
3. 2020 Southern Boundary well data ranges from Sept 2020 to Mar 2025
4. 2022 Well data ranges from Oct 2022 to Apr 2025
5. Ohio River data ranges from Feb 2018 to Mar 2025
6. Bottom Ash Pond data ranges from Feb 2018 to Oct 2022

ERM

Figure 6-2. Boron-Potassium Concentration Plot
Gavin Generating Station
Cheshire, Ohio

APPENDIX A 2024 KYGER CREEK STATION *CLOSED NORTH FLY ASH POND GROUNDWATER SEMI-ANNUAL DATA ANALYSIS*

OHIO VALLEY ELECTRIC CORPORATION
3932 U. S. Route 23
P. O. Box 468
Piketon, Ohio 45661
740-289-7200

WRITER'S DIRECT DIAL NO:
(740) 289-7259

December 6, 2024

Delivered Electronically

Mr. Marco Deshaies
Division of Surface Water
Ohio Environmental Protection Agency
Southeast District Office
2195 Front Street
Logan, Ohio 43138

Dear Mr. Deshaies:

Re: Ohio Valley Electric Corporation
Kyger Creek Station- Closed North Fly Ash Pond
Groundwater Semi-Annual Data Analysis

Attached are field data (Attachment I) and laboratory analytical data (Attachment II) for the fifty-first (51) set of semi-annual samples collected on October 22, 2024, from groundwater monitoring wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508 and KC-9509 at the Ohio Valley Electric Corporation's (OVEC's) Kyger Creek Station Closed North Fly Ash Pond (CNFAP).

In accordance with the groundwater sampling and analysis plan dated July 5, 1996, for the North Fly Ash Pond Closure Project (hereinafter referred to as "the Plan") and the statistical method notification letter dated October 20, 1999, the analytical results of the semi-annual samples were statistically compared to the background data for the four Groundwater Contamination Indicator Parameters (alkalinity, specific conductivity, sulfate, and total dissolved solids) to determine if any significant change in groundwater quality has occurred. The statistical evaluation was performed by using the tolerance interval method for intrawell comparison in accordance with the Plan and notification letter.

An upper tolerance limit was calculated for each of the four parameters at each well using the background data set with a coverage of 95% (i.e., contains 95% of all possible sample measurements) and a tolerance coefficient of 95% (i.e., 95% degree of confidence with which the interval reaches the specified coverage).

The upper tolerance limits were constructed in accordance with "Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance" (U.S. EPA, 1989), using a one-sided tolerance factor of K=3.188 for n=8 found in Table 5 of Appendix B.

A summary of the sampling results as well as the calculated upper tolerance limits can

be seen for each well on the spreadsheets included under Attachment III.

In accordance with the Plan, verbal communication of parameters exceeding upper tolerance limits has been provided to you via voicemail on December 5, 2024, detailing that the concentrations for the parameter alkalinity exceeded the upper tolerance limit at wells KC-9501, KC-9502, and KC-9507; the concentrations for the parameter sulfate exceeded the upper tolerance limit at wells KC-9501, KC-9502,KC-9507; the concentration for conductivity exceeding the upper tolerance limit at well KC-9507; and the concentrations for the parameter total dissolved solids exceeded the upper tolerance limit at wells KC-9501, KC-9502, and KC-9507.

If you have any questions, please email or contact me at (740) 289-7259.

Sincerely,

Jeremy Galloway
Environmental Specialist

JDG:zsh

Attachments

Attachment I

MONITORING WELL SAMPLING

	KC-9501	KC-9502	KC-9504	KC-9507	KC-9508	KC-9509
DATE	10/22/2024	10/22/2024	10/23/2024	10/23/2024	10/23/2024	10/23/2024
PUMP TIME	5	6	7	6	5	6
FLOW (ml/mi	740	800	780	690	600	1170
VOL. PUMPE	3700	4800	5460	4140	3000	7020
TIME	1254	1336	932	1242	1305	1334
TEMPERATU	15.9	17	16.4	17.7	19	18.6
COND. (uS/cn	999	793	1040	1973	938	954
pH(S.U.)	7.78	5.86	6.56	6.78	7.08	6.99
TIME	1255	1337	933	1243	1306	1335
TEMPERATU	15.1	17.5	16.1	17	18.5	17.6
COND. (uS/cn	1008	790	1036	1982	945	979
pH(S.U.)	7.27	5.93	6.57	6.84	7.06	6.82
TIME	1256	1338	934	1244	1307	1336
TEMPERATU	14.90	15.20	16.00	16.60	18.00	17.00
COND. (uS/cn	1016	788	1012	2000	955	983
pH(S.U.)	7.27	5.77	6.31	6.86	7.06	6.76
TIME	1257	1339	935	1245	1308	1337
TEMPERATU	15.00	15.20	16.00	16.50	17.80	16.80
COND. (uS/cn	1017	788	1004	2004	954	988
pH(S.U.)	7.27	5.77	6.30	6.86	7.05	6.73
TIME		1340	936	1296		1338
TEMPERATURE(C)		15.30	16.00	16.30		16.80
COND. (uS/cm)		792	996	2004		988
pH(S.U.)		5.76	6.25	6.89		6.73
TIME			937			
TEMPERATURE(C)			16			
COND. (uS/cm)			991			
pH(S.U.)			6.23			
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
SAMPLE TIM	858	910	932	940	1009	1021
APPEARANC	Clear	Clear	turbid	turbid	turbid	clear/black particles
ODOR	None	None	None	None	None	None
SAMPLER	HC/KP	HC/KP	HC/KP	HC/KP	HC/KP	HC/KP

WELL #	LEVEL READING
KC-9501	52.50
KC-9502	52.30
KC-9503	
KC-9504	49.70
KC-9505	
KC-9506	
KC-9507	49.70
KC-9508	24.40
KC-9509	24.80
KC-9510	
KC-9511	
KC-9512	
KC-9513	
KC-9514	

DATE	RIVER LEVEL
10/12/2024	539.2
10/13/2024	539.3
10/14/2024	538.9
10/15/2024	539.1
10/16/2024	539.1
10/17/2024	539.3
10/18/2024	539.3
10/19/2024	539.0
10/20/2024	539.4
10/21/2024	539.1
10/22/2024	539.2
10/23/2024	539.1

CALIBRATION	
PARAMETER	TIME
pH	0800
CONDUCT.	0800

Attachment II

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9501 **Customer Description:**
Lab Number: 243179-001 **Preparation: Dissolved**
Date Collected: 10/22/2024 12:58 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	25.0	mg/L	25	0.8	0.3		CRJ	10/31/2024 18:29	EPA 300.1 -1997, Rev. 1.0
Sulfate	249	mg/L	25	8	2		CRJ	10/31/2024 18:29	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	72.3	µg/L	5	1.0	0.3		ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Calcium	149	mg/L	50	3	1	M1	ELH	11/19/2024 23:53	EPA 200.8-1994, Rev. 5.4
Iron	0.72	mg/L	5	0.10	0.02		ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Magnesium	29.3	mg/L	50	5.0	0.5	M1	ELH	11/19/2024 23:53	EPA 200.8-1994, Rev. 5.4
Manganese	0.887	mg/L	5	0.0050	0.0004		ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Sodium	19.9	mg/L	5	1.0	0.1		ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	253	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	710	mg/L	1	50	20		BLB	10/28/2024 09:36	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9502 **Customer Description:**
Lab Number: 243179-002 **Preparation: Dissolved**
Date Collected: 10/22/2024 13:41 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	25.2	mg/L	10	0.3	0.1		CRJ	10/31/2024 19:02	EPA 300.1 -1997, Rev. 1.0
Sulfate	356	mg/L	10	3.0	0.6		CRJ	10/31/2024 19:02	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	24.4	µg/L	5	1.0	0.3		ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Calcium	84	mg/L	50	3	1		ELH	11/20/2024 00:09	EPA 200.8-1994, Rev. 5.4
Iron	0.12	mg/L	5	0.10	0.02		ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Magnesium	28.6	mg/L	50	5.0	0.5		ELH	11/20/2024 00:09	EPA 200.8-1994, Rev. 5.4
Manganese	14.0	mg/L	5	0.0050	0.0004		ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Sodium	22.2	mg/L	5	1.0	0.1		ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	31	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	640	mg/L	1	50	20		BLB	10/28/2024 09:36	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9504 **Customer Description:**
Lab Number: 243179-003 **Preparation: Dissolved**
Date Collected: 10/23/2024 09:38 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	98.1	mg/L	25	0.8	0.3		CRJ	10/31/2024 20:08	EPA 300.1-1997, Rev. 1.0
Sulfate	365	mg/L	25	8	2		CRJ	10/31/2024 20:08	EPA 300.1-1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	27.1	µg/L	5	1.0	0.3		ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Calcium	135	mg/L	50	3	1		ELH	11/20/2024 00:15	EPA 200.8-1994, Rev. 5.4
Iron	2.12	mg/L	5	0.10	0.02		ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Magnesium	13.2	mg/L	50	5.0	0.5		ELH	11/20/2024 00:15	EPA 200.8-1994, Rev. 5.4
Manganese	0.401	mg/L	5	0.0050	0.0004		ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Sodium	54	mg/L	50	10	1		ELH	11/12/2024 02:47	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	25	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	780	mg/L	1	50	20		BLB	10/28/2024 09:42	SM 2540C-2015

AMERICAN ELECTRIC POWER

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Water Analysis Report

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9507 **Customer Description:**
Lab Number: 243179-004 **Preparation: Dissolved**
Date Collected: 10/23/2024 12:48 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	122	mg/L	25	0.8	0.3		CRJ	10/31/2024 20:41	EPA 300.1-1997, Rev. 1.0
Sulfate	963	mg/L	25	8	2		CRJ	10/31/2024 20:41	EPA 300.1-1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	29.1	µg/L	5	1.0	0.3		ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Calcium	311	mg/L	50	3	1		ELH	11/25/2024 19:42	EPA 200.8-1994, Rev. 5.4
Iron	2.44	mg/L	5	0.10	0.02		ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Magnesium	37.0	mg/L	50	5.0	0.5		ELH	11/25/2024 19:42	EPA 200.8-1994, Rev. 5.4
Manganese	3.69	mg/L	5	0.0050	0.0004		ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Sodium	91	mg/L	50	10	1		ELH	11/12/2024 02:58	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	64	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	1770	mg/L	1	50	20		BLB	10/28/2024 09:42	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9508 **Customer Description:**
Lab Number: 243179-005 **Preparation: Dissolved**
Date Collected: 10/23/2024 13:09 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	31.5	mg/L	25	0.8	0.3		CRJ	10/31/2024 21:14	EPA 300.1 -1997, Rev. 1.0
Sulfate	229	mg/L	25	8	2		CRJ	10/31/2024 21:14	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	58.2	µg/L	5	1.0	0.3		ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Calcium	147	mg/L	50	3	1		ELH	11/25/2024 19:47	EPA 200.8-1994, Rev. 5.4
Iron	4.66	mg/L	5	0.10	0.02		ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Magnesium	22.2	mg/L	50	5.0	0.5		ELH	11/25/2024 19:47	EPA 200.8-1994, Rev. 5.4
Manganese	1.84	mg/L	5	0.0050	0.0004		ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Sodium	15.2	mg/L	5	1.0	0.1		ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	209	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	670	mg/L	1	50	20		BLB	10/28/2024 09:48	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9509 **Customer Description:**
Lab Number: 243179-006 **Preparation: Dissolved**
Date Collected: 10/23/2024 13:39 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	42.4	mg/L	25	0.8	0.3		CRJ	10/31/2024 21:47	EPA 300.1 -1997, Rev. 1.0
Sulfate	266	mg/L	25	8	2		CRJ	10/31/2024 21:47	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	58.8	µg/L	5	1.0	0.3		ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Calcium	123	mg/L	50	3	1		ELH	11/25/2024 19:53	EPA 200.8-1994, Rev. 5.4
Iron	5.48	mg/L	5	0.10	0.02		ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Magnesium	22.2	mg/L	50	5.0	0.5		ELH	11/25/2024 19:53	EPA 200.8-1994, Rev. 5.4
Manganese	11.1	mg/L	5	0.0050	0.0004		ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Sodium	17.5	mg/L	5	1.0	0.1		ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	170	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	680	mg/L	1	50	20		BLB	10/28/2024 09:48	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: Trip Blank **Customer Description:**
Lab Number: 243179-007 **Preparation: Dissolved**
Date Collected: 10/22/2024 10:15 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	0.02	mg/L	2	0.06	0.02	J1	CRJ	10/31/2024 22:52	EPA 300.1-1997, Rev. 1.0
Sulfate	0.2	mg/L	2	0.6	0.1	J1	CRJ	10/31/2024 22:52	EPA 300.1-1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	0.11	µg/L	1	0.20	0.05	J1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Calcium	<0.02	mg/L	1	0.05	0.02	U1	ELH	11/25/2024 19:58	EPA 200.8-1994, Rev. 5.4
Iron	0.004	mg/L	1	0.020	0.003	J1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Lead	0.06	µg/L	1	0.20	0.05	J1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Magnesium	<0.009	mg/L	1	0.100	0.009	U1	ELH	11/25/2024 19:58	EPA 200.8-1994, Rev. 5.4
Manganese	0.00031	mg/L	1	0.00100	0.00007	J1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Sodium	<0.02	mg/L	1	0.20	0.02	U1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	<20	mg/L	1	50	20	U1	BLB	10/28/2024 09:54	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: Duplicate **Customer Description:**
Lab Number: 243179-008 **Preparation: Dissolved**
Date Collected: 10/22/2024 12:58 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	24.9	mg/L	25	0.8	0.3		CRJ	10/31/2024 23:25	EPA 300.1 -1997, Rev. 1.0
Sulfate	249	mg/L	25	8	2		CRJ	10/31/2024 23:25	EPA 300.1 -1997, Rev. 1.0

Metals

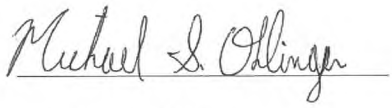
Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	70.6	µg/L	1	0.20	0.05		ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Calcium	149	mg/L	50	3	1	M1	ELH	11/25/2024 20:04	EPA 200.8-1994, Rev. 5.4
Iron	0.664	mg/L	1	0.020	0.003		ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Magnesium	30.1	mg/L	50	5.0	0.5	M1	ELH	11/25/2024 20:04	EPA 200.8-1994, Rev. 5.4
Manganese	0.836	mg/L	1	0.00100	0.00007	M1	ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Sodium	19	mg/L	50	10	1		ELH	11/12/2024 04:47	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	260	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	690	mg/L	1	50	20		BLB	10/28/2024 09:54	SM 2540C-2015

Report Verification

This report and the above data have been confirmed by the following analyst.



Michael Ohlinger, Chemist
Email: msohlinger@aep.com
Phone: 614-836-4184
Audinet: 8-210-4184

THIS TEST REPORT RELATES ONLY TO THE ITEMS TESTED AND SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF THE LABORATORY. ALL TEST RESULTS MEET ALL OF THE REQUIREMENTS OF THE ACCREDITING AUTHORITY, UNLESS OTHERWISE NOTED. ALL TIMES LISTED ARE IN THE EASTERN TIME ZONE.

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Water Analysis Report

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Data Qualifer Legend

M1 - The associated matrix spike (MS) or matrix spike duplicate (MSD) recovery was outside acceptance limits.
U1 - Not detected at or below method detection limit (MDL).
J1 - Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

Form COC-2
Rev. 3, 03/12/07

Chain-of-Custody Record and Analysis Request Form

243179

AEP AMERICAN ELECTRIC POWER

Location: (District, Region, Plant, etc.) OVEC - Kyger Creek Station

Program/Project: (If applicable)

Submitted/Requested By: H. E. Cleland

Phone/Fax/E-mail: Audinet 241-5323; hcleland@ovec.com

Sample(s) Origin: (NPDES Permit, Outfall No., etc.) OIB00005*QD; Monitoring Wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508, and KC-9509

Additional Information: (Site Description, Sample Type, etc.) Grab, Filtered through a .45 micron in-line filter

Analyses Requested: (Attach information if necessary) Alkalinity, Sulfate, TDS, Chloride

Results Turnaround: (Select One ☑) (Please date non-routine)

Routine	Priority	Rush	Date By:
X			

Weather Conditions Affecting Sampling:

Bottle or Analysis ID's	Preservatives and Filtering (Codes/Colors)	Sample Volume (mL)	Sampler(s) Initials	Flow	Select One Per Line: COMPOSITE Date/Time	COMPOSITE mL Added	GRAB Date/Time
KC-9501	B, Blue F, Pink	1000 mL	HC/KP				10/22/24 1258
KC-9502	B, Blue F, Pink	1000 ml	HC/KP				10/22/24 1341
KC-9504	B, Blue F, Pink	1000 ml	HC/KP				10/23/24 0938
KC-9507	B, Blue F, Pink	1000 ml	HC/KP				10/23/24 1248
KC-9508	B, Blue F, Pink	1000 ml	HC/KP				10/23/24 1309
KC-9509	B, Blue F, Pink	1000 ml	HC/KP				10/23/24 1339
Trip Blank	B, Blue F, Pink	1000 ml	HC				10/22/24 1145
Duplicate	B, Blue F, Pink	1000 ml	HC				10/22/24 1258

Units of Flow ☑: ☐ mgd ☐ gpm ☐ Other

Preservatives and Filtering

(Codes)	(Colors)
(A) None	{White}
(B) Cool, ≤ 6° C	{Blue}
(C) NaOH; pH > 12	{Yellow}
(D) HNO_3; pH < 2	{Red}
(E) 1:1 H_2SO_4; pH < 2	{Green}
(F) Filtered	{Pink}
(G) 1:1 HCl; pH < 2	{Gray}
(H) Zinc Acetate	{Black}
(I) Other	

Samplers Initials Code

Initials	Print Sampler Name(s)
HC	Henry Cleland
KP	Kristen Pelfrey

Relinquished By: (Sampling supervisor or personnel) Kristen Pelfrey **Date/Time:** 10/25/24 10:30

Transportation: ☑ ☐ Employee ☒ AEP Courier ☐ UPS ☐ Fed-Ex ☐ Other (Name):

Received by Transporter: **Date/Time:**

Relinquished by Transporter: **Date/Time:**

Received By: (Testing laboratory receiving personnel) Michael Ohlinger **Date/Time:** 10/25/24 ~~10/2~~ 11:30

Receipt Notes:

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, Ohio 43125
Phone: 8-210-4211 or 614-836-4211
Fax: 8-210-4168 or 614-836-4168

A PROPERLY FILLED OUT COPY OF THIS FORM MUST ACCOMPANY EACH SET OF SAMPLES SENT TO THE WATER TESTING LABORATORY.
ALSO, A TAG ON THE SAMPLE OR CONTAINER IS NECESSARY FOR THE SAMPLE(S) TO BE PROPERLY PROCESSED.
FEDERAL REGULATIONS REQUIRE THAT THIS INFORMATION BE RETAINED FOR AT LEAST THREE YEARS.
LABORATORY DATA FOR THESE SAMPLES SHOULD BE FILED WITH A COPY OF THIS CHAIN-OF-CUSTODY RECORD.

Form COC-2
Rev 3, 03/12/07

Chain-of-Custody Record and Analysis Request Form

AMERICAN ELECTRIC POWER

Location: (District, Region, Plant, etc.) OVEC - Kyger Creek Station

Program/Project: (If applicable)

Submitted/Requested By: H. E. Cleland

Phone/Fax/E-mail: Audinet 241-5323; hcleland@ovec.com

Sample(s) Origin: (NPDES Permit, Outfall No., etc.) OIB00005*QD; Monitoring Wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508, and KC-9509

Additional Information: (Site Description, Sample Type, etc.) Grab, Filtered through a .45 micron in-line filter

Analyses Requested: (Attach information if necessary) Barium, Calcium, Iron, Lead, Magnesium, Manganese, Selenium, Sodium

Results Turnaround: (Select One ☑) (Please date non-routine)

Routine	Priority	Rush	Date By:
X			

Weather Conditions Affecting Sampling:

Bottle or Analysis ID's	Preservatives and Filtering (Codes/Colors)	Sample Volume (mL)	Sampler(s) Initials	Flow	Select One Per Line: COMPOSITE Date/Time	COMPOSITE mL Added	GRAB Date/Time
KC-9501	D, Red F, Pink	1000 mL	HC/KP				10/22/24 1258
KC-9502	D, Red F, Pink	1000 ml	HC/KP				10/22/24 1341
KC-9504	D, Red F, Pink	1000 ml	HC/KP				10/23/24 0938
KC-9507	D, Red F, Pink	1000 ml	HC/KP				10/23/24 1248
KC-9508	D, Red F, Pink	1000 ml	HC/KP				10/23/24 1309
KC-9509	D, Red F, Pink	1000 ml	HC/KP				10/23/24 1339
Trip Blank	D, Red F, Pink	1000 ml	HC				10/22/24 1015
Duplicate	D, Red F, Pink	1000 ml	HC				10/22/24 1258

Units of Flow ☑: ☐ mgd ☐ gpm ☐ Other

Preservatives and Filtering

(Codes)	(Colors)
(A) None	{White}
(B) Cool, ≤ 6° C	{Blue}
(C) NaOH; pH > 12	{Yellow}
(D) HNO_3; pH < 2	{Red}
(E) 1:1 H_2SO_4; pH < 2	{Green}
(F) Filtered	{Pink}
(G) 1:1 HCl; pH < 2	{Gray}
(H) Zinc Acetate	{Black}
(I) Other	

Samplers Initials Code

Initials	Print Sampler Name(s)
HC	Henry Cleland
KP	Kristen Palfrey

Relinquished By: (Sampling supervisor or personnel) Kristen Palfrey **Date/Time:** 10/25/24 10:30

Transportation: ☑ ☐ Employee ☒ AEP Courier ☐ UPS ☐ Fed-Ex ☐ Other (Name):

Received by Transporter: **Date/Time:**

Relinquished by Transporter: **Date/Time:**

Received By: (Testing laboratory receiving personnel) Rachael Ohley **Date/Time:** 10/25/24 1720

Receipt Notes:

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, Ohio 43125
Phone: 8-210-4211 or 614-836-4211
Fax: 8-210-4168 or 614-836-4168

A PROPERLY FILLED OUT COPY OF THIS FORM MUST ACCOMPANY EACH SET OF SAMPLES SENT TO THE WATER TESTING LABORATORY.
ALSO, A TAG ON THE SAMPLE OR CONTAINER IS NECESSARY FOR THE SAMPLE(S) TO BE PROPERLY PROCESSED.
FEDERAL REGULATIONS REQUIRE THAT THIS INFORMATION BE RETAINED FOR AT LEAST THREE YEARS.
LABORATORY DATA FOR THESE SAMPLES SHOULD BE FILED WITH A COPY OF THIS CHAIN-OF-CUSTODY RECORD.

WATER & WASTE SAMPLE RECEIPT FORM

Form SOP-7102 Sample Receipt Form Rev.9, 10/07/24

Package Type

(Cooler) Box Bag Envelope

Delivery Type

UPS FedEX USPS

Other Courier

Plant/Customer Kyger Creek **Total # of Containers RECEIVED in Job:** 16

Opened By MSJ

Date/Time 10/25/24 11:30

Were all temperatures within 0-6°C? (Y) / N or N/A (Temps) **Initial:** MSJ on (ice) / no ice

If No, specify each deviation(s) on back of form. (IR Gun Ser# 240093386, *Expir.* 01/31/2026)

Was container in good condition? (Y) / N Comments _____

Was Chain of Custody received? (Y) / N Comments _____

Requested turnaround: Routine If **RUSH**, who was notified? _____

pH (15 min) Cr^{+6} (pres) (24 hr) NO_2 or NO_3 (48 hr) *ortho*-PO_4 (48 hr) Hg-diss (pres) (48 hr)

Was pH checked & Color Coding done? (Y) / N or N/A (pH) **Initial & Date:** MSJ 10/25/24

pH paper mfr LabRat ,PN 4801 ,LOT# X000RWDG21 ,EXPIR DATE 11/30/2025

*** Note changes to pH paper in comments below***

Was Add'l Preservative needed? Y / (N) If Yes: By whom & when: _____ (See Prep Book)

(Dissolved) Is sample filtration requested? Y / (N) Comments _____ (See Prep Book)

Was COC filled out properly? (Y) / N Comments _____

Were samples labeled properly? (Y) / N Comments _____

Were correct containers used? (Y) / N Comments _____

Was the customer contacted? If Yes: Person Contacted: _____

Initial & Date & Time : _____

Lab ID# 243179

Comments: _____

Logged by MSJ

(Record Test Count on back of form)

Total # of Containers LISTED on COC: 16

WATER & WASTE SAMPLE RECEIPT FORM (CONT)

REMINDER: Document the pertinent sample integrity information and deviations in sample receipt (as noted above) in the Sample or Job "Comments" field in the LIMS. **Comments below**:
i.e. Mark "LF" if needs Lab filtered, Temperature or Preservative deviation, Preserved upon arrival , etc.

JOB # : 243179 **Initial/ Date:** MSD 10/25/24 **Peer Review Initial/ Date:** KMB 10/29/24

Login Test Count from COC	LIMS Sample ID (or COC Sample Name)	Comments /Nonconformities	Peer Review Test Count from COC
17	243179-001		17
	-002		
	-003		
	-004		
	-005		
	-006		
	-007		
	-008		

Review for Received Jobs:

Job # 243179 Peer Review Initials & Date KMD 10/29/24

Mark Yes or No. *Mark "corrected by" with you Initials & Date when making corrections.*

STEP 1: Create Login Report and Compare to COC

1. Open LIMS, go to "Job Review". Select job number that is being reviewed.
2. Right click on Job, go to "Reports", select "Login Report";
3. Select "Export Document" When "PDF Export Options" appears, select "OK". Save "Login Report" to H:Internal/Login Reports/**Not Sent Login Reports**
4. Save with the following format:
    a. "Job Number" "Location Abbreviation" "General Sample Info" "Collection Date" Login Report
    b. Example: 241496 CK TRS & WWTP 5-(6,7)-24 Login Report
    c. Close the login report preview screen.

STEP 2: Reviewing and Receiving Jobs

Y / N **1. (For each sample) Does Count of Tests from COC match the Count of Tests on Login Report?**
- a. Especially for Total & Dissolved
- b. COUNT Tests on each Sample from COC & record on back of Sample Receipt Form.
- c. Compare Your Count to the Login Report (& to Test Count recorded at Login)

From Job Tab

Y / N **2. Is location correct?**
- a. Plant name listed
- b. Or correct Region in the Location field (i.e. wastes received from REC)

Y / N 3. **Is the Customer listed appropriately?** (Blank except for the following list.)
- i. Mitchell Water
- ii. Amos Water vs Amos Wells
- iii. Mountaineer Water
- iv. Welsh Water
- v. (Or in case of Wastes from REC – is Customer Name listed?)

Y / N **4. Is the COC signed and dated with the date/time received?**
- a. Does the Job "Date Received" match the COC?

Y / N **5. Is the "Due Date" in LIMS (or "Report Due" on Login Report) correct?**
- a. If "Date By" on COC is marked with a date, this date takes precedence.
- b. 28 days for wells marked "routine"
- c. 14 days for non-wells marked "routine"
- d. Rush is 3 business days.
- e. Priority is 1 week.

From Samples Tab

Y / N **6. Is Collection Date/Time entered correctly?**
- a. Eastern Plants should all match COC
- b. Western Plants should be 1 hour later in LIMS vs. COC

Y / N **7. Does "Customer Sample Name" match COC?**

a. Sampling Point (alias) (if available) similar to "Customer Sample Name"

Y / N **8. Do all of the "Date Results Required" on the <u>Samples</u> match the <u>Job</u>?**

a. If subsample due dates are incorrect,

i. Right click on job
ii. Go to "Workflow Login"
iii. Select "Modify"
iv. Go to "Sample Data" Tab
v. Click on first sample "Date Results Required" – make changes
vi. Hit Right Arrow Button at top right of window
vii. Select "Ok"

Y / N **9. Is the project selected and correct in LIMS?**

a. Either "CCR" for wells or "Other" for all other project types (or "Vault Manhole" for specific TCLP samples)

From Test Tab

Check the following items and verify they are correct. If incorrect, then check with Login Staff:

Y / N **10. Do tests listed on COC match what has been logged in LIMS?**

i. If Clinch or Glen Lyn (Va only) ensure that secondary tests are selected.
ii. <u>Except</u> Glen Lyn's "Addair Run"/"Bluestone Facility" which is in WV and should be primary tests.

Y / N **11. Is the "Sample Receipt Form" filled out completely and correctly?**

a. Based on COC ("dissolved", "request Filtration"), Did any samples require filtration ?

__a__ And IF SO was this marked YES on the Sample Receipt Form ?

corrected

<u>STEP 3: "Receive Job" in the LIMS</u>

When STEP 2 REVIEW is complete,

- Initial and Date the "Peer Reviewed By" line on top of <u>this</u> form.
- Go to the "Job" tab in "Job Review". Select right click on job number. Go to "Process", select "Receive Job".

<u>STEP 4: Re- create Login Report and Scan COC packet</u>

Reminder: If a change was made to the login, re-create (overwrite original) login report per STEP 1.

1. Add Peer Review form to COC packet (COC and Sample receipt form)
2. Scan full COC packet (COC, sample receipt form, login peer review checklist) and save to H:Internal/COC/WWAG/**Not Sent COC**
3. Save with the following format:
   a. COC "Job Number" "Location Abbreviation
   b. Example: COC 241496 CK
4. Place paper COC packet in folder with label and deliver to Chemist – who will email Login Report and COC to customer.

Water – Blue Solids – Pink Waste - Green

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Project Description

Kyger Creek

For:

Kristen Pelfrey

Ohio Valley Electric Co.

Kyger Creek Station 5758 St Rt 7N

Cheshire, OH 45620

Tiffany Bailey

Customer Relationship Coordinator

Tiffany Bailey

Friday, November 15, 2024

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories Inc., - Marietta, OH. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Ohio Valley Electric Co.

Kristen Pelfrey
Kyger Creek Station 5758 St Rt 7N
Cheshire, OH 45620

Project Name: Kyger Creek

Project / PO Number: N/A
Received: 10/24/2024
Reported: 11/15/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
KC-9501	M4J1584-01	Wastewater	Grab		10/22/24 12:00	10/24/24 10:25
KC-9502	M4J1584-02	Wastewater	Grab		10/22/24 13:41	10/24/24 10:25
KC-9504	M4J1584-03	Wastewater	Grab		10/22/24 09:38	10/24/24 10:25
KC-9507	M4J1584-04	Wastewater	Grab		10/22/24 12:48	10/24/24 10:25
KC-9508	M4J1584-05	Wastewater	Grab		10/22/24 13:09	10/24/24 10:25
KC-9509	M4J1584-06	Wastewater	Grab		10/22/24 13:39	10/24/24 10:25

MICROBAC®

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Analytical Testing Parameters

Client Sample ID: KC-9501
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-01 **Collection Date:** 10/22/2024 12:00

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	0.2305	+/-1.19	1.08	pCi/L		10/30/24 0900	11/05/24 1600	AK
Gross Beta	1.056	+/-0.661	0.578	pCi/L		10/30/24 0900	11/05/24 1600	AK

Client Sample ID: KC-9502
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-02 **Collection Date:** 10/22/2024 13:41

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	-0.04086	+/-1.02	0.935	pCi/L		10/30/24 0900	11/05/24 1600	AK
Gross Beta	0.1656	+/-0.683	0.623	pCi/L		10/30/24 0900	11/05/24 1600	AK

Client Sample ID: KC-9504
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-03 **Collection Date:** 10/22/2024 9:38

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	1.083	+/-1.19	1.03	pCi/L		10/30/24 0900	11/06/24 1600	AK
Gross Beta	1.067	+/-0.671	0.588	pCi/L		10/30/24 0900	11/06/24 1600	AK

Client Sample ID: KC-9507
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-04 **Collection Date:** 10/22/2024 12:48

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	1.068	+/-1.87	1.65	pCi/L		10/30/24 0900	11/06/24 1600	AK
Gross Beta	2.030	+/-0.73	0.614	pCi/L		10/30/24 0900	11/06/24 1600	AK

MICROBAC®

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Client Sample ID: KC-9508
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-05 **Collection Date:** 10/22/2024 13:09

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	0.6156	+/-0.903	0.791	pCi/L		10/30/24 0900	11/06/24 1600	AK
Gross Beta	0.5484	+/-0.633	0.567	pCi/L		10/30/24 0900	11/06/24 1600	AK

Client Sample ID: KC-9509
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-06 **Collection Date:** 10/22/2024 13:39

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	1.604	+/-1.05	0.867	pCi/L		10/30/24 0900	11/06/24 1600	AK
Gross Beta	1.465	+/-0.62	0.526	pCi/L		10/30/24 0900	11/06/24 1600	AK

Definitions

MDA: Minimum Detectable Activity, Sample Specific - Concentration which can be counted with a precision +/- 100% at the 95% confidence level (1.96*sigma where sigma is the standard deviation of the net counting rate of the sample).
pCi/L: Picocuries per Liter
UNC: The uncertainty listed is the combined standard uncertainty with an expanded uncertainty of 2*sigma, which provides a level of confidence of approximately 95%.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 7.0°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

MICROBAC®

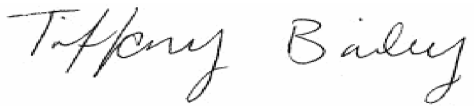
Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Report Comments

Reviewed and Approved By:



Tiffany Bailey
Customer Relationship Coordinator
Reported: 11/15/2024 15:37

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

MICROBAC Return to: 158 Starlite Drive Marietta Ohio 45750

CHAIN OF CUSTODY RECORD

Number

Instructions on back

Lab Report Address		Invoice Address		Turnaround Time	TO BE COMPLETED BY MICROBAC
Client Name:	Microbac	Client Name:	Same	[x] Routine (5 to 7 business days) [ ] RUSH* (notify lab)	Temperature Upon Receipt (°C) 7.0 Therm ID N
Address:	158 Starlite Drive	Address:			Holding Time
City, State, Zip:	Marietta, OH 45750	City, State, Zip:		(needed by)	Samples Received on Ice? Yes No N/A
Contact:	Alicia Walker	Contact:		Report Type	Custody Seals Intact? Yes No N/A
Telephone No.:	740-373-4071	Telephone No.:		[ ]Results Only [ ]Level 1 [ ]Level 2 [ ]Level3 [ ]Level 4 [ ]EDD	

Send Report via: [ ] Mail [ ] Fax [x] e-mail (address) hcleland@ovec.com Send Invoice via: [ ] Mail [ ] Fax [X] e-mail (address)

Project: KC Monitoring Well Sampling Location: Cheshire, OH PO No.: Compliance Monitoring? [X] Yes [ ] No ( ) Agency/Program

Sampled by (PRINT): Henry Cleland/Kristen Pelfrey Sampler Signature: Sampler Phone No.: 740-648-8484

M 4 J 1 5 8 4

Ohio Valley Electric Co.
Rec'd: 10/24/2024 10:25
By: Erin Porter Temp: 7 (Signature)

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Grab Analysis	Grab Bottles	Additional Notes
	KC-9501	10/22/24	1258	2	WW	G	1	1	1	Need one gallon containers
	KC-9502	10/22/24	1341	2	WW	G	1	1	1	Need one gallon containers
	KC-9504	10/23/24	0938	2	WW	G	1	1	1	Need one gallon containers
	KC-9507	10/23/24	1248	2	WW	G	1	1	1	Need one gallon containers
	KC-9508	10/23/24	1309	2	WW	G	1	1	1	Need one gallon containers
	KC-9509	10/23/24	1339	2	WW	G	1	1	1	Need one gallon containers

Possible Hazard Identification [ ] Hazardous [X] Non-Hazardous [ ] Radioactive Sample Disposition [ ] Dispose as appropriate [ ] Return [ ] Archive

Comments

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
	10/24/24 1025		
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
			10-24-24 1025

rev.12/26/2017

Sample Acceptance Policy for Environmental Chemistry and Microbiology

MICROBAC®

Work Order # M45584

COOLER TEMP >6° C LOG

SAMPLE ID	Bottle 1 °C	Bottle 2 °C	Bottle 3 °C	Bottle 4 °C	Bottle 5 °C	Bottle 6 °C

CW 10-24-24

pH Lot # NVA

pH Exceptions

SAMPLE ID	Bottle 1	Bottle 2	Bottle 3	Bottle 4	Bottle 5	Bottle 6

CW 10-24-24

_SERVATIVE
_XCEPTIONS
_NONE
_AS NOTED

CW 10-24-24

Attachment III

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9501
SAMPLING RESULTS

BACKGROUND	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magnesium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field mhos/cm	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
	1	10/14/97	169	63	118	43	2.3	4.1	0.36	<2	20.7	0.78	545	<5	22.5	196	509	15.59	7.18	51.7	539
	2	01/06/98	179	65	108	41	5.5	6.9	0.3	<2	18.8	0.57	539	<5	21.5	200	585	15.42	7.1	51.4	540
	3	05/22/98	181	68	114	40	1.8	4	0.68	<2	21	0.64	576	<5	22.4	194	815	16.06	7.12	50.9	539
	4	07/21/98	168	63	121	40	2	3	0.61	<2	21.2	0.72	564	<5	23.6	203	760	16.46	7.11	51	539
	5	10/21/98	161	61	115	41	3.7	4	0.6	<2	20.4	0.61	548	<5	21.1	211	761	15.86	6.83	51.7	539
	6	01/13/99	171	64	114	40	1.5	5.1	0.59	<2	21.2	0.56	547	<5	21.8	208	760	15.25	6.71	51.7	540
	7	04/21/99	176	61	109	39	6	5.9	0.54	<2	20.5	0.52	549	<5	20.9	201	811	15.76	6.58	50.7	541
	8	07/27/99	167	64	117	31	5	3.6	0.55	<2	21.3	0.56	562	<5	21.5	207	813	17.92	6.64	51.4	540
	95% Tol.	Upper	193	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	593	N/A	N/A	221	1095	N/A	N/A	N/A	N/A
	95% Tol.	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1	10/13/99	160	61	117	41	5	6.6	0.56	<2	21.8	0.49	538	<5	21.8	222	818	18.35	6.8	52	539
	2	05/04/00	179	67	122	46	2.6	3.2	0.59	<2	21.6	0.66	578	<5	23.2	196	880	16.47	6.2	51.5	538
	3	10/19/00	138	65	116	39	1.3	3.2	0.59	<2	21.5	0.52	568	<5	22	237	818	15.92	6.27	52.25	539
	4	04/25/01	152	–	–	–	–	–	–	–	–	–	600	–	–	214	864	16.37	6.34	51.83	539
	5	10/04/01	149	61	119	–	6	6.2	0.65	<2	22.3	0.53	571	<5	21.6	219	822	16.48	7.26	52.68	538
	6	06/05/02	162	–	–	36	–	–	–	–	–	–	620	–	–	234	814	16.35	7.24	51.50	538
	7	10/31/02	152	71	117	43	4.5	5.3	0.45	<2	20.9	0.63	565	<5	24.8	237	798	15.38	7.30	52.39	538
	8	04/08/03	133	–	–	–	–	–	–	–	–	–	570	–	–	258	826	15.29	7.34	49.50	541
	9	10/09/03	137	69	115	38	0.8	3.4	0.39	<2	20.1	0.61	552	<5	24	235	784	15.24	7.51	52.50	538
	10	05/05/04	153	–	–	–	–	–	–	–	–	–	563	–	–	214	791	15.16	7.43	50.55	540
	11	10/21/04	136	66	118	30	5	5.9	0.2	<2	18.1	0.65	529	<5	23.4	204	791	15.40	7.37	52.45	540
	12	04/26/05	140	–	–	–	–	–	–	–	–	–	517	–	–	207	803	15.20	7.27	49.00	542
	13	10/19/05	132	51	96.6	34	7.9	7.3	0.03	<2	16	0.37	732	<5	25.6	208	759	15.50	7.31	52.00	539
	14	04/18/06	128	–	–	–	–	–	–	–	–	–	489	–	–	198	764	15.40	7.26	51.84	539
	15	10/19/06	126	55	101	38	4.3	4.1	0.09	<10	15.8	0.57	492	<20	19.9	207	734	15.60	7.30	50.40	541
	16	04/27/07	127	–	–	–	–	–	–	–	–	–	541	–	–	192	840	14.60	7.41	50.14	539
	17	11/05/07	143	64	108	–	4.6	2.8	0.03	<5	15.8	0.69	566	<0.5	27.4	193	832	14.60	7.00	51.66	539
	18	04/22/08	160	–	–	–	–	–	–	–	–	–	591	–	–	186	513	14.62	5.87	52.80	539
	19	11/04/08	132	76	116	30.9	1.5	1.09	0.04	<0.05	19.4	0.89	519	<0.5	24.6	192	506	15.10	6.94	52.29	539
	20	04/23/09	132	–	–	30.3	–	–	–	–	–	–	500	–	–	192	762	13.78	7.21	51.22	539
	21	10/21/09	151	55	90.2	31.7	7.2	6.1	0.02	<10	15.2	0.36	499	<0.5	21.1	189	740	16.20	7.33	52.00	539
	22	04/20/10	151	–	–	–	–	–	–	–	–	–	500	–	–	189	759	14.90	7.50	51.85	539
	23	10/15/10	158	63	102	31.5	2.9	3.8	0.17	<10	17.8	0.61	495	<0.5	22.6	195	702	14.80	7.33	52.30	539
	24	06/07/11	164	–	–	–	–	–	–	–	–	–	513	–	–	185	748	14.80	6.72	50.50	539
	25	10/19/11	188	56	94.8	24.6	5.3	7.5	0.38	<10	18.3	0.44	484	<0.5	20.6	168	709	14.00	7.31	51.50	539
	26	04/25/12	204	–	–	20	–	–	–	–	–	–	503	–	–	147	684	14.10	7.35	51.62	539
	27	10/09/12	247	60.7	110	22.1	4.7	2.9	0.39	0.04	21	0.48	492	<0.1	21.5	146	739	13.60	7.08	52.30	539
	28	04/24/13	220	–	–	18.2	–	–	–	–	–	–	508	–	–	128	754	14.60	7.44	52.10	538
	29	10/24/13	218	63.3	114	22.7	1.9	1.2	0.34	0.06	19.9	0.53	508	<0.2	19.9	150	732	14.20	7.06	52.10	539
	30	04/17/14	228	–	–	–	–	–	–	–	–	–	531	–	–	155	781	14.30	7.45	51.10	540
	31	10/28/14	234	67	112	20.6	2.9	4.1	0.47	0.01	21.5	0.53	513	<0.1	20	160	835	14.70	7.03	52.20	538
	32	05/21/15	232	–	–	22.4	–	–	–	–	–	–	522	–	–	172	852	14.40	7.27	51.00	538
	33	10/29/15	235	68.5	126	20.7	4.9	7	0.53	0.02	24.8	0.61	558	<0.03	21	173	845	14.50	7.14	51.40	539
	34	04/21/16	252	–	–	22.9	–	–	–	–	–	–	528	–	–	173	789	15.00	7.27	51.70	539
	35	10/13/16	260	68.6	122	20.9	14.4	4.9	0.43	0.01	23.8	0.57	518	<0.03	20.2	160	887	15.00	7.16	52.90	539
	36	04/27/17	254	-	-	23.5	-	-	-	-	-	-	534	-	-	173	854	14.90	6.86	50.70	540
	37	10/17/17	259	76.4	124	22.2	2.6	8.3	0.56	0.01	24.1	0.64	569	<0.03	19.3	202	909	15.50	7.16	52.10	539
	38	06/06/18	256	-	-	23.7	-	-	-	-	-	-	591	-	-	206	894	14.90	7.18	50.90	540
	39	10/18/18	270	70.7	121	23.4	3	0	0.54	<0.02	23.3	0.59	578	<0.03	17.9	193	977	14.80	7.16	51.00	540
	40	04/22/19	247	-	–	23.8	-	-	-	-	-	-	603	-	-	199	959	14.50	7.11	48.40	541
	41	10/29/19	277	73.3	118	24	1.47	2.54	0.68	<0.05	26	0.49	578	<0.03	19.4	189	856	15.00	6.96	52.30	541
	42	06/12/20	261	-	-	26.2	-	-	-	-	-	-	683	-	-	242	927	15.60	7.23	51.00	536
	43	10/23/20	246	83.4	140	24.3	0.75	0.89	2.4	<0.05	28	0.7	763	<0.03	18.2	232	939	14.30	7.27	52.30	539
	44	04/28/21	244	-	-	26.5	-	-	-	-	-	-	651	-	-	242	997	14.60	7.43	51.70	539
	45	10/19/22	266	80.7	142	26	0.2	1.12	0.79	<0.03	28.4	0.75	660	<0.5	20	242	1007	15.7	7.13	52.6	539
	46	04/22/22	259	-	-	25.9	-	-	-	-	-	-	660	-	-	266	1016	14.7	7.23	50.2	541
	47	10/25/22	250	82.8	129	25.2	0.74	0	0.73	<0.05	27.1	0.73	670	<0.09	18.7	260	946	14.8	7.17	52.9	537
	48	05/24/23	232	-	-	25.2	-	-	-	-	-	-	680	-	-	263	614	14.6	7.29	52.3	537
	49	10/19/23	227	82.7	146	26.1	1.5	1.13	0.78	<0.05	29.3	0.83	690	<0.04	20.1	278	916	14.6	7.24	52.6	539
	50	05/14/24	253	-	-	25.6	-	-	-	-	-	-	710	-	-	261	1022	14.6	7.25	51.2	539
	51	10/22/24	250	72.3	149	25	0.23	1.06	0.72	<0.3	29.3	0.89	710	<0.2	19.9	249	1017	15.00	7.27	52.5	539

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9502
SAMPLING RESULTS

	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magnesium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field µmhos/cm	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
BACKGROUND	1	10/14/97	19	19	59.1	38	1	2.7	3.79	<2	20.9	16.5	464	<5	24.1	233	409	15.68	5.69	51.65	538.6
	2	01/06/98	17	21	56.1	40	4.8	12.8	5.37	3	18.2	11.6	449	<5	24.8	232	455	15.6	5.69	51.37	539.5
	3	05/22/98	19	24	55.6	40	<1	2.7	6.67	<2	19	12.6	494	<5	24.9	238	623	15.93	5.7	50.81	538.8
	4	07/21/98	17	19	59.4	40	<1	2.1	6.85	3	20	13.4	463	<5	25	236	604	16.4	5.48	50.9	539
	5	10/21/98	18	18	58.6	40	<1	2.1	5.54	<2	19	13.3	474	<5	23	232	606	15.91	5.49	51.62	539
	6	01/13/99	15	23	54.3	42	<1	1.5	6.86	2	18.7	11.4	470	<5	23.8	239	594	15.62	5.23	51.66	539.5
	7	04/21/99	15	16	53.5	34	<1	1.7	2.11	3	18	13.1	478	<5	22.1	236	633	16.25	5.24	50.65	541
	8	07/27/99	16	19	58.6	31	1.7	2.3	3.38	4	19.2	14.6	510	<5	24.1	220	634	17.89	5.36	51.36	540
		95% Tol. Upper	22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	536	N/A	N/A	252	847	N/A	N/A	N/A	N/A
		95% Tol. Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SEMIANNUAL	1	10/13/99	18	16	59.7	45	0	5.8	1.64	<2	19.5	16.2	461	<5	23.3	239	640	16.96	5.49	51.9	538.5
	2	05/04/00	18	19	58.7	58	0.4	1.7	3.85	2	19.9	14.8	509	<5	25.3	251	687	16.46	5.19	51.46	538
	3	10/19/00	20	19	58.4	31	1.1	1.8	4.68	<2	19.7	13.9	509	<5	24.2	241	656	16.02	5.40	52.18	538.8
	4	04/25/01	18	–	–	–	--	–	--	--	–	--	546	--	–	240	593	15.86	5.89	51.67	539
	5	10/04/01	22	18	61.3	–	0	1.8	3.4	2	20	15	483	<5	22.9	237	658	16.29	5.90	52.61	538
	6	06/05/02	22	–	–	40	--	–	--	--	–	--	612	--	–	247	640	15.73	5.81	51.46	538
	7	10/31/02	21	20	61.5	39	0.8	2.1	4.44	<2	20.4	14.4	492	<5	24.5	248	641	15.39	5.91	52.31	538.4
	8	04/08/03	15	–	–	–	--	–	--	--	–	--	513	--	–	275	682	15.32	5.63	49.45	540.7
	9	10/09/03	20	23	62.1	42	0.8	1.1	4.23	<2	21.1	14.8	486	<5	23.2	250	651	15.41	6.22	52.48	538
	10	05/05/04	19	–	–	–	--	–	--	--	–	--	538	--	–	266	685	15.16	6.04	50.50	540
	11	10/21/04	23	19	69.6	33	0.6	0	12.2	<2	21.3	12.1	516	<5	24.9	279	726	15.40	5.86	52.00	540
	12	04/26/05	12	–	–	–	--	–	--	--	–	--	527	--	–	278	703	15.10	5.54	49.40	542
	13	1019/05	16	15	59.7	32	1.2	2.9	7.28	5	19.7	13	522	<5	27.8	260	693	15.80	5.67	51.94	539
	14	04/18/06	18	–	–	–	--	–	--	--	–	--	483	--	–	274	693	15.20	5.61	51.60	539
	15	10/19/06	15	16	56.3	32.9	1.7	3.2	7.18	<10	17.7	11.6	481	<20	19.2	278	694	15.40	5.57	50.30	541
	16	04/27/07	19	–	–	–	--	–	--	--	–	--	520	--	–	276	738	14.40	5.77	50.12	539
	17	11/05/07	18	7	64.5	–	1.1	0	6.26	<5	19.8	13	538	<0.5	25.3	259	716	14.60	5.81	51.57	539
	18	04/22/08	28	–	–	–	--	–	--	--	–	--	527	--	–	244	641	14.86	7.47	52.76	539
	19	11/04/08	26	<10	62.8	23.4	0.165	0.77	4.36	0.14	19.9	13.9	484	<0.5	24	226	438	15.12	5.91	52.18	539
	20	04/23/09	28	–	–	24.8	--	–	--	--	–	--	469	--	–	240	687	13.77	6.55	51.16	539
	21	10/21/09	27	<20	52.9	26.6	1.1	1.6	4.88	<10	17.3	11.7	484	<0.5	22.5	248	681	15.20	5.75	51.80	538.7
	22	04/20/10	31.5	–	–	–	--	–	--	--	–	--	487	--	–	247	708	14.80	5.96	51.68	539
	23	10/15/10	29.3	<20	60.1	32.2	0	2	5.74	<10	20.2	13.4	470	<0.5	23.9	300	627	14.70	5.91	52.20	539
	24	06/07/11	31.9	–	–	–	--	–	--	--	–	--	471	--	–	249	659	14.60	6.83	50.37	538.8
	25	10/19/11	32.8	<20	55.6	28.3	1.5	6	4.48	<10	18.2	11.8	478	<0.5	22.8	257	652	13.90	5.79	51.40	538.9
	26	04/25/12	31	–	–	23.9	--	–	--	--	–	--	478	--	–	240	616	14.00	5.55	51.58	538.7
	27	10/09/12	26	19	62.7	26.7	0.7	1.5	3.54	0.035	20.1	14.3	462	<0.1	24.7	228	646	13.50	5.03	52.12	538.5
	28	04/24/13	42	–	–	22.8	--	–	--	--	–	--	458	--	–	246	658	14.50	5.99	52.11	538.1
	29	10/24/13	33.8	18.9	62.1	26.6	0	0.8	4.89	0.144	19	14.2	474	<0.2	22.2	238	613	13.10	5.80	52.00	538.5
	30	04/17/14	33	–	–	–	--	–	--	--	–	--	480	--	–	246	680	14.20	5.84	51.00	540
	31	10/28/14	38.8	19.5	59	25.2	0.7	2.8	4.5	0.006	19.1	14.5	462	<0.1	23	242	690	14.70	6.50	52.20	538
	32	05/21/15	48.9	–	–	20.6	--	–	--	--	–	--	450	--	–	254	684	14.40	6.04	51.00	538.1
	33	10/29/15	41.1	19.6	66.4	25.8	1	1.1	2.44	0.016	20.8	18.6	446	<0.03	24.5	249	683	14.50	5.79	51.80	539
	34	04/21/16	45.7	–	–	21.7	--	–	--	--	–	--	473	--	–	261	644	14.80	5.75	51.70	539
	35	10/13/16	39.7	21.5	67.9	26.3	7.3	1.6	0.088	0.029	21.7	21.4	473	<0.03	23.4	264	761	14.90	5.51	52.80	538.9
	36	04/27/17	62.8	-	-	19.7	-	-	-	-	-	-	446	-	-	239	715	14.70	5.68	50.60	540.2
	37	10/17/17	59.2	20.1	64.6	23.2	0	10.1	3.28	0.01	20.7	15.1	470	<.03	22.1	259	710	15.30	5.89	52.00	539.1
	38	06/06/18	61	-	-	22.6	-	-	-	-	-	-	482	-	-	102	719	14.80	5.85	50.80	540.3
	39	10/18/18	48.3	22.4	68.4	27.1	0.6	1.7	0.531	0.03	21.2	20.6	515	0.04	22	275	811	14.10	5.73	50.90	539.8
	40	04/22/19	41.9	-	-	27.3	-	-	-	-	-	-	542	-	-	288	787	14.30	5.59	48.40	541.3
	41	10/29/19	29.7	24	63.1	27.2	0.049	1.13	0.401	<0.05	22.3	21.7	544	0.03	24.1	303	724	14.60	5.52	52.20	540.8
	42	06/12/20	28.4	-	-	27.9	-	-	-	-	-	-	559	-	-	305	730	15.40	5.45	51.00	536.2
	43	10/23/20	24.9	26.7	74.8	26.1	-0.49	2.46	0.162	<0.05	24.4	25.2	573	0.07	22.7	315	763	14.20	5.52	52.20	538.9
	44	04/28/21	28.8	-	-	27.7	-	-	-	-	-	-	566	-	-	310	997	14.40	5.60	51.70	539.2
	45	10/19/21	31	27.4	73.6	27.5	0.791	0.83	0.03	<0.3	24.4	24.5	580	<0.5	24	316	796	15.70	5.64	52.60	539
	46	04/22/22	42	-	-	23.5	-	-	-	-	-	-	520	-	-	299	1148	16.70	5.62	50.30	540.9
	47	10/25/22	27	28	74.4	27	-0.37	0.62	0.041	<0.05	24.4	26	590	<0.09	23.5	355	790	14.90	5.63	52.80	537.1
	48	05/24/23	25	-	-	25.2	-	-	-	-	-	-	590	-	-	356	512	14.50	5.70	52.30	537.3
	49	10/19/23	26	27.4	75.8	26.2	1.29	1	0.088	0.08	26	26.5	610	0.04	24.1	363	734	14.60	5.64	52.60	539.4
	50	05/14/24	37	-	-	25.5	-	-	-	-	-	-	630	-	-	340	824	14.40	5.83	51.20	539.3
	51	10/22/24	31	24.4	84	25.2	-0.04	0.17	0.12	<0.3	28.6	14	640	<0.2	22.2	356	792	15.30	5.76	52.30	539.2

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9504
SAMPLING RESULTS

BACKGROUND	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magneium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field mhos/c	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
	1	10/14/97	103	58	135	41	1.3	4.6	0.66	<2	17.9	0.85	683	<5	29.9	327	594	16.7	6.98	47.5	539
	2	01/06/98	98	52	135	40	2.8	4.3	0.41	3	15.3	0.7	667	<5	30.6	324	653	16.5	6.86	47.5	540
	3	05/22/98	101	55	139	38	<1	2.4	1.03	<2	16.9	0.83	727	<5	30.5	349	916	16.8	6.86	46.77	539
	4	07/21/98	94	54	145	40	<1	2.4	1.05	<2	16.7	0.8	704	<5	30.8	345	871	17.3	6.89	46.87	539
	5	10/21/98	95	53	150	37	<1	2.2	0.85	3	17.7	0.89	737	<5	30.4	369	915	16.6	6.78	47.88	539
	6	01/13/99	108	58	147	39	<1	2	1.06	2	17.8	0.81	744	<5	31.3	370	942	16.1	6.57	48	540
	7	04/21/99	89	45	138	32	28	29	0.33	<2	17.4	0.69	716	<5	28.6	371	1198	17.1	5.19	46.44	541
	8	07/27/99	118	49	179	35	4.3	5.8	0.85	<2	20.5	0.93	852	<5	32.1	421	1071	18.1	6.29	47.22	540
	95% Tol.	Upper	130	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	908	N/A	N/A	459	1528	N/A	N/A	N/A	N/A
	95% Tol.	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ASH	1	10/13/99	117	45	184	32	12	15.6	0.91	<2	22.3	1.06	856	<5	32.2	440	1118	17.1	6.37	47.9	539
SENSE	2	05/04/00	124	44	186	58	0.8	4.8	1.17	2	22.2	1.05	919	<5	29.2	429	1182	16.4	5.92	47.95	538
	3	10/19/00	118	40	190	36	5.6	11.6	1.44	<2	24	0.92	928	<5	29.7	467	1161	16.44	6.06	48.75	539
MIAL	4	04/25/01	122	–	–	–	–	–	–	–	–	–	1070	–	–	537	968	17.42	6.04	48.25	539
	5	10/04/01	116	35	222	–	2.8	5.1	1.75	<2	27.9	0.91	1010	<5	27.9	527	1105	16.99	5.64	49.01	538
	6	06/05/02	104	–	–	36	–	–	–	–	–	–	1050	–	–	561	1205	16.85	6.83	48.00	538
	7	10/31/02	99	38	203	42	4.3	4	1.69	<2	29.3	1.16	1010	<5	24	559	1203	16.48	6.87	48.70	538
	8	04/08/03	97	–	–	–	–	–	–	–	–	–	1040	–	–	555	1301	16.47	6.92	46.50	541
	9	10/09/03	93	36	198	43	1.9	1	1.81	<2	31.2	1.22	979	<5	23.2	524	1186	16.28	7.40	49.20	538
	10	05/05/04	107	–	–	–	–	–	–	–	–	–	1040	–	–	532	1216	15.50	6.97	46.90	540
	11	10/21/04	82	32	185	38	2.6	1.7	1.93	<2	31.2	0.94	941	<5	23.3	519	1141	16.80	6.89	48.72	540
	12	04/26/05	78	–	–	–	–	–	–	–	–	–	977	–	–	519	1221	16.70	6.97	45.45	542
	13	10/19/05	75	26	175	41	1.8	4.6	2.05	<2	34	1.04	1000	12	25.9	525	1216	17.10	6.97	48.50	539
	14	04/18/06	79	–	–	–	–	–	–	–	–	–	1050	–	–	565	1285	16.80	6.98	48.24	539
	15	10/19/06	70	27	213	47	10.8	4	1.84	<10	33.9	1.06	986	<20	17.7	558	1233	17.20	6.86	47.20	541
	16	04/27/07	69	–	–	–	–	–	–	–	–	–	1050	–	–	585	1350	16.20	7.11	46.65	539
	17	11/05/07	69	29	187	–	1.5	3.7	1.83	<5	32.1	1.27	1020	<0.5	23	503	1258	16.40	7.00	48.29	539
	18	04/22/08	144	–	–	–	–	–	–	–	–	–	1480	–	–	790	1413	17.47	6.83	57.68	539
	19	11/04/08	124	37	286	29.4	2.23	2.97	4.46	<0.05	46	3.37	1430	<0.5	23.1	820	1149	17.44	6.76	48.31	539
	20	04/23/09	127	–	–	34.5	–	–	–	–	–	–	1470	–	–	778	1607	16.15	7.63	47.32	539
	21	10/21/09	129	29	273	33.8	1.5	0	3.38	<10	38.3	2.65	1390	<0.5	21.2	785	1598	17.00	6.83	48.75	539
	22	04/20/10	138	–	–	–	–	–	–	–	–	–	1420	–	–	744	946	16.90	5.85	47.51	539
	23	10/15/10	127	34	277	38	1.9	0.9	4.28	<10	39.6	3.32	1330	<0.5	21.8	775	1432	16.80	6.80	48.23	539
	24	06/07/11	127	–	–	–	–	–	–	–	–	–	1280	–	–	668	1428	16.80	7.03	46.75	539
	25	10/19/11	123	24	207	36.2	2.1	3.5	3.8	<10	28.9	2.96	1180	<0.5	19.1	666	1366	15.80	6.73	48.05	539
	26	04/25/12	117	–	–	37.3	–	–	–	–	–	–	1090	–	–	541	1184	16.50	6.77	48.48	539
	27	10/09/12	111	26.5	208	37.3	3.3	3.3	4.18	0.41	29.6	3.08	957	<0.1	19.4	459	1181	15.60	6.78	49.08	539
	28	04/24/13	111	–	–	39	–	–	–	–	–	–	965	–	–	542	1211	16.50	7.13	48.84	538
	29	10/24/13	97.9	25.9	195	40.5	3	10.6	3.7	0.11	25	2.69	903	<0.2	15.9	452	1119	15.40	6.74	49.10	539
	30	014/17/14	99.7	–	–	–	–	–	–	–	–	–	949	–	–	484	1170	16.20	7.16	48.00	540
	31	10/28/14	89.9	26.6	184	42.4	2	2.3	3.51	0.01	24.3	2.52	898	<0.1	15.8	460	1226	16.60	6.49	49.20	538
	32	05/21/15	94.6	–	–	44.5	–	–	–	–	–	–	896	–	–	481	1500	16.10	6.84	48.10	538
	33	10/29/15	85.1	26.7	192	48.9	4.7	5.1	3.76	0.03	26.7	2.67	784	<0.03	16.6	464	1130	16.30	7.00	48.80	539
	34	04/21/16	92.1	–	–	45.2	–	–	–	–	–	–	795	–	–	428	1013	16.80	6.88	48.70	539
	35	10/13/16	86.6	26.7	166	45.8	16.5	4.6	3.2	0.01	23.7	2.28	757	<0.03	14.7	423	1137	16.50	6.91	49.60	539
	36	04/27/17	12.5	-	-	54.1	-	-	-	-	-	-	295	-	-	103	446	16.50	6.21	47.50	540
	37	10/17/17	21.8	30.2	63.1	52.6	1.5	0.5	0.82	0.04	6.92	0.32	321	<.03	17.9	128	485	17.10	6.25	49.20	539
	38	06/06/18	36.1	-	-	53.8	-	-	-	-	-	-	330	-	-	102	504	16.70	6.56	47.20	540
	39	10/18/18	14.7	28.9	55.9	63.9	0.9	0	0.82	<0.02	5.9	0.42	312	<0.03	17.7	114	557	14.10	6.12	47.80	540
	40	04/22/19	14.4	-	-	70.2	-	-	-	-	-	-	391	-	-	129	571	17.10	6.27	45.40	541
	41	10/29/19	10	29.4	75.4	85.2	0.8	1.82	0.3	<0.05	7.7	0.15	464	0.04	33	185	643	16.30	6.39	48.90	541
	42	06/12/20	20.7	-	-	79.3	-	-	-	-	-	-	490	-	-	202	550	18.20	6.74	47.50	536
	43	10/23/20	10	26	90.9	80.9	-0.13	2.55	0.18	0.07	8.83	0.27	575	0.03	36.5	226	738	16.00	6.39	49.10	539
	44	04/28/21	10	-	-	86.3	-	-	-	-	-	-	568	-	-	250	837	16.20	6.49	48.50	539
	45	10/19/21	14	23.3	88.2	85.4	0	0.27	1.31	<0.3	9.43	0.46	540	<0.5	52.1	249	882	17.00	6.31	49.20	539
	46	04/22/22	13	-	-	83.4	-	-	-	-	-	-	540	-	-	259	1200	16.30	6.82	47.10	541
	47	10/25/22	13	21.3	81.9	86.8	0.06	0.09	0.47	<0.05	8.41	0.17	540	<0.09	54.7	256	776	16.90	6.71	49.50	537
	48	05/24/23	22	-	-	78.7	-	-	-	-	-	-	550	-	-	243	490	16.1	6.25	49.2	537
	49	10/19/23	16	26.4	113	89.9	0.72	0.99	0.86	<0.05	11.4	0.36	650	<0.04	53.2	326	834	16.4	7.01	49.1	539
	50	05/14/24	21	-	-	93.9	-	-	-	-	-	-	760	-	-	352	1035	15.7	6.38	48.00	539
	51	10/23/24	25	27.1	135	98.1	1.08	1.07	2.12	<0.3	13.2	0.42	780	<0.2	54	365	991	16.00	6.23	49.70	539

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9507
SAMPLING RESULTS

	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magnesium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field umhos/cm	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
BACKGROUND DATA	1	10/14/97	40	28	150	35	4.6	5.5	18.5	<2	55.5	6.73	1000	<5	29.9	629	842	17.3	5.61	47.32	538.6
	2	01/06/98	42	24	138	37	3.4	6.3	14.1	3	45.8	4.42	993	<5	30.1	586	868	17.2	5.59	47.38	539.5
	3	05/22/98	44	29	141	30	<1	3.3	16.8	2	49	5.15	1080	<5	29.2	583	499	17.4	5.61	46.63	538.8
	4	07/21/98	46	24	162	28	10.9	16.2	17.5	<2	51.8	5.55	1060	<5	29.9	618	1236	17.8	5.64	46.77	539
	5	10/21/98	50	23	153	30	<1	3.1	17	<2	51.5	5.14	1050	<5	26.3	610	1209	17.2	5.57	47.8	539
	6	01/13/99	46	24	152	26	1.7	6.4	17.3	3	52.9	4.8	1070	<5	27.8	632	1214	16.7	5.16	47.98	539.5
	7	04/21/99	41	24	157	30	5	7.8	19.2	2	52.8	5.21	1130	<5	27.3	672	931	16.9	6.18	46.36	541
	8	07/27/99	38	22	156	29	9.6	6.6	22.5	<2	53.8	5.91	1110	<5	27.2	637	1306	19.4	5.3	47.15	540
	95% Tol	Upper	56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1214	N/A	N/A	713	1895	N/A	N/A	N/A	N/A
	95% Tol	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ASH POND SEMI ANNUAL	1	10/13/99	39	20	147	33	2.5	1.8	18.6	<2	49.5	4.93	954	<5	27.6	579	1226	17.2	5.36	47.86	538.5
	2	05/04/00	37	19	131	46	1.5	0.5	12.9	<2	43.4	3.72	981	<5	26.1	518	1182	16.9	5.07	48.35	538
	3	10/19/00	33	18	130	26	3.7	1.3	15.6	<2	45.3	4.34	919	<5	24.7	531	1138	16.82	5.28	48.69	538.8
	4	04/25/01	32	–	–	–	–	–	–	–	–	–	967	–	–	536	1309	17.26	5.68	48.17	539
	5	10/04/01	27	20	128	–	0.7	1.7	13.6	<2	41.8	3.57	860	<5	25.6	485	1267	17.75	6.91	48.99	538
	6	06/05/02	25	–	–	34	–	–	–	–	–	–	1110	–	–	563	1124	16.90	5.62	48.00	538
	7	10/31/02	24	24	122	41	0.7	1.9	18.6	<2	41.1	4.32	853	<5	24.6	530	1051	16.70	5.75	48.60	538.4
	8	04/08/03	22	–	–	–	–	–	–	–	–	–	843	–	–	505	1051	16.65	5.67	46.40	540.7
	9	10/09/03	22	21	118	45	0.8	2.6	18.6	<2	38.9	4.06	820	<5	22.9	479	1048	16.49	5.95	48.10	538
	10	05/05/04	22	–	–	–	–	–	–	–	–	–	941	–	–	515	1112	16.56	5.79	46.80	540
	11	10/21/04	21	19	123	34	0.8	2.5	26.4	<2	39.2	5.28	810	<5	24.3	514	1074	16.90	5.67	48.35	540
	12	04/26/05	22	–	–	–	–	–	–	–	–	–	782	–	–	463	1053	16.70	5.62	45.40	542
	13	10/19/05	20	13	96	39	0.7	1.2	17	<2	31.4	3.12	707	<5	25.3	400	961	17.10	5.71	48.35	539
	14	04/18/06	20	–	–	–	–	–	–	–	–	–	755	–	–	448	976	16.90	5.66	48.15	539
	15	10/19/06	20	15	103	36.9	0.7	0.9	27.5	<10	32.7	4.71	724	<20	21.2	445	1015	17.20	5.52	47.28	541
	16	04/27/07	22	–	–	–	–	–	–	–	–	–	808	–	–	463	1072	16.30	5.73	46.64	539
	17	11/05/07	25	17	100	–	2	3	31.4	<5	31.2	5.59	810	<0.5	23.2	396	996	16.50	5.62	48.15	539
	18	04/22/08	31	–	–	–	–	–	–	–	–	–	1120	–	–	649	1121	17.68	6.29	57.67	539
	19	11/04/08	26	22	232	36.6	-0.21	0.84	8.31	<0.05	31.5	1.89	1040	<0.5	16.2	592	894	17.49	6.22	52.49	539
	20	04/23/09	28	–	–	41.5	–	–	–	–	–	–	997	–	–	560	1200	16.30	7.01	47.22	539
	21	10/21/09	28	<20	144	40.5	2.6	0	8.44	<10	18.8	1.65	827	0.5	14.1	492	1060	17.20	5.86	48.80	538.7
	22	04/20/10	24	–	–	–	–	–	–	–	–	–	698	–	–	408	1022	17.00	6.93	47.40	539
	23	10/15/10	21.2	21	122	51.6	0.6	0	5.19	<10	14.2	0.937	593	<0.5	13.6	382	770	16.60	6.08	48.10	539
	24	06/07/11	26.7	–	–	–	–	–	–	–	–	–	627	–	–	319	858	16.80	7.07	46.85	538.8
	25	10/19/11	20.2	<20	77.8	40.9	3.1	4.7	1.26	<10	8.66	0.395	433	<0.5	10.6	212	543	15.80	5.81	48.02	538.9
	26	04/25/12	17	–	–	43.7	–	–	–	–	–	–	489	–	–	207	604	16.50	6.10	48.42	538.7
	27	10/09/12	14	21.3	85.4	49	1.4	2.6	0.64	0.03	8.18	0.211	433	<0.1	11.4	171	577	15.60	5.66	48.97	538.5
	28	04/24/13	15	–	–	48.8	–	–	–	–	–	–	402	–	–	168	557	16.40	6.33	48.78	538.1
	29	10/24/13	14.2	24.8	73.7	50.1	0	3.5	1.26	0.09	7.47	0.392	349	<0.2	11.3	142	517	15.40	6.74	49.10	538.5
	30	04/17/14	14.6	–	–	–	–	–	–	–	–	–	393	–	–	135	537	16.10	6.19	48.10	540
	31	10/28/14	25	25.2	60.7	50.8	0	4.7	0.13	0.02	6.46	0.277	343	<0.1	11.5	128	520	16.60	6.56	49.10	538
	32	05/21/15	26.5	–	–	56	–	–	–	–	–	–	353	–	–	136	546	15.90	6.26	48.00	538.1
	33	10/29/15	13.2	26.4	60.8	56.3	0.5	13.1	1.02	0.02	6.17	0.264	348	<0.03	12.8	130	484	16.30	6.13	48.70	539
	34	04/21/16	14.3	–	–	53.9	–	–	–	–	–	–	320	–	–	121	443	16.50	6.01	48.60	539
	35	10/13/16	14.8	29.3	61.6	54.6	0	0	1.22	0.03	6.73	0.382	339	0.04	16.2	133	510	16.40	6.02	49.60	538.9
	36	04/27/17	93.1	-	-	46.5	-	-	-	-	-	-	724	-	-	360	1054	16.50	6.95	46.90	540.2
	37	10/17/17	93.9	25.3	146	46	1.4	3.7	2.61	0.01	21.1	1.79	651	<0.03	13.6	346	970	16.70	6.93	48.70	539.1
	38	06/06/18	102	-	-	49.6	-	-	-	-	-	-	694	-	-	343	1089	16.60	6.93	47.10	540.3
	39	10/18/18	93.8	27.1	141	55.3	4.6	1.2	2.4	<0.02	19.2	1.65	662	<0.03	12.4	319	1121	15.90	6.99	47.80	539.8
	40	04/22/19	87.1	-	-	64.4	-	-	-	-	-	-	825	-	-	383	1230	16.00	6.59	45.50	541.3
	41	10/29/19	89.2	38.4	173	65.6	1.24	1.48	3.36	<0.05	25.1	2.64	911	<>0.03	28	462	1231	16.60	6.99	48.90	540.8
	42	06/12/20	75.5	-	-	71.6	-	-	-	-	-	-	1050	-	-	537	1280	18.10	6.74	47.50	536.2
	43	10/23/20	100	31.3	207	63.5	-0.43	1.16	2.98	<0.05	26.8	2.44	945	<0.03	23.3	479	1350	16.50	6.99	49.10	538.9
	44	04/28/21	87.9	-	-	74.7	-	-	-	-	-	-	1080	-	-	566	1474	15.80	6.99	48.50	539.2
	45	10/19/21	92	32.1	222	73.8	0.45	0.7	3.11	<0.3	29.7	3.08	1120	<0.5	35.3	592	1537	17.80	7.02	49.20	539
	46	04/22/22	91	-	-	90.1	-	-	-	-	-	-	1380	-	-	814	1662	16.60	7.06	47.20	540.9
	47	10/25/22	83	32.5	249	87.6	0	1.16	3.05	<0.05	31.6	3.14	1340	<0.09	55.6	777	1615	17.00	6.96	49.60	537.1
	48	05/24/23	58	-	-	102	-	-	-	-	-	-	1430	-	-	827	1068	16.40	6.92	49.20	537.3
	49	10/19/23	67	31	271	101	1.23	0.93	3.84	<0.05	33.2	3.26	1560	<0.04	73.7	876	1714	16.00	7.01	49.10	539
	50	05/14/24	68	-	-	117	-	-	-	-	-	-	1750	-	-	982	2146	15.90	6.95	48.20	539.3
	51	10/23/24	64	29.1	311	122	1.07	2.03	2.44	<0.3	37	3.69	1770	<0.2	91	963	2004	16.30	6.89	49.70	539.1

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9508
SAMPLING RESULTS

BACKGROUND	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magnesium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field mhos/cm	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
	1	10/14/97	237	99	132	21	5.6	8.6	1.07	<2	20	1.24	558	<5	14.7	190	512	15	6.94	23.5	539
	2	01/06/98	244	90	124	21	5.5	9.1	1.17	2	17.1	0.92	568	<5	15.3	196	588	14.9	6.85	23.4	540
	3	05/22/98	236	99	133	22	2.5	4.7	2.15	<2	19.6	0.88	607	<5	15.7	203	840	15.1	6.91	22.7	539
	4	07/21/98	230	98	146	21	3.1	3.8	2.35	<2	20.7	0.97	598	<5	15.8	208	805	15.4	6.81	22.8	539
	5	10/21/98	210	101	144	23	3.3	3.9	2.32	<2	20	0.89	621	<5	14.9	245	819	15.1	6.83	23.5	539
	6	01/13/99	233	98	136	21	3.5	5.2	2.28	2	19.7	0.86	600	<5	15.3	221	824	14.9	6.4	23.6	540
	7	04/21/99	224	101	138	20	5	5.7	1.99	<2	19.2	0.78	608	<5	15.5	230	975	16.1	6.33	22.4	541
	8	07/27/99	228	102	151	23	1.2	3.4	2.08	<2	20.7	0.79	659	<5	16.2	235	893	16.5	6.44	23.2	540
	95% Tol.	Upper	263	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	702	N/A	N/A	279	1275	N/A	N/A	N/A	N/A
	95% Tol.	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1	10/13/99	228	104	155	23	2.6	3.2	2.22	<2	20.8	0.78	631	<5	16.7	247	904	15.3	6.56	23.7	539
	2	05/04/00	221	104	158	32	0	2.3	2.29	<2	21.2	0.79	660	<5	16.8	247	969	15.3	5.93	23.9	538
	3	10/19/00	238	108	156	23	5.9	4	2.08	<2	21.8	0.94	645	<5	16.5	253	980	15.33	5.96	24.03	539
	4	04/25/01	229	–	–	–	–	–	–	–	–	–	691	–	–	264	729	15.14	5.97	23.58	539
	5	10/04/01	244	111	171	–	4	4.4	2.58	<2	22.6	1.1	681	<5	16.9	273	974	15.34	6.96	24.27	538
	6	06/05/02	233	–	–	24	–	–	–	–	–	–	754	–	–	283	962	15.25	6.98	23.46	538
	7	10/31/02	233	116	172	26	3.4	6.7	2.95	<2	24.4	0.95	736	<5	18.1	315	1002	14.79	7.01	24.31	538
	8	04/08/03	224	–	–	–	–	–	–	–	–	–	807	–	–	357	1087	14.81	6.89	24.80	541
	9	10/09/03	227	99	193	24	1.3	4.2	3.23	<2	27.2	1.04	827	<5	19.8	370	996	15.10	7.24	24.30	538
	10	05/05/04	228	–	–	–	–	–	–	–	–	–	896	–	–	380	1157	14.78	7.14	22.40	540
	11	10/21/04	227	78	216	13	3.3	5	4.08	<2	27.2	1.09	841	<5	20.9	372	1148	15.00	6.93	24.00	540
	12	04/26/05	229	–	–	–	–	–	–	–	–	–	803	–	–	351	1103	15.00	6.91	21.00	542
	13	10/19/05	231	60	171	22	1.9	3.3	4.02	<2	24.3	0.98	778	<5	20.5	320	1064	15.10	6.96	23.77	539
	14	04/18/06	228	–	–	–	–	–	–	–	–	–	761	–	–	332	1056	15.30	6.89	23.52	539
	15	10/19/06	226	68	194	23.4	0	0.5	3.94	<10	25.6	0.95	759	<20	18.1	325	1050	15.30	6.88	22.04	541
	16	04/27/07	231	–	–	–	–	–	–	–	–	–	795	–	–	314	1134	14.30	6.99	22.25	539
	17	11/05/07	164	65	178	–	2	0.5	3.82	<5	24.8	1.09	882	<0.5	20.9	326	1112	14.40	6.93	23.68	539
	18	04/22/08	207	–	–	–	–	–	–	–	–	–	794	–	–	320	852	14.80	7.16	25.83	539
	19	11/04/08	199	74	200	23.3	2.99	1.2	4.24	<0.05	28.5	1.43	820	<0.5	20.5	337	751	15.30	7.11	24.49	539
	20	04/23/09	231	–	–	30.2	–	–	–	–	–	–	806	–	–	334	1078	14.10	7.49	22.68	539
	21	10/21/09	229	68	165	27.4	0.7	3.2	4.2	<10	24.4	0.94	774	<0.5	24.8	326	1083	15.20	6.96	24.00	539
	22	04/20/10	230	–	–	–	–	–	–	–	–	–	815	–	–	340	1005	14.90	7.02	23.20	539
	23	10/15/10	235	71	169	29.2	0	2.1	4.59	<10	26.3	1	742	<0.5	20.9	395	970	15.00	6.93	23.60	539
	24	06/07/11	241	–	–	–	–	–	–	–	–	–	738	–	–	288	1019	14.90	7.36	22.37	539
	25	10/19/11	234	71	165	27.4	3.1	5	4.2	<10	25.4	0.98	796	<0.5	21.6	336	1037	14.20	6.75	23.01	539
	26	04/25/12	242	–	–	26.5	–	–	–	–	–	–	834	–	–	330	1020	15.00	6.89	23.70	539
	27	10/09/12	229	75.5	194	27.3	3.5	3.5	5.33	0.04	29.9	1.06	838	<0.1	25	336	1112	14.20	6.72	23.91	539
	28	04/24/13	237	–	–	27.7	–	–	–	–	–	–	825	–	–	399	1161	15.40	7.09	23.90	538
	29	10/24/13	223	70.9	189	29.8	1	2.3	5.41	0.08	27.1	1	830	<0.2	21.7	346	1109	14.80	6.59	23.70	539
	30	04/17/14	225	–	–	–	–	–	–	–	–	–	844	–	–	346	1131	15.10	7.04	23.20	540
	31	10/28/14	223	64.7	178	28.7	2.3	4.1	5.34	0.01	25.7	1.04	836	<0.1	21.3	364	1195	16.00	6.65	23.90	538
	32	05/21/15	216	–	–	–	–	–	–	–	–	–	847	–	–	394	1231	15.30	6.76	22.10	538
	33	10/29/15	213	67	208	32.7	1.9	2.5	6.5	0.02	30.5	1.3	800	<0.03	25.4	384	1184	15.80	6.71	23.50	539
	34	04/21/16	215	–	–	30.7	–	–	–	–	–	–	868	–	–	391	1106	16.50	6.85	23.80	539
	35	10/13/16	234	67	192	31.8	2.5	2	5.95	0.01	27.6	1.31	866	<0.03	21.9	420	1296	16.20	6.84	24.30	539
	36	04/27/17	210	-	-	31.9	-	-	-	-	-	-	834	-	-	381	1188	16.45	6.75	22.30	540
	37	10/17/17	237	57.1	176	30.4	3	0.4	5.79	0.01	26.2	1.19	788	<0.03	20.4	370	1135	17.30	6.83	24.00	539
	38	06/06/18	225	-	-	30.7	-	-	-	-	-	-	777	-	-	342	1122	16.00	6.85	22.70	540
	39	10/18/18	237	55.9	162	29.7	3.4	1.4	5.32	0.06	22.7	1.19	391	<0.03	17.8	317	1208	15.70	6.84	22.90	540
	40	04/22/19	215	-	-	31	-	-	-	-	-	-	810	-	-	352	1163	16.90	6.96	20.30	541
	41	10/29/19	208	65.2	164	33	-0.66	2.83	6.51	<0.05	25.5	1.46	838	0.03	19.9	362	1061	17.40	6.82	23.90	541
	42	06/12/20	228	-	-	31.1	-	-	-	-	-	-	793	-	-	338	1071	18.10	7.00	22.70	536
	43	10/23/20	221	61.4	168	29.5	0.84	2.56	6.49	<0.05	24.2	1.73	783	<0.03	17.7	311	1198	17.60	6.98	23.80	539
	44	04/28/21	208	-	-	30.7	-	-	-	-	-	-	735	-	-	297	1050	16.90	6.89	23.30	539
	45	10/19/21	217	56	149	30.3	0.39	1.67	5.74	<0.3	21.9	1.68	680	<0.5	17.6	283	1068	17.60	6.90	24.10	539
	46	04/22/22	224	-	-	31.8	-	-	-	-	-	-	670	-	-	295	1216	17.00	7.12	22.40	541
	47	10/25/22	213	63.1	134	33.6	-0.13	0.44	5.55	<0.05	21.3	1.81	690	<0.09	16	284	966	16.40	6.83	24.40	537
	48	05/24/23	208	-	-	33.2	-	-	-	-	-	-	680	-	-	272	606	16.90	6.98	24.30	537
	49	10/19/23	203	61.7	147	32.5	1.04	0.89	2.83	<0.05	21.8	1.59	660	<0.04	16.7	266	863	16.80	7.02	49.10	539
	50	05/14/24	232	-	-	31	-	-	-	-	-	-	640	-	-	221	954	16.10	7.05	23.30	539
	51	10/23/24	209	58.2	147	31.5	0.62	0.55	4.66	<0.3	22.2	1.84	670	<0.2	15.2	229	954	17.80	7.05	24.40	539

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9509
SAMPLING RESULTS

			Alkalinity	Barium	Calcium	Chloride	Gross Alpha	Gross Beta	Iron	Lead	Magnesium	Manganese	Residue, Filterable, TDS	Selenium	Sodium	Sulfate	Conductivity	Temperature	pH	Well	River
	Round	Date	(total) mg/l	(diss) ug/l	(diss) mg/l	mg/l	pCi/l	pCi/l	(diss) mg/l	(diss) ug/l	(diss) mg/l	(diss) mg/l	mg/l	(diss) ug/l	(diss) mg/l	mg/l	Field mhos/cm	Field °C	Field S.U.	Elev. ft.	Elev. ft.
BACKGROUND	1	10/14/97	195	51	133	18	<1	2.7	2.65	<2	22.4	0.87	603	<5	17.2	241	485	14.9	6.62	23.8	539
	2	01/06/98	201	45	122	24	1.5	3.1	1.58	2	19.3	0.48	605	<5	17.4	235	597	14.9	6.59	23.7	540
	3	05/22/98	210	47	128	21	<1	2.2	2.41	<2	20.4	0.58	642	<5	16.4	225	832	15.1	6.65	23	539
	4	07/21/98	201	47	143	21	<1	2.8	2.6	<2	22.3	0.63	621	<5	17.2	245	814	15.4	6.36	23.1	539
	5	10/21/98	230	45	141	23	1.6	3	2.19	<2	21.4	0.59	618	<5	15.7	220	820	15	6.48	23.8	539
	6	01/13/99	206	48	135	21	<1	2.5	2.39	<2	21.2	0.56	624	<5	16.6	261	827	14.9	5.87	24	540
	7	04/21/99	212	45	133	24	3.2	2.4	1.56	4	19.7	0.44	589	<5	15.6	235	857	15.3	6.14	22.8	541
	8	07/27/99	207	45	144	16	4.3	4.1	1.76	<2	21.3	0.47	646	<5	16.1	244	869	16.1	6.14	23.6	540
	95% Tol.	Upper	241	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	680	N/A	N/A	279	1213	N/A	N/A	N/A	N/A
	95% Tol.	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SEMIANNUAL	1	10/13/99	204	48	147	21	0.5	2	3.3	<2	21.9	0.62	622	<5	17.5	255	885	15.2	6.27	23.9	539
	2	05/04/00	197	59	152	30	0	0.3	4.75	2	22.3	0.81	694	<5	18.2	278	959	15.3	5.65	23.6	538
	3	10/19/00	201	55	168	15	2.2	1.8	2.34	<2	25.2	0.62	736	<5	18.9	326	1017	15.21	5.76	24.45	539
	4	04/25/01	200	–	–	–	–	–	–	–	–	–	831	–	–	383	787	15.14	5.50	23.83	539
	5	10/04/01	206	63	175	–	2.3	3.3	2.48	<2	25	0.68	734	<5	19.1	324	1027	15.32	6.75	24.62	538
	6	06/05/02	190	–	–	23	–	–	–	–	–	–	793	–	–	348	992	15.21	6.69	23.75	538
	7	10/31/02	162	74	164	24	0	2.1	4.35	<2	27.7	1.08	803	<5	23.3	395	1040	14.75	6.56	24.70	538
	8	04/08/03	151	–	–	–	–	–	–	–	–	–	894	–	–	457	1136	14.85	6.40	22.10	541
	9	10/09/03	149	59	178	25	1.3	4.6	1.32	<2	30.1	1.07	864	<5	22	443	1020	15.05	6.78	24.60	538
	10	05/05/04	151	–	–	–	–	–	–	–	–	–	876	–	–	426	1101	14.89	6.58	22.68	540
	11	10/21/04	149	65	184	18	1.6	4.3	4.14	<2	28.3	2.48	849	<5	22.1	436	1127	14.90	6.21	23.23	540
	12	04/26/05	162	–	–	–	–	–	–	–	–	–	863	–	–	420	1129	15.00	6.31	21.90	542
	13	10/19/05	152	49	165	22	1.5	4.3	2.45	3	28.2	5.36	846	<5	24.1	430	1093	15.10	6.48	24.15	539
	14	04/18/06	165	–	–	–	–	–	–	–	–	–	841	–	–	410	1050	15.40	6.52	24.05	539
	15	10/19/06	155	53	172	25.1	0.7	3.9	1.83	<10	25.1	8.99	761	<20	17.9	394	1023	15.20	6.47	22.36	541
	16	04/27/07	158	–	–	–	–	–	–	–	–	–	830	–	–	381	1131	14.40	6.71	22.60	539
	17	11/05/07	180	51	170	–	3	5.6	2.52	<5	26.6	8.58	896	<0.5	22.5	398	1173	14.40	6.61	24.00	539
	18	04/22/08	164	–	–	–	–	–	–	–	–	–	745	–	–	328	794	14.95	6.63	26.16	539
	19	11/04/08	167	59	145	21.8	1.67	1.61	3.61	<0.05	23.3	9	664	<0.5	18.4	263	622	15.26	6.84	23.94	539
	20	04/23/09	167	–	–	25.5	–	–	–	–	–	–	693	–	–	304	921	14.09	7.51	22.98	539
	21	10/21/09	162	54	127	25.1	1.2	3.7	5.24	<10	22.6	10.2	742	<0.5	19.8	351	994	15.20	6.44	24.50	539
	22	04/20/10	170										781			349	1069	15.00	6.59	23.49	539
	23	10/15/10	177	58	162	34.1	4.9	2.9	2.82	<10	28.7	10.1	825	<0.5	22.8	451	1032	15.00	6.66	24.18	539
	24	06/07/11	184	–	–	–	–	–	–	–	–	–	834	–	–	361	1058	14.80	7.11	22.85	539
	25	10/19/11	177	44	156	27.8	4.4	6.2	2.29	<10	27	10	868	<0.5	23	432	1069	14.20	6.38	23.60	539
	26	04/25/12	207	–	–	27	–	–	–	–	–	–	861	–	–	391	1013	14.80	6.47	23.25	539
	27	10/09/12	147	63.1	63.6	25.3	3	3.1	3.16	0.1	20.2	14.8	923	<0.1	25.3	430	1160	14.20	6.22	24.42	539
	28	04/24/13	176	–	–	26.5	–	–	–	–	–	–	900	–	–	471	1188	15.40	6.71	24.35	538
	29	10/24/13	137	72.6	158	26.5	2.3	0	6.76	0.51	27.8	22.5	832	<0.2	22.8	401	1069	15.00	6.22	24.90	539
	30	04/17/14	131	–	–	–	–	–	–	–	–	–	922	–	–	454	1173	15.40	6.59	23.70	540
	31	10/28/14	118	63.6	155	29.4	2.2	0	2.21	0.01	28.2	29.1	915	<0.1	24.7	473	1260	16.10	6.44	24.30	538
	32	05/21/15	143	–	–	31.7	–	–	–	–	–	–	918	–	–	478	1262	15.40	6.63	23.40	538
	33	10/29/15	112	49.6	166	32	6.1	0	2.55	0.02	31.1	33.8	886	<0.03	26.5	497	1204	15.70	6.13	23.80	539
	34	04/21/16	109	–	–	31.9	–	–	–	–	–	–	877	–	–	499	950	16.60	6.15	24.20	539
	35	10/13/16	113	62	134	29.2	3.1	2.7	7.04	0.01	26	36.2	779	<0.03	23.5	460	1126	16.50	6.11	24.69	539
	36	04/27/17	110	-	-	32.2	-	-	-	-	-	-	854	-	-	463	1155	16.44	6.19	22.80	540
	37	10/17/17	134	41.8	157	31.3	2.8	0	1.72	0.01	29	30.6	828	<0.03	23.7	464	1043	17.30	6.83	24.00	539
	38	06/06/18	168	-	-	32.7	-	-	-	-	-	-	824	-	-	414	1119	16.00	6.50	23.10	540
	39	10/18/18	150	49.5	147	33.4	1.5	5.1	2.38	0.21	25.7	26.2	828	<0.03	20.9	405	1212	16.10	6.43	23.30	540
	40	04/22/19	162	-	-	33	-	-	-	-	-	-	812	-	-	375	1103	17.20	6.68	20.70	541
	41	10/29/19	126	49.4	132	40.1	0.93	2.53	1.95	<0.05	26.1	30.1	804	<0.03	21.9	402	1045	17.10	6.70	24.90	541
	42	06/12/20	126	-	-	38.3	-	-	-	-	-	-	768	-	-	373	1068	17.20	6.93	23.20	536
	43	10/23/20	136	54.9	132	37.3	-0.19	1.53	3.53	<0.05	23.6	26.7	783	<0.03	18.8	330	1172	16.70	6.70	24.20	539
	44	04/28/21	158	-	-	35.6	-	-	-	-	-	-	720	-	-	324	1034	16.40	6.80	23.70	539
	45	10/19/21	148	62.2	117	40.8	0	0.86	6.45	<0.3	21.2	23.7	660	<0.5	18.9	296	1063	16.90	6.73	24.60	539
	46	04/22/22	144	-	-	44	-	-	-	-	-	-	670	-	-	325	980	16.60	6.82	22.90	541
	47	10/25/22	144	67.5	119	45.8	0.6	1.02	3.45	<0.05	22	19	680	<0.09	17.6	324	952	17.40	6.51	24.80	537
	48	05/24/23	150	-	-	39.8	-	-	-	-	-	-	690	-	-	310	600	16.50	6.62	24.30	537
	49	10/19/23	150	49.4	122	41.4	0.91	0.84	2.46	<0.05	21.1	16.7	700	<0.04	16.6	305	868	16.30	6.62	24.60	539
	50	05/14/24	164	-	-	44.0	-	-	-	-	-	-	680	-	-	293	979	16.20	6.64	23.40	539
	51	10/23/24	170	58.8	123	42.4	1.6	1.47	5.48	<0.3	22.2	11.1	680	<0.2	17.5	266	988	16.80	6.73	24.80	539

APPENDIX B 1998 AND 2017 OEPA INTEROFFICE MEMORANDUM

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George V. Voinovich
Governor

To: Dan Messerly through Bruce Goff, DSW-SEDO

From: David Hunt through Mike Preston, DDAGW-SEDO

Subject: Ohio Valley Electric Corporation - Ground Water Quality Results for May 1998
(DDAGW #: 07/22/98-04-3-05-0 3757)

Date: August 28, 1998

****

Introduction

The Ohio Valley Electric Corporation (OVEC) site is located in Gallia County, Ohio on State Route 7 approximately five miles north of Gallipolis, Ohio. There are two fly ash ponds at the OVEC site: the north and the south ponds. The PTI for closure plan is only for the closure of the north pond, while the south pond will continue to be used for fly ash disposal. The PTI was approved without OVEC having to address DDAGW's comments on the proposed ground water monitoring plan. The geology of interest beneath the OVEC site consists of unconsolidated sand and gravel formations of the Ohio River Valley Aquifer. There are two industrial, nonpotable well fields up river and down river of the north and south ponds. The industrial well fields and the Ohio River are the major influence of the ground water flow patterns at the OVEC site.

There are ten ground water monitoring wells at the closure site (KC-9501 through KC-9510) However, only wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508 and KC-9509 have been selected by OVEC for ground water monitoring purposes. Dedicated bladder pumps have been installed in these six wells for sampling purposes. The ground water monitoring package submitted on July 10, 1998 included ground water data for these six wells. The package also included water level data for fourteen wells present at the site. The six wells are proposed to be sampled quarterly for two years. No up gradient well was sampled, which is necessary to determine if an intrawell statistical approach is appropriate. DDAGW has commented on this before, but OVEC maintains that they will implement the ground water monitoring program in the approved PTI, which does not include a background well being monitored.

In a previous IOC to DSW, DDAGW outlined that based upon a comparison of shallow wells verses deep wells it appears that the water quality at the OVEC site is being impacted. Please refer to the January 1998 IOC for further information on the November sampling results.

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The following are DDAGW's comments on the ground water monitoring data results in the July 1998 submittal for the OVEC site.

Observations

1. Since no background well was sampled, DDAGW has made several comparisons with the ground water quality results to evaluate whether the north fly ash pond has impacted ground water. These comparisons include shallow wells to deep wells, the wells on site to two ambient stations within the Ohio River Valley Aquifer, and the two well clusters monitoring the north fly ash pond to the cluster on the southern side of the south fly ash pond. The following are several observations about the water quality.

    a. The shallow wells tend to have lower pH and alkalinity than the deeper wells at two of the three locations. The shallow wells KC-9502 and KC-9507 show pH ranging between 5.61 to 5.75, while the deeper well at the respective clusters, KC-9501 and KC-9504, showed pH near 7.0. Alkalinity in the deeper well 9501 was 181 ug/l, while the shallower well 9502 was at 19 ug/l.

    b. Shallow wells 9502 and 9507 have higher concentrations of manganese, and iron verses the deep wells 9501 and 9504. Well 9501 has a manganese concentration of 0.64 mg/l while the shallow well at the same cluster has a manganese concentration of 12.6 mg/l. Iron is 1.03 mg/l in the deep well (9504) but is 16.8 mg/l in shallow well (9507).

    c. In addition to the iron and manganese, 9507 (shallow well) has slightly higher concentrations of magnesium (Mg), TDS and sulfate (SO4) when compared to the deep well, 9504.

    d. The water quality for the cluster 9508 and 9509 was very similar for all parameters.

    e. There has been fairly good consistency in water quality between the three ground water sampling events that have been performed to date, with the following exceptions: well 9502 is showing an increasing trend of iron (3.79 in 10/97 to 6.67 in 5/98); conductivity in well 9507 dropped from 850 in 10/97 and 868 in 1/98 down to 499 in 5/98; 9508 is showing a slight increase in iron between the three events while manganese is slightly decreasing.

    f. Shallow wells 9502 and 9507 are close to being directly down gradient of the north fly ash pond while 9508 is located side gradient, or southward, of the south fly ash pond. Since there is no real difference between the deep and shallow wells at the 9508/09 location it stands to reason that the differences in water quality between shallow and deep at the other two locations may be related to a release from the north fly ash pond. Alkalinity, barium, calcium and pH are higher in the shallow well 9508 than found in 9502 and 9507. Iron and manganese are much

higher in 9502 and 9507 verses 9508. TDS, sulfate, and magnesium are higher in 9507 than found at 9508.

g. DDAGW maintains two ground water ambient stations within the Ohio River Valley Aquifer near the OVEC site. The Middleport Well #4 and the Gallia Rural Water #4 stations are located near the OVEC site. Water quality from July 1998 at these two ambient locations was compared to the water quality being found at the OVEC site. Magnesium, barium, sodium, calcium and chloride are all similar in concentration in the ambient wells as found at the OVEC site. However, iron and manganese levels are much higher (1 to 2 orders of magnitude higher) in all of the wells (shallow and deep) at the OVEC site when compared to the ambient water quality. Interestingly, the OVEC deep wells show very similar alkalinity to the ambient wells.

Comments

1. No water level map was submitted with the three water quality reports. A potentiometric map should be submitted with the water quality data report.

2. In the June 25, 1997 memo on the ground water quality SAP, DDAGW recommended the inclusion of the background well KC-9506 in the initial two year sampling. As noted, this is particularly important in determining if an intrawell statistical approach is the best method for evaluating whether a release has occurred. Given the water quality from the first tbree quarters of monitoring, it appears that there are differences in water quality between the shallow and deep wells in two of the three clusters. Other differences in water quality were also evaluated above. These differences in water quality may be reflective of a release to ground water from the north pond. If a release has occurred at the OVEC site, then intrawell statistics cannot be used to evaluate a release. In order for OVEC to effectively demonstrate that no release has occurred and that intrawell comparison is appropriate, DDAGW continues to recommend that KC-9506 be included in the sampling effort.

3. Based on the water quality data and the submitted water level depth data, DDAGW continues to recommend tbat another monitoring well cluster be installed between the clusters 9501/9502 and 9504/9507 on the east side of the north fly ash pond. OVEC declined to install this well cluster in 1997 given that OEPA approved the PTI without this well as a component of the proposed ground water monitoring program. If OVEC will not install this monitoring well as part of detection monitoring program, then the cluster would likely be installed during assessment activities. Based on the review of the water quality data it is likely that assessment activities will be necessary.

Conclusion

DDAGW has completed its review of the July 1998 Ground Water Quality Report for the North Pond closure at the OVEC site in Gallia County. DDAGW made several ohservations

concerning the water quality data generated to date. Based on the water quality data it appears that there is a difference in water quality between the shallow and deep portions of the Ohio River Valley Aquifer on the down gradient side of the site. This may be an indication of a release from the north or south ponds. Should you have any further questions regarding this review or the site in general, please contact me.

cc: Scott Sutliffe, DDAGW-CO

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DDAGW #: 07/22/98-04-3-05-0 3757

Gallia Co, OIB00005*DD Ohio Valley Electric Corp Kyger Creek

Ohio Environmental Protection Agency

Interoffice Memo

To: Marco Deshaies DSW, SEDO.

From: Steve Lowry through Steve Williams DDAGW, SEDO.

Date: February 7, 2017

RE: Ohio Valley Electric Corporation (OVEC), Kyger Creek Station, North Fly Ash Pond Closure Project, Internal Technical Review, Ground Water Program, Gallia County, OIB00005*PD

Subject: Review of the December 2015, May 2016 and December 2016 North Fly Ash Pond Closure Project Semi-annual groundwater sampling results.

INTRODUCTION

The DDAGW has reviewed the December 14, 2015, May 25, 2016 and the December 2, 2016 dated submittals containing the semiannual groundwater sampling and statistical analysis results from the North Fly Ash Pond Closure Project. These reports include data from the corresponding October 2015, April 2016 and October 2016 sampling events.

Groundwater monitoring of the North Fly Ash Pond is required as part of a January 15, 1997 PTI. Groundwater monitoring at the site began in October of 1997. The North Pond is closed and located immediately north of the adjacent and open South Fly Ash Pond. The North Fly Ash Pond was first used in the 1950's.

The statistical evaluations of groundwater quality contained in the above noted submittals indicate that the upper tolerance limits for the following parameters were exceeded at the following wells:

Alkalinity at wells KC-9501 and KC-9502, exceeded during all three sampling events.

Sulfate at wells KC-9508 and KC-9509, exceeded during all three sampling events, and at well KC-9502 during both 2016 events and KC-9504 during the October 2015 event.

TDS at wells KC-9508 and KC-9509, exceeded during all three sampling events.

Conductivity at well KC-9508 exceeded during the October 2016 sampling event.

Statistical exceedances have been declared by the facility for at least one parameter per sampling event since the beginning of the statistical evaluations, in October of 1999. As with past submittals, OVEC contends that "these statistical exceedances are due to natural variation and not associated with the North Fly Ash Closure Project".

The PTI does not include any provisions for further investigations related to the statistical increases, or for an assessment of the groundwater quality.

BACKGROUND

The facility has been conducting semi-annual groundwater monitoring at the North Fly Ash Pond since 1997. The PTI "Groundwater Sampling and Analysis Plan" is a rather brief document. The plan outlines sampling protocols and parameters and requires a statistical analysis of the four indicator parameters and a requirement to notify Ohio EPA of any statistically significant increases within 15 days of receipt of the analysis. As noted above, the plan does not contain any requirements for additional investigations or for the implementation of a groundwater assessment.

Per the PTI, during the spring sampling event, the statistical parameters of Alkalinity, Specific Conductance, Sulfate and TDS are collected and analyzed. During each fall sampling event, the above four parameters and an additional 12 water quality parameters are collected. The above three noted submittals contain the field parameters for the six sampled wells, total water depth measurements, river stage measurements, the laboratory data sheets for the sampled parameters, and a table that shows the sampling results for each parameter and the intra-well 95% confidence interval value for each of the statistical parameters.

Groundwater flow maps were not included in the submitted documents. The groundwater flow direction at the site is difficult to accurately determine due to the limited number of water level measurements included in the submittals. The lack of a submitted water level from an upgradient well also hinders evaluation of groundwater flow directions. Additionally, clarification may be necessary as water level data appears to be reported as a depth to water, from the top of the monitoring well inner casing, as opposed to mean sea level.

The North Fly Ash Pond is monitored by six wells which represent three well clusters, each monitoring two separate units. These wells are screened in sand and gravel deposits associated with the Ohio River. The wells range in depth from approximately 34 feet to 94 feet below grade. The well screens of each well cluster are separated by a distance of approximately two to five feet. The well clusters (shallow listed first) are grouped as follows: KC-9502/KC-9501, KC-9507/KC-9504, and KC-9509/KC-9508. Groundwater monitoring was not initiated at the North Fly Ash Pond until approximately 40 years after waste placement was initiated.

Wells KC-9509/KC-9508 are located primarily downgradient of the South Fly Ash Pond. These wells show the most significant impact to groundwater. The shallow well KC-9509 is showing statistically significant increases in conductivity, TDS and sulfate. Conductivity has increased from 485 umohs/cm in 1997 to 1,126 umoh/cm in 2016. TDS has increased from 603 mg/l to 779 mg/l and sulfate has increased from 241 mg/l to 460 mg/l over the same time period. The deeper well KC-9508 is showing

statistically significant increases in TDS and sulfate along with a visually increasing trend in conductivity since 2010. TDS in well KC-9508 has increased from 558 mg/l in 1997 to 866 mg/l in 2016, sulfate has increased from 190 mg/l in 2010 to 420 mg/l in 2016 and conductivity has increased from 512 umohs/cm in 1997 to 1,296 umoh/cm over the same time period.

Wells KC-9501/9502, located at the northernmost portion of the North Fly Ash Pond, has shown a statistically significant increase in alkalinity in both wells. Alkalinity in well KC-9501 has increased from 169 mg/l to 260 mg/l, and well KC-9502 from 19 mg/l to 45.7 mg/l over the 1997 to 2016 time period.

Wells KC 9507/9504 located downgradient of the North Fly Ash Pond reveals mostly decreasing trends in all statistically evaluated parameters, with the exception of deep well KC-9504, which has a statistically increasing trend for sulfate. The sulfate concentration in well KC-9504 started out at a concentration of 327 mg/l in 1997 and is currently at 423 mg/l. The sulfate concentration in this well was as high as 820 mg/l in 2008. The trend for sulfate in this well has been decreasing since 2008. TDS in this well is currently at a concentration of 757 mg/l with a past high of 1480 mg/l in 2008.

For comparison purposes, un-impacted groundwater from Ohio River sand and gravel deposits, from the Proctorville Wellfield (Lawrence County), reveal the following average concentrations: Alkalinity 58.2 mg/l, Conductivity 320.1 umhos/cm, TDS 195.7 mg/l and Sulfate 46.1 mg/l.

The sampling of additional existing groundwater monitoring wells, such as background well KC-9506 and possibly the KC-9505/9503 cluster may provide additional information regarding groundwater quality, flow directions and the extent of impacted ground water in the area of the North Fly Ash Pond. The installation of additional appropriately placed downgradient wells would also allow for a more meaningful evaluation of groundwater quality and flow directions in the area of the North Fly Ash Pond.

As shown in the December 14, 2015, the May 25, 2016 and the December 2, 2016 dated submittals titled "North Fly Ash Pond Closure Project, Groundwater Semiannual Data Analysis" the drinking water health standard was exceeded in all six monitoring wells for the parameter manganese. DDAGW will conduct a detailed review of potential receptors in the area. However, a preliminary review shows no private wells or public well fields immediately down gradient of the Kyger Creek Station, North Fly Ash Pond Closure Project.

RECOMMENDATIONS

1. The DDAGW has reviewed the December 14, 2015, the May 25, 2016 and the December 2, 2016 dated submittals titled "North Fly Ash Pond Closure Project,

Groundwater Semiannual Data Analysis". In these documents OVEC has presented the results of a statistical analysis of groundwater and concluded that the nine statistical exceedances are due to "natural variation and not associated with the North Fly Ash Pond Closure Project". The DDAGW does not concur with OVEC's statement that "these statistical exceedances are due to natural variation and are not associated with the North Fly Ash Closure Project". OVEC has not undertaken any known field activities to demonstrate that the statistically elevated concentrations of sulfate, TDS, Conductivity or Alkalinity are not the result of the operation of the North Fly Ash Pond. The DDAGW recommends that an assessment of groundwater quality be conducted at the North Fly Ash Pond.

To better evaluate the declared statistical exceedances, the DDAGW recommends that OVEC make improvements to the groundwater monitoring system for the North Fly Ash Pond and then conduct as assessment of groundwater quality as outlined in Attachment "G" of Guidance Document GD0303.010 titled "Ground Water Monitoring Program Plan Requirements for Wastewater Facilities".

2. The DDAGW recommends the following improvements be made to the groundwater monitoring network at the North Fly Ash Pond:

    a. That water level measurements and groundwater sampling results from background well KC-9506 be included in all future submittals. This sampling data point would represent background water quality for the North Fly Ash Pond and allow for a more meaningful evaluation of groundwater quality.

    b. That water level measurements from well KC-9510, KC-9503 and KC-9505 also be included in all future submittals.

    c. That OVEC evaluate the usefulness of including wells KC9503 and KC-9505 into the groundwater monitoring network.

    d. That the 10 groundwater monitoring wells installed in the area of the North Fly Ash Pond (KC-9501 to KC-9510) be resurveyed to ensure that the collected water level measurements accurately reflect site conditions.

    e. That future submittals include ground water flow maps derived from the above noted monitoring wells and that the water level measurements are recorded in reference to mean sea level.

    f. That upon determining current groundwater flow directions in the area of the North Fly Ash Pond, OVEC evaluate the adequacy of the current groundwater monitoring network. At this time the installation of an additional shallow groundwater monitoring well between existing wells KC9502 and KC-9507 appears to be appropriate.

Conclusion

The DDAGW has reviewed the December 14, 2015, May 25, 2016 and the December 2, 2016 dated submittals titled North Fly Ash Pond Closure Project submittals. The DDAGW has recommended that OVEC make improvements to the groundwater monitoring network at the North Fly Ash Pond and that an assessment of groundwater quality be conducted.

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APPENDIX E GAVIN BOTTOM ASH POND SECOND SEMIANNUAL SAMPLING EVENT OF 2024 ALTERNATE SOURCE DEMONSTRATION REPORT

Second Semiannual Sampling Event of 2025 Alternate Source Demonstration Report

Gavin Bottom Ash Pond

PREPARED FOR
Gavin Power, LLC

DATE
31 January 2026

REFERENCE
0767401

SIGNATURE PAGE

Second Semiannual Sampling Event of 2025 Alternate Source Demonstration Report

Gavin Bottom Ash Pond

0767401



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ACRONYMS AND ABBREVIATIONS

Acronym	Description
AEP	American Electric Power Service Corporation
ASD	Alternate Source Demonstration
BAC	Bottom Ash Complex
BAP	Bottom Ash Pond
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
ERM	Environmental Resources Management, Inc.
ft	feet
Gavin	Gavin Power, LLC
K	Hydraulic Conductivity
H2	Second Semiannual
mg/L	milligrams per liter
NFAP	North Fly Ash Pond
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
ORSANCO	Ohio River Valley Water Sanitation Commission
OVEC	Ohio Valley Electric Corporation
Plant	General James M. Gavin Power Plant
PTI	Permit–to-Install
SFAP	South Fly Ash Pond
SSI	Statistically significant increase
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
uS/cm	microsiemens per centimeter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

1. INTRODUCTION

1.1 REGULATORY AND LEGAL FRAMEWORK

In accordance with Title 40 Code of Federal Regulations (CFR), Part 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments (CCR Rule) – Gavin Power, LLC (Gavin) has been implementing the groundwater monitoring requirements of 40 CFR § 257.90 et seq. for the Bottom Ash Pond (BAP) CCR Surface Impoundment at the General James M. Gavin Power Plant (Plant). Gavin calculated background levels and conducted statistical analyses for Appendix III constituents in accordance with 40 CFR § 257.93(h). Currently, Gavin is performing detection monitoring at the BAP in accordance with 40 CFR § 257.94. Statistically significant increases (SSIs) over background concentrations were detected in downgradient monitoring wells for some Appendix III constituents for the second semiannual (H2) groundwater sampling event of 2025 and are explained in this Alternate Source Demonstration (ASD) Report. The second semiannual groundwater sampling event of 2025 was performed at the BAP from September 10, 2025 to October 27, 2025. Review of data for quality assurance and statistical comparison was completed on January 13, 2026. Pursuant to 40 CFR § 257.94(e)(1), Gavin must establish an assessment monitoring program at the BAP if an Alternate Source Demonstration (ASD) is not completed and certified by a Professional Engineer within 90 days. This ASD Report, which was prepared and certified by January 31, 2026, will be included with the 2025 annual groundwater monitoring and corrective action report required under CFR § 257.90(e), which is due January 31, 2026.

An SSI for one or more Appendix III constituents is a *potential* indication of a release of constituents from a CCR unit to groundwater. In the event of an SSI, the CCR Rule provides that "… the owner or operator may demonstrate that a source other than the CCR unit caused the SSI over background levels for a constituent or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality…" (40 CFR § 257.94(e)(2)). If it is demonstrated that the SSI is the result of a source other than the CCR unit, then the CCR unit may remain in the Detection Monitoring Program instead of transitioning to an Assessment Monitoring Program. To implement this demonstration, an ASD must be made in writing, and the accuracy of the information must be verified through certification by a qualified Professional Engineer (40 CFR § 257.94(e)(2)).

The United States Environmental Protection Agency (USEPA) guidance document, "Solid Waste Disposal Facility Criteria Technical Manual, EPA530-R-93-017, Subpart E" (USEPA 1993), specifies the following six lines of evidence that must be addressed to determine whether an SSI resulted from a source other than the regulated disposal unit:

- an alternative source exists;
- a hydraulic connection exists between the alternative source and the well with a statistically significant increase;
- constituent(s) (or precursor constituents) are present at the alternative source or along the flow path from the alternative source prior to possible release from the unit;

- the relative concentration and distribution of constituents in the zone of contamination are more strongly linked to the alternative source than to the unit when the fate and transport characteristics of the constituents are considered;
- the concentration observed in groundwater could not have resulted from the unit given the waste constituents and concentrations in the unit leachate and wastes, and the site hydrogeologic conditions; and
- the data supporting conclusions regarding the alternative source are historically consistent with the hydrogeologic conditions and findings of the monitoring program.

Environmental Resources Management, Inc. (ERM) has prepared this ASD Report on behalf of Gavin to address each of these lines of evidence for the SSIs detected in groundwater collected from downgradient compliance wells at the BAP. The groundwater monitoring program and ASD have been prepared utilizing accepted practices incorporating regional information that has been confirmed with site specific information.

In 2022, the USEPA provided feedback on the groundwater monitoring program at the BAP (USEPA 2022), and Gavin formally responded to the concerns (Gavin 2022). In consideration of this feedback, Gavin installed additional monitoring wells and conducted supplemental characterization at the BAP to refine the conceptual site model. Findings and updates were provided in the 2022, 2023, and 2024 Annual Groundwater Monitoring and Corrective Action Reports (ERM 2023, 2024, 2025) and are also discussed below.

Some of the topics discussed in this report are also addressed in USEPA's November 22, 2022 Final Decision: Denial of Alternative Closure Deadline for General James M. Gavin Plant, Cheshire, Ohio (Final Denial). In other documents, Gavin has explained how the approaches described and documented in this report are consistent with USEPA regulations and guidance as well as with best engineering practices and judgment. Gavin has contested USEPA's findings in the Final Denial from a factual, technical, and legal perspective.

1.2 BACKGROUND

The Plant is a coal-fired generating station located in Cheshire, Gallia County, Ohio (Figure 1-1), and is bounded to the east by the Ohio River. The BAP is one of three CCR units at the Plant that are subject to regulation under the CCR Rule and is located adjacent to and immediately south of the main Plant area (Figure 1-2). Adjacent to the BAP is the smaller Reclaim Pond (Figure 1-3) which, along with the BAP, make up the Bottom Ash Complex (BAC) that started operating in 1974. The Reclaim Pond was not designed to retain an accumulation of CCR; did not and does not receive any significant amount of CCR; and did not and does not treat, store, or dispose of CCR. Therefore, it is not subject to the CCR Rule.

The certified groundwater monitoring well network (ERM 2021a) consists of three upgradient monitoring wells (BAC-01, MW-1, and MW-6) along the western perimeter of the BAP, two upgradient monitoring wells (BAC-06 and BAC-07) along the southern perimeter, and four downgradient monitoring wells (BAC-02, BAC-03, BAC-04, and BAC-05) positioned along the northern and eastern perimeter of the BAP (Figure 1-3). These wells are herein referred to as "network" wells for the purposes of this report.

Consistent with the CCR Rule and the Groundwater Monitoring Plan developed for Gavin (ERM 2017), an interwell prediction limit approach was used to identify potential impacts to groundwater. Upper prediction limits, and a lower prediction limit specifically for pH, were established based on the upgradient groundwater data. The 2017 Annual Groundwater Monitoring and Corrective Action Report was prepared to document the status of the groundwater monitoring program for the BAP (ERM 2018a) and included results from eight background sampling events performed from August 2016 to July 2017. The 2017 report and each subsequent Annual Groundwater Monitoring and Corrective Action Report have included comparisons of the sampling results obtained from downgradient wells during each semiannual detection monitoring event with the upper and lower prediction limits calculated based on the initial eight background samples taken from upgradient wells. ASD reports (ERM 2018b; ERM 2019; ERM 2020; ERM 2021b; ERM 2022; ERM 2023; ERM 2024; ERM 2025) were prepared to address SSIs that were identified during the initial and subsequent reporting periods.

Sixteen additional monitoring wells were installed in key areas around the BAP in 2022 (Figure 1-3). Collectively, these wells were installed to provide supplemental characterization of the conditions at the BAP and to support ASDs. Potentiometric elevations and analytical results from these wells have been incorporated in this report.

1.3 GEOLOGY

The geology in the vicinity of the BAP is visualized in Figure 1-4 and features 50 to 100 feet (ft) of unconsolidated deposits overlying deeper bedrock units. At the surface, a fine-grained unit consisting of clays and silts extends 10-40 ft below ground surface depending on surface topography. This unit overlays a layer with fine-grained sands intermixed within the clay and silt matrix. Together, these two layers make up the separation layer. In some portions of the BAP, a thin (less than 5 ft) layer of sand and clay is present directly beneath the separation layer. Below this layer, there is an approximately 20 to 40 ft thick layer of medium-to-coarse grained glacial sand and gravel. In some cores collected around the BAP in 2022, smaller lenses (less than 5 ft) of the finer silt and clay materials observed in the upper layers are interbedded within the sand and gravel layer (ERM 2023). The alluvial aquifer lies directly above the uppermost bedrock layer in the area – a claystone/siltstone layer (interpreted to be the Round Knob) atop the underlying sandstone stratum (interpreted to be the Cow Run).

1.4 SITE HYDROLOGY AND HYDROGEOLOGY

The uppermost aquifer beneath the BAP area is the approximately 20 to 40 ft thick layer of coarser-grained sands and gravels described in Section 1.3, though some fine sand is also present. Also referred to as the alluvial aquifer, the uppermost aquifer is confined by the clay and silt separation layer above and by the siltstone/claystone bedrock unit below (Figure 1-4). The Ohio River acts as a hydraulic boundary to the east that is dynamic in nature due to fluctuations in river stage. Two water supply wells operated by the Plant (FW-15 and FW-1101) exist approximately 400 to 700 feet north of the BAP (Figure 1-3). These wells have 20-to-30-foot screens positioned within the alluvial aquifer and can have a significant combined influence on groundwater flow at the BAP. The use of the wells is variable in both duration and frequency and is

dependent on Plant needs; however, when in use, the pumping rates are consistent at 550 and 650 gallons per minute for FW-1101 and FW-15, respectively. Two additional water supply wells (FW-17 and FW-1102) exist approximately 0.4 to 0.5 miles further north and are not expected to have a significant influence on groundwater at the BAP due to their distance from the BAP and infrequency of their use.

Five undisturbed Shelby tube samples of the clay and silt separation layer (mentioned above, located between the uppermost aquifer and the bedrock unit below) were collected from a barge within the BAP in 2020 for laboratory grain size distribution and permeameter testing (ERM 2021b). The samples ranged from 0.9% to 32.3% sand and 67.7% to 99.1% silt and clay. The permeameter testing of these samples yielded hydraulic conductivity (K) values ranging from 1.44 x 10^{-8} centimeters per second (cm/sec) to 1.18 x 10^{-7} cm/sec. Thus, even the samples with a higher amount of sand yielded very low K values. These data are direct evidence that the separation layer beneath the BAP acts as an aquitard to downward migration of water stored in the BAP.

1.5 2025 H2 GROUNDWATER SAMPLING EVENT

The data from the second semiannual groundwater sampling event from 2025 were compared to the upper and lower prediction limits for the respective parameters, and SSIs for Appendix III analytes were identified. Table 1-1 summarizes occurrences of SSIs from the September/October 2025 sampling event.

TABLE 1-1: SSIS IN GROUNDWATER BENEATH THE BAP

Analyte	Monitoring Well			
	BAC-02	BAC-03	BAC-04	BAC-05
Boron	SSI	SSI	SSI	SSI
Calcium	ϕ	ϕ	ϕ	ϕ
Chloride	SSI	SSI	SSI	SSI
Fluoride	SSI	ϕ	ϕ	ϕ
pH	SSI	SSI	SSI	SSI
Sulfate	SSI	SSI	SSI	SSI
TDS	SSI	ϕ	SSI	ϕ

Notes: ϕ = No SSI; SSI = statistically significant increase; BAP = Bottom Ash Pond; TDS = total dissolved solids. Results are for the downgradient wells sampled in September/October 2025.

This ASD Report identifies the regional, naturally-occurring brine discharging from the bedrock as the source of chloride, fluoride, and total dissolved solids (TDS), and the Kyger Creek North Fly Ash Pond (NFAP) is identified as the source of boron, sulfate, and low pH. Supporting information and additional discussion of each of the lines of evidence are presented in subsequent sections of this ASD Report.

2. DESCRIPTION OF ALTERNATE SOURCES

Identified alternate sources for the Appendix III constituents that are observed at the BAP include Regional Brine and the Kyger Creek Generating Station Closed NFAP.

- Regional Brine – Naturally occurring brine originating from bedrock (i.e., Cow Run Sandstone) as observed in shallow groundwater in and around Gavin. Identified as the alternate source of chloride, fluoride, and TDS.
- Kyger Creek Generating Station Closed NFAP – CCR-impacted groundwater migrating from the Closed NFAP. Identified as the alternate source for boron, low pH, and sulfate.

Additional influence on groundwater quality at the BAP is observed from mixing of the alternate sources and upgradient alluvial aquifer groundwater from west of the BAP and/or surface water from the Ohio River.

A summary of each of these alternate sources and influences on groundwater quality is provided below.

2.1 REGIONAL BRINE

Naturally occurring brine, which is known in the Ohio River Valley to have elevated levels of chloride, fluoride, and other trace elements, exists in the subsurface (Stout et al. 1932; ORSANCO 1984; ODNR 1995). The discharge of brine is seen at a regional scale, with shallow wells near the Ohio River observing brine impacts as a result of the vertical head gradient driving overall flow upwards from bedrock to alluvium (USGS 1997). The Cow Run Sandstone is the shallowest sandstone of any importance in Ohio where brine of marine origin has been observed (Phalen 1919; Stout et al. 1932). Brine was discovered at the land surface approximately 10 miles southwest of the Plant in Gallipolis, Ohio and was utilized for the commercial production of salt beginning in 1807 (Stout et al. 1932). Naturally occurring brine was also identified at the land surface in Jackson, Ohio approximately 30 miles west of the Plant (ODNR 1995). The regional presence of shallow brine indicates the potential for naturally occurring brine to contribute Appendix III constituents to groundwater at the Plant. Evidence of brine impacts near the Plant includes specific conductivity measurements at several monitoring wells upgradient of the Residual Waste Landfill that are consistently greater than 30,000 microsiemens per centimeter (µS/cm) and reach as high as 55,485 µS/cm. A brine signature was also observed in supplemental BAP monitoring well BAC-11 during sampling in September/October 2025. This signature included a specific conductivity field measurement of 61,427 µS/cm, TDS of 36,000 mg/L, and chloride levels of 29,000 mg/L. For reference, the approximate specific conductivity of seawater is 50,000 µS/cm (USGS 2019).

Based on a review of permit applications for historical oil and gas wells installed within the Gavin property by prior owners, the Ohio Department of Natural Resources (ODNR) routinely required applicants to identify the company responsible for collecting, transporting, and disposing of salt water to be produced by the proposed well. Oil and gas wells in the vicinity of the Gavin Plant were typically drilled to a depth of approximately 1,800 feet below ground surface and recovered brine was temporarily stored in pits at the wellsite prior to offsite disposal. In addition, the

permits demonstrate that the boreholes were typically not sealed below 250 feet below ground surface if oil and gas were not found, which would leave an unsealed borehole that could allow the upward migration of brine to shallower strata in the Cow Run. These ODNR records demonstrate the naturally occurring presence of brine at the Gavin property in geologic strata located beneath the Cow Run Sandstone and the potential for upward migration of brine through unsealed boreholes (ODNR 2024).

The background groundwater data set is discussed further in Section 4.

2.2 KYGER CREEK NORTH FLY ASH POND

The Kyger Creek Generating Station, owned and operated by Ohio Valley Electric Corporation (OVEC), is located along the Ohio River in Gallia County, south of and adjacent to the Plant (Figure 2-1). The Kyger Creek Fly Ash Pond complex consists of the 110-acre NFAP (which is closed) and 60-acre South Fly Ash Pond (SFAP) (which is active). The ponds were constructed in 1955 using locally available native materials (i.e. soil). Between 2 and 10 feet of silty clay soils were removed to create base elevations of 550 feet above mean sea level for the SFAP and 558 feet above mean sea level for the NFAP. No liner was installed at either of the ponds prior to emplacement of CCR materials. The NFAP cap includes 5 feet of boiler slag, 2 feet of compacted clay and one foot of topsoil. (AEP 2016; AEP 1994; CHA, 2010; OEPA 1996). According to the approved Ohio Environmental Protection Agency (OEPA) Permit–to-Install (PTI), construction activities to close the NFAP were initiated in March 1998 and concluded in October 2000 (OVEC 2017). Semiannual groundwater sampling for PTI compliance at the NFAP has been performed since October 1997 and currently includes sampling of six monitoring wells (OEPA 1996). Per the PTI, samples are collected semiannually for:

- Groundwater Contamination Indicator Parameters – alkalinity, specific conductivity, sulfate, and TDS; and
- Groundwater Quality Parameters – barium, calcium, chloride, iron, lead, magnesium, manganese, selenium, sodium, gross alpha and gross beta, and pH.

Groundwater monitoring for federal CCR compliance is performed at the SFAP only.

The closed Kyger Creek NFAP is located less than 300 feet south of the Gavin BAP, and the units share an approximately 2,000-foot-long border (Figure 2-1). Gavin's network wells BAC-06 and BAC-07 were installed in 2020 at the top of the south berm of the BAP adjacent to this boundary and screened within the alluvial aquifer. Six supplemental monitoring wells were installed along the south berm between the BAP and the Kyger Creek NFAP in 2022 to better understand the hydraulic relationship between the BAP and the NFAP and groundwater quality along the boundary. These supplemental wells include alluvial aquifer wells BAC-16 and BAC-18, separation layer wells BAC-15 and BAC-20, bedrock well BAC-19, and separation layer and alluvial aquifer well BAC-17.

The Kyger Creek NFAP has a higher potential to impact groundwater than the BAP because the Kyger Creek NFAP contains fly ash (approximately 1.7 million cubic yards), which when compared to bottom ash, has a greater potential to leach CCR constituents due to higher concentrations of CCR constituents and increased surface area due to smaller particle size (Cox et al. 1978; OEPA 1996; Jones et al. 2012), as described further in Section 7. The NFAP also contains approximately

900,000 cubic yards of boiler slag and boiler slag fines used to construct the NFAP berm and as cover material (OEPA 1996).

2.3 UPGRADIENT ALLUVIAL AQUIFER GROUNDWATER

Groundwater from upgradient of the BAP is observed at upgradient monitoring locations west of the BAP, including network wells MW-1, MW-6 and BAC-01, and supplemental wells BAC-08, BAC-21, BAC-22, and BAC-23. The upgradient status of these locations is confirmed by potentiometric surface maps which consistently show higher potentiometric elevations west of the BAP than in wells north, south, or east of the BAP. Potentiometric surface maps are presented and discussed further in Section 3. Groundwater from west of the BAP flows through the alluvial aquifer beneath the BAP where it ultimately mixes with groundwater migrating northward from the Kyger Creek NFAP, groundwater discharging upward from bedrock, and surface water from the Ohio River.

2.4 OHIO RIVER

The Ohio River extends approximately 981 river miles from Pittsburgh, Pennsylvania to Cairo, Illinois and drains approximately 205,000 square miles (ORSANCO 2018). The Ohio River is located approximately 700 feet east of the BAP, and the alluvial aquifer beneath the BAP is hydraulically connected to the river.

While the Ohio River is not considered a source of impacts to groundwater under the BAP, the mixing of Ohio River surface water with groundwater does influence groundwater quality at the BAP through interaction of groundwater and river water (see Section 3). Surface water from the Ohio River enters the alluvial aquifer and interacts with groundwater beneath the BAP, driven by induced infiltration caused by pumping of the onsite water supply wells and during periods of rapidly rising and high river stage conditions (i.e., flooding). When the Ohio River floods, water from the river mixes with groundwater within the alluvial aquifer (ERM 2018b) beneath the BAP. The quality of the Ohio River water that mixes with groundwater is discussed in Section 4.

3. HYDRAULIC CONNECTIONS TO THE ALTERNATE SOURCES

Explanations of the hydraulic connections between potential alternate sources and the downgradient wells of the BAP were previously provided in the first ASD Report for the BAP (ERM 2018b). An updated summary of each of these connections is provided below.

3.1 HYDRAULIC CONNECTION TO REGIONAL BRINE

Regional groundwater within the fractured sedimentary bedrock in the Ohio River Valley generally flows from areas of higher topographic elevation towards areas of lower elevation, ultimately discharging to the Ohio River (ORSANCO 1984). Precipitation infiltrates the land surface to recharge the underlying aquifers below, and flow of groundwater within these aquifers is driven by the gravitational force on groundwater (differences in hydraulic head) within the bedrock.

At the BAP, groundwater discharges upward from shallow fractured bedrock into the overlying alluvial aquifer under certain hydraulic conditions. This upward discharge of groundwater from the bedrock aquifer to the overlying alluvial aquifer is attributable to three primary drivers:

- Hydraulic pressure (head) in the bedrock aquifer compared to the alluvial aquifer driven by recharge at the adjacent higher elevation ridges;
- Areas of high hydraulic conductivity related to the interconnected fracture network within the bedrock; and
- Active pumping conditions related to operation of the two water supply wells directly north of the BAP (FW-15 and FW-1101).

3.1.1 EVALUATION OF VERTICAL GRADIENTS

As water is removed from the alluvial aquifer via pumping, it creates a hydraulic gradient toward the water supply well. As described in the 2022 H2 Alternate Source Demonstration Report (ERM 2023), upward vertical gradients between the bedrock aquifer and the alluvial aquifer were observed. A long-term transducer study performed in 2024 indicated that upward vertical gradients at the BAP are observed in periods of active pumping of the Gavin water supply wells and during times of a declining river stage.

In order to evaluate the nature of vertical gradients beneath the BAP, transducers were deployed in several alluvial & bedrock well couplets around the BAP, and continuous long-term, high-resolution potentiometric elevation data were collected from January through December 2025. Transducer data were evaluated to determine the direction of vertical gradients and the conditions that lead to upward vertical gradients. Hydrographs of alluvium-bedrock well pairs at the northern (BAC-02/BAC-11), eastern (BAC-04/BAC-13), southern (BAC-18/BAC-19), and western (BAC-01/ BAC-09) boundaries of the BAP are shown in Figures 3-1, 3-2, 3-3, and 3-4, respectively. Periods of upward hydraulic gradient can be seen in the hydrograph figures where the bedrock groundwater potentiometric elevation (black line) is above the alluvial aquifer potentiometric elevation (green line). Available data is presented on Figures 3-1 through 3-4.

Alluvial wells located to the north of the BAP are most sensitive to pumping activities (Figure 3-1). When pumping was active at the water supply wells (as evidenced by frequent oscillation of

groundwater elevations at BAC-02), and the river stage was low, there were periods of upward vertical gradients observed in late February, early March, late April and early May. Upward vertical gradients were observed at the southern well couplet (Figure 3-3) during an extended period in March and shorter periods in April, May and June. At the western well couplet (Figure 3-4), an extended period of upward vertical gradients persisted in January. During the second half of the year, impacts from pumping were not observed at the southern or western well couplets; however, short periods of upward vertical gradients were observed at the southern well couplet in October and November (Figure 3-3) and at the western well couplet from September through November (Figure 3-4).

3.1.2 HYDRAULIC CONDUCTIVITY

Groundwater flow within bedrock occurs primarily via flow through the network of interconnected and saturated fractures, which provides a much higher effective porosity (fracture/secondary porosity) than does the bedrock aquifer matrix (primary porosity). This is due to the effective pore size of the fractures (the ratio of volume of open fractures to the bulk volume of the bedrock matrix) as compared to the miniscule pore sizes between sedimentary grains making up the bedrock matrix. Consequently, the fracture network provides a flow system with significantly higher hydraulic conductivity than the overall bedrock matrix porosity.

This network of fractures is highly heterogeneous, varying greatly in connectivity and conductivity from location to location. The fracture network is also anisotropic, which means the hydraulic conductivity varies in magnitude depending on the direction of measurement. As such, the occurrence of fracture interconnectivity and saturation varies greatly at a regional scale. In the Ohio River Valley, stress relief fracturing in bedrock provides a structural framework for bedrock to be hydraulically interconnected to overlying coarse glacial outwash alluvial deposits. The degree of stress fracturing is generally greatest in bedrock directly underlying the alluvial valley bottom, driving enhanced transmissivity of the fracture network in these areas (USGS 1981).

Heterogeneity and anisotropy of the fracture network is clearly observed in the bedrock wells installed around the BAP. Hydraulic conductivity was measured to be 4.17×10^{-2} cm/sec at bedrock well BAC-11 where observations of significant fractures were made during drilling and geophysical logging. This high K value in BAC-11 is similar to K values measured in the alluvial aquifer. Conversely, substantially lower K values were measured at bedrock wells BAC-09 (2.26×10^{-6} cm/sec) and BAC-19 (3.18×10^{-7} cm/sec), where fewer fractures were observed. This difference in hydraulic conductivity values between wells screened within the same bedrock unit exemplifies the effect of fracture network connectivity on hydraulic conductivity and helps to explain why some portions of the alluvial aquifer can be impacted by regional discharge (i.e., near BAC-02) while other areas may not be substantially influenced (i.e., near BAC-01 and BAC-18). The periods of upward hydraulic gradients (see Section 3.1.1) and the transmissive nature of the fractured bedrock aquifer provide evidence that there is a hydraulic connection between the brine-impacted bedrock aquifer (see Section 2.1 and Section 4.1) and the overlying alluvial aquifer.

3.2 HYDRAULIC CONNECTION TO KYGER CREEK NORTH FLY ASH POND

Groundwater flow directions around the BAP are heavily influenced by pumping of Gavin water supply wells FW-15 and FW-1101. Based on 2025 transducer data from monitoring wells around the BAP, the alluvial aquifer continued to have an immediate response to pumping, similar to observations in 2022, 2023, and 2024 regardless of whether one or both wells were active.

During the H2 2025 groundwater gauging event in September 2025, there was no active pumping at the water supply wells, resulting in an interpreted direction of groundwater flow to the east, towards the Ohio River (Figure 3-5).

Transducer data from 2025 was evaluated to analyze the effects of pumping on horizontal hydraulic gradients and flow directions in the alluvial aquifer beneath the BAP. Horizontal gradients were calculated for each day from January 1, 2025, through December 3, 2025, using an R tool that calculates the best fit of a 2D plane to the potentiometric elevations based on the geometry of a given well-network. The approach was adapted from the EPA On-line Hydraulic Gradient Magnitude and Direction tool (USEPA 2021). The tool output is an overall flow vector frequency and direction for the transducer network. The frequency and direction of groundwater flow in 2025 is diagrammed in Figure 3-6. During this time period, the predominant direction of groundwater flow was to the east due to the lack of pumping activity at the water supply wells in the second half of the year. The next most frequent directions of groundwater flow were to the northeast and east-northeast, on approximately 35% of the days in the data set. On a minority of days (less than 10% of the data set), groundwater flow was to the north or north-northwest. These findings are consistent with those observed historically (ERM 2023) and confirm the following key points:

- Due to the prevailing groundwater flow direction, the Kyger Creek NFAP is not situated upgradient of the monitoring wells located along the western and northwestern areas of the Gavin BAP (BAC-01, BAC-08, BAC-21, BAC-22, BAC-23, MW-1, MW-6);
- Monitoring wells on the south side of the BAP are located downgradient of the Kyger Creek NFAP and upgradient of the BAP (BAC-06, BAC-07, BAC-16, BAC-17, BAC-18);
- On days with a prevailing groundwater flow direction to the northeast the Kyger Creek NFAP is hydraulically upgradient of the monitoring wells along the southern and southeastern areas of the BAP; and
- During pumping conditions, the Kyger Creek NFAP is hydraulically upgradient of the monitoring wells along the southern, eastern, and northeastern areas of the BAP (BAC-02, BAC-03, BAC-04, BAC-05, BAC-10, BAC-12, BAC-14).

It is evident that the Kyger Creek NFAP is hydraulically connected to the downgradient BAP monitoring wells based on the prevalent northeasterly direction of groundwater flow and the presence of the same alluvial aquifer beneath both the Kyger Creek NFAP and the BAP. Pumping activity of water supply wells FW-15 and FW-1101 creates a clear and nearly immediate influence on groundwater flow directions around the BAP, shifting groundwater flow northward, especially across the eastern half of the BAP. This shift in localized groundwater flow directions orients the Kyger Creek NFAP as upgradient to a larger area of the BAP and results in an increased hydraulic connection between the Kyger Creek NFAP and the aquifer beneath the BAP.

4. CONSTITUENTS ARE PRESENT AT THE ALTERNATE SOURCES OR ALONG THE FLOW PATHWAYS

Groundwater quality at the BAP is influenced by multiple sources, as described in Sections 2 and 3. The Kyger Creek NFAP is identified as the source of boron, low pH, and sulfate. Regional brine is identified as the source of chloride, fluoride and TDS in BAP downgradient groundwater. The mixing of upgradient alluvial groundwater and water from the Ohio River also affects groundwater chemistry downgradient of the BAP. A summary of the constituents present at these sources is provided below.

4.1 REGIONAL BRINE

Regional brine is present in the area of the Plant and locally in bedrock under the BAP. Supplemental monitoring wells BAC-09, BAC-11, BAC-13, and BAC-19, which are installed in the Cow Run Sandstone at the BAP, all have chemical signatures indicating the presence of brine. As described in Section 3.1, the bedrock wells are upgradient of compliance wells BAC-02, BAC-03, BAC-04, and BAC-05 during certain portions of the year when upward vertical gradients exist. The ranges for chloride, fluoride and TDS in bedrock groundwater and downgradient alluvial groundwater (BAC-02, BAC-03, BAC-04 and BAC-05) at the BAP are presented in Table 4-1.

TABLE 4-1: COMPARISON OF BEDROCK GROUNDWATER TO DOWNGRADIENT BAP GROUNDWATER

Analyte	Units	Bedrock Groundwater at BAP	Downgradient Alluvial Groundwater at BAP
Chloride	mg/L	1000-29,000	36-59
Fluoride	mg/L	0.51-1.1	0.06-0.28
TDS	mg/L	1,700-36,000	480-720

Notes: BAP = Bottom Ash Pond; mg/L = milligrams per liter; TDS = total dissolved solids.
Results from samples collected in September/October 2025.
Bedrock Groundwater at BAP includes data from BAC-09, BAC-11, BAC-13, and BAC-19.
Downgradient Alluvial Groundwater at BAP includes data from BAC-02, BAC-03, BAC-04, and BAC-05.

Cross section view figures for chloride (Figure 4-1a and 4-1b), TDS (Figure 4-2a and 4-2b), and fluoride (Figures 4-3a and 4-3b) depict the distribution of concentrations for these three constituents within bedrock and the alluvial aquifer around the area of the BAP. Concentrations of chloride, fluoride, and TDS are generally higher, and in some cases one to two orders of magnitude higher in bedrock than in the overlying alluvial aquifer, consistent with a regional brine signature. Therefore, the higher concentrations of chloride, fluoride, and TDS in the bedrock groundwater indicate these constituents are present at the alternate source and the observed upward hydraulic gradients indicate the SSIs are attributable to the discharge of groundwater from bedrock to the overlying alluvial aquifer.

4.2 KYGER CREEK NORTH FLY ASH POND

4.2.1 BORON

Figure 4-4 depicts the distribution of boron concentrations across the BAP monitoring well network and the general horizontal flow path of boron from the northern boundary of the Kyger Creek NFAP. The plume orientation is consistent with the 2025 average observed daily groundwater flow vector as depicted on Figure 3-6 and included within Figure 4-4 for reference, which is predominantly towards the east with significant contribution towards the northeast. The vector diagram summarizes transducer data collected from January 1, 2025 through December 3, 2025. Boron concentrations and the approximate extent of boron impacts along the primary flow directions (northeast) from the Kyger Creek NFAP are also presented in cross section views (Figures 4-5a and 4-5b).

Key observations from the distribution of boron across the BAP network (Figure 4-4) and the cross sections (Figures 4-5a and 4-5b) are summarized in the following points:

- BAC-17 was installed in 2022 as a replicant monitoring point for B-0904 (which historically had a higher boron concentration than any BAP well; located on Kyger Creek Generating Station property and no longer accessible for sampling). BAC-17 is located downgradient of the Kyger Creek NFAP and upgradient of the BAP and is screened in both the separation layer and into the underlying alluvial aquifer, mirroring the well screen of B-0904. The concentration of boron in BAC-17 was 3.8 mg/L in September 2025, a higher concentration than was observed in any downgradient well at the BAP in H1 2025.
- The highest boron concentrations in BAP downgradient wells were measured at wells BAC-04 and BAC-05, which are located nearest to and downgradient from the Kyger Creek NFAP.
- Monitoring wells BAC-06 and BAC-07 demonstrated lower concentrations than measured in groundwater from monitoring well BAC-17 (and historically monitoring well B-0904), likely due to the slightly deeper position of the well screens within the alluvial aquifer.

In December 2024, OVEC released a report on an investigation performed at the Kyger Creek NFAP from 2019 to 2024 (OVEC 2024a; included as Appendix A). As part of this report, OVEC conducted groundwater sampling at the NFAP for boron, which is not typically required. In this report, OVEC reports concentrations of boron as high as 6.2 mg/L at the northern end of the NFAP, adjacent to the Gavin property (Figure 4-4). Even higher concentrations (up to 14 mg/L) are reported at the southern end of the NFAP.

In this report, OVEC alleges that the NFAP is not the source of boron at the BAP due to groundwater flow directions. However, the date of OVEC's groundwater gauging is not clear from the report so the validity of combining Gavin and OVEC data in a synoptic groundwater contour event cannot be evaluated. It is likely not appropriate to determine a groundwater flow direction based on data collected on different dates. Additionally, the report does not account for the variable nature of groundwater flow and contribution from days when the average groundwater flow is to the north. Due to the higher concentrations of boron detected at the NFAP and the documented northerly and northeasterly flow directions based on Gavin data, the Kyger Creek NFAP is the most likely source of boron at the BAP.

Correspondence dated in 1998 and 2017 obtained from the OEPA regarding Kyger Creek NFAP concluded that groundwater below the NFAP appears to be impacted by a release from the Kyger Creek NFAP and that an assessment of groundwater should be conducted (Appendix B and Appendix C). In addition to the sampling performed at the Kyger Creek NFAP discussed above, the Kyger Creek SFAP data suggest that boron is present in groundwater below both Kyger Creek fly ash ponds. Table 4-2 summarizes boron analytical results from two groundwater sampling events conducted in March/April and October 2024 at monitoring wells downgradient of the Kyger Creek SFAP (AGES 2025), and sampling from August 2024 for CCR constituents at monitoring wells surrounding the Kyger Creek NFAP (wells were not designated as upgradient or downgradient). The highest concentrations were observed on the northeastern and southeastern boundaries of the Kyger Creek SFAP. The northeastern boundary was interpreted to be downgradient from the Kyger Creek NFAP in 2020 (AGES 2021).

TABLE 4-2: KYGER CREEK NFAP/SFAP BORON 2024 RESULTS

Unit	Units	Maximum	Average
SFAP	mg/L	16	7.98
NFAP	mg/L	14	4.92

Notes: mg/L = milligrams per liter; NFAP = North Fly Ash Pond, SFAP = South Fly Ash Pond.

The average concentration of boron in groundwater around the Kyger Creek SFAP (7.98 mg/L) for 2024 and in groundwater around the Kyger Creek NFAP (4.92 mg/L) for August 2024 is substantially higher than the maximum concentration of boron measured in groundwater around the BAP (2.3 mg/L) in fall 2025 from network wells. The Kyger Creek SFAP and the now-closed NFAP both contain fly ash generated at the Kyger Creek Generating Station. Thus, this evidence supports the conclusion that boron is present in groundwater at the alternate source, the Kyger Creek Generating Station.

4.2.2 SULFATE

Figure 4-6 depicts the distribution of sulfate in groundwater across the BAP monitoring well network and includes results from the four monitoring wells screened in the alluvial aquifer located around the Kyger Creek NFAP. The figure also depicts the location of three additional Kyger Creek monitoring wells on the western boundary of the NFAP that were not sampled for sulfate. Figure 4-6 also depicts the general horizontal flow path of sulfate from the northern boundary of the Kyger Creek NFAP under pumping conditions, along with the approximated extent of sulfate impacts from the Kyger Creek NFAP around the BAP. This plume is consistent with the 2025 average observed daily groundwater flow vector as depicted on Figure 3-6 and included within Figure 4-6 for reference, which is predominantly towards the east and northeast.

According to the December 2024 Kyger Creek Generating Station Closed North Fly Ash Pond Groundwater Semiannual Data Analysis (OVEC 2024b; Appendix B), sulfate is present in wells surrounding the NFAP at concentrations exceeding those observed in groundwater around the BAP. In October 2024, sulfate was present in monitoring well KC-9507 (located to the southeast of NFAP) at 963 mg/L, in monitoring well KC-9502 (located to the northeast of the NFAP adjacent to

the Gavin property boundary) at 356 mg/L, and in monitoring well KC-9504 (located to the southeast of NFAP) at 365 mg/L. Additionally, in the December 2024 Kyger Creek Generating Station Closed North Fly Ash Pond Additional Investigation of Groundwater Flow and Quality (OVEC 2024a; Appendix A), OVEC concludes that under pumping conditions sulfate in groundwater from the NFAP could be migrating towards the BAP.

Toxicity Characteristic Leaching Procedure (TCLP) data included with the Permit to Install for the Ohio Valley Electric-Kyger Creek Plant North Fly Ash Pond Closure Project indicate that fly ash produced at Kyger Creek Generating Station and placed in the NFAP had a sulfate concentration in leachate of 559 mg/L (OEPA 1996).

4.2.3 PH

The pH of groundwater emanating from the Kyger Creek NFAP was previously measured in well B-0904 and was historically slightly acidic (ERM 2018b). Acidic pH results of 5.49 and 5.76 were measured at B-0904 replicant well BAC-17 and Kyger Creek NFAP well KC-9502 (located at the northeast corner of Kyger Creek Generating Station property) in September 2025 and October 2024, respectively (OVEC 2024; Appendix B). The low pH at KC-9502 has been observed since 1997 (Appendix B) and was identified by OEPA in 1998 (OEPA 1998; Appendix C). Table 4-3 summarizes the pH data in groundwater in sources around the BAP.

TABLE 4-3: GROUNDWATER AND SURFACE WATER PH VALUES

Location	pH (SU)
Kyger Creek NFAP: Upgradient BAP Groundwater (KC-9502; 22 October 2024)	5.76
BAP: Upgradient Groundwater – West (BAC-01, MW-1, and MW-6; September/October 2025)	6.83-7.33
BAP: Upgradient Groundwater – South (BAC-06, BAC-07, and BAC-17; September 2025)	5.88-6.71
BAP: Downgradient Groundwater (BAC-02 through BAC-05; September/October 2025)	6.19-6.55
BAP: Bedrock Groundwater (BAC-09, BAC-11, BAC-13, and BAC-19; September/October 2025)	7.12-7.62
Ohio River (September 2025)	7.37

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond; SU = Standard pH Units.

The fall 2025 results remain consistent with previous ASD Reports for the BAP (ERM 2018b; ERM 2019; ERM 2020; ERM 2021b; ERM 2022; ERM 2023; ERM 2024; ERM 2025). As shown in Figure 4-7, the distribution of pH and the northeastward flow direction demonstrate that low pH groundwater flows on-site from the Kyger Creek NFAP, where it mixes with upgradient alluvial groundwater, bedrock discharge, and water from the Ohio River, resulting in the intermediate pH observed in groundwater downgradient of the BAP. Monitoring wells BAC-06 and BAC-07 are not impacted to the same degree as BAC-17 by acidic groundwater migrating from the Kyger Creek NFAP, as evidenced by their higher pH. This is attributable to the well screens of BAC-06 and BAC-07 being substantially deeper than the well screens at B-0904 and BAC-17, lending to more influence by the regional discharge of groundwater from bedrock to the alluvial aquifer, as described further in Section 6.

5. LINKAGES OF CONSTITUENT CONCENTRATIONS AND DISTRIBUTIONS BETWEEN ALTERNATE SOURCES AND DOWNGRADIENT WELLS

5.1 REGIONAL BRINE

As discussed in Section 4.1, the concentrations of chloride, fluoride and TDS are significantly higher in bedrock groundwater compared to alluvial groundwater, in particular at bedrock monitoring well BAC-11. Table 5-1 demonstrates that the concentrations of chloride, fluoride, and TDS range from 7 to 607 times higher in bedrock compared to alluvial groundwater. Brine impacted bedrock groundwater is the alternate source of chloride, fluoride, and TDS. As described in Section 3.1, groundwater discharges from bedrock upward into the overlying alluvial aquifer (uppermost aquifer) under certain hydraulic conditions. The presence of higher concentrations of chloride, fluoride, and TDS establishes bedrock groundwater as the source, and the presence of upward hydraulic gradients and interconnected bedrock fractures is the linkage (i.e., the means to migrate) between the alternate source and downgradient wells.

TABLE 5-1: RATIO OF BEDROCK GROUNDWATER TO DOWNGRADIENT BAP GROUNDWATER FOR REGIONAL BRINE

Analyte	Units	Maximum Brine-Impacted Groundwater in Bedrock Beneath BAP (As measured at BAC-11/ BAC-13)	Average Downgradient Well at BAP	Bedrock to Alluvial Aquifer Ratio
Chloride	mg/L	29,000	47.75	607:1
Fluoride	mg/L	1.10	0.16	7:1
TDS	mg/L	36,000	555	65:1

Notes: BAP = Bottom Ash Pond; mg/L = milligrams per liter; TDS = total dissolved solids.
Results from samples collected in September/October 2025.

5.2 KYGER CREEK NORTH FLY ASH POND

As described in Section 3.2, despite the prevailing groundwater flow direction to the east, on roughly 35% of days in 2025 the groundwater flow in the alluvial aquifer is to the northeast from the Kyger Creek NFAP underneath the BAP towards the water supply wells. Figures 4-4, 4-6, and 4-7 show the linkage between the alternate source and the downgradient monitoring wells for boron, sulfate, and low pH, respectively.

5.2.1 BORON AND SULFATE

The maximum boron concentration measured in onsite groundwater monitoring wells at the BAP was 3.8 mg/L at BAC-17 (Figure 4-4). The average boron concentration observed at the Kyger Creek SFAP in 2024 was 7.98 mg/L, with a maximum boron concentration reported to be 16 mg/L. Additionally, in a sampling program performed in August 2024, boron concentrations as high as 6.2 mg/L were reported at the north end of the NFAP, with concentrations as high as 14

mg/L reported at the southern end of the NFAP. The average concentration reported around the NFAP in August 2024 is 4.92 mg/L (Appendix A).

The maximum sulfate concentration measured in upgradient onsite groundwater monitoring wells along the southern boundary of the BAP was 190 mg/L at BAC-06 in fall 2025, while the maximum sulfate concentrations observed at the Kyger Creek NFAP in fall 2024 were 480 mg/L in well KC-19-32, located at the northern boundary of the Kyger Creek NFAP, and 963 mg/L in well KC-9507 located in the southeast corner of the Kyger Creek NFAP (Figure 4-6). The ratio of the maximum Kyger Creek fly ash pond concentrations to the maximum downgradient BAP well is provided in Table 5-2. These ratios, and the presence of pumping-influenced flow directions to the northeast, demonstrate the linkage between boron and sulfate observed in downgradient BAP wells and the Kyger Creek NFAP, the alternate source.

TABLE 5-2: RATIO OF KYGER CREEK GROUNDWATER TO DOWNGRADIENT BAP GROUNDWATER FOR BORON/SULFATE

		Maximum Concentration		Ratio: Kyger Creek Fly Ash Ponds to Downgradient BAP
Analyte	**Units**	**Kyger Creek NFAP/SFAP (2024)**	**Downgradient BAP Well (BAC-04/BAC-02)**	
Boron	mg/L	16	2.3	7.6:1
Sulfate	mg/L	963	290	3.3:1

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond; SFAP = South Fly Ash Pond; mg/L = milligrams per liter.
Results from Gavin samples collected in September/October 2025, Kyger Creek NFAP/SFAP samples collected in October 2024.

5.2.2 PH

Table 5-3 summarizes the range of pH values measured at the Kyger Creek NFAP, the BAP and the Ohio River. The observed pH SSIs at the BAP were below the lower prediction limit of 6.63, which was derived based on background data from MW-1, BAC-01 and MW-6. BAP background groundwater, BAP bedrock groundwater, and water from the Ohio River all have relatively neutral to slightly alkaline pH. Groundwater migrating from Kyger Creek NFAP has an acidic pH, as confirmed by the October 2024 pH measurement of 5.76 at monitoring well KC-9502, which is located approximately 150 feet south of the BAP. As discussed in Section 4.2.3, the low pH at KC-9502 has been observed since 1997 and was identified by OEPA in 1998 (Appendix B). As discussed in Section 3, groundwater migrating northward from the Kyger Creek NFAP mixes with upgradient groundwater migrating from the west and can mix with Ohio River water during high river stage conditions. This mixing of neutral to slightly alkaline waters from background sources and acidic waters migrating northward from the Kyger Creek NFAP causes groundwater at the downgradient BAP wells to become slightly acidic. These observations demonstrate the linkage between low pH groundwater observed in downgradient BAP wells and low pH groundwater from the Kyger Creek NFAP, the alternate source.

TABLE 5-3: COMPARISON OF BEDROCK, KYGER CREEK NFAP, AND DOWNGRADIENT BAP GROUNDWATER FOR PH

Analyte	Units	Lowest Measured		Upgradient Wells West of BAP	Bedrock Wells	Ohio River	Downgradient BAP Wells (Mixing Area)
		Onsite BAP Well (BAC-03)	Kyger Creek NFAP (KC-9502)				
pH	SU	6.19	5.76	6.83-7.33	7.12-7.66	7.37	6.19-6.55

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond; SU = Standard pH Units.
Results from Gavin samples collected in September/October 2025, Kyger Creek NFAP samples collected in October 2024, and Ohio River sample collected September 2025.

6. DATA INDICATES THAT THE BAP IS NOT THE SOURCE

6.1 EVALUATION OF POTENTIAL GROUNDWATER MOUNDING AT THE BAP

From August 2022 through November 2023, programmable electronic data loggers equipped with a pressure-sensitive water level transducer were installed at four pairs of alluvial aquifer monitoring wells (eight monitoring wells) at the southern, western, northern, and eastern boundaries of the BAP to evaluate the potential for groundwater mounding. These monitoring well pairs were chosen based on their proximity to one another, and to the BAP. Each well pair included a well directly adjacent to the BAP, and the other located approximately 150-250 ft away from the BAP, which allowed for the evaluation of hydraulic heads and resulting hydraulic gradients between each couplet. A signature of mounding would be identified by consistently higher potentiometric elevations at the well located closer to the BAP compared to its counterpart located further from the BAP. The four well couplet pairs included the following:

- BAC-01 (further from BAP) and BAC-08 (closer to BAP), installed at the western boundary of the BAP;
- BAC-10 (further from BAP) and BAC-02 (closer to BAP), installed at the northern boundary of the BAP;
- BAC-12 (further from BAP) and BAC-04 (closer to BAP), installed at the eastern boundary of the BAP; and
- BAC-16 (further from BAP) and BAC-18 (closer to BAP), installed at the southern boundary of the BAP.

Mounding was not observed at the BAP (ERM 2024). The potentiometric elevation at the northern boundary of the BAP is largely controlled by the operation of the pumping wells located north of the BAP. Well BAC-10 is located closer to the pumping wells and typically has a lower potentiometric surface during times of pumping. This signature is consistent with greater drawdown at BAC-10 because it is closer to the water supply wells than BAC-02 and is not a result of mounding at the northern boundary at the BAP. At the eastern, southern, and western boundaries of the BAP, potentiometric elevations in the wells located further from the BAP were consistently very similar to or higher than the potentiometric elevations in the wells located closer to the BAP. These observations are not consistent with mounding at the BAP.

Dewatering activities at the BAP began the week of March 20, 2023 and continued through May 31, 2023. After this date, the BAP was considered drained and has not contained appreciable quantities of water, making mounding unlikely under the current conditions. The lack of evidence for groundwater mounding at the BAP supports the conclusion that the BAP is not the source of the SSIs.

6.2 OBSERVED BORON CONCENTRATIONS

Surface water samples at the BAP and Reclaim Pond were collected during each groundwater sampling event between 2016 and 2022. Prior to dewatering of the BAP, boron was consistently detected in surface water at 0.50 mg/L or lower, except for one event in 2019 when boron was measured at 1.30 mg/L. Table 6-1 compares the boron concentrations measured in surface water

and monitoring wells. Based on this data, the boron concentration in the BAP surface water was too low to be the source of boron to the downgradient BAP wells. In contrast, groundwater flowing towards the BAP from under the Kyger Creek NFAP has consistently had a boron concentration higher than what is detected in downgradient groundwater. The average concentration at B-0904 from March 2018 to March 2020 was 3.95 mg/L, and BAC-17 had an average boron concentration of 3.88 mg/L from October 2022 to September 2025, making the Kyger Creek NFAP the most likely source.

Boron in the environment typically exists as boric acid or the borate ion. Both species are water-soluble and are not sensitive to redox conditions. Although adsorption/desorption reactions occur, adsorption is strongest in slightly-to-moderately basic conditions (pH 7.5-10), which are not observed in alluvial groundwater around the BAP (ATSDR 2010). Therefore, it is not likely that oxidizing conditions present in surface water would impact boron concentrations in the BAP, nor is it likely that adsorption/desorption processes are significantly impacting the concentrations of boron in groundwater surrounding the BAP. Boron is expected to act as a conservative tracer due to its high solubility and mobility in groundwater.

TABLE 6-1: BAP BORON RESULTS

Analyte	Units	Bottom Ash Pond[a]	Reclaim Pond[a]	Downgradient BAP Wells[b]
Boron	mg/L	0.44	0.51	1.9

[a] Average sample results from February 2018 to October 2022.
[b] Average sample results from BAC-02, BAC-03, BAC-04, and BAC-05 in September 2025.

6.3 LEACHING DATA

Based on leaching testing performed on bottom ash from the BAP, the CCR material present in the BAP does not yield concentrations of Appendix III parameters above background (or below background in the case of pH). Therefore, the BAP does not constitute a source of impact to groundwater.

Gavin collected composite bottom ash samples annually from the BAP. These samples were extracted by modified TCLP following method ASTM D3987 to evaluate the leaching potential of bottom ash material from the BAP. A summary of the results is included in Table 6-2, including minimum, maximum, and average leachate concentrations for the bottom ash samples from 2016 to 2023. Table 6-2 also includes applicable LPL and UPL values derived for the BAP Appendix III parameters, as well as the average of 11 samples collected from monitoring well BAC-21, located west of the BAP to represent groundwater quality hydraulically upgradient and distant from the BAP.

TABLE 6-2: BAP TCLP RESULTS

Appendix III Parameter	Units	App III LPL	App III UPL	BAC-21 (Avg)	Gavin Modified TCLP			
					n	Min	Max	Avg
Fluoride	mg/L	-	0.161	0.08	8	<0.01	0.059	0.053
Chloride	mg/L	-	24.7	66.8	8	0.174	0.91	0.621
Sulfate	mg/L	-	140	123.8	8	2.1	42	10
TDS	mg/L	-	505	520	8	<10.0	56	29
pH	SU	6.63	7.22	6.82	8	6.5	9.7	8.02
Calcium	mg/L	-	123.7	126.2	4	3	12	6.1
Boron	mg/L	-	0.177	0.35	4	<0.1	<0.1	<0.1

Notes: n = number of samples available from 2016 to 2023; < = not detected at the listed reporting limit; SU = standard units.

These results indicate that the Appendix III parameters do not leach from Gavin bottom ash at concentrations above the Appendix III UPLs. We note that the pH SSI is for pH levels lower than the LPL, so the fact that the average pH level in the TCLP results is not only above the LPL but also above the UPL is further indication that the BAP is not the source of the low pH SSI. Leaching results are generally lower than background groundwater observed west of the BAP. Accordingly, concentrations observed in downgradient wells must be caused by a source other than the BAP.

6.4 CHEMICAL FINGERPRINTS

The geochemical fingerprints of surface water from the BAP, upgradient groundwater west of the BAP, groundwater flowing from the Kyger Creek NFAP, and surface water from the Ohio River were evaluated using the concentrations of parameters that are not expected to sorb strongly or participate in redox reactions. Boron, chloride, and potassium were chosen for these comparisons due to their higher water solubility, limited redox chemistry, and presence in groundwater around the BAP. Boron-chloride and boron-potassium plots are shown in Figure 6-1 and Figure 6-2, respectively.

The samples presented on the concentration plots were collected from 2016 through 2025. The primary observations based on the concentration plots (Figures 6-1 and 6-2) are the following:

- Multiple samples collected from a single location (e.g., the Ohio River or Well BAC-01) tended to be tightly clustered, indicating that the chemical signatures of individual locations were consistent over time.
- Monitoring well samples collected from a similar environment (e.g., upgradient wells located west of the BAP) tended to have similar concentrations and plot near each other.
- Groundwater from BAP upgradient wells MW-1, BAC-01, and MW-6 has a unique signature with relatively low boron, chloride, and potassium. The Ohio River has similar concentrations of boron and chloride but generally has a higher concentration of potassium.
- Groundwater migrating from the Kyger Creek NFAP is sampled at monitoring wells B-0904 and BAC-17, which was installed to replace B-0904. Concentrations of boron, chloride, and potassium at these wells are similar. These wells are characterized by high boron and low chloride and potassium.

- Groundwater from BAP downgradient wells BAC-02, BAC-03, BAC-04, and BAC-05 has a signature similar to groundwater migrating onto Gavin from the Kyger Creek NFAP (B-0904 and BAC-17). BAC-05, which is located closest to the Kyger Creek NFAP, plots closest to the Kyger Creek NFAP groundwater, followed by BAC-04, BAC-03, and BAC-02, respectively. This is consistent with their distance from the Kyger Creek NFAP. Groundwater at these wells is characterized by high boron, with elevated chloride and potassium relative to Kyger Creek NFAP groundwater due to the influence of bedrock groundwater. Supplemental monitoring wells BAC-12 and BAC-14 have chemical fingerprints consistent with other BAP downgradient wells.
- Groundwater from monitoring wells BAC-06 and BAC-07 shows a distinct signature with similar concentrations of chloride and potassium to Kyger Creek NFAP groundwater, with lower but still elevated concentrations of boron. These wells are screened at a deeper interval than B-0904 and BAC-17, indicating that the boron plume flowing from the Kyger Creek NFAP is primarily located in the upper part of the alluvial aquifer.
- Groundwater from supplemental bedrock wells BAC-09, BAC-11, BAC-13, and BAC-19 has a unique signature with moderate concentrations of boron (comparable to those observed at some upgradient locations) and very high chloride. Chloride concentrations are up to three orders of magnitude higher in bedrock groundwater than in alluvial background groundwater, which is consistent with the interpretation of brine influencing Cow Run groundwater quality.
- Groundwater from supplemental upgradient monitoring wells located farther to west/northwest (BAC-21, BAC-22, and BAC-23) has a signature similar to the network upgradient wells (MW-1, BAC-01 and MW-6), but with slightly higher boron and potassium.
- Groundwater from supplemental separation layer monitoring well BAC-15 has a distinct signature characterized by moderate boron and potassium and very low chloride. This well has limited connectivity to surrounding groundwater due to the low hydraulic conductivity of the separation layer.
- BAP surface water through 2023 had a signature distinct from downgradient groundwater, characterized by moderate boron and chloride, with potassium concentrations higher than both upgradient and downgradient groundwater. If the BAP were the source of SSIs at downgradient wells BAC-02, BAC-03, BAC-04 and BAC-05, these wells would have plot closer to the BAC surface water, i.e., have higher potassium concentrations.

Based on the data summarized above and the chemical fingerprints of BAP surface water and groundwater at issue, the BAP is not the source of the SSIs.

7. ALTERNATE SOURCE DATA ARE HISTORICALLY CONSISTENT WITH HYDROGEOLOGIC CONDITIONS AND FINDINGS OF THE MONITORING PROGRAM

7.1 REGIONAL BRINE

The existence of Regional Brine in the area surrounding the plant is supported by historical studies and data. Regional groundwater flow regimes through fractured bedrock upgradient of the BAP were established after the last deglaciation, which occurred approximately 14,000 years ago (Hansen 2017). Enhancement of transmissivity in the Ohio River Valley from stress-relief fracturing in bedrock provides conditions for bedrock to be interconnected to coarse glacial outwash alluvial deposits (USGS 1981; USGS, 1997). Regional groundwater within the fractured sedimentary bedrock in the Ohio River Valley generally flows from areas of higher topographic elevation towards areas of lower elevation, ultimately discharging to the Ohio River (ORSANCO 1984). Assuming a conservatively high effective porosity of 1 percent, estimated groundwater velocity values for the Morgantown Sandstone and Cow Run Sandstone units are approximately 77 to 79 feet per year and 31 to 32 feet per year, respectively. These flow rates would allow ample time for groundwater to migrate from upgradient regional background sources to Plant property. The data supporting these conclusions are historically consistent with hydrogeologic conditions and findings of the BAP monitoring program.

The discharge of brines is seen at a regional scale along the Ohio River with shallow wells near the Ohio River observing saltwater impacts; whereas, further from the Ohio River shallow wells report little to no brine impacts (USGS 1997). At the site, upward gradients between bedrock and alluvial wells near the Ohio River have been observed, and locations with the strongest observed upward gradients generally have high hydraulic conductivities, which supports the conclusion that bedrock and alluvial aquifers are hydraulically connected on-site. Additionally, the influence of pumping conditions further contributes to upward vertical gradients, as described in previous sections. TDS concentrations observed in bedrock wells around the BAP are consistent with observations seen at brine-freshwater mixing zones at other brine-impacted sites (Yager et al. 2017). The regional and site-specific data are in strong agreement and support the conclusion that regional brines are discharging under the BAP and mixing with alluvial groundwater underneath the BAP.

7.2 KYGER CREEK NORTH FLY ASH POND

The Kyger Creek NFAP was constructed in 1955 on a native soil base and without an engineered liner system to capture and contain leachate. The unit was used to manage fly ash until it was drained and closed from 1998 to 2000. However, despite closure, ash is still present within the Kyger Creek NFAP (AEP 1994). The NFAP was capped with boiler slag and clay but did not include synthetic materials that would be more likely to prevent infiltration of precipitation, subsequent migration of water through highly leachable CCR materials in the subsurface and resulting recharge of sulfate and boron-impacted water to the alluvial aquifer. Approximately 900,000 cubic yards of boiler slag and boiler slag fines were also used as surface fill and as material to build berms. Both materials yielded low pH samples during leachability testing (OEPA 1996).

Groundwater in the alluvial aquifer flows from the Kyger Creek NFAP in a northeasterly direction toward the BAP. Given the six decades that this unit has contained fly ash and the alluvial aquifer groundwater velocity estimates of 130 to 200 feet per year, ample time has passed for groundwater to migrate from the Kyger Creek NFAP beneath the BAP. The following evidence therefore supports that the Kyger Creek NFAP is the alternate source of boron, sulfate, and low pH.

- The low concentration of boron in surface water from the BAP compared to the higher concentrations of boron in groundwater beneath the BAP (Section 4 and Section 6).
- Analytical results from groundwater samples collected for the Kyger Creek NFAP and SFAP suggest boron and sulfate are present in Kyger Creek groundwater and groundwater has an acidic pH (Section 4).
- TCLP data indicates that material placed in the Kyger Creek NFAP leaches high sulfate and low pH, while bottom ash from the BAP leaches low sulfate, low boron, and near-neutral pH.
- The chemical fingerprinting evidence suggests groundwater from the Kyger Creek NFAP mixes with upgradient groundwater from west of the BAP, groundwater discharging from the bedrock, and water from the Ohio River water under the eastern portion of the BAP (Section 6).
- The OEPA has concluded that groundwater appears to be impacted by a release (i.e., elevated conductivity, sulfate, TDS, and low pH) from the Kyger Creek NFAP (Appendix A and Appendix B).

A comparison of the materials managed in the BAP provides evidence that the BAP is not the source of boron and that the Kyger Creek NFAP is a more likely source of boron. The Kyger Creek NFAP has contained fly ash since 1955, while the BAP has been used primarily for the management of bottom ash since 1974. Bottom ash and fly ash have different physical and chemical properties; laboratory investigations have demonstrated elements (including Appendix III constituents) have a much greater potential to leach from fly ash compared to bottom ash (Cox et al. 1978; Jones et al. 2012). The higher concentrations of boron observed in Kyger Creek SFAP groundwater compared to the lower concentration of boron observed in groundwater downgradient of the BAP are consistent with the known leaching properties of fly ash and bottom ash. Boron, therefore, is more likely to leach from the Kyger Creek SFAP/NFAP than the BAP based on the historical use of each unit. These observations support the conclusion that the Kyger Creek NFAP, and not the BAP, is the source of boron in groundwater under the BAP. Thus, the data supporting these conclusions are historically consistent with hydrogeologic conditions and findings of the BAP monitoring program.

8. CONCLUSIONS

The SSIs identified in this ASD Report are based on results from downgradient BAP monitoring well samples collected in September/October 2025. Review of data for quality assurance and statistical comparison was completed on 13 January 2026. In response to the SSIs, this ASD Report was prepared and certified by 31 January 2026, within the required 90-day period, in accordance with 40 CFR § 257.94(e)(2).

SSIs in the downgradient BAP monitoring wells have been determined to result from alternate sources based on analysis of the gathered data: discharge of regional brine present in bedrock and the Kyger Creek Power Plant NFAP. Table 8-1 summarizes the six lines of evidence for each of the SSIs.

In conclusion, the BAP is not the source of the SSIs associated with the second semiannual sampling event groundwater results for 2025. Thus, Gavin will continue detection monitoring at the BAP in accordance with 40 CFR § 257.94(e)(2).

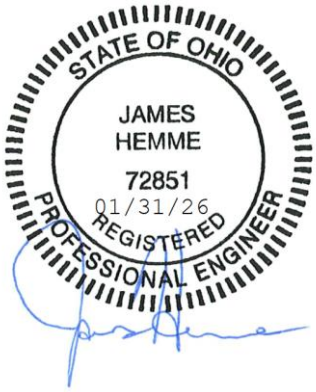
TABLE 8-1: BAP ASD SUMMARY

Analyte	SSI Location	Six Lines of Evidence from USEPA Guidance					
		Alternate Source	Hydraulic Connection	Constituent Present at Source or along Flow Path	Constituent Distribution More Strongly Linked to Alternate Source	Constituent Could Not Have Resulted from the BAP	Data Are Historically Consistent with Hydrogeologic Conditions
Boron	BAC-02 BAC-03 BAC-04 BAC-05	Kyger Creek NFAP	X	X	X	X	X
Chloride	BAC-02 BAC-03 BAC-04 BAC-05	Regional Brine	X	X	X	X	X
Fluoride	BAC-02	Regional Brine	X	X	X	X	X
pH	BAC-02 BAC-03 BAC-04 BAC-05	Kyger Creek NFAP	X	X	X	X	X
Sulfate	BAC-02 BAC-03 BAC-04 BAC-05	Kyger Creek NFAP	X	X	X	X	X
TDS	BAC-02 BAC-04	Regional Brine	X	X	X	X	X

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond; SSI = statistically significant increase; TDS = total dissolved solids; USEPA = United States Environmental Protection Agency.

9. PROFESSIONAL ENGINEER CERTIFICATION

I hereby certify that I, or an agent under my review, have prepared this Alternate Source Demonstration Report for the Bottom Ash Pond and it meets the requirements of 40 CFR § 257.94(e)(2). To the best of my knowledge, the information contained in this Report is true, complete, and accurate.



James A. Hemme, P.E.
State of Ohio License No.: 72851

Date: 1/31/26

10. REFERENCES

AEP (American Electric Power Service Corporation). 1994. Hydrogeologic Site Investigation Work Plan for the Proposed North Fly Ash Pond Closure, Kyger Creek Station, Ohio Valley Electric Corporation, Gallia County, Ohio. Prepared by American Electric Power Service Corporation.

AEP. 2016. *History of Construction, CFR 257.73(c)(1) South Fly Ash Pond*, Kyger Creek Station, Ohio Valley Electric Corporation, Gallia County, Ohio.

AGES (Applied Geology and Environmental Science, Inc.). 2021. *Coal Combustion Residual Regulation 2020 Groundwater Monitoring and Corrective Action Report, Ohio Valley Electric Corporation, Kyger Creek Station*. Prepared for Ohio Valley Electric Corporation.

AGES. 2025. *Coal Combustion Residual Regulation 2024 Groundwater Monitoring and Corrective Action Report, Ohio Valley Electric Corporation, Kyger Creek Station*. Prepared for Ohio Valley Electric Corporation.

ATSDR (Agency for Toxic Substances and Disease Registry). 2010. *Toxicological profile for Boron*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

CHA. 2010. *Assessment of Dam Safety of Coal Combustion Surface Impoundments (Task 3) Final Report,* Ohio Valley Electric Corporation, Kyger Creek Power Station, Gallipolis, Ohio. Prepared for Lockheed Martin, Edison, New Jersey.

Cox, J.A., G.L. Lundquist, A. Przyjazny, and C.D. Schmulbach. 1978. "Leaching of Boron from Coal Ash"*. Environmental Science and Technology*, Vol. 12, No. 6: 72–723.

ERM (ERM Consulting & Engineering, Inc.). 2017. *Groundwater Monitoring Plan. Bottom Ash Complex, Fly Ash Reservoir, and Residual Waste Landfill*. Gavin Plant, Cheshire, Ohio.

ERM. 2018a. *2017 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2018b. *Gavin Bottom Ash Complex Alternate Source Demonstration.* Gavin Plant, Cheshire, Ohio.

ERM. 2019. *2018 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2020. *2019 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2021a. *Updated Groundwater Monitoring System Evaluation and Certification-40 CFR 257.91, Gavin Bottom Ash Pond.* Gavin Plant, Cheshire, Ohio.

ERM. 2021b. *2020 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2021c. *Gavin Bottom Ash Pond Investigation*. Gavin Plant, Cheshire, Ohio.

ERM. 2022. *2021 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2023. *2022 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2024. *2023 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

ERM. 2025. *2024 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Complex*. Gavin Plant, Cheshire, Ohio.

Gavin (Gavin Power, LLC). 2022. *Comments of Gavin Power, LLC on EPA's Proposed Denial of Alternative Closure Deadline for General James M. Gavin Plant*. Cheshire, OH. https://www.regulations.gov/comment/EPA-HQ-OLEM-2021-0590-0076

Hansen. 2017. *The Ice Age in Ohio*. Education Leaflet No. 7, Revised Edition 2017. Columbus, Ohio: Ohio Department of Natural Resources, Division of Geological Survey.

Jones, K.B., L.F. Rupert, and S.M. Swanson. 2012. "Leaching of Elements from Bottom Ash, Economizer Fly Ash, and Fly Ash from Two Coal-Fired Power Plants". *International Journal of Coal Geology*, Vol. 94: 337–348. 1 May 2012.

ODNR (Ohio Department of Natural Resources). 1995. *GeoFacts No. 7. The Scioto Saline—Ohio's Early Salt Industry.* Ohio Department of Natural Resources, Division of Geological Survey.

OEPA (Ohio Environmental Protection Agency). 1996. *Division of Surface Water Report on the Combined Application for Permit to Install for the Ohio Valley Electric-Kyger Creek Plant North Fly Ash Pond Closure Project, Cheshire, Gallia County, Ohio*, PTI 06-4916. Southeast District Office – December 5, 1996.

Ohio River Valley Water Sanitation Commission (ORSANCO). 1984. *A Primer on Groundwater Resources in the Compact of the Ohio River Basin.* Cincinnati, Ohio: ORSANCO.

ORSANCO. 2018. *River Facts*. Cincinnati, Ohio. http://www.orsanco.org/river-facts/

Ohio Valley Electric Corporation (OVEC). 2017. Alteration Request – North Fly Ash Pond Permit to Install. December 4, 2017.

OVEC. 2024a. *Ohio Valley Electric Corporation Kyger Creek Station- Closed North Fly Ash Pond Additional Investigation of Groundwater Flow and Quality*, dated 12/6/2024.

OVEC. 2024b. *Ohio Valley Electric Corporation Kyger Creek Station- Closed North Fly Ash Pond Groundwater Semiannual Data Analysis*, dated 12/6/2024.

Phalen, W.C. 1919. Salt Resources of the United States. USGS Bulletin 669.

Stout, W., R.E. Lamborn, and Schaaf Downs. 1932. "Brines of Ohio". *Fourth Series, Bulletin 37*. Columbus, Ohio: Geological Survey of Ohio.

USEPA (United States Environmental Protection Agency). 1993. *The Solid Waste Disposal Facility Criteria Technical Manual, EPA530-R-93-017, Subpart E*. Washington, D.C: USEPA.

USEPA. 2021. EPA On-line Tools for Site Assessment Calculation. https://www3.epa.gov/ceampubl/learn2model/part-two/onsite/gradient4plus-ns.html.

USEPA. 2022. Proposed Denial of Alternative Closure Deadline for General James M. Gavin Plant, EPA-HQ-OLEM-2021-0590. Washington, D.C: USEPA.

USGS (United States Geologic Survey). 1981. Hydrologic Effects of Stress-Relief Fracturing in an Appalachian Valley. Paper 2177.

USGS. 1997. Ground-Water Hydrology of the Area Bordering the Ohio River Between Chester and Waverly, West Virginia. Report 95-710.

USGS. 2019. Specific Conductance, from Chapter 6.3 of Section A, National Field Manual for the Collection of Water-Quality Data; Book 9, Handbooks for Water-Resources Investigations, revised February.

Yager, R.M., McCoy, K. J., Voss, C. I., Sandford, W. E., and Winston, R. B. 2017. "The Role of Uplift and Erosion in the Persistence of Saline Groundwater in the Shallow Subsurface". Geophys. Res. Lett., Vol. 4, 3672-3681

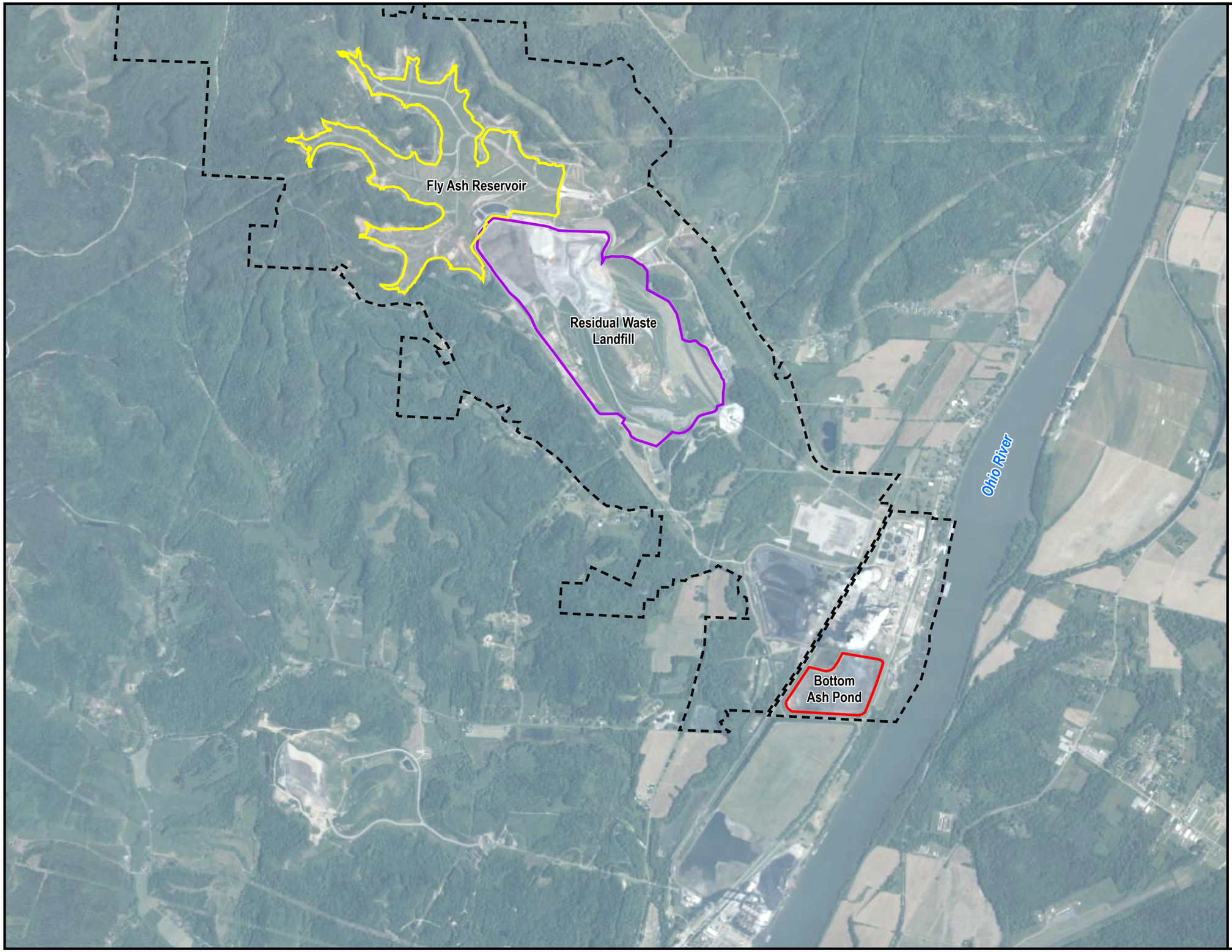
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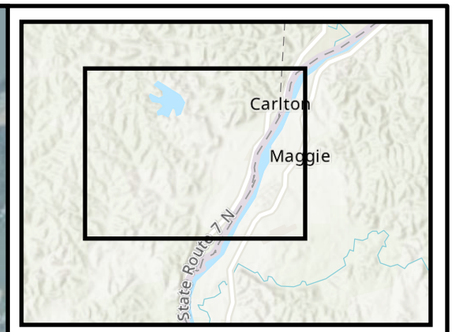


Figure 1-1: Gavin Plant Location
Gavin Generating Station
Cheshire, Ohio

ERM

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Legend

- Fly Ash Reservoir
- Residual Waste Landfill
- Bottom Ash Pond
- Property Boundary

NOTES:

1. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

N

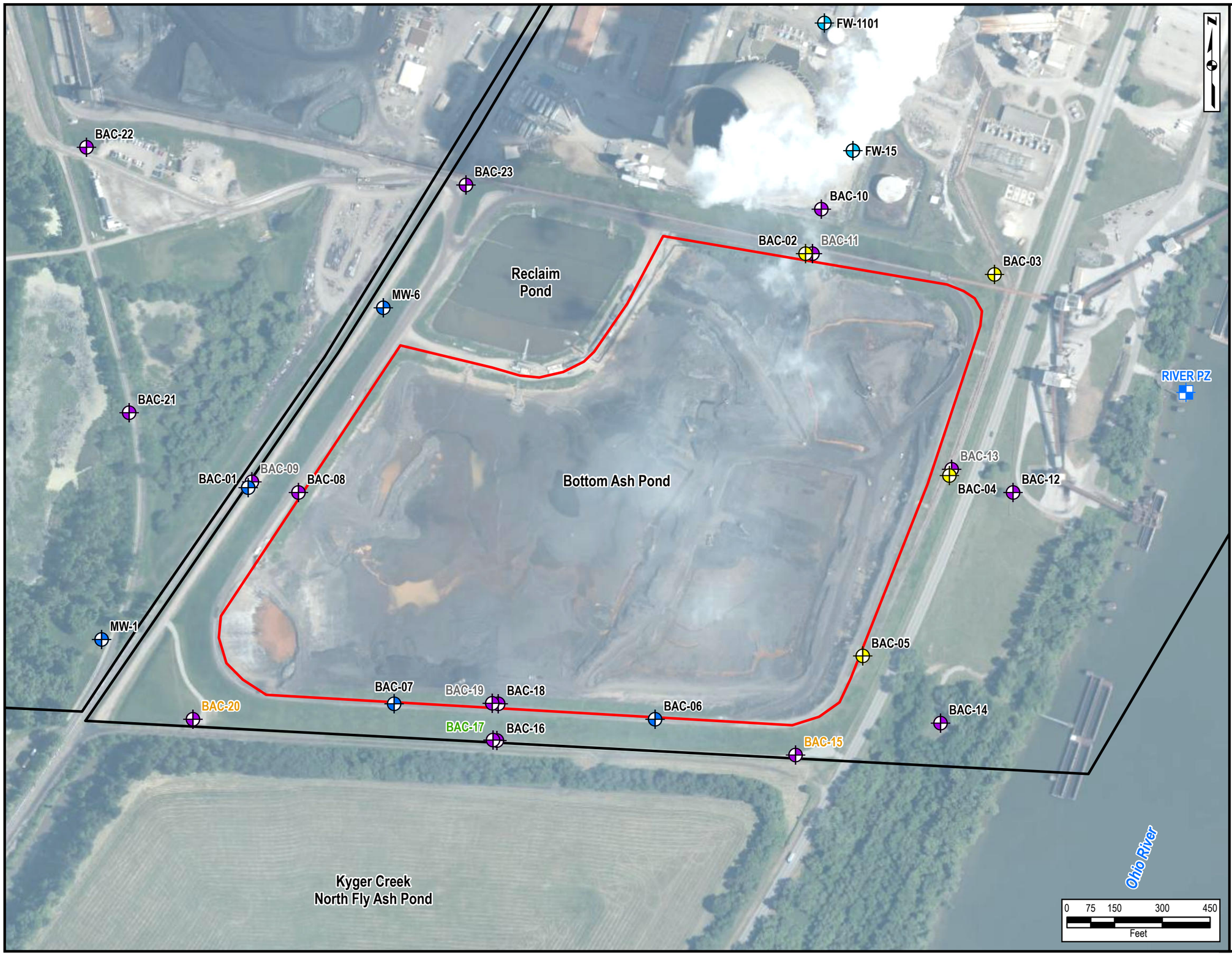
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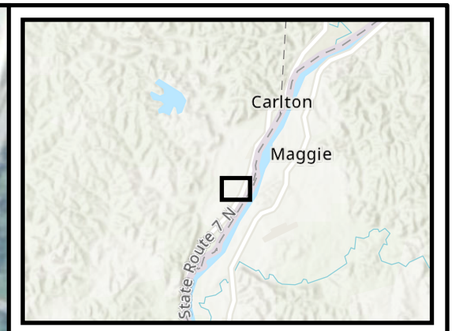
Feet

Figure 1-2: Former Bottom Ash Pond Location
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM

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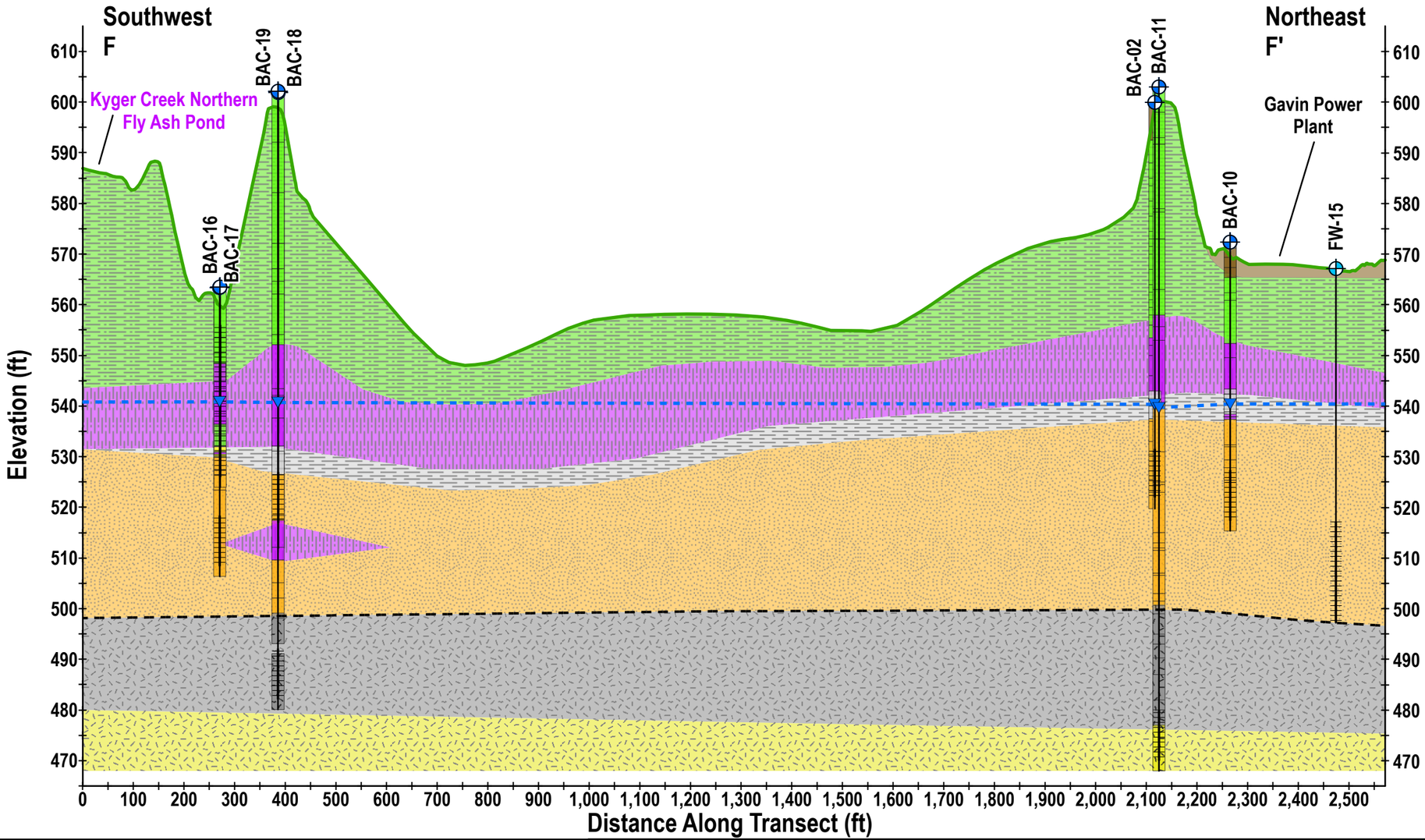
- 2022 Monitoring Well (Not in Federal Program)
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Water Supply Well
- Piezometer
- BAC Alluvium Well
- BAC Silt and Clay/Alluvium Well
- BAC Silt and Clay Well
- BAC Bedrock Well
- Approximate location of Bottom Ash Pond boundary
- Gavin Property Boundary

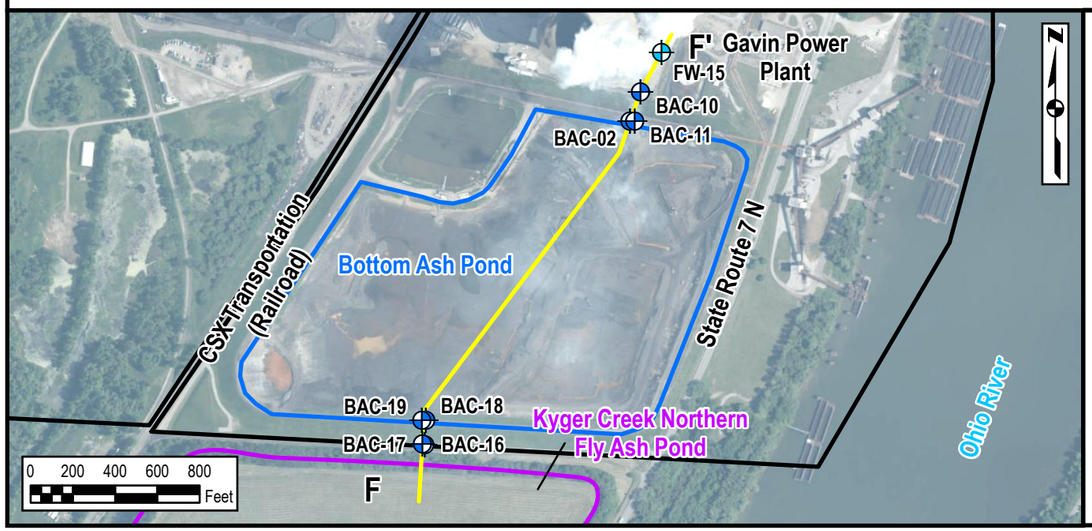
NOTES:

1. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 1-3: Bottom Ash Pond Monitoring Well Network
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM





Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Generalized Lithology

- Road Material
- Clay and Silt — Separation Layer
- Sandy Clay and Silt — Separation Layer
- Sand and Clay
- Sand and Gravel — Alluvial Aquifer
- Sand — Alluvial Aquifer
- Claystone/Siltstone — Bedrock Units
- Sandstone — Bedrock Units

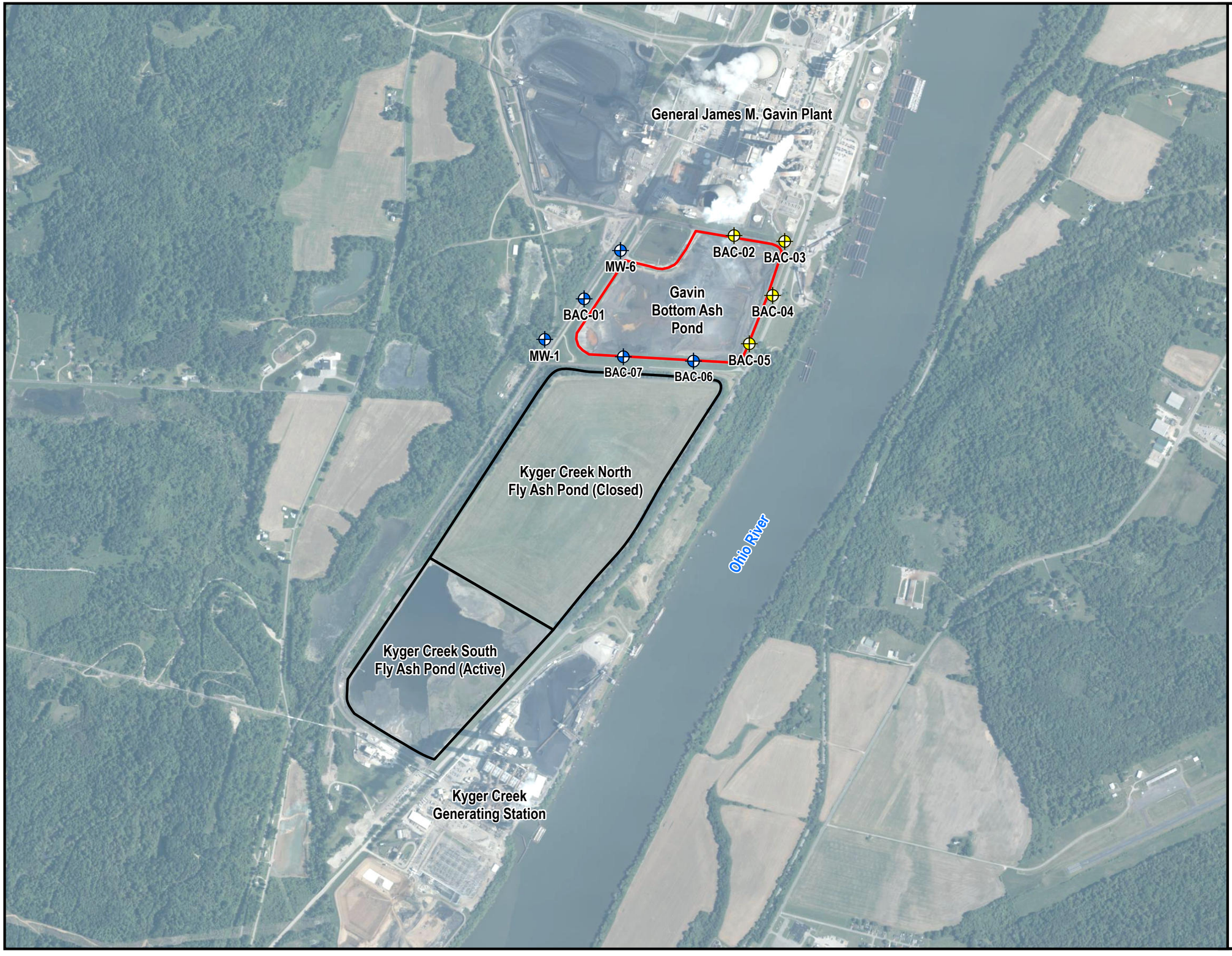
Figure 1-4: Bottom Ash Pond Cross Section
Gavin Power, LLC
Cheshire, Ohio

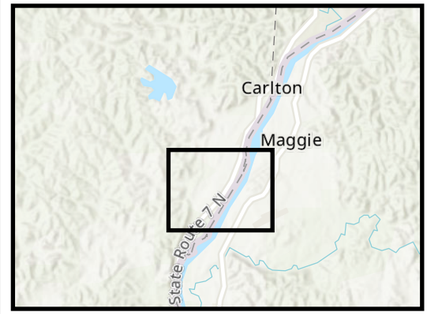
NOTES:

1. Potentiometric elevations from 09/08/25.
2. Surface profile from OGRIP LiDAR 2020.
3. Elevation is exaggerated 10X.
4. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
5. The geology is generalized based on the lithology descriptions.
6. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Gavin Bottom Ash Pond
- Kyger Creek Fly Ash Ponds

NOTES:

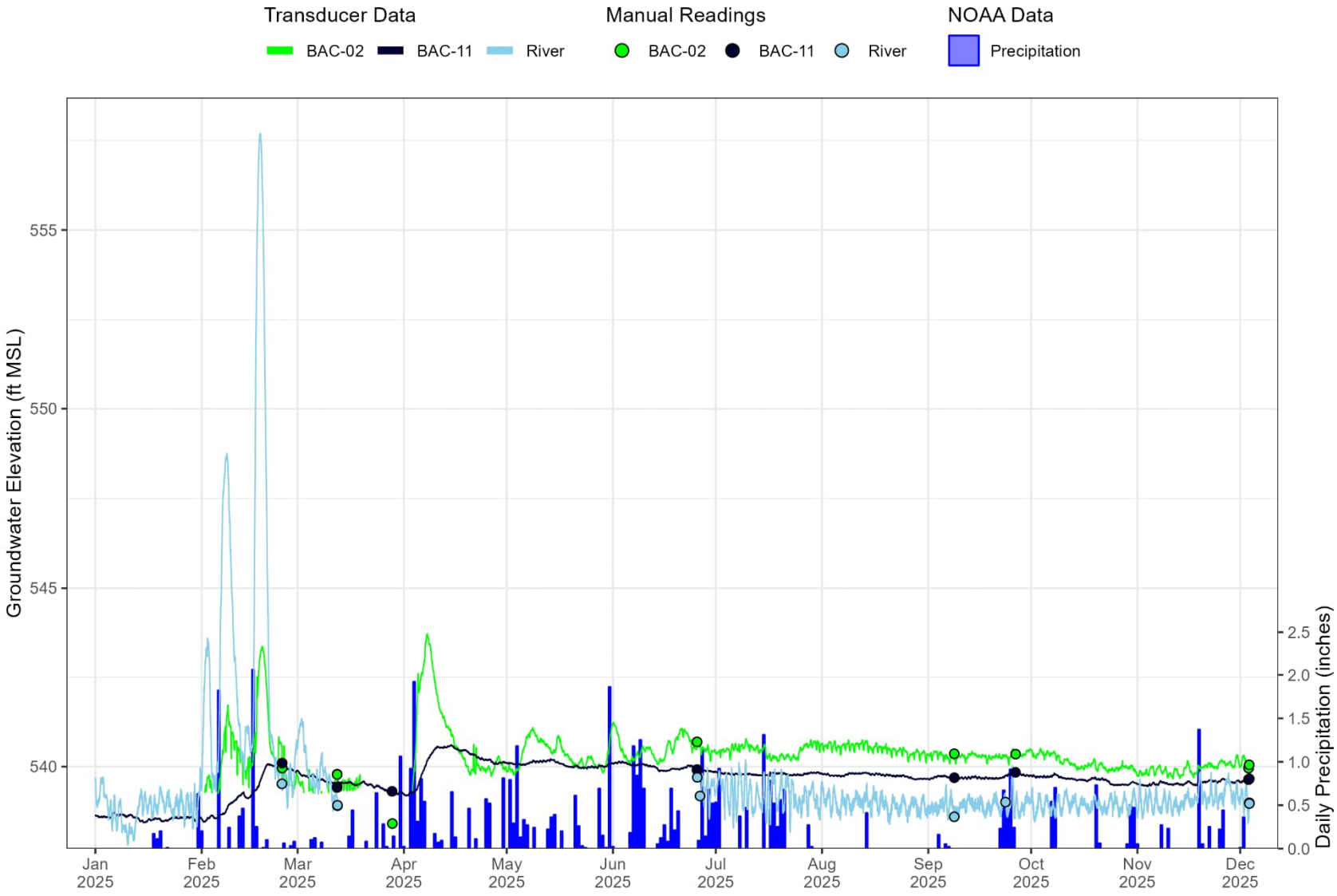
1. Kyger Creek features are from AEP. 1994. Hydrogeologic Site Investigation Plan for the Proposed North Fly Ash Pond Closure, Kyger Creek Station, Ohio Valley Electric Corporation, Gallia County, Ohio.
2. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

N

0 300 600 1,200 1,800
Feet

Figure 2-1: Kyger Creek Generating Station Location
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM

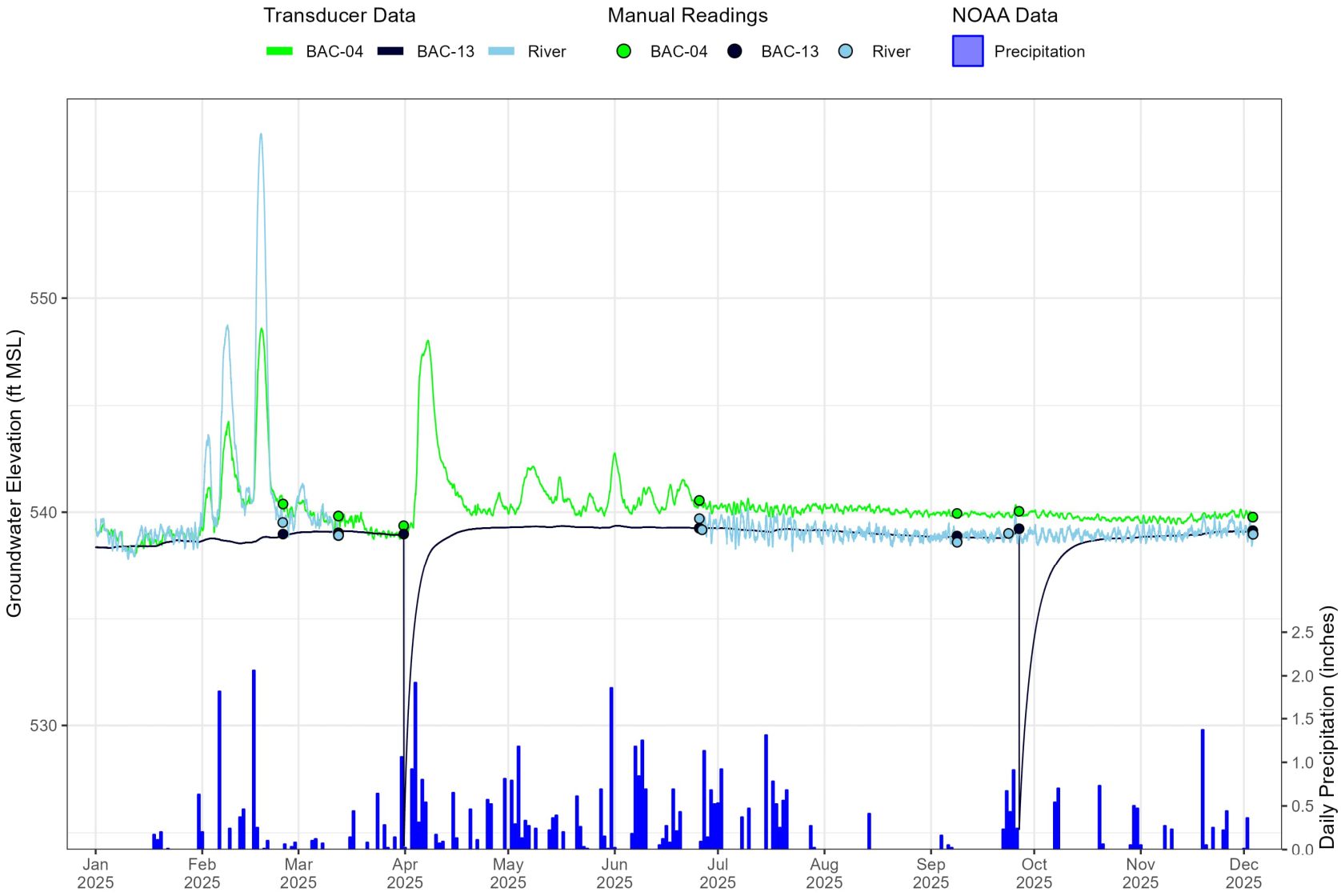


Notes:
1.) River data from on-site stilling well
2.) Transducer reading frequency was set to 15min
3.) Precipitation Source: NOAA Cheshire, OH, Albany, OH & Parkersburg WV

Figure 3-1: BAC-02 and BAC-11 Hydrograph

Gavin Power, LLC
Cheshire, Ohio

ERM

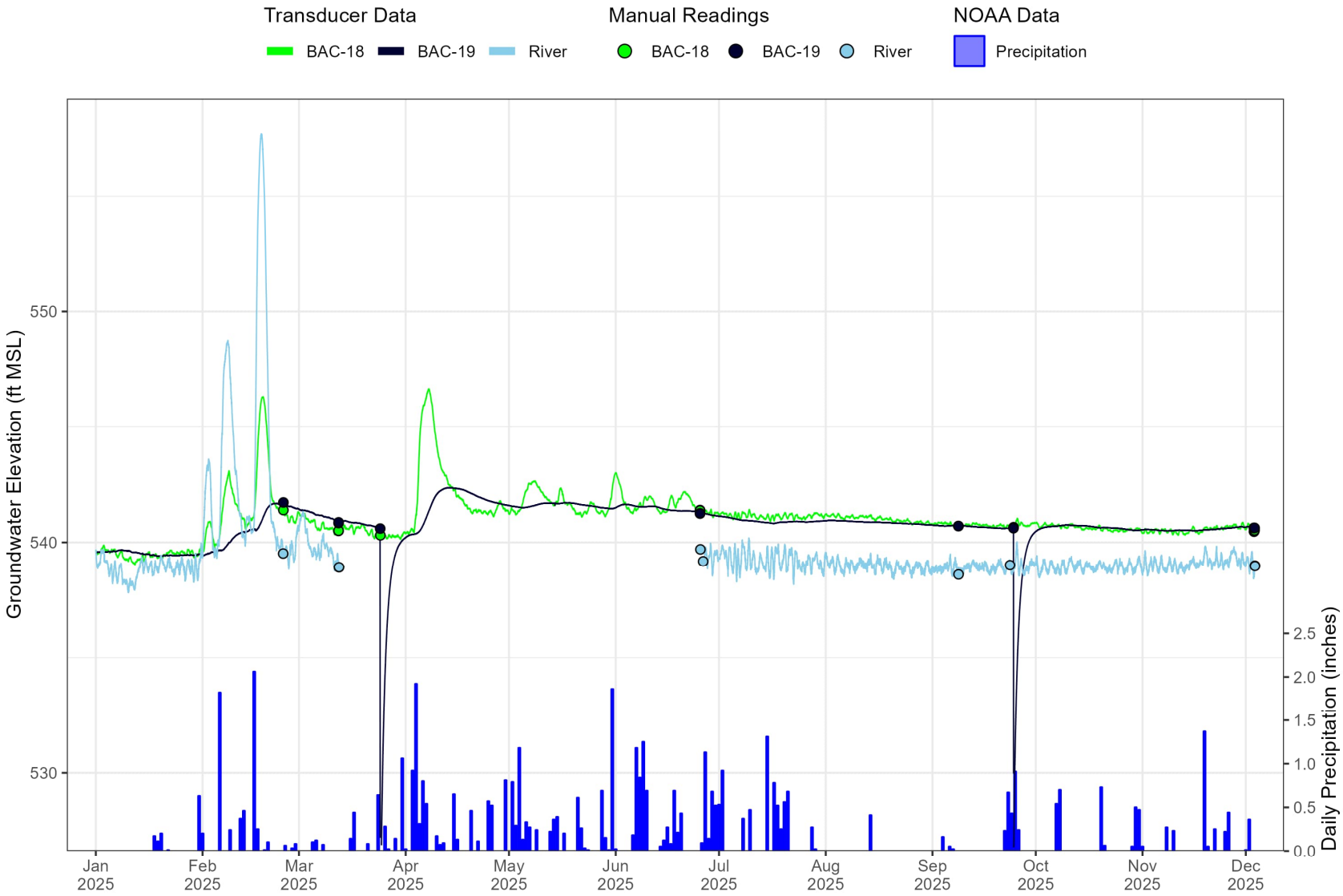


Notes:
1.) River data from on-site stilling well
2.) Transducer reading frequency was set to 15min
3.) Precipitation Source: NOAA Cheshire, OH, Albany, OH & Parkersburg WV

Figure 3-2: BAC-04 and BAC-13 Hydrograph

Gavin Power, LLC
Cheshire, Ohio

ERM

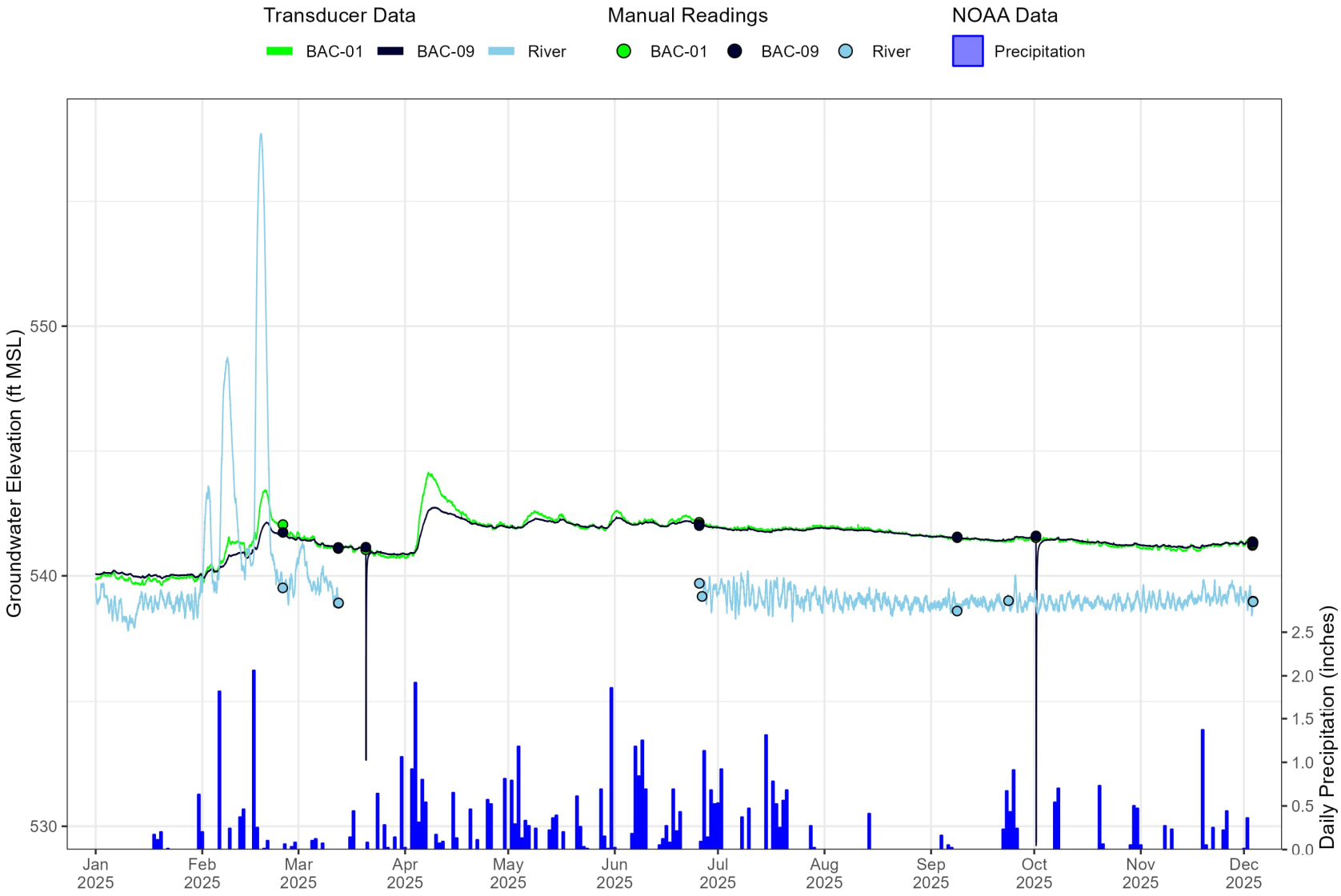


Notes:
1.) River data from on-site stilling well
2.) Transducer reading frequency was set to 15min
3.) Precipitation Source: NOAA Cheshire, OH, Albany, OH & Parkersburg WV

Figure 3-3: BAC-18 and BAC-19 Hydrograph

Gavin Power, LLC
Cheshire, Ohio

ERM

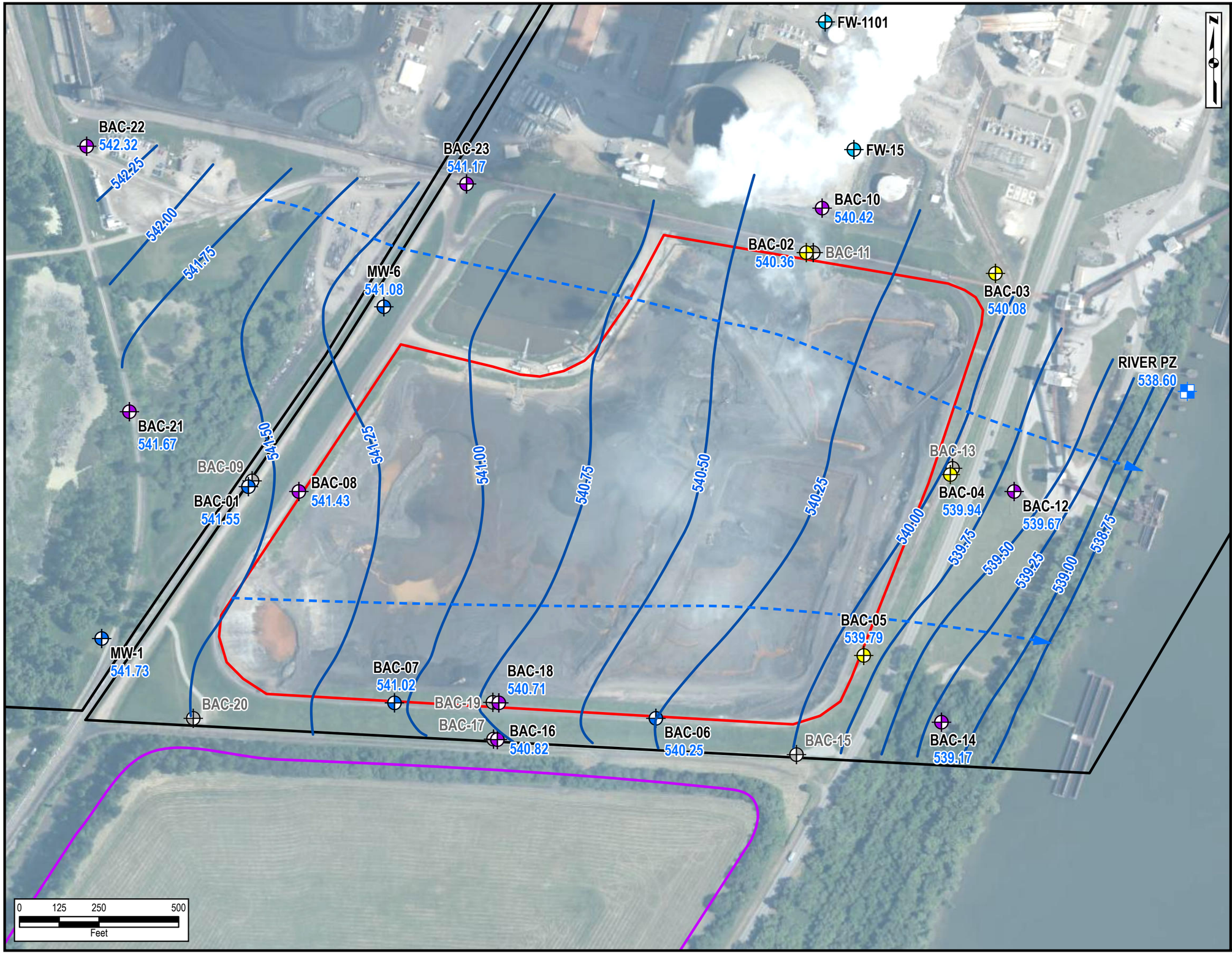


Notes:
1.) River data from on-site stilling well
2.) Transducer reading frequency was set to 15min
3.) Precipitation Source: NOAA Cheshire, OH, Albany, OH & Parkersburg WV

Figure 3-4: BAC-01 and BAC-09 Hydrograph

Gavin Power, LLC
Cheshire, Ohio

ERM



Legend

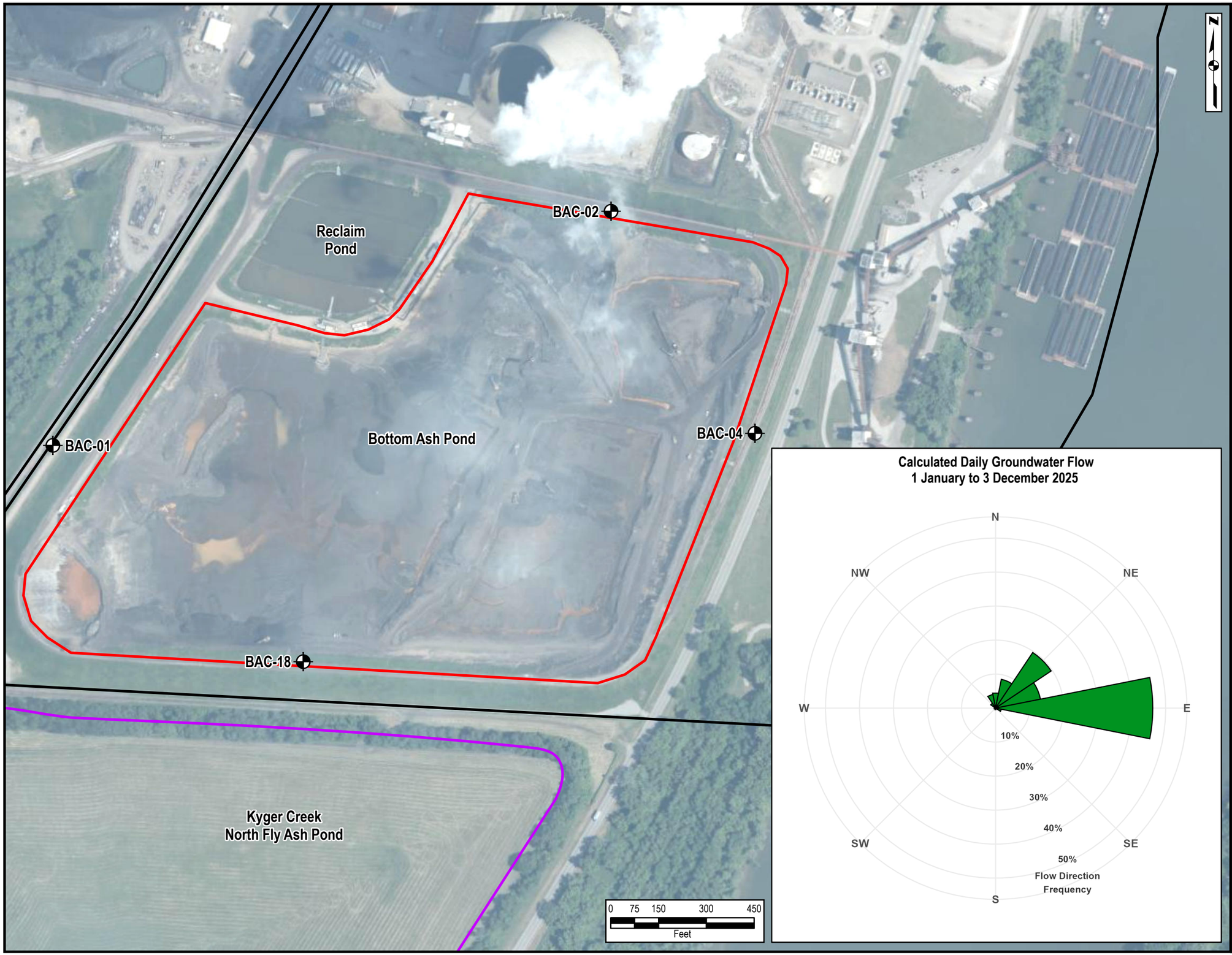
- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- River Stilling Well Location
- Bedrock or Silt/Clay Well (excluded from contouring)
- Water Supply Well
- 539.75 Groundwater Elevation (ft)
- H2 2025 Interpreted Groundwater Potentiometric Contour
- H2 2025 Interpreted Generalized Groundwater Flow Direction
- Approximate Former Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

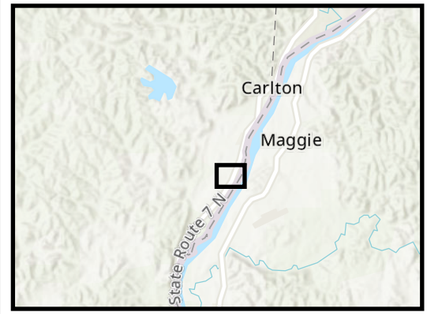
NOTES:

- Monitoring wells were gauged on 9/8/2025.
- Wells not used for contouring of the Alluvium include wells screened in silt/clay or bedrock.
- Flow lines indicate a general groundwater flow direction within alluvium beneath the Former Bottom Ash Pond. They do not represent all potential flow paths within the alluvium.
- Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS Pro 3.4.2
- H2 refers to the second half of 2025.
- Non-Pumping conditions based on interpretation of water level data from transducer installed in BAC-02. Pump had been off for approximately 29 hours..

Figure 3-5: Interpretive Groundwater Potentiometric Contour Map H2 2025 - Non-Pumping Conditions
Gavin Generating Station
Cheshire, Ohio

ERM





Legend

- Groundwater Monitoring Locations
- Frequency of Vector Flow Direction (% Days)
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

1. Groundwater flow vector diagrams calculated using an R Studio Shiny application.
2. The approach was adapted from the EPA On-line Hydraulic Gradient Magnitude and Direction tool.
3. Interpreted groundwater flow directions calculated based on data from transducers installed in the four displayed wells.
4. Transducer data were collected from 1 January 2025 through 3 December 2025.
5. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 3-6: Interpretive 2025 Groundwater Flow Directions
Gavin Power, LLC
Cheshire, Ohio

ERM

West
B

East
B'

CSX Transportation
(Railroad)

State Route
7 N

River
PZ

Ohio
River

BAC-21
BAC-01
BAC-09
BAC-08
BAC-04
BAC-13
BAC-12

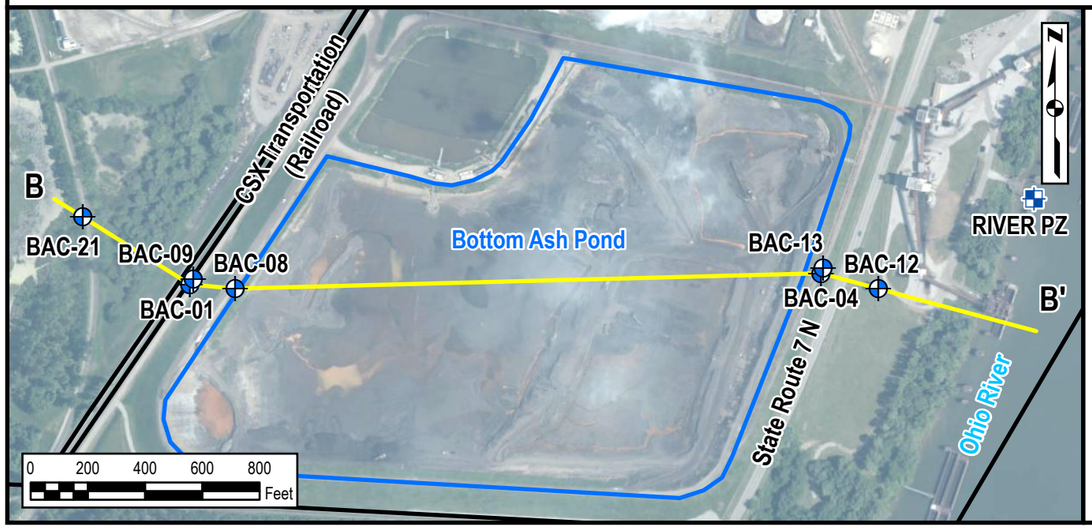
64
22
19
38
62
45
3,100
2,400

Elevation (ft)

610 600 590 580 570 560 550 540 530 520 510 500 490 480 470

0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400 1,500 1,600 1,700 1,800 1,900 2,000 2,100 2,200 2,300 2,400 2,500 2,600 2,700 2,800 2,900 3,000 3,100 3,200 3,300 3,400 3,500

Distance Along Transect (ft)



Legend

- Monitoring Well
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary

Chloride Concentrations in Groundwater (mg/L)

- <24.7
- 24.7 - 100
- 100 - 1,000
- 1,000 - 10,000
- >10,000

Generalized Lithology

- Road Material
- Separation Layer
  - Clay and Silt
  - Sandy Clay and Silt
  - Sand and Clay
- Alluvial Aquifer
  - Sand and Gravel
  - Sand
- Bedrock Units
  - Claystone/Siltstone
  - Sandstone

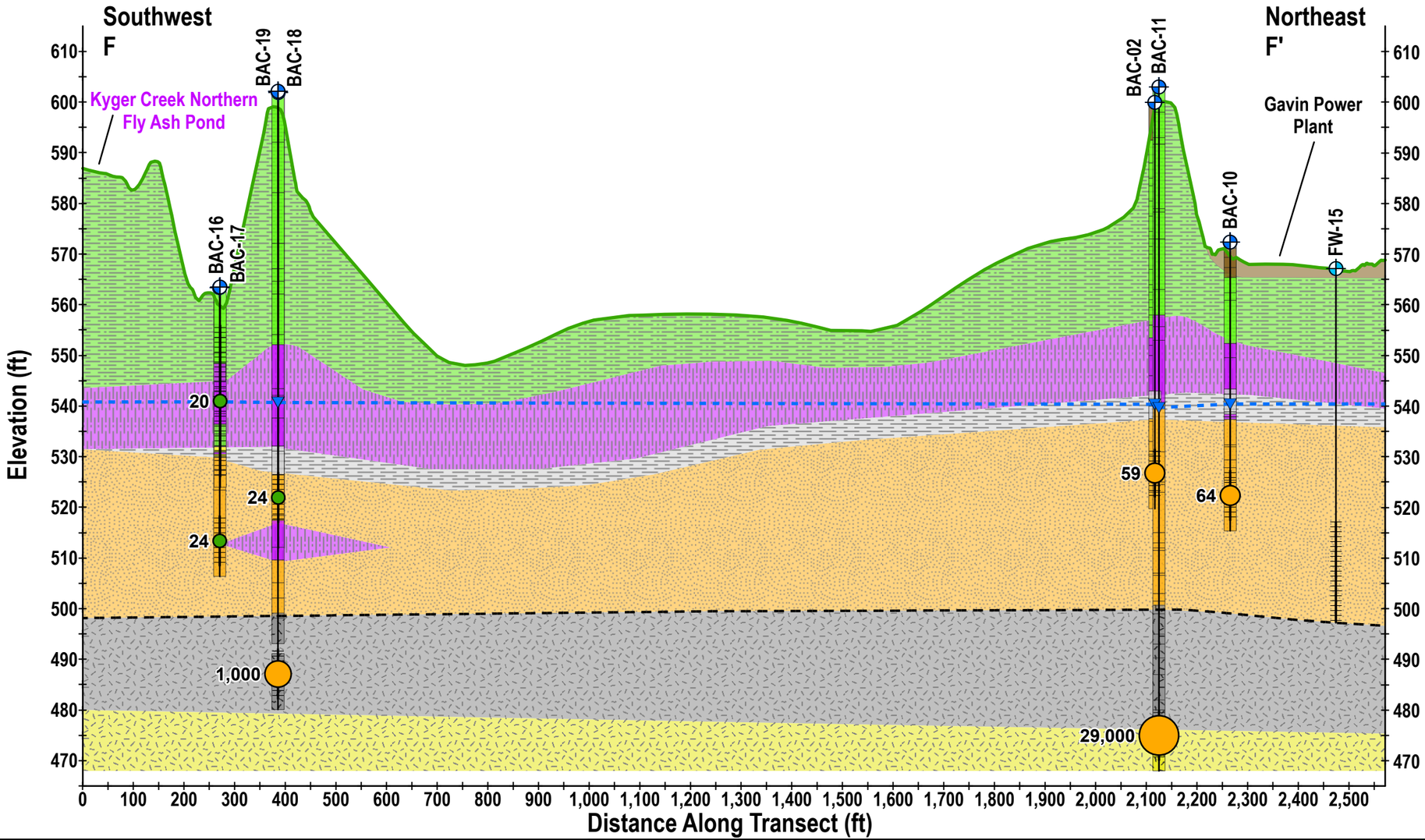
Figure 4-1a: Chloride Concentrations in Groundwater (Cross Section View 1)
Gavin Power, LLC
Cheshire, Ohio

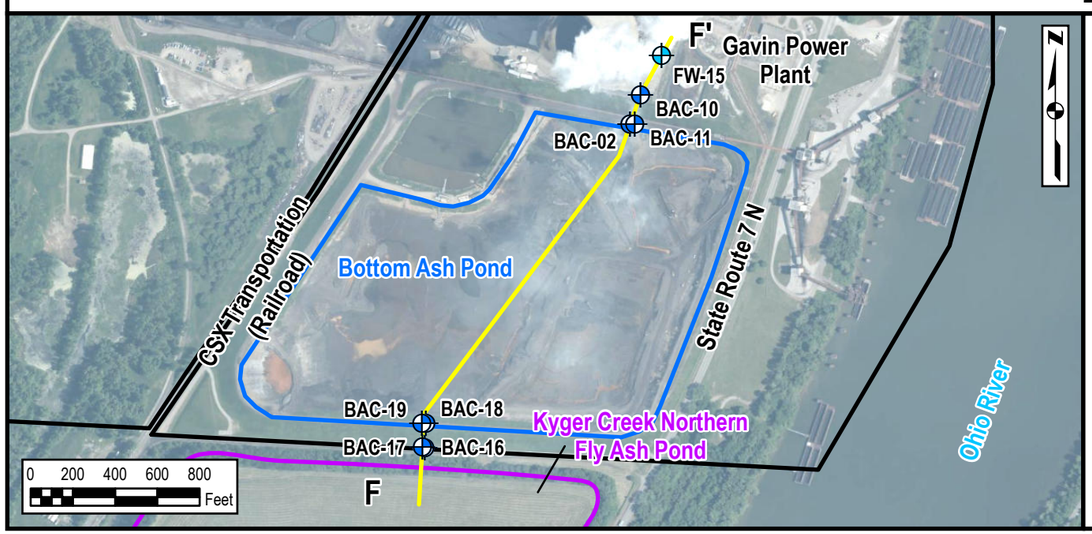
NOTES:

1. Potentiometric elevations from 09/08/25.
2. Groundwater and Ohio River samples collected from 09/10/25 to 10/31/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

M:\GIS\Projects\A-C\Blacksmith_Cp\GavinPower\Plan\MXD\Gavin_BAP_ASD_REPORT_2025\FIG2\Gavin_BAP_ASD_REPORT_2025_FIG2_CrossSection_2025219.aprx - 1/6/2026





Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Chloride Concentrations in Groundwater (mg/L)

- <24.7
- 24.7 - 100
- 100 - 1,000
- 1,000 - 10,000
- >10,000

Generalized Lithology

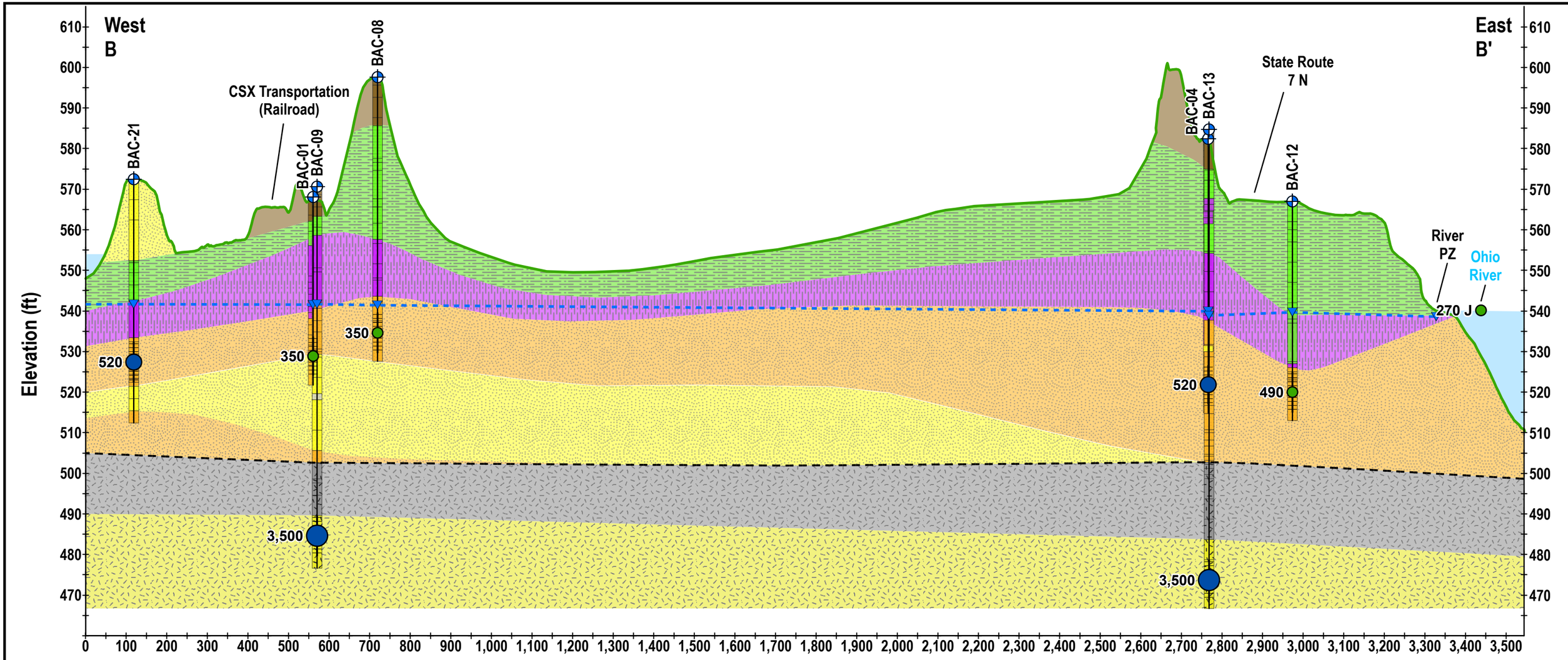
- Road Material
- Clay and Silt — Separation Layer
- Sandy Clay and Silt — Separation Layer
- Sand and Clay
- Sand and Gravel — Alluvial Aquifer
- Sand — Alluvial Aquifer
- Claystone/Siltstone — Bedrock Units
- Sandstone — Bedrock Units

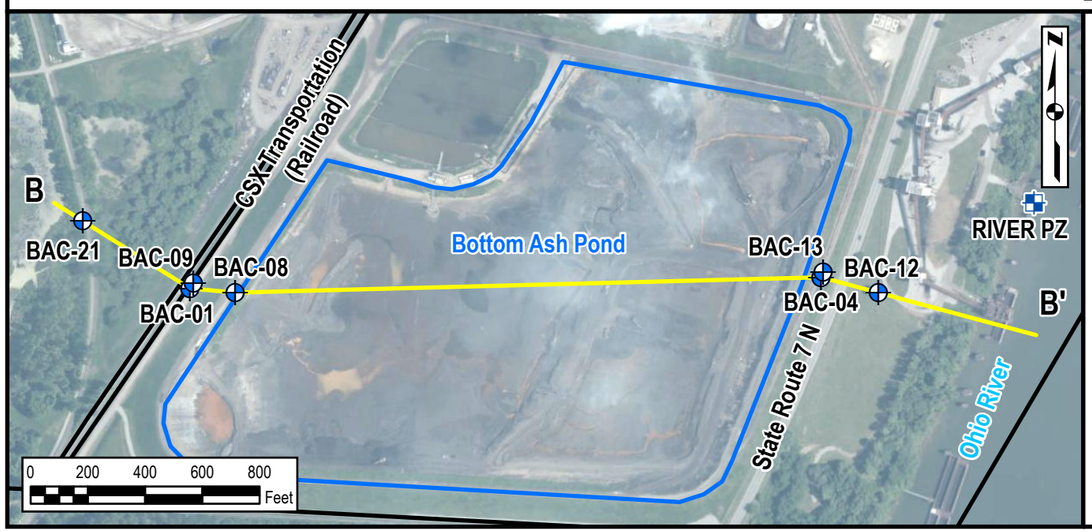
Figure 4-1b: Chloride Concentrations in Groundwater (Cross Section View 2)
Gavin Power, LLC
Cheshire, Ohio

NOTES:

1. Potentiometric elevations from 09/08/25.
2. Groundwater samples collected from 09/10/25 to 10/31/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM





Legend

- Monitoring Well
- Piezometer
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary

Total Dissolved Solids Concentrations in Groundwater (mg/L)

- < 505
- 505 - 1,000
- 1,000 - 10,000
- 10,000 - 20,000
- >20,000

Generalized Lithology

- Road Material
- Clay and Silt
- Sandy Clay and Silt
- Separation Layer
- Sand and Clay
- Sand and Gravel
- Sand
- Alluvial Aquifer
- Claystone/Siltstone
- Sandstone
- Bedrock Units

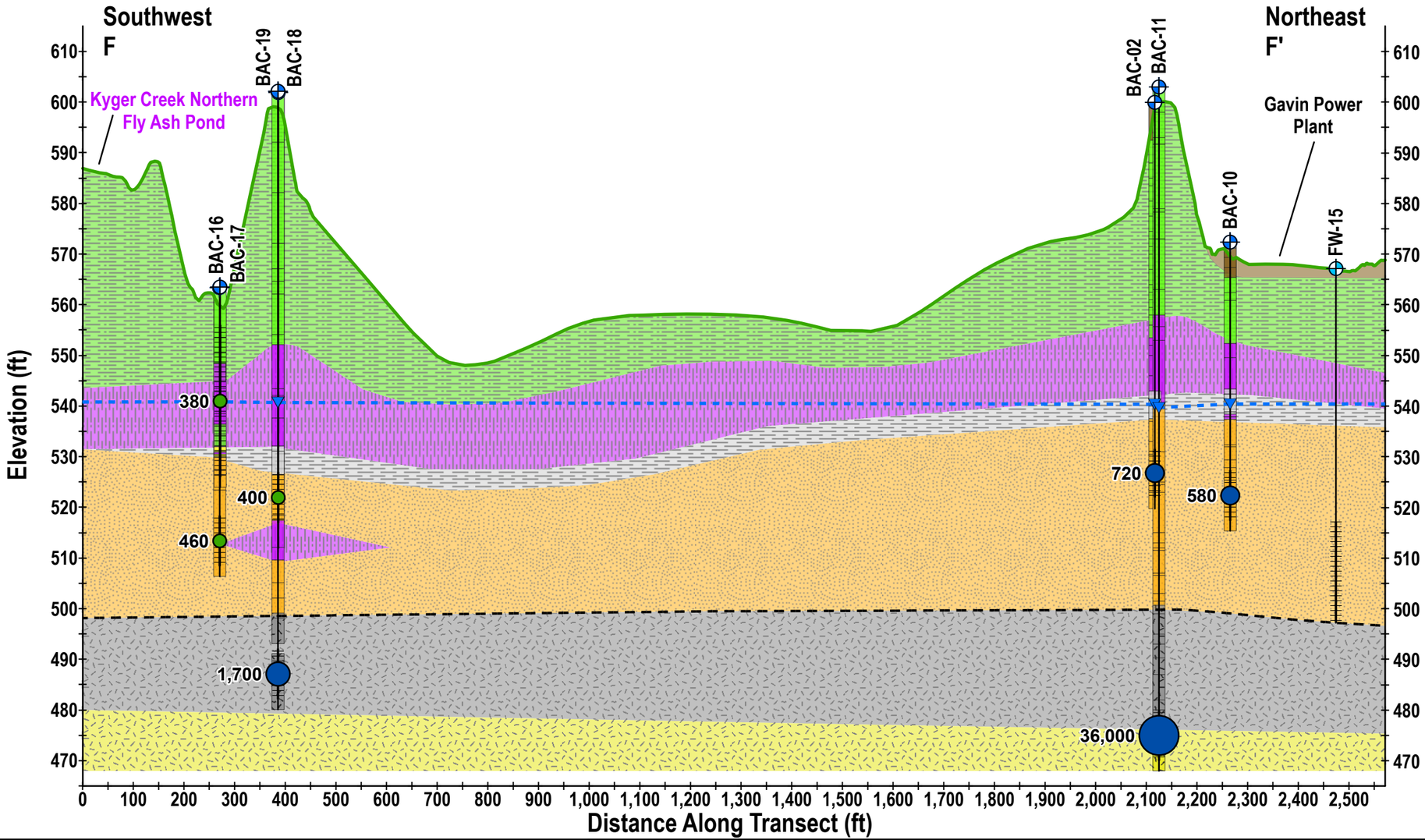
Figure 4-2a: TDS Concentrations in Groundwater (Cross Section View 1)
Gavin Power, LLC
Cheshire, Ohio

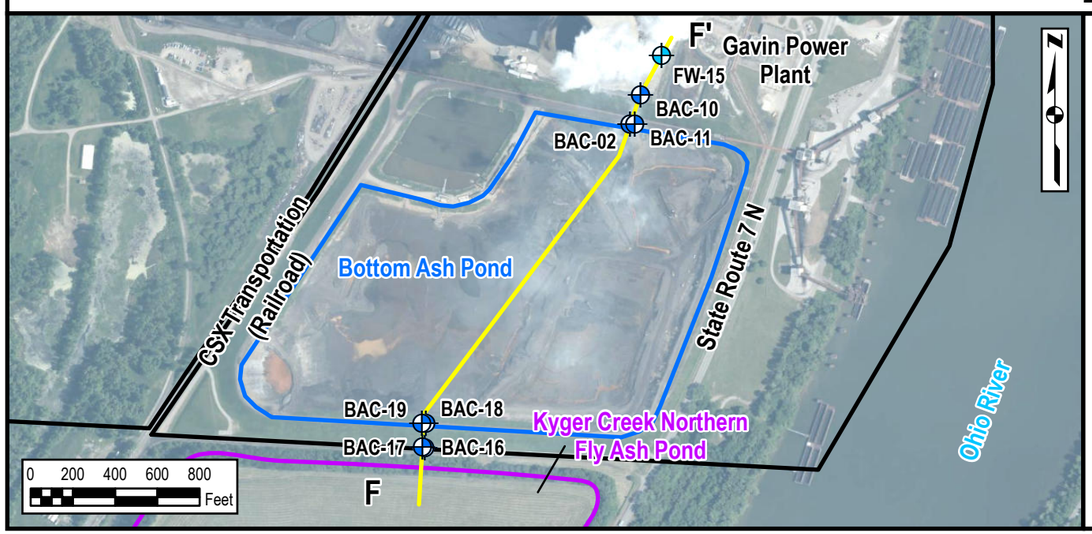
NOTES:

1. J = the analyte was identified below the method reporting limit; the associated value is an approximate concentration.
2. Potentiometric elevations from 09/08/25.
3. Groundwater and Ohio River samples collected from 09/10/25 to 10/31/25.
4. Surface profile from OGRIP LiDAR 2020.
5. Elevation is exaggerated 10X.
6. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
7. The geology is generalized based on the lithology descriptions.
8. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Monitoring well
- Water Supply Well
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Total Dissolved Solids Concentrations in Groundwater (mg/L)

- < 505
- 505 - 1,000
- 1,000 - 10,000
- 10,000 - 20,000
- > 20,000

Generalized Lithology

- Road Material
- Separation Layer: Clay and Silt; Sandy Clay and Silt
- Sand and Clay
- Alluvial Aquifer: Sand and Gravel; Sand
- Bedrock Units: Claystone/Siltstone; Sandstone

Figure 4-2b: TDS Concentrations in Groundwater (Cross Section View 2)
Gavin Power, LLC
Cheshire, Ohio

NOTES:

1. Potentiometric elevations from 09/08/25.
2. Groundwater samples collected from 09/10/25 to 10/31/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

West
B

East
B'

CSX Transportation
(Railroad)

State Route
7 N

BAC-21
BAC-01
BAC-09
BAC-08
BAC-04
BAC-13
BAC-12
River
PZ
Ohio
River

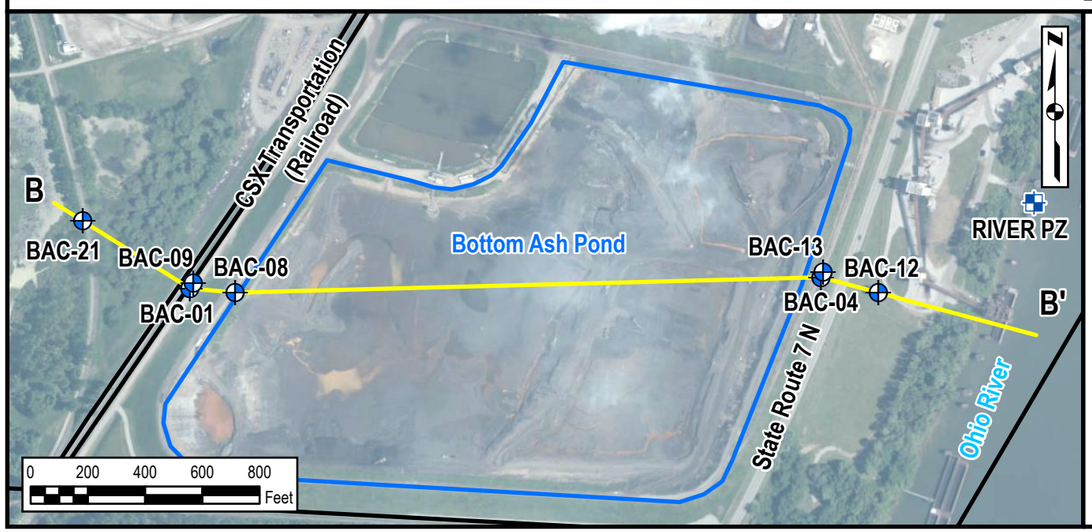
0.081
0.14
0.13
0.12
0.084
0.17
0.51
1.1

Elevation (ft)

610 600 590 580 570 560 550 540 530 520 510 500 490 480 470

0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400 1,500 1,600 1,700 1,800 1,900 2,000 2,100 2,200 2,300 2,400 2,500 2,600 2,700 2,800 2,900 3,000 3,100 3,200 3,300 3,400 3,500

Distance Along Transect (ft)



Legend

- Monitoring Well
- Piezometer
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary

Fluoride Concentrations in Groundwater (mg/L)

- <0.161
- 0.161 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- >0.4

Generalized Lithology

- Road Material
- Clay and Silt
- Sandy Clay and Silt
  (Separation Layer)
- Sand and Clay
- Sand and Gravel
- Sand
  (Alluvial Aquifer)
- Claystone/Siltstone
- Sandstone
  (Bedrock Units)

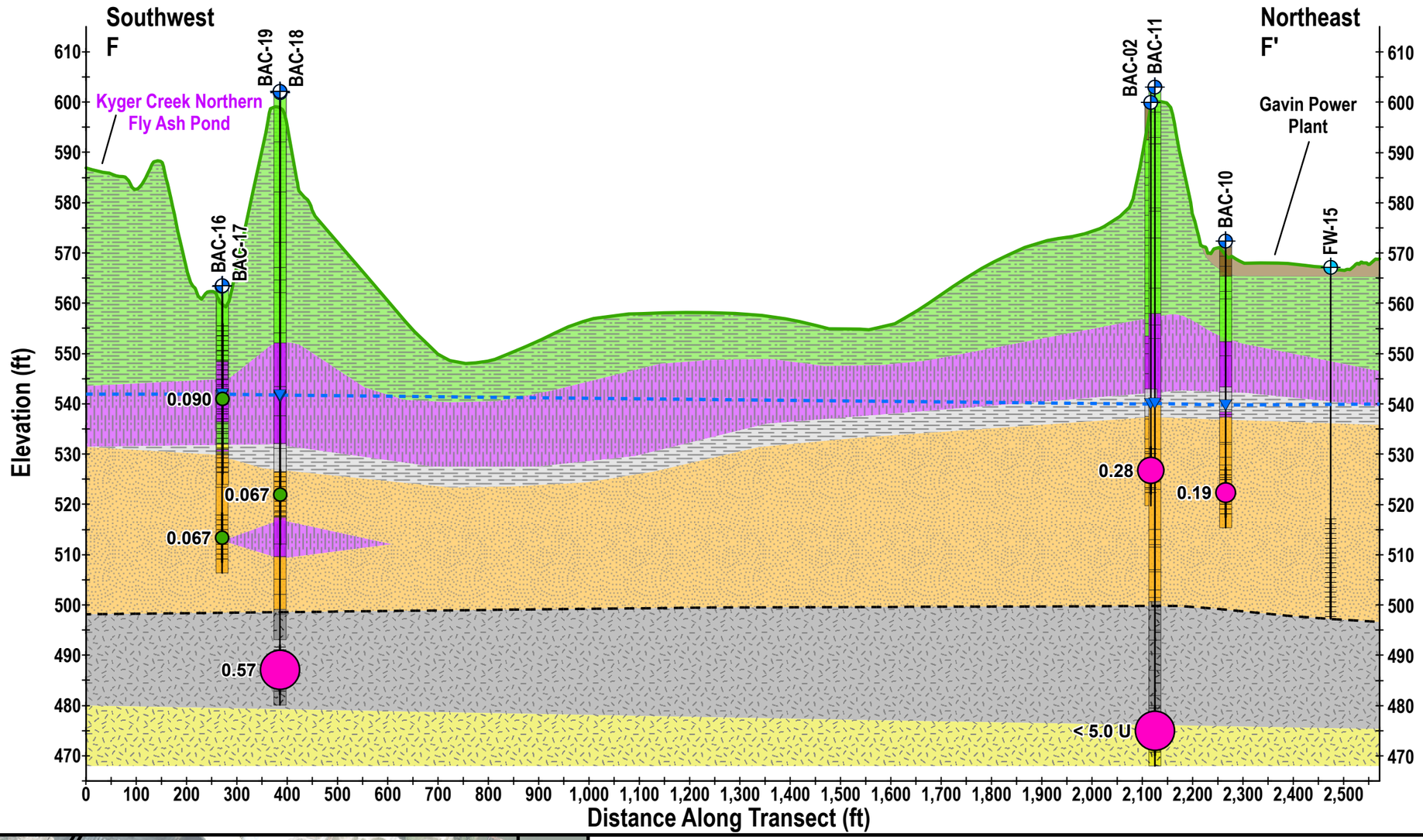
Figure 4-3a: Fluoride Concentrations in Groundwater (Cross-Section View 1)
Gavin Power, LLC
Cheshire, Ohio

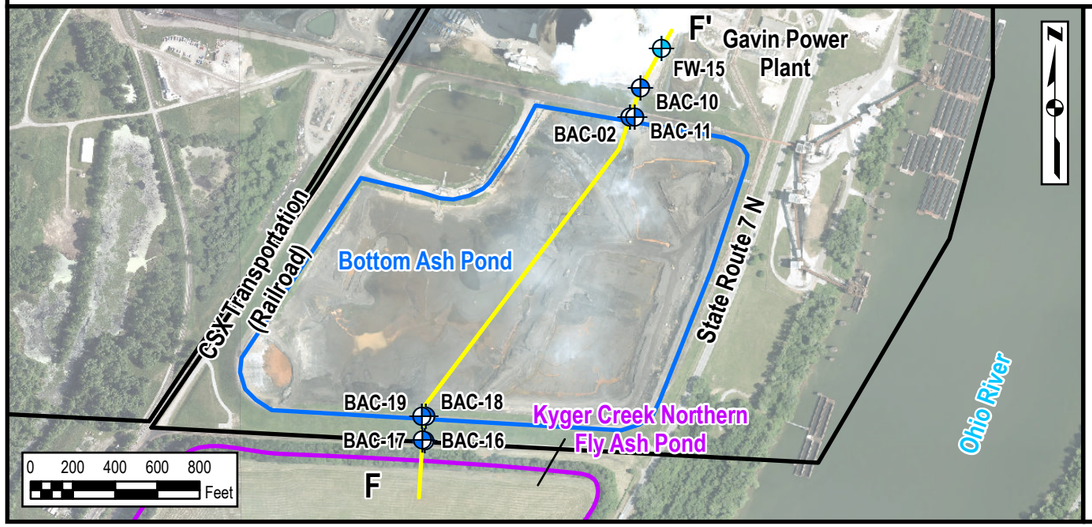
NOTES:

1. Potentiometric elevations from 09/08/25.
2. Groundwater and Ohio River samples collected from 09/10/25 to 10/31/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Fluoride Concentrations in Groundwater (mg/L)

- <0.161
- 0.161 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- >0.4

Generalized Lithology

- Road Material
- Separation Layer: Clay and Silt; Sandy Clay and Silt; Sand and Clay
- Alluvial Aquifer: Sand and Gravel; Sand
- Bedrock Units: Claystone/Siltstone; Sandstone

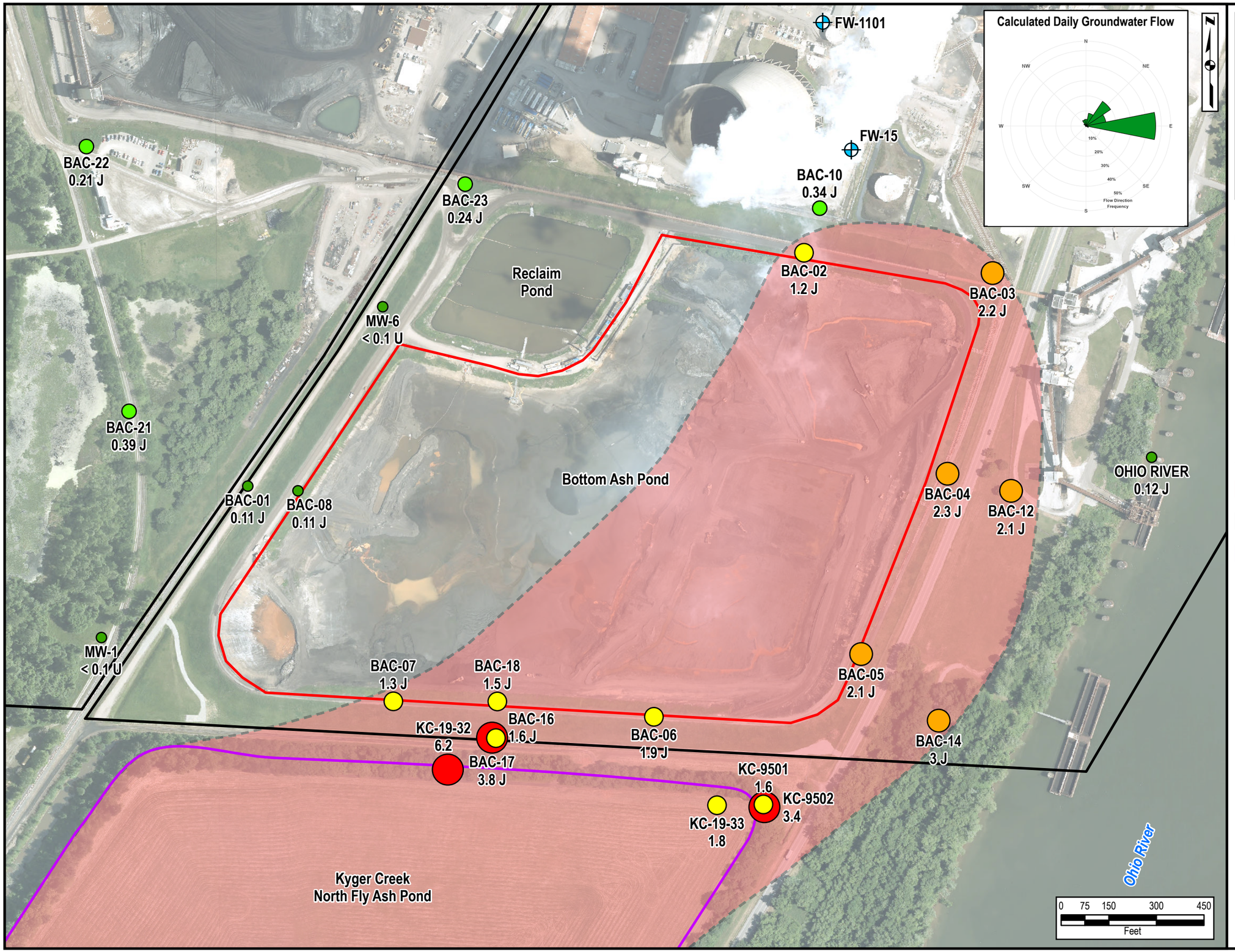
Figure 4-3b: Fluoride Concentrations in Groundwater (Cross-Section View 2)
Gavin Power, LLC
Cheshire, Ohio

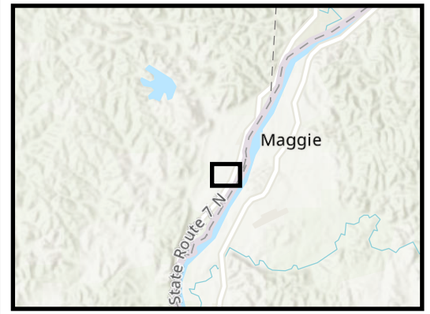
NOTES:

1. Potentiometric elevations from 09/08/25.
2. Groundwater samples collected from 09/10/25 to 10/31/25.
3. Surface profile from OGRIP LiDAR 2020.
4. Elevation is exaggerated 10X.
5. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
6. The geology is generalized based on the lithology descriptions.
7. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.
8. BAC-11 reporting limit elevated due to sample dilution.

ERM

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Legend

Boron Concentrations in Groundwater (mg/L)

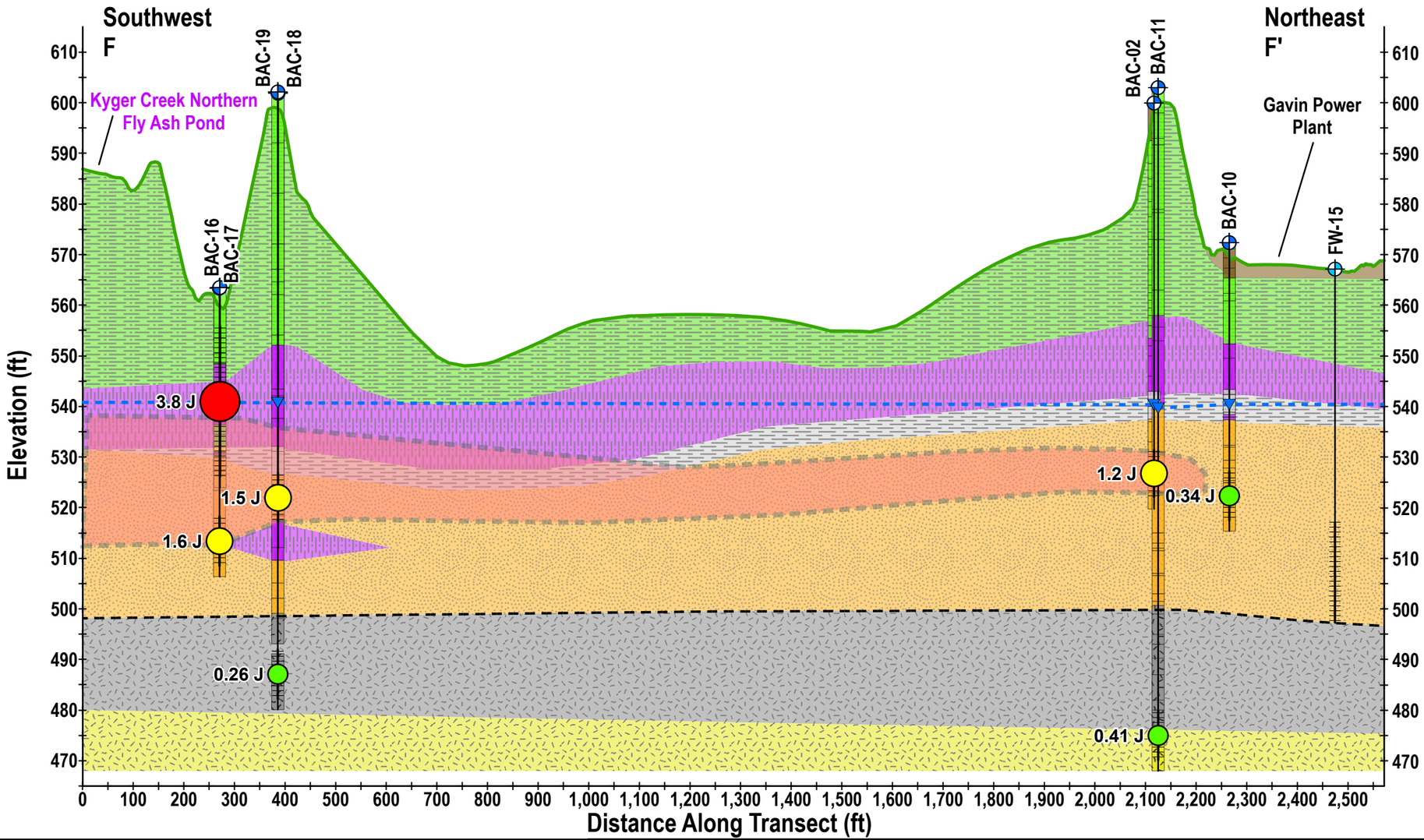
- <0.17
- 0.17 - 0.5
- 0.5 - 2
- 2 - 3
- >3
- Not Sampled
- Water Supply Well Location
- Approximated Boron Plume
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

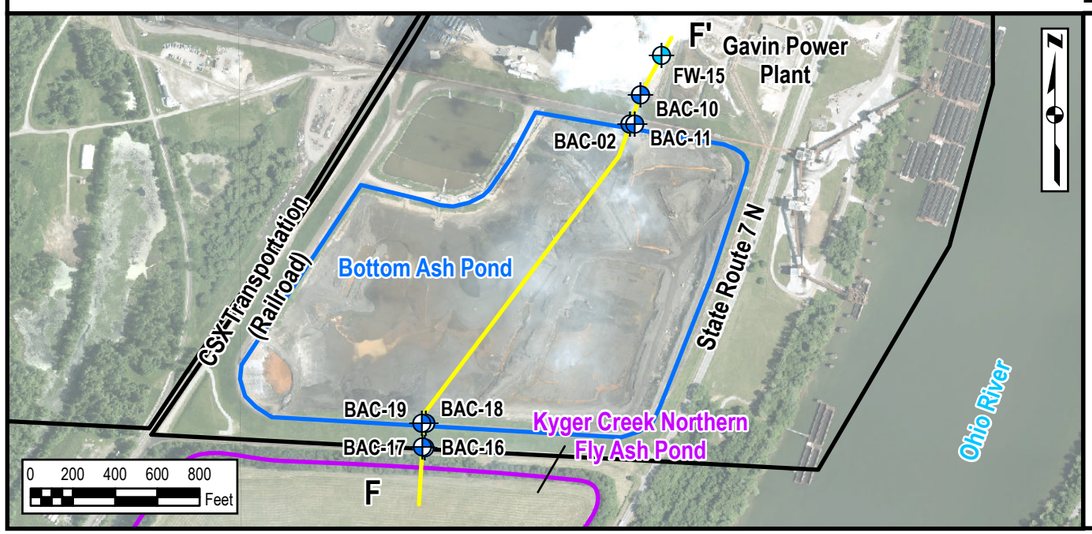
NOTES:

1. mg/L = milligrams per liter
2. Boron concentrations in BAP wells assigned J qualifier during data validation due to detection of boron in a field blank.
3. Groundwater and surface water samples collected from 09/10/25 through 10/31/25.
4. Daily groundwater flow direction calculated based on transducer data collected from 01 January 2025 through 03 December 2025.
5. Kyger Creek NFAP well samples collected August 2024.
6. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 4-4: Boron Distribution in Groundwater (Map View)
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM





Legend

- Monitoring Well
- Water Supply Well
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Boron Concentrations in Groundwater (mg/L)

- <0.177
- 0.177 - 0.5
- 0.5 - 2
- 2 - 3
- >3

- Approximated Boron Plume

Generalized Lithology

- Road Material
- Clay and Silt — Separation Layer
- Sandy Clay and Silt — Separation Layer
- Sand and Clay
- Sand and Gravel — Alluvial Aquifer
- Sand — Alluvial Aquifer
- Claystone/Siltstone — Bedrock Units
- Sandstone — Bedrock Units

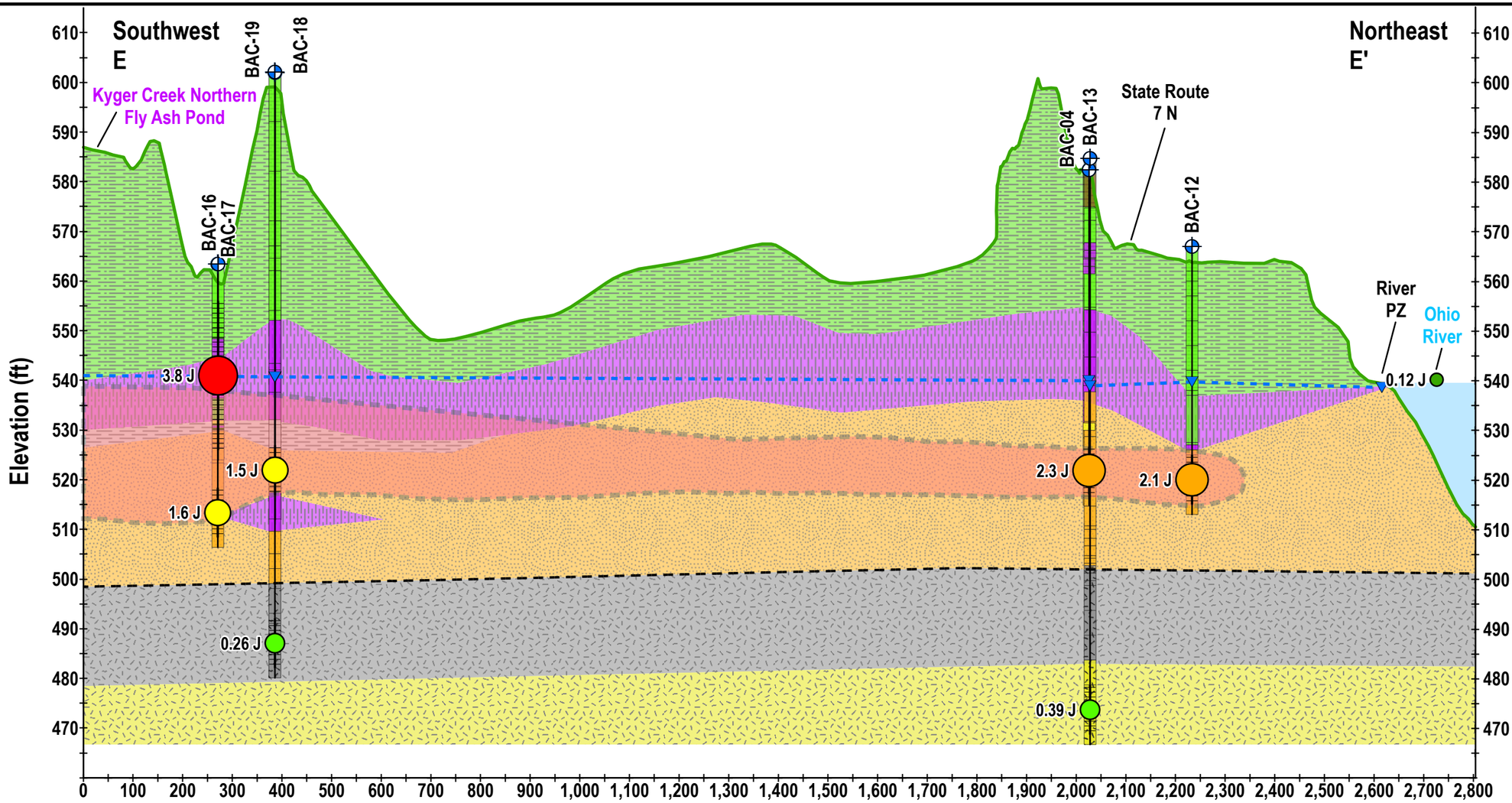
Figure 4-5a: Boron Concentrations in Groundwater (Cross-Section View 1)
Gavin Power, LLC
Cheshire, Ohio

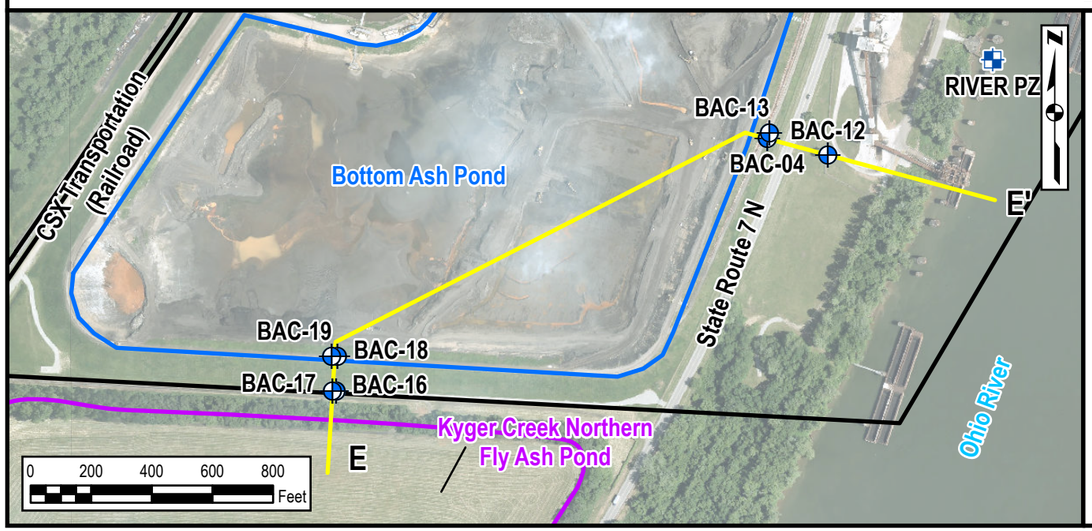
NOTES:

1. Boron concentrations in BAP wells assigned J qualifier during data validation due to detection of boron in a field blank
2. Potentiometric elevations from 09/08/25.
3. Groundwater samples collected from 09/10/25 to 10/31/25.
4. Surface profile from OGRIP LiDAR 2020.
5. Elevation is exaggerated 10X.
6. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
7. The geology is generalized based on the lithology descriptions.
8. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

- Monitoring Well
- Potentiometric Elevation (Fall 2025)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Kyger Creek Northern Fly Ash Pond

Boron Concentrations in Groundwater (mg/L)

- <0.177
- 0.177 - 0.5
- 0.5 - 2
- 2 - 3
- >3

- Approximated Boron Plume

Generalized Lithology

- Road Material
- Clay and Silt — Separation Layer
- Sandy Clay and Silt — Separation Layer
- Sand and Clay
- Sand and Gravel — Alluvial Aquifer
- Sand — Alluvial Aquifer
- Claystone/Siltstone — Bedrock Units
- Sandstone — Bedrock Units

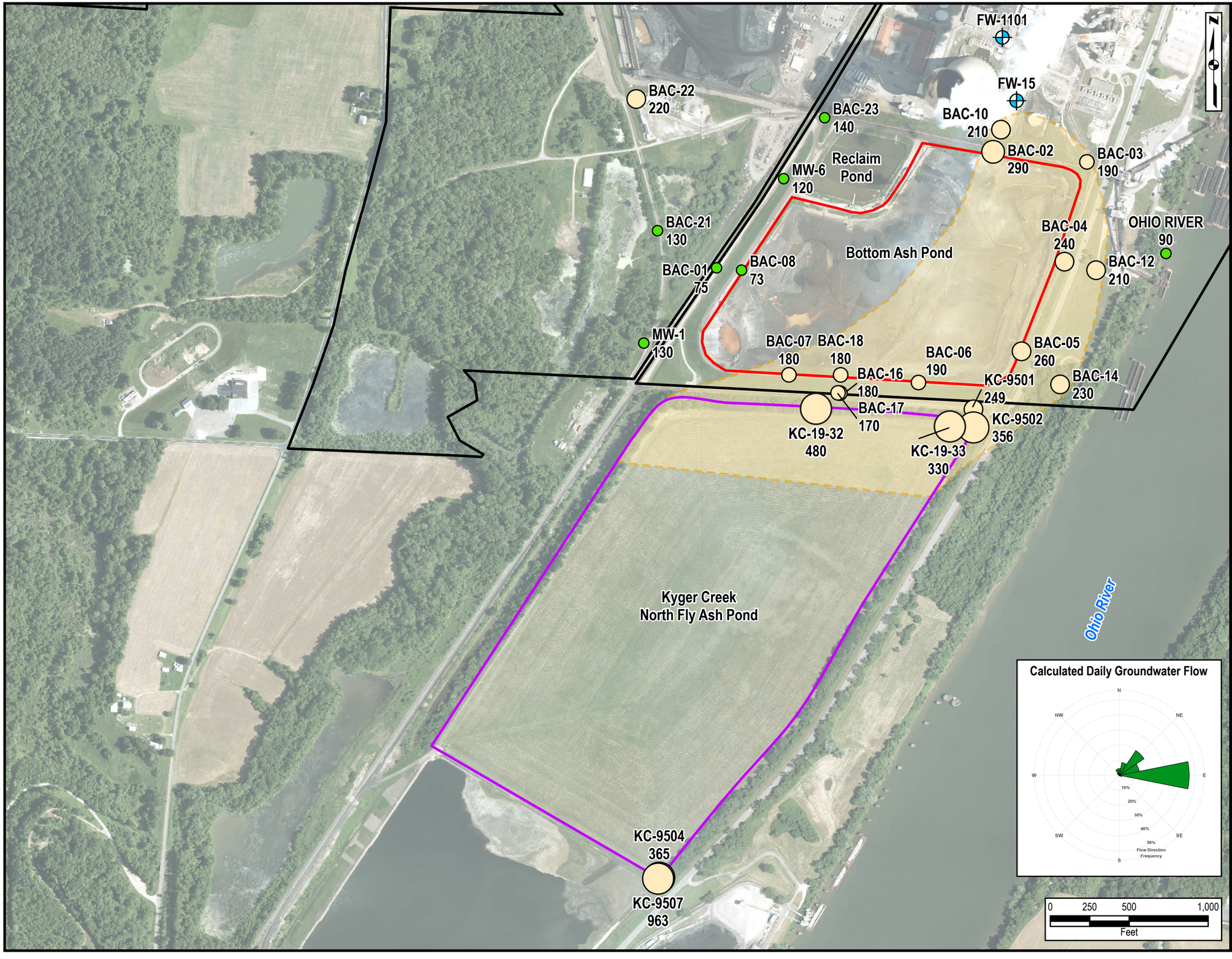
Figure 4-5b: Boron Concentrations in Groundwater (Cross-Section View 2)
Gavin Power, LLC
Cheshire, Ohio

NOTES:

1. Boron concentrations in BAP wells assigned J qualifier during data validation due to detection of boron in a field blank.
2. Potentiometric elevations from 09/08/25.
3. Groundwater samples collected from 09/10/25 to 10/31/25.
4. Surface profile from OGRIP LiDAR 2020.
5. Elevation is exaggerated 10X.
6. Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
7. The geology is generalized based on the lithology descriptions.
8. The bottom elevation profile of the bottom ash pond is from Integrated Solutions, Inc CPT borings conducted between 3/18/2020 to 5/28/20.

ERM

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Legend

Sulfate Concentration (mg/L)

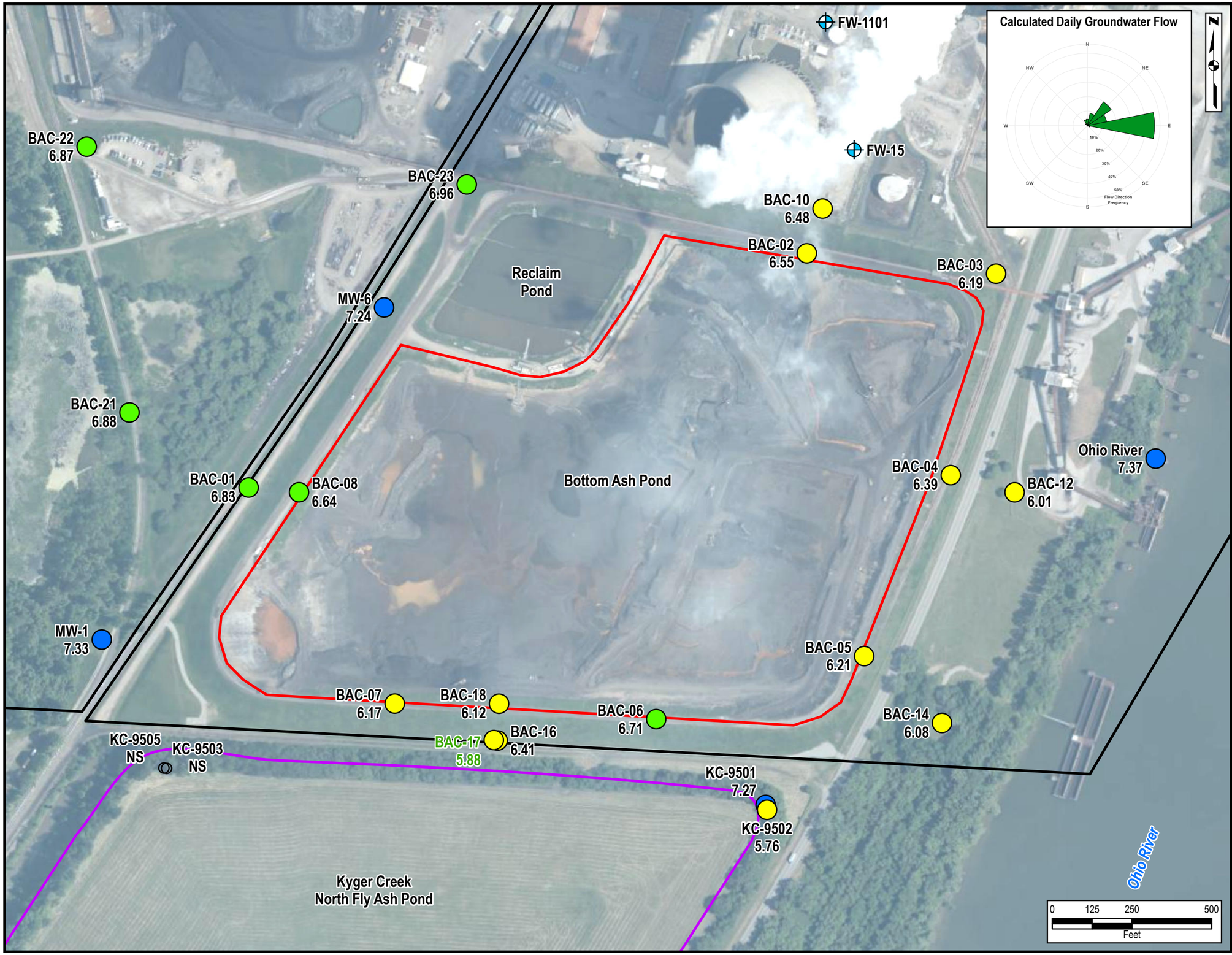
- <140
- 140 - 200
- 200 - 260
- 260 - 320
- >320
- Water Supply Well Location
- Approximated Sulfate Plume
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

1. mg/L = milligrams per liter
2. Gavin groundwater and surface water samples were collected 09/10/25 through 10/31/25.
3. Kyger Creek groundwater samples results collected August to October 2024.
4. Daily groundwater flow direction calculated based on transducer data collected from 01 January 2025 through 03 December 2025.
5. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 4-6: Sulfate Distribution in Groundwater (Map View)
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM



Legend

pH Concentrations in Groundwater (SU)

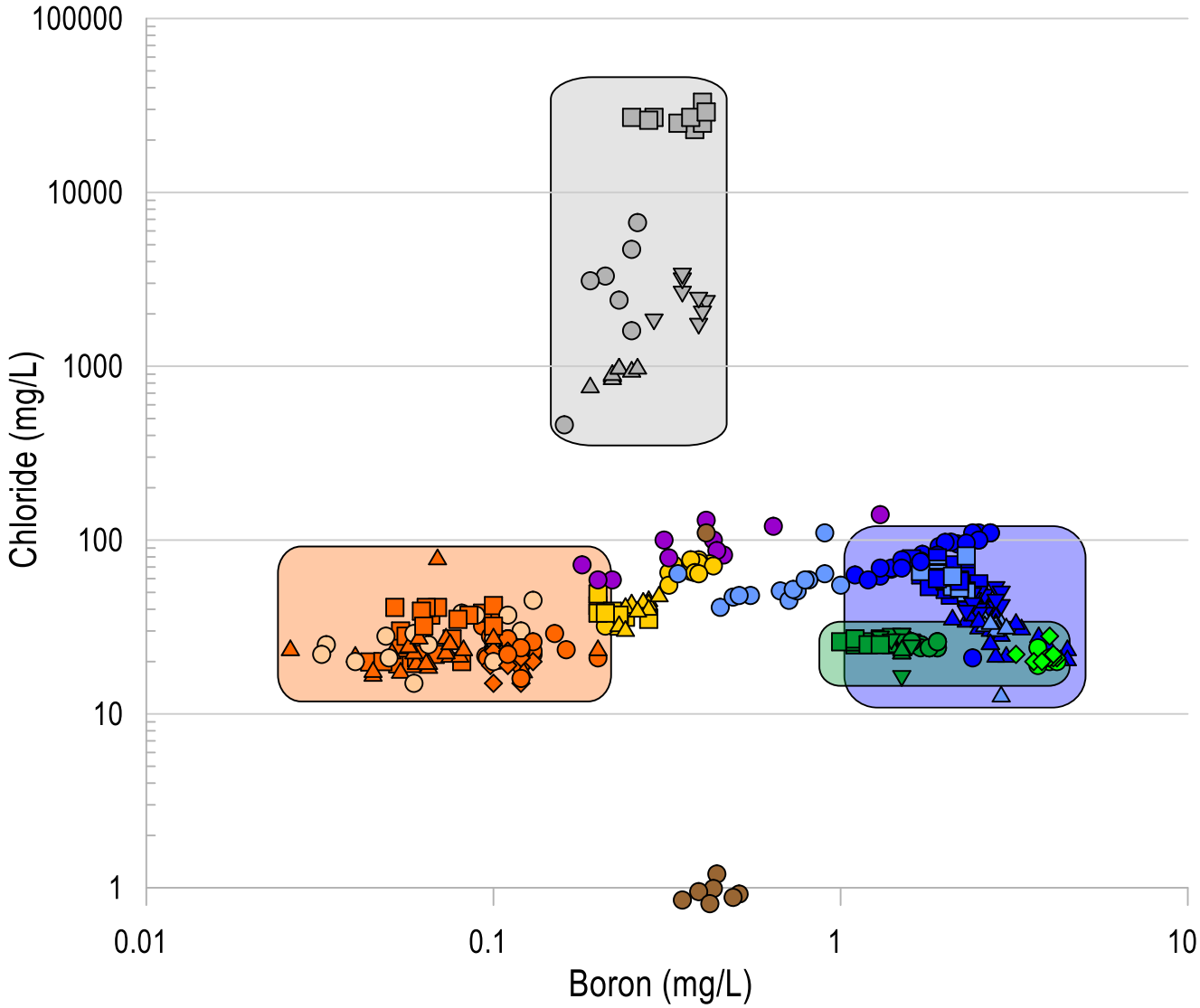
- <6.63
- 6.63 - 7.22
- >7.22
- Not Sampled
- Water Supply Well
- **BAC** Alluvial Aquifer Well
- **BAC** Separation Layer and Alluvial Aquifer Well
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

1. SU = standard units
2. NS = Not Sampled
3. Gavin groundwater and surface water samples were collected 09/10/25 through 10/31/25.
4. Kyger Creek groundwater samples results collected 10/22/2024 to 10/23/2024.
5. Daily groundwater flow direction calculated based on transducer data collected from 01 January 2025 through 03 December 2025.
6. Aerial Imagery: USDA National Agriculture Imagery Program (NAIP), May 2023

Figure 4-7: pH Distribution in Groundwater (Map View)
Gavin Generating Station
Gavin Power, LLC
Cheshire, Ohio

ERM



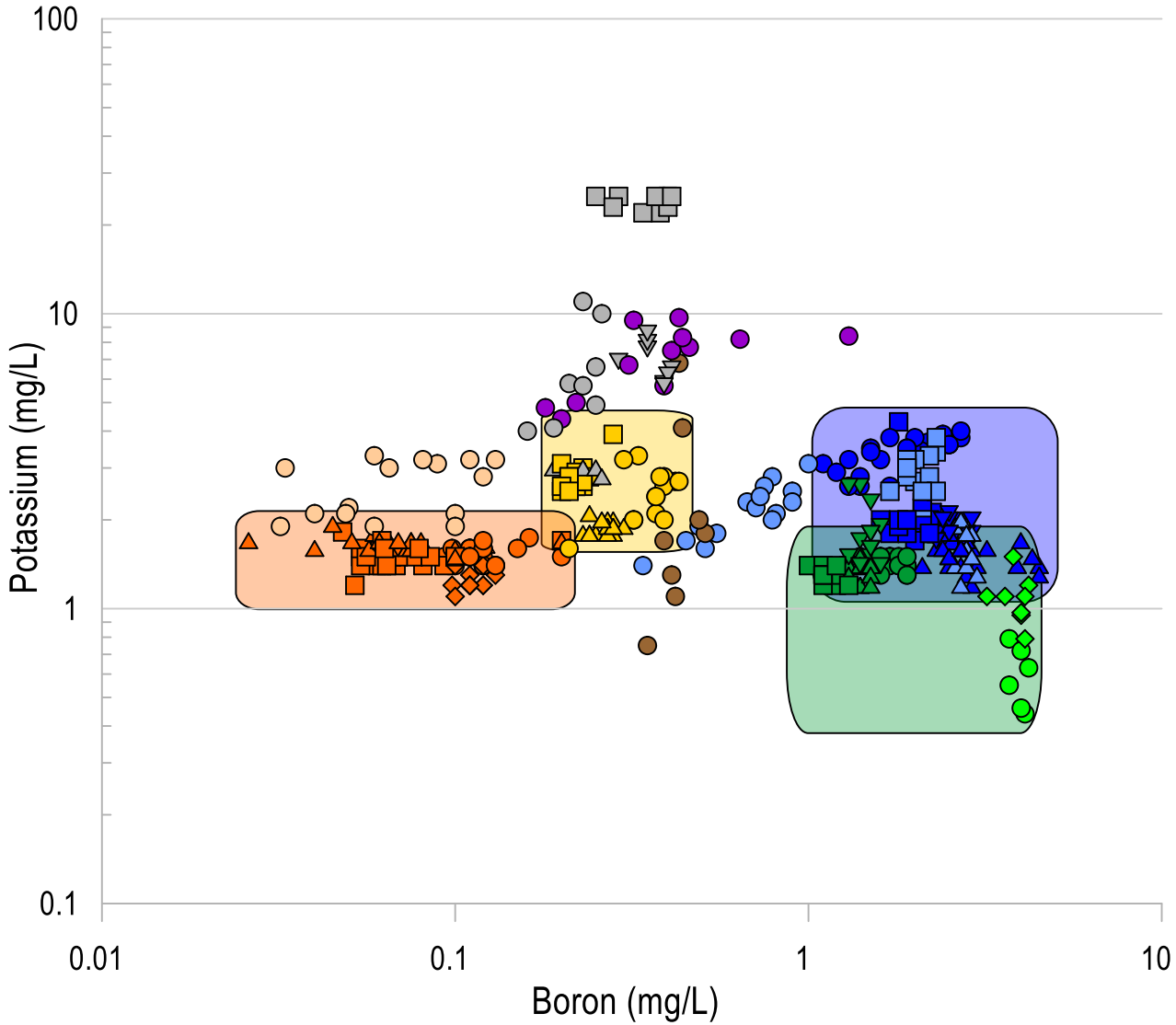
Legend

BAC-01, MW-1, MW-6	Historical Upgradient Wells
BAC-02, BAC-03, BAC-04, BAC-05	Historical Downgradient Wells
B-0904	Historical Kyger Creek Groundwater
BAC-06, BAC-07	2020 Southern Boundary Wells
BAC-09, BAC-11, BAC-13, BAC-19	2022 Bedrock Wells
BAC-21, BAC-22, BAC-23	2022 Northwestern Wells
BAC-08	2022 Upgradient Well
BAC-10, BAC-12, BAC-14	2022 Downgradient Wells
BAC-16, BAC-18	2022 Southern Boundary Wells
BAC-17	2022 Kyger Creek Groundwater
BAC-15	2022 Silt and Clay Well
Ohio River	
Bottom Ash Pond	

NOTES:
1. Historical Upgradient and Downgradient well data ranges from Aug 2016 to Oct 2025
2. B-0904 data ranges from Mar 2018 to Mar 2020
3. 2020 Southern Boundary well data ranges from Sept 2020 to Oct 2025
4. 2022 Well data ranges from Oct 2022 to Oct 2025
5. Ohio River data ranges from Feb 2018 to Sept 2025
6. Bottom Ash Pond data ranges from Feb 2018 to Oct 2022

ERM

Figure 6-1. Boron-Chloride Concentration Plot
Gavin Generating Station
Cheshire, Ohio



Legend

BAC-01, MW-1, MW-6	Historical Upgradient Wells
BAC-02, BAC-03, BAC-04, BAC-05	Historical Downgradient Wells
B-0904	Historical Kyger Creek Groundwater
BAC-06, BAC-07	2020 Southern Boundary Wells
BAC-09, BAC-11, BAC-13, BAC-19	2022 Bedrock Wells
BAC-21, BAC-22, BAC-23	2022 Northwestern Wells
BAC-08	2022 Upgradient Well
BAC-10, BAC-12, BAC-14	2022 Downgradient Wells
BAC-16, BAC-18	2022 Southern Boundary Wells
BAC-17	2022 Kyger Creek Groundwater
BAC-15	2022 Silt and Clay Well
Ohio River	
Bottom Ash Pond	

NOTES:
1. Historical Upgradient and Downgradient well data ranges from Aug 2016 to Oct 2025
2. B-0904 data ranges from Mar 2018 to Mar 2020
3. 2020 Southern Boundary well data ranges from Sept 2020 to Oct 2025
4. 2022 Well data ranges from Oct 2022 to Oct 2025
5. Ohio River data ranges from Feb 2018 to Sept 2025
6. Bottom Ash Pond data ranges from Feb 2018 to Oct 2022

ERM

Figure 6-2. Boron-Potassium Concentration Plot
Gavin Generating Station
Cheshire, Ohio

APPENDIX A 2024 KYGER CREEK STATION *CLOSED NORTH FLY ASH POND ADDITIONAL INVESTIGATION OF GROUNDWATER FLOW AND QUALITY*

OHIO VALLEY ELECTRIC CORPORATION
3932 U. S. Route 23
P. O. Box 468
Piketon, Ohio 45661
740-289-7200

WRITER'S DIRECT DIAL NO:
(740) 289-7259

December 6, 2024

Delivered Electronically

Mr. Marco Deshaies
Division of Surface Water
Ohio Environmental Protection Agency
Southeast District Office
2195 Front Street
Logan, Ohio 43138

Dear Mr. Deshaies:

Re: Ohio Valley Electric Corporation
Kyger Creek Station- Closed North Fly Ash Pond
Additional Investigation of Groundwater Flow and Quality

On June 12, 2024, Ohio Environment Protection Agency (OEPA), Ohio Valley Electric Corporation (OVEC), and Applied Geology and Environmental Science, Inc. (AGES), had a meeting to discuss groundwater flows and quality at the Kyger Creek Station Closed North Fly Ash Pond (CNFAP). Per the request of the OEPA, additional information was needed relating to the groundwater flow and quality at the CNFAP. During the meeting OVEC presented the list below to provide additional information to OEPA, which OEPA agreed with the list.

- Redevelopment of OEPA wells associated with the CNFAP
- Groundwater analysis of OEPA, Appendix III and Appendix IV parameters
- Technical report on the groundwater flow and quality
- Preparation of groundwater flow maps (to include CNFAP, South Fly Ash Pond, Ohio River, and Gavin Power Plant)
- Evaluate the current statistical method being used to determine if a more robust statistical method is applicable
- Data from all the groundwater wells will be evaluated in relation to published groundwater results for groundwater wells at the Bottom Ash Pond at the Gavin Power Plant

Please find attached, the results of the investigation of the groundwater flow and quality for the CNFAP. Once OEPA completes its review of the attached information, OVEC would like to schedule an in-person meeting, with OEPA, to discuss any questions or comments they may have.

If you have any questions, please email me or contact me at (740) 289-7259.

Sincerely,



Jeremy Galloway
Environmental Specialist

JDG:zsh

Attachments

Attachment I

AGES
Applied Geology And Environmental Science, Inc.

2402 Hookstown Grade Road, Suite 200
Clinton, PA 15026
www.appliedgeology.net
P 412. 264. 6453 F 412. 264. 6567

December 3, 2024

Mr. Jeremy Galloway
OVEC/IKEC
3932 U.S. Route 23
Piketon, Ohio 45661

RE: Investigation of Groundwater Flow and Quality
Closed North Fly Ash Pond (CNFAP): Kyger Creek Station - Cheshire, Ohio
Ohio Valley Electric Corporation (OVEC)

Dear Mr. Galloway:

In July 2024, Applied Geology and Environmental Science (AGES), Inc. was contracted by the Ohio Valley Electric Corporation (OVEC) to evaluate groundwater quality and flow at the Closed North Fly Ash Pond (CNFAP), located at the Kyger Creek Station in Gallia County, Cheshire, Ohio.

Presented below are details regarding this project.

HISTORIC BACKGROUND

The Kyger Creek Station, located in Cheshire, Ohio, is a 1.1 GW coal-fired power station operated by OVEC (Figure 1). The station has five (5) 217 MW generating units and has operated since 1955. Beginning in 1955, ash products were sluiced to impoundments at the plant site, including the approximately 120-acre former fly ash pond. The CNFAP was formally closed in approximately 1999 and has been the subject of a post-closure groundwater monitoring program under the Ohio Environmental Protection Agency (Ohio EPA) since then.

Since 1997, OVEC has monitored three (3) clusters of wells (KC-9501 and KC-9502; KC-9504 and KC-9507; and KC-9508 and KC-9509) located along the eastern side of the CNFAP/South Fly Ash Pond (SFAP) complex for several metals and indicator parameters (Figure 2). Background groundwater sampling was performed from October 1997 through July 1999; based on the background data, OVEC calculated a 95% Upper Tolerance Limit (UTL) for applicable parameters. During the post-closure period from October 1999 through October 2023, 49 semi-annual groundwater monitoring rounds were completed. Based on the 95% UTL, Statistically Significant Increases (SSIs) have been noted for several parameters.

PREVIOUS INVESTIGATION AT CNFAP: 2019

The Gavin Power Plant (Gavin) is located just north of the Kyger Creek Station; the Bottom Ash Pond (BAP) at Gavin is located adjacent to the CNFAP (Figure 1). In 2018, under the Coal Combustion Residuals (CCR) program, Gavin identified SSIs in groundwater for Boron at the BAP. In Alternate Source Demonstration (ASD) reports in their 2018 CCR Annual Groundwater Monitoring and Corrective Action Report, Gavin identified the CNFAP as the source of the Boron detected in the groundwater at the BAP.

In response to these ASD reports, in 2019, OVEC requested that AGES install six (6) groundwater monitoring wells (KC-19-30 through KC-19-35) around the CNFAP to better evaluate groundwater flow and quality in the area (Figure 2). The wells were screened in the same uppermost aquifer as the existing CNFAP wells. Following installation and development, water levels were collected from the new wells, and they were sampled for Appendix III and IV CCR constituents and for the list of constituents in the Ohio EPA groundwater monitoring program.

Based on water levels collected in May 2019, groundwater flow beneath the CNFAP and SFAP is from the west to the east toward the Ohio River (Attachment A). Based on these results, neither the CNFAP nor the SFAP are upgradient of the Gavin BAP, indicating that neither unit was an alternate source of Boron and that the conclusions in the Gavin ASD report were inaccurate.

Groundwater sampling results from the 2019 event are included in Attachment A. Total and dissolved Boron concentrations for each well are presented on figures in Attachment A. As shown, Boron concentrations upgradient of the CNFAP are all less than 1 milligram per liter (mg/L) and higher downgradient, with the highest concentrations observed in well KC-19-34 at the southeast corner of the CNFAP. Boron concentrations in KC-19-32 were 4.7 mg/L (total) and 4.8 mg/L (dissolved), which are similar to the reported range of Boron reported at well B-0904 (between the BAP and CNFAP) of 3.7 mg/L to 4.0 mg/L

Based on the results of the 2019 event, the CNFAP was determined not to be an alternate source of Boron SSIs at the Gavin BAP.

UPDATED BACKGROUND: 2023 & 2024

In 2023, Gavin identified groundwater SSIs at the BAP under the CCR Program for Boron, Sulfate, and pH. In ASD reports in their 2023 CCR Program Annual Groundwater Monitoring and Corrective Action Report (issued in January 2024), Gavin identified the CNFAP as the source of these Boron, Sulfate, and pH issues at the BAP. On January 17, 2024, Ohio EPA provided OVEC with a draft set of comments on the results of the May 2023 groundwater monitoring at the CNFAP. On June 12, 2024, OVEC, Ohio EPA, and AGES met to discuss groundwater quality and flow at the CNFAP.

To address the Gavin ASD reports and to provide Ohio EPA with updated data on groundwater quality and flow at the CNFAP, OVEC requested that AGES redevelop the three (3) clusters of wells (KC-9501 and KC-9502; KC-9504 and KC-9507; and KC-9508 and KC-9509) and collect one (1) round of groundwater samples from the clusters of wells and wells KC-19-30 through KC-19-35 for analysis of constituents included in the Ohio EPA closure monitoring program and Appendix III and IV constituents of the CCR Rule.

The results of this additional investigation are presented below.

MONITORING WELL REDEVELOPMENT

On August 19 and 20, 2024, AGES redeveloped the three (3) well clusters (KC-9501 and KC-9502; KC-9504 and KC-9507; and KC-9508 and KC-9509) through alternating surging and pumping for a minimum of two (2) hours. All of these wells have dedicated pumps, which were used in the redevelopment. Field parameters, including Oxidation-Reduction Potential (ORP), temperature, specific conductance, pH, and turbidity, were recorded at regular intervals during redevelopment. Development continued until each parameter stabilized and turbidity was less than five (5) Nephelometric Units (NTUs). Field data from the redevelopment is included in Attachment B. Based on these results, the wells have been sufficiently redeveloped.

GROUNDWATER FLOW: 2023

In 2023, AGES collected complete rounds of water level data from all wells at the CNFAP and SFAP on a monthly basis. To evaluate the hydraulic relationship between the SFAP, CNFAP, and BAP, AGES used data from these field events and water level data collected by Gavin in March and September 2023 (reported in their 2023 CCR Program Annual Groundwater Monitoring and Corrective Action Report) to prepare groundwater flow maps for the entire area for these months (Figures 3 and 4). As shown in Figure 3, in March 2023, groundwater flow at both the Gavin BAP and CNFAP is to the southeast toward the Ohio River. Under these conditions, neither the CNFAP nor the SFAP is upgradient of the Gavin BAP, indicating that neither unit could be the source of Boron, Sulfate, or pH SSIs; the conclusions in the Gavin ASD reports were, therefore, inaccurate for March 2023.

As shown in Figure 4, in September 2023, groundwater flow conditions in the area were slightly different due to the apparent pumping of wells FW-15 and FW-1101 at Gavin. During this event, groundwater flow at the SFAP was still to the southeast toward the Ohio River. However, the apparent pumping of wells FW-15 and FW-1101 resulted in a flow reversal at the Gavin BAP, as groundwater flows from the Ohio River at an elevation of 539 feet mean sea level (ft-msl) toward the northwest and Gavin well BAC-10 (537.15 ft-msl) and well FW-15. Under these pumping

conditions, it is possible that there is a component of flow from the northern portion of the CNFAP (near wells KC-19-31, KC-19-32, and KC-19-33) toward the Gavin BAP (Figure 4).

Based on previous and current groundwater levels in the area, the flow reversal can be attributed entirely to Gavin's apparent pumping of wells FW-15 and FW-1101. Due to potential permitting issues, most power stations no longer use onsite supply wells for potable water; most have converted to municipal water supplies. Over the past several years, some utility companies have begun to pump these previously retired onsite supply wells to prevent the off-site migration of potentially impacted groundwater. Specific information on pumping supply wells FW-15 and FW-1011 at Gavin is unavailable. However, based on the groundwater SSIs at the Gavin BAP and the reversal of groundwater flow noted in September 2023, pumping these wells may be an intentional effort to prevent the migration of impacted groundwater to the Ohio River.

GROUNDWATER SAMPLING RESULTS: 2024

Between August 21 and 27, 2024, AGES collected one (1) round of groundwater samples from the well clusters (KC-9501 and KC-9502; KC-9504 and KC-9507; and KC-9508 and KC-9509) and wells KC-19-30 through KC-19-35 for analysis of constituents included in the Ohio EPA closure monitoring program and Appendix III and IV constituents of the CCR Rule. The fieldwork was performed in general accordance with the CCR Groundwater Monitoring Program Plan, Revision 1.0, dated January 2024; laboratory analyses were conducted by Eurofins.

Groundwater sampling results for the Ohio EPA program are provided in Table 1. As shown in the table, results for Alkalinity exceeded the UTL for the Ohio EPA program at wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508, KC-9509, and KC-19-35. Total Dissolved Solids (TDS) exceeded the UTL at KC-9507; no other constituent exceeded a UTL on the Ohio EPA program.

Groundwater sampling results for the CCR Program are provided in Table 2. As a qualitative evaluation, the CCR results were compared to the applicable UTL or Groundwater Protection Standard (GWPS) used for the CCR Program at the adjacent SFAP. As shown in Table 2, Appendix III constituents Calcium, Chloride, Sulfate, and TDS exceed UTL standards at several wells. As all results for Appendix IV constituents were less than the applicable GWPS, they were not further evaluated.

EVALUATION OF UTL EXCEEDANCES ON THE OHIO EPA PROGRAM

As shown on Figure 2, wells KC-9501 and KC-9502 are located at the northeast corner of the CNFAP; under non-pumping conditions, they are slightly downgradient of the Gavin BAP, which is a likely source of the Alkalinity exceedances at these wells. Well KC-19-35, where Alkalinity also exceeds the UTL, is upgradient of the CNFAP; therefore, the closed pond cannot be the source of this UTL.

Wells KC-9504, KC-9507, KC-9508, and KC-9509, where Alkalinity (all wells) and TDS (KC-9509) exceed the UTL, are located further south of the Gavin BAP (Figure 2). However, given the extremely flat natural groundwater flow gradient (Figure 3), the significant impact on flow directions due to intermittent pumping at Gavin (Figure 4), and changes in the stage of the nearby Ohio River, the adjacent Gavin BAP is a potential alternate source for these UTLs. Further investigation is required to evaluate this issue.

EVALUATION OF BORON, SULFATE, AND PH ISSUES AT GAVIN BAP

When Gavin wells FW-15 and FW-1101 are not pumping, the CNFAP is not upgradient of the Gavin BAP, and cannot be the source of Boron, Sulfate, or pH SSIs.

As shown in Table 2, all pH results were well within the range established as the UTL for the SFAP; therefore, the CNFAP cannot be the source of pH SSIs at the Gavin BAP, even under pumping conditions.

As shown in Table 2 and Figure 5, Boron results in the northern portion of the CNFAP were 0.21 mg/L at KC-19-31; 6.2 mg/L at KC-19-32; and 1.8 mg/L at KC-19-33. In September 2023, Boron results at Gavin wells were 2.5 mg/L at BAC-04 and 2.4 mg/L at BAC-05 (Figure 5). As shown in Figure 5, the groundwater flow path (under pumping conditions) from the CNFAP to Gavin wells BAC-04 and BAC-05 flow through CNFAP well KC-19-33, where the Boron concentration was less than that observed at the Gavin wells. Based on these conditions, the CNFAP cannot be the source of Boron SSIs at the Gavin BAP, even under pumping conditions.

As shown in Table 2 and Figure 6, Sulfate results in the northern portion of the CNFAP were 69 mg/L at KC-19-31; 480 mg/L at KC-19-32; and 330 mg/L at KC-19-33. In September 2023, Sulfate results at the Gavin wells were 210 mg/L at BAC-04 and 270 mg/L at BAC-05 (Figure 6). Given the groundwater flow path in Figure 6, there is the potential that Sulfate in groundwater at the CNFAP could be migrating toward the BAP under pumping conditions.

CONCLUSIONS

- Results for Alkalinity and TDS exceeded the UTL for the Ohio EPA program at several wells. To further evaluate this issue, OVEC proposes the following additional investigation:
    - Continue monthly monitoring of groundwater elevations at all wells at the CNFAP and SFAP;

  - Implement a supplemental semi-annual monitoring program at wells KC-19-30 through KC-19-35 at the CNFAP to evaluate concentrations of Ohio EPA program constituents in groundwater at the unit;
  - Review potential alternate statistical methods to analyze concentrations of Ohio EPA constituents in groundwater at the CNFAP; and
  - Evaluate whether a groundwater flow model would be useful in better defining the hydraulic relationship between the CNFAP and Gavin BAP.

- Appendix III constituents Calcium, Chloride, Sulfate, and TDS exceeded standards at several wells; however, all results for Appendix IV constituents were less than the applicable GWPS.

- Under non-pumping conditions, the CNFAP is not upgradient of the Gavin BAP and cannot be the source of Boron, Sulfate, or pH SSIs at the BAP; the Gavin ASD report is, therefore, inaccurate on this issue.

- Based on groundwater flow and quality data, the CNFAP cannot be the source of Boron or pH SSIs at the Gavin BAP, even under pumping conditions; the Gavin ASD report is, therefore, inaccurate on this issue.

- There is the potential that Sulfate in groundwater from the CNFAP could be migrating toward the BAP under pumping conditions.

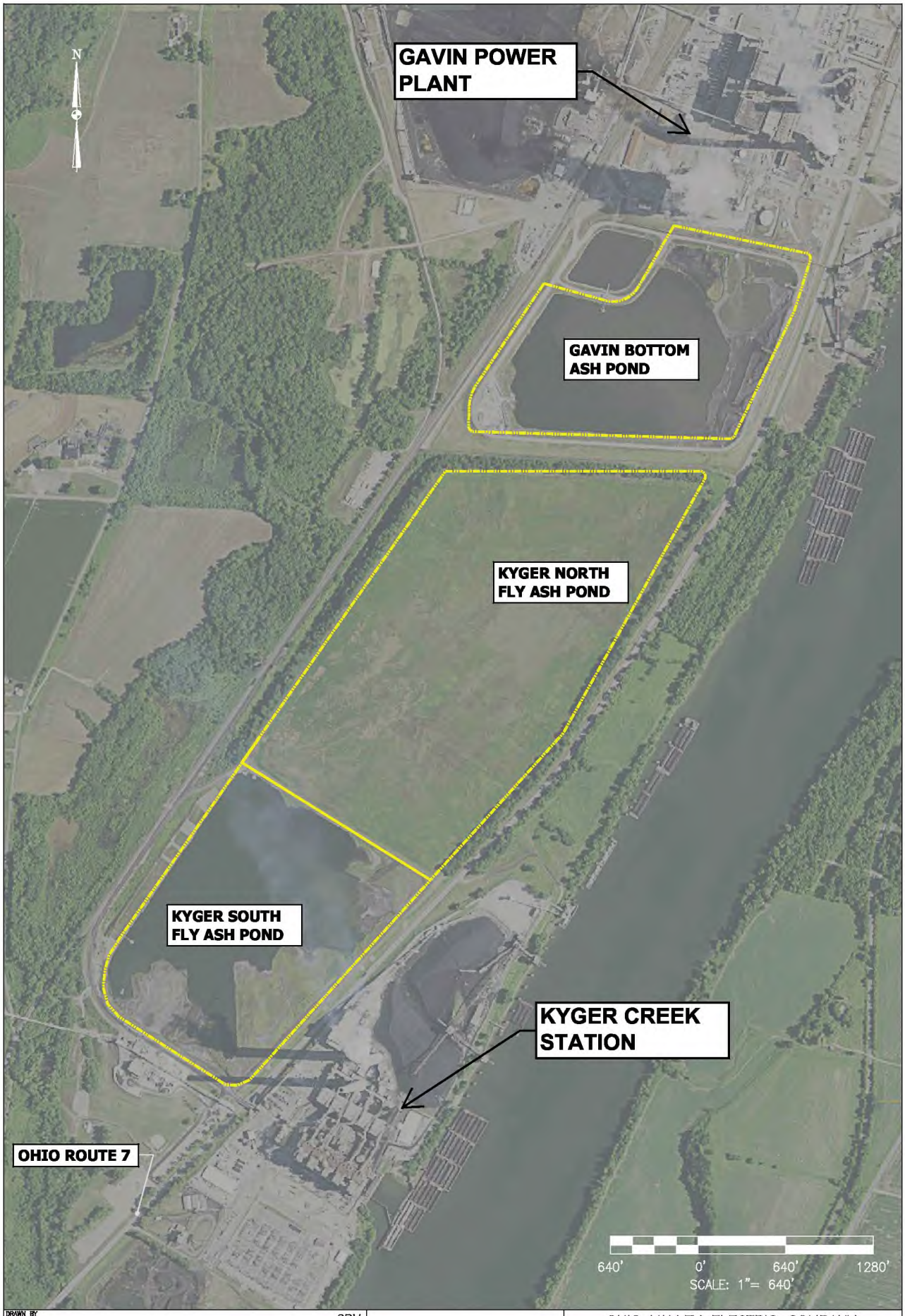
- Pumping supply wells FW-15 and FW-1011 at Gavin has caused a reversal in natural groundwater flow directions in the area. Details on the pumping are not currently available. Pumping these wells may be an intentional effort to prevent the migration of impacted groundwater to the Ohio River. Terminating this pumping program would eliminate any potential for Sulfate from the CNFAP to migrate toward the BAP.

Sincerely,
APPLIED GEOLOGY AND ENVIRONMENTAL SCIENCE, INC.

Bethany Flaherty
Senior Scientist II

Robert W. King, PG
Principal Scientist II

FIGURES



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DATE	
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JOB NO.	2024106-KYG
DWG FILE	KYGER_SITE MAP FIGURE 2_11-20-2024.DWG
DRAWING SCALE	AS SHOWN

AGES
Applied Geology And Environmental Science, Inc.

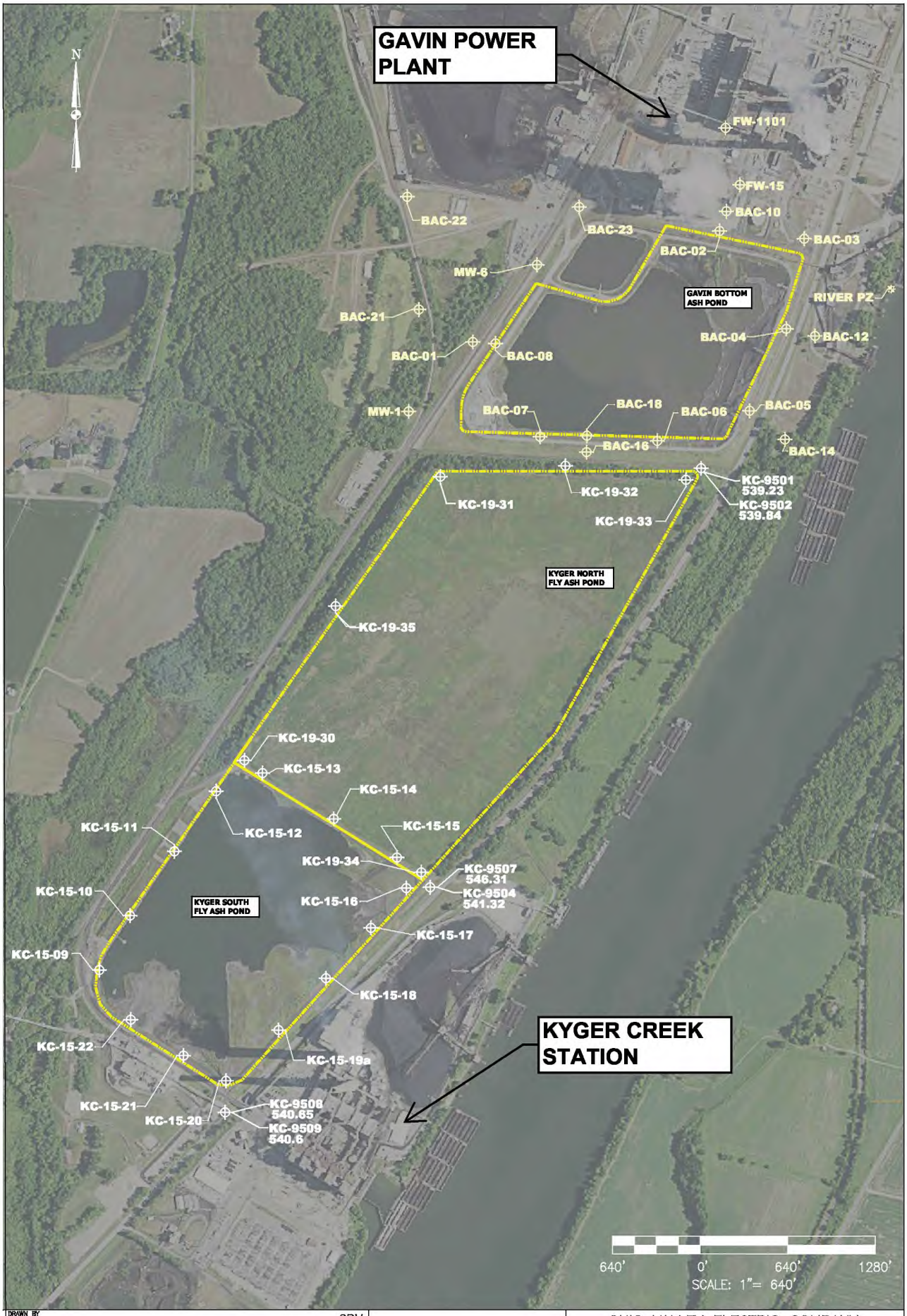
OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION LANDFILL
GALLIA COUNTY, OHIO
SITE LOCATION MAP

DRAWING NAME: FIGURE 1

REV. 0

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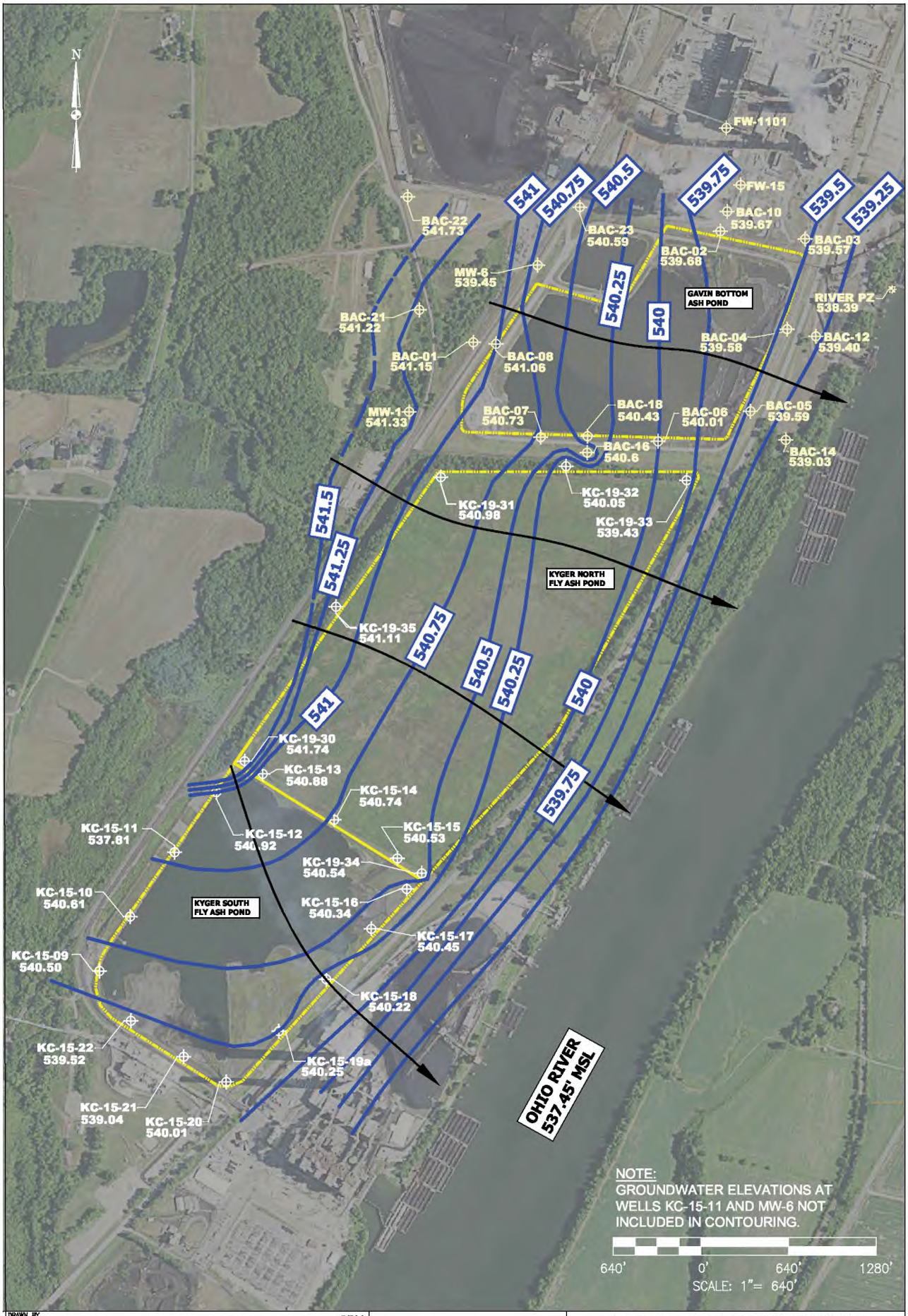
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Applied Geology And Environmental Science, Inc.

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION LANDFILL
GALLIA COUNTY, OHIO
WELL LOCATION MAP

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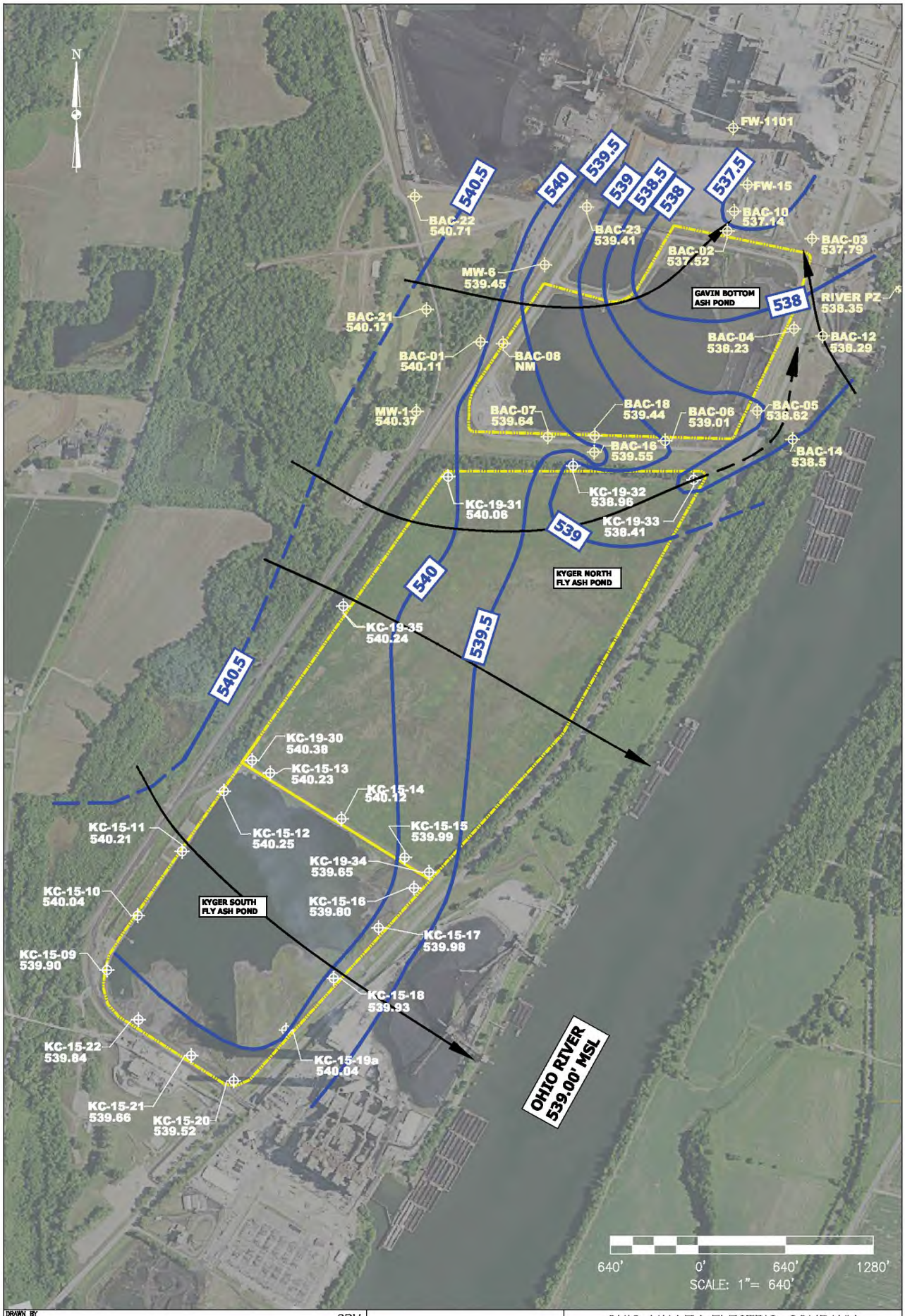
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Applied Geology And Environmental Science, Inc.

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION LANDFILL
GALLIA COUNTY, OHIO
GROUNDWATER CONTOURS
MARCH 2023 NON-PUMPING CONDITIONS

DRAWING NAME	REV.
FIGURE 3	0

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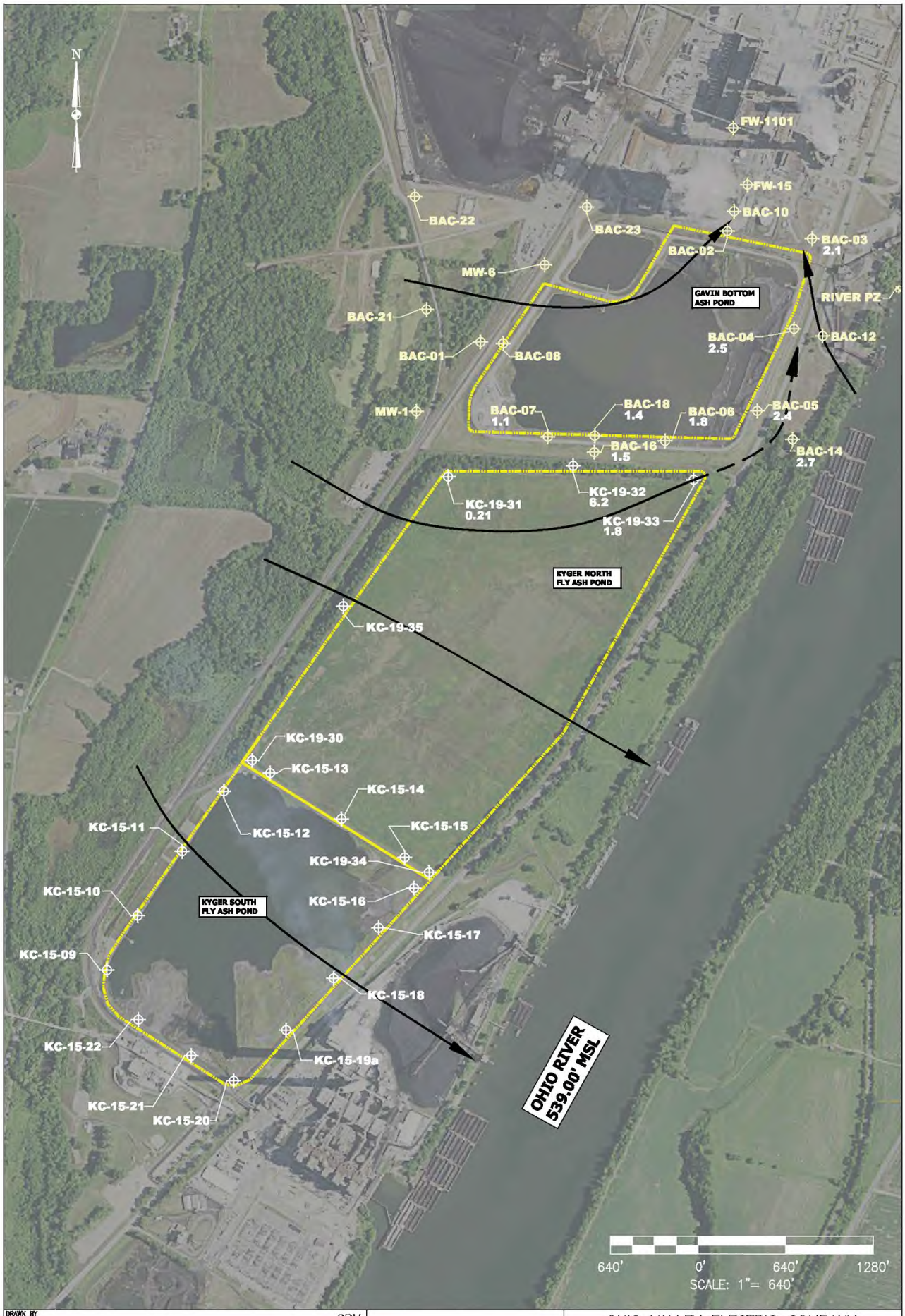
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Applied Geology And Environmental Science, Inc.

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION LANDFILL
GALLIA COUNTY, OHIO
GROUNDWATER CONTOURS
SEPTEMBER 2023 PUMPING CONDITIONS

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FIGURE 4	0

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DRAWING SCALE	AS SHOWN

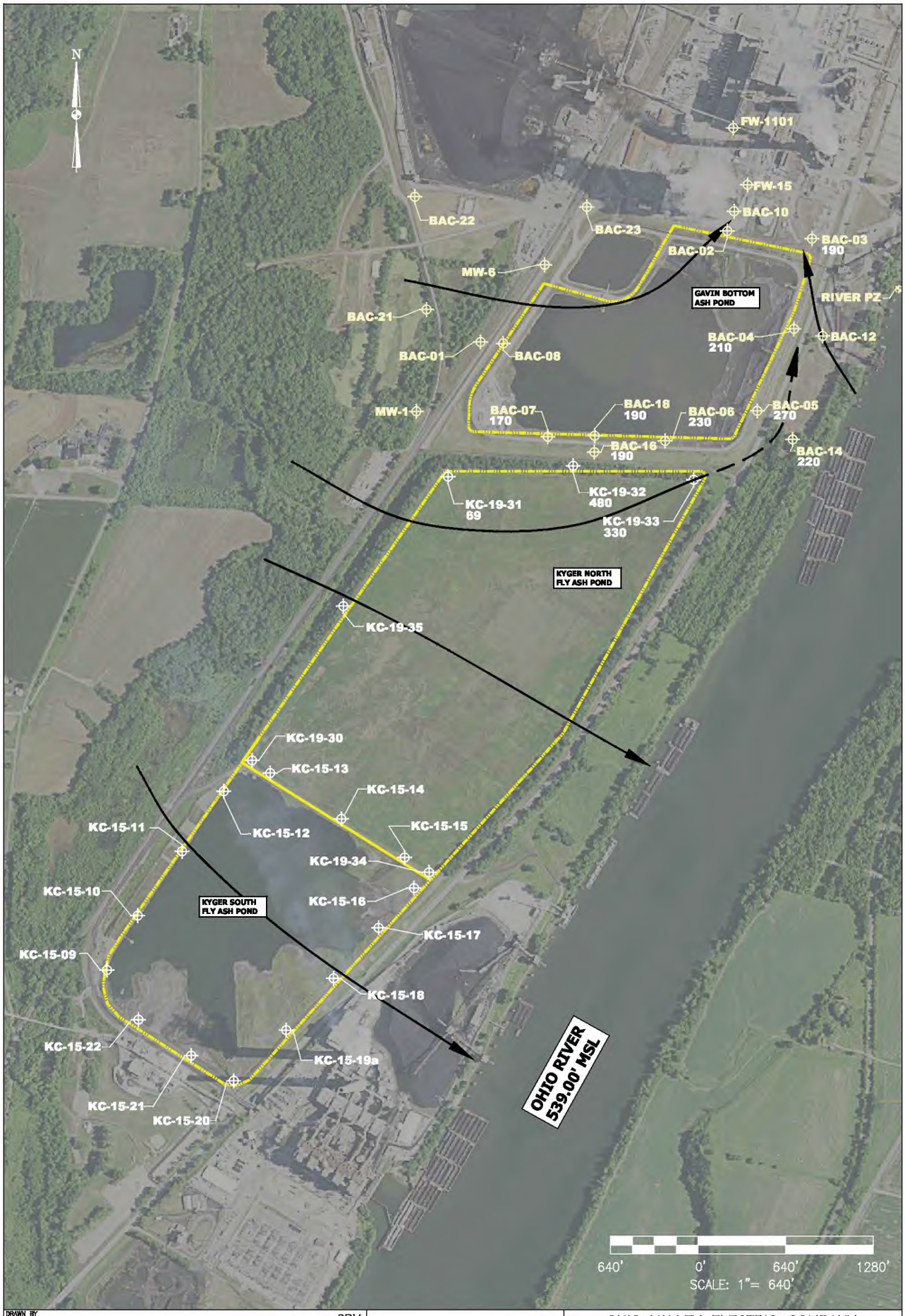
AGES
Applied Geology And Environmental Science, Inc.

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION LANDFILL
GALLIA COUNTY, OHIO
GROUNDWATER CONTOURS
BORON RESULTS IN MG/L

DRAWING NAME	REV.
FIGURE 5	0

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DWG FILE	KYGER_SITE MAP FIGURE 2_11-20-2024.DWG
DRAWING SCALE	AS SHOWN

AGES
Applied Geology And Environmental Science, Inc.

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION LANDFILL
GALLIA COUNTY, OHIO
GROUNDWATER CONTOURS
SULFATE RESULTS IN MG/L

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TABLES

TABLE 1
NORTH FLY ASH POND
SUMMARY OF AUGUST 2024 ANALYTICAL RESULTS - OEPA CONSTITUENTS
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
GALLIA COUNTY, OHIO

OEPA Constituents	Units	PROGRAM UTL	KC-9501	KC-9502	KC-9504	KC-9507	KC-9508	KC-9509	KC-19-30	KC-19-31	KC-19-32	KC-19-33	KC-19-34	KC-19-35
Indicator Parameters														
Boron, B	mg/L	--	1.73	3.66	8.44	12.5	7.05	6.96	0.47	0.23	6.84	2.1	10.4	0.07
Cadmium, Cd	ug/L	5	0.005	0.351	0.174	0.018	0.006	0.169	0.09	<0.04	<0.04	0.32	0.27	<0.04
Chloride, Cl	mg/L	--	27.2	20.1	91.3	120	32.2	47	17.5	24.8	8.49	8.2	98	25.7
Copper, Cu	ug/L	1500	0.2	0.2	0.5	0.2	0.2	0.2	<1	<1	<1	<1	1	<1
Magnesium, Mg	mg/L	--	29.6	24.6	11.8	35.3	21.1	21	15.4	11.7	41.9	27.7	14	11.6
Potassium, K	mg/L	--	1.96	1.31	3.55	3.4	2.37	2.33	1.2	1	1.1	1.1	3.6	1.1
Selenium, Se	ug/L	--	<0.04	<0.04	0.04	<0.04	<0.04	<0.04	<0.4	0.6	<0.4	<0.4	<0.4	<0.4
Sulfate, SO4	mg/L	--	272	319	350	965	244	285	76	58	505	323	373	43.2
Metals (Dissolved)														
Arsenic, As	ug/L	10	1.63	0.28	0.29	4.97	6.43	1.45	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Barium, Ba	ug/L	2000	76.1	25.3	27	32.8	61.4	80	40.8	69.6	35.4	21.4	26.8	114
Calcium, Ca	mg/L	--	143	73.3	115	315	138	111	63.3	57.6	95.7	82.5	147	92.4
Chromium, Cr	ug/L	100	<0.07	0.09	<0.07	<0.07	<0.07	0.07	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Iron, Fe	mg/L	--	0.697	2.56	0.309	3.41	5.15	7.23	<0.03	<0.03	41.5	5.9	<0.03	<0.03
Lead, Pb	ug/L	15	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Manganese, Mn	mg/L	--	0.916	22.9	0.282	3.51	1.96	25.6	0.218	0.039	2.53	1.32	0.445	0.304
Mercury, Hg	ug/L	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Silver, Ag	ug/L	90	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
Sodium, Na	mg/L	--	22.2	25.1	65.4	91	16.9	19.3	14.7	12.5	26	30.1	67.4	12
Other														
Alkalinity	mg/L	193	**569**	**378**	**332**	**353**	**297**	**310**	140	116	7	38	14	**228**
Total Organic Carbon, TOC	mg/L	--	1.2	0.6	0.8	1.2	0.7	1.1	1.1	1.2	1.4	0.9	1	1.1
Chemical Oxygen Demand, COD	mg/L	--	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Residue, Filterable, TDS	mg/L	1214	720	570	720	**1710**	660	650	320	270	730	520	780	340
Gross Alpha	pCi/L	--	<3.65	<3.73	<0.646	<6.97	<2.53	<2.18	<-0.216	<1.03	<1.97	<0.804	<0.477	<2.93
Gross Beta	pCi/L	--	<-0.734	3.04	4.25	8.16	3.75	3.96	1.57	<0.884	<1.27	<0.794	3	<0.296

Notes:
mg/L: Milligrams per liter
pCi/L: Picocuries per liter
s.u.: Standard units
ug/L: Micrograms per liter

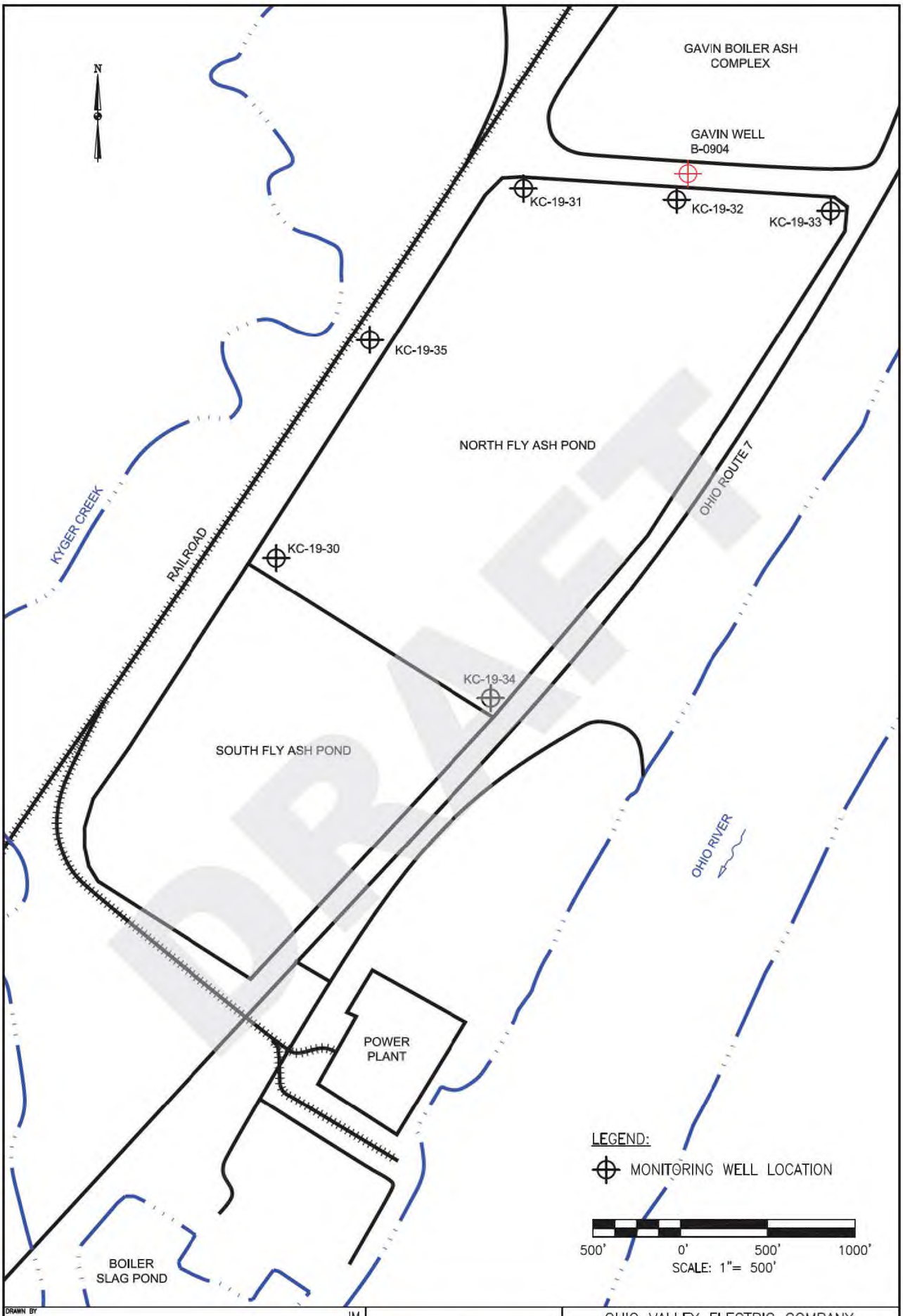
TABLE 2
NORTH FLY ASH POND
SUMMARY OF AUGUST 2024 ANALYTICAL RESULTS - CCR CONSTITUENTS
OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK STATION
GALLIA COUNTY, OHIO

CCR Constituents	Units	SFAP UTL/GWPS	KC-9501	KC-9502	KC-9504	KC-9507	KC-9508	KC-9509	KC-19-30	KC-19-31	KC-19-32	KC-19-33	KC-19-34	KC-19-35
Appendix III Constituents														
Boron, B	mg/L	15	1.6	3.4	8.5	14	6.7	7.1	0.16	0.21	6.2	1.8	9.3	0.047
Calcium, Ca	mg/L	111.5	**140**	72	**120**	**320**	**130**	**120**	62	56	89	75	**130**	89
Chloride, Cl	mg/L	65	31	21	**92**	**120**	33	48	17	25	8.3	8	**96**	25
Fluoride, F	mg/L	0.32	0.23	0.13	0.080 J	0.21 J	0.14	0.14	0.15	0.068	<0.10	0.062	0.092 J	0.17
pH	s.u.	5.29/9.08	7.39	6.82	6.49	7.33	6.44	6.31	6.68	7.27	7.37	7.08	6.8	7.15
Sulfate, SO4	mg/L	508	310	330	350	**990**	240	300	85	69	480	330	370	46
Total Dissolved Solids (TDS)	mg/L	890	680	570	710	**1600**	660	660	300	270	730	530	740	350
Appendix IV Constituents														
Antimony, Sb	ug/L	6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic, As	ug/L	10	2.6	0.48 J	0.46 J	5.4	6.8	1.6	0.64 J	0.48 J	0.57 J	<1.0	0.72 J	1
Barium, Ba	ug/L	2000	71	22	25	29	58	73	39	70	33	18	28	110
Beryllium, Be	ug/L	4	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	0.32 J	<0.70	<0.70	<0.70
Cadmium, Cd	ug/L	5	<0.50	0.33 J	0.17 J	<0.50	<0.50	0.18 J	<0.50	<0.50	<0.50	0.26 J	0.25 J	<0.50
Chromium, Cr	ug/L	100	<1.5	<1.5	<1.5	1.2 J	<1.5	<1.5	<1.5	1.3 J	<1.5	<1.5	1.4 J	1.4 J
Cobalt, Co	ug/L	12.7	0.93	7.6	0.88	3	0.65	1.3	0.75	0.36	9.5	12	1.6	0.49
Fluoride, F	mg/L	4	0.23	0.13	0.080 J	0.21 J	0.14	0.14	0.15	0.068	0.1	0.062	0.092 J	0.17
Lead, Pb	ug/L	15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.23 J	<1.0	<1.0	0.51 J	<1.0
Lithium, Li	mg/L	40	0.0045	0.012	0.0091	0.0092	0.0058	0.0093	0.0038 J	0.0048	0.0048	0.005	0.01	0.0023 J
Mercury, Hg	ug/L	2	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Molybdenum, Mo	ug/L	100	0.57 J	<1.0	<1.0	0.27 J	0.21 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.31 J
Radium 226 & 228 (combined)	pCi/L	5	<0.265	<0.406	<0.0859	<0.263	<0.324	<0.279	<0.389	<0.148	<0.305	<-0.0175	<0.131	<0.561
Selenium, Se	ug/L	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.54 J	<1.0	<1.0	<1.0	<1.0
Thallium, Tl	ug/L	2	<0.20	<0.20	<0.20	<0.20	<0.20	0.074 J	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Notes:
Upper Tolerance Limits (UTL) established for Appendix III Constituents; Groundwater Protection Standards (GWPS) stablished for Appendix IV Constituents.
mg/L: Milligrams per liter
pCi/L: Picocuries per liter
s.u.: Standard units
ug/L: Micrograms per liter

ATTACHMENT A

2019 INVESTIGATION DATA



DRAFT

DRAWN BY	JM
DATE	
CHECKED BY	
JOB NO.	2019066-7-KYGER
DWG FILE	KYGER_NFAP b02_NORTH.dwg
DRAWING SCALE	AS SHOWN

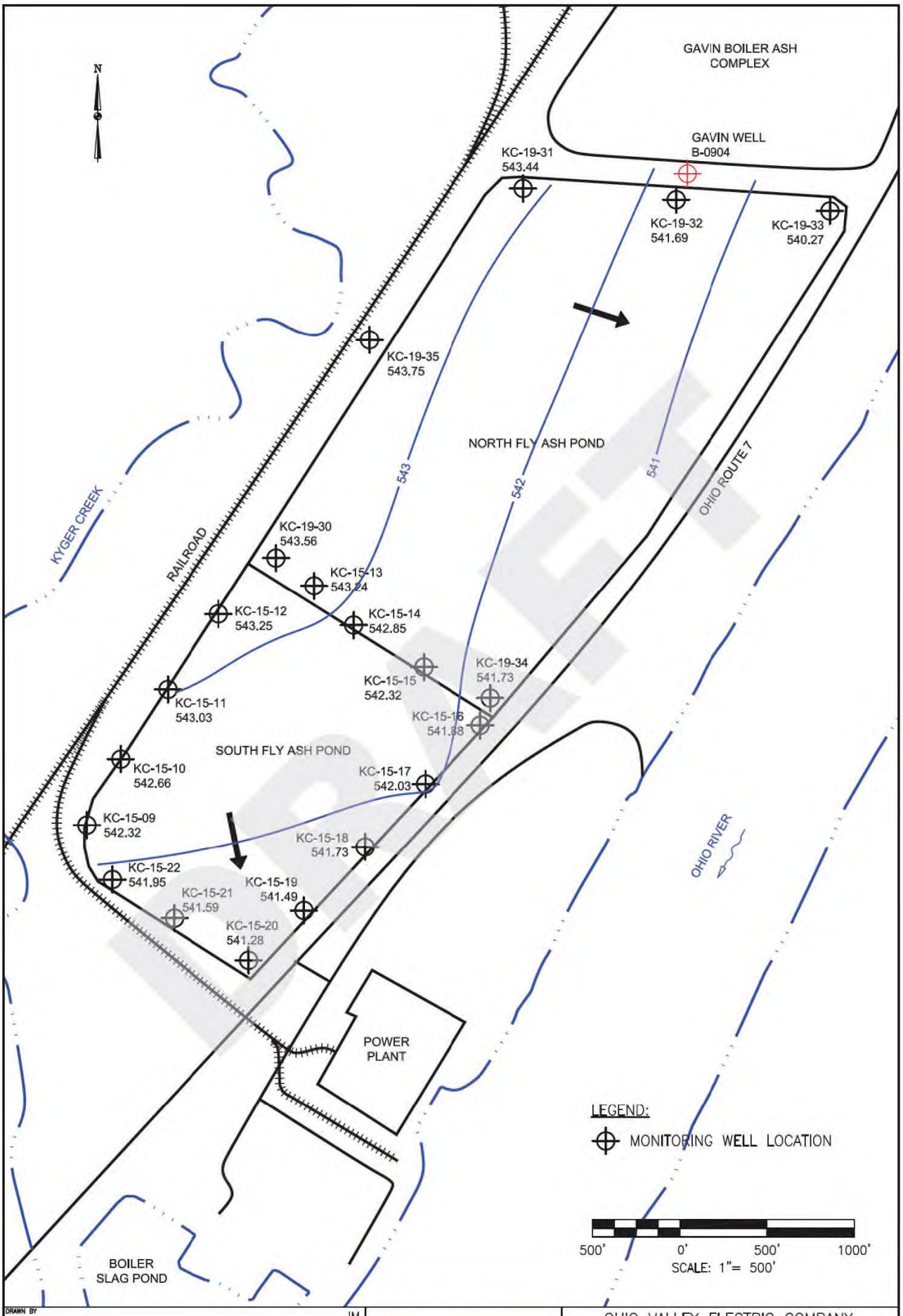
AGES
Applied Geology And Environmental Science, Inc.
2402 Hookstown Grade Road, Suite 200
Clinton, PA 15026
412.264.6453

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION – CCR PROGRAM
CHESHIRE, GALLIA COUNTY, OHIO
NORTH FLY ASH POND

DRAWING NAME	REV.
FIGURE 1	0

Plot: 07/08/2019 13:18 _PROGRAM-KYGER OVEC\Kyger Creek-CCR Program\CAD\North Fly Ash Pond\KYGER_NFAP b02_NORTH.dwg\NFAP



DRAWN BY	JM
DATE	
CHECKED BY	
JOB NO.	2019066-7-KYGER
DWG FILE	KYGER_NFAP b05_GW FLOW.dwg
DRAWING SCALE	AS SHOWN

AGES
Applied Geology And Environmental Science, Inc.
2402 Hookstown Grade Road, Suite 200
Clinton, PA 15026
412.264.6453

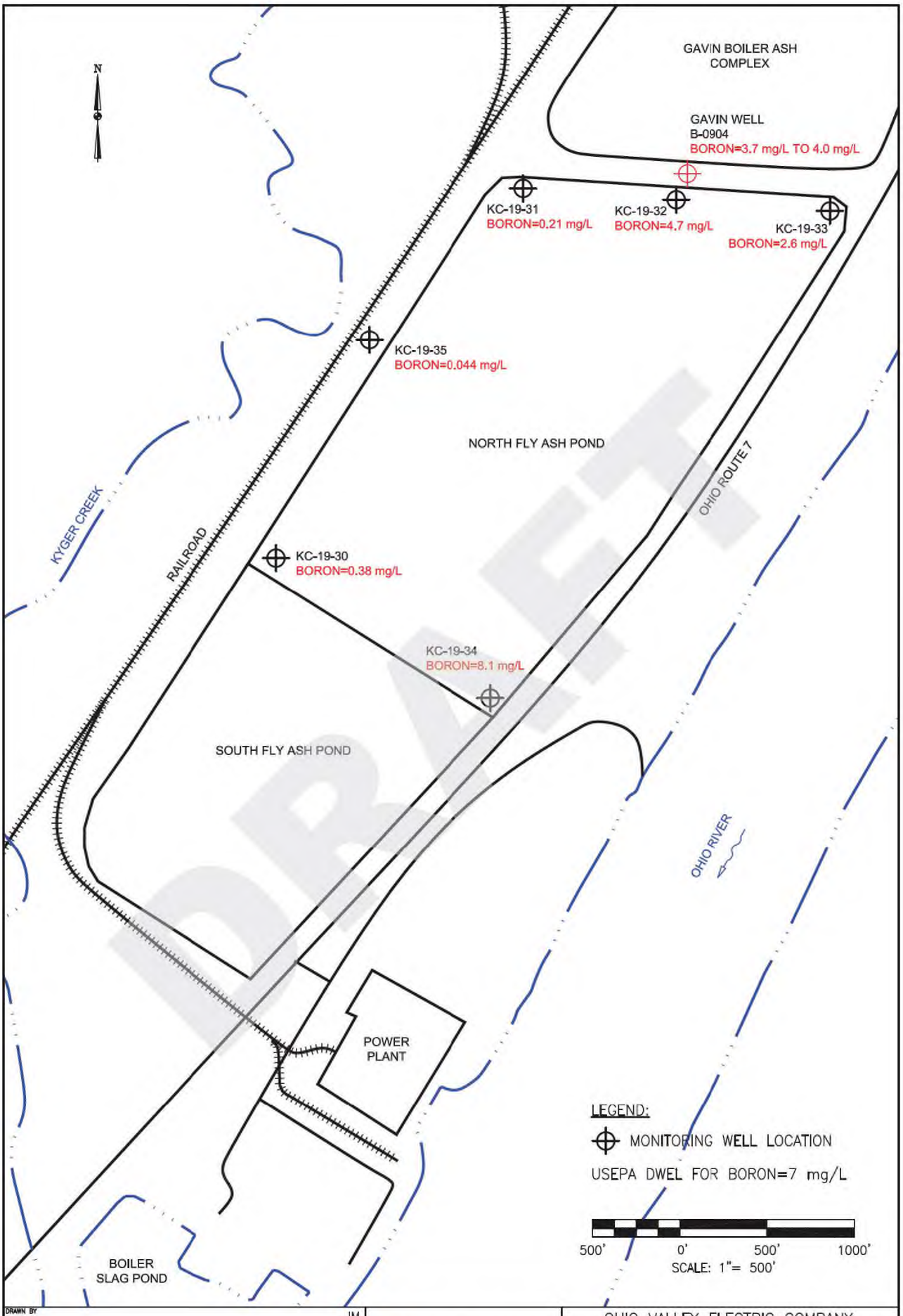
OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION – CCR PROGRAM
CHESHIRE, GALLIA COUNTY, OHIO
NORTH FLY ASH POND
GROUNDWATER FLOW MAP
MAY 2019

DRAWING NAME: FIGURE 2 | REV. 0

DRAFT

Plot: 07/08/2019 13:32 _PROGRAM-KYGER OVEC\Kyger Creek-CCR Program\CAD\North Fly Ash Pond\KYGER_NFAP b05_GW FLOW.dwg\NFAP



DRAWN BY	JM
DATE	
CHECKED BY	
JOB NO.	2019066-7-KYGER
DWG FILE	KYGER_NFAP b03_total boron.dwg
DRAWING SCALE	AS SHOWN

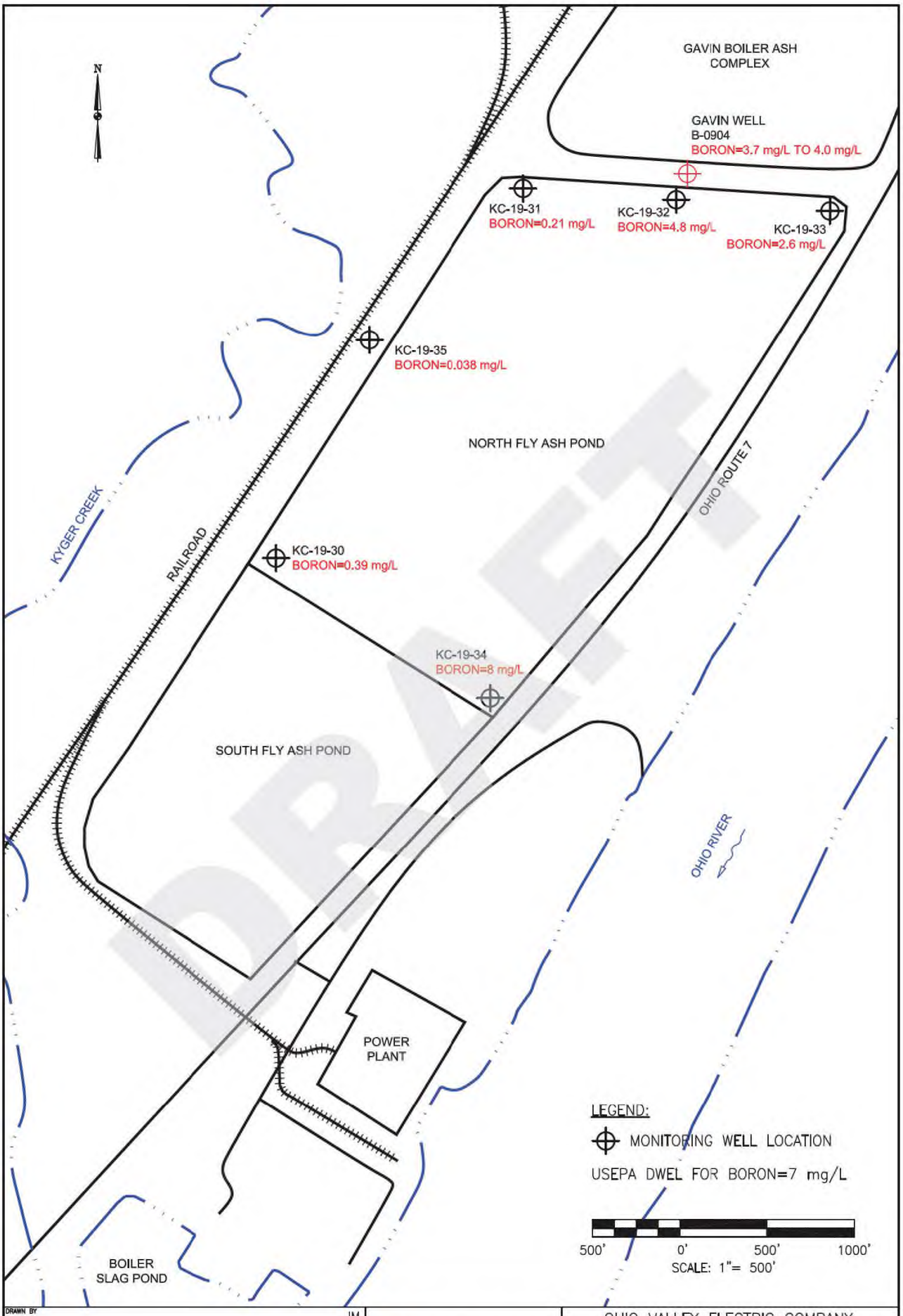
AGES
Applied Geology And Environmental Science, Inc.
2402 Hookstown Grade Road, Suite 200
Clinton, PA 15026
412.264.6453

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION – CCR PROGRAM
CHESHIRE, GALLIA COUNTY, OHIO
NORTH FLY ASH POND
TOTAL BORON CONCENTRATIONS
MAY 2019

DRAWING NAME: FIGURE 3 | REV.: 0

Plot: 07/08/2019 13:48 _PROGRAM-KYGER OVEC\Kyger Creek-CCR Program\CAD\North Fly Ash Pond\KYGER_NFAP b03_total boron.dwg\NFAP



DRAWN BY	JM
DATE	
CHECKED BY	
JOB NO.	2019066-7-KYGER
DWG FILE	KYGER_NFAP b04_dissolved boron.dwg
DRAWING SCALE	AS SHOWN

AGES
Applied Geology And Environmental Science, Inc.
2402 Hookstown Grade Road, Suite 200
Clinton, PA 15026
412.264.6453

OHIO VALLEY ELECTRIC COMPANY

KYGER CREEK STATION – CCR PROGRAM
CHESHIRE, GALLIA COUNTY, OHIO
NORTH FLY ASH POND
DISSOLVED BORON CONCENTRATIONS
MAY 2019

DRAWING NAME: FIGURE 4 | REV. 0

TABLES

DRAFT

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
CCR (TOTAL) GROUNDWATER MONITORING PROGRAM PARAMETERS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	MCL	KC-19-30	KC-19-31	KC-19-32	K	KC-19-34	KC-19-35
Appendix III Constituents								
Boron, B	mg/L	None	0.38	0.21	4.7		8.1	0.044
Calcium, Ca	mg/L	None	55	63	92	63	88	94
Chloride, Cl	mg/L	250	15	31		14	73	20
Fluoride, F	mg/L	4	0.17	0.12	1	0.22	062	0.2
pH	s.u.	6.5-8.5	5.99	5.9	5.58	5.37	5.86	6.54
Sulfate, SO4	mg/L	250	89	76	500	290	220	69
Total Dissolved Solids (TDS)	mg/L	500	320	320	8	530	500	320
Appendix IV Constituents								
Antimony, Sb	ug/L	6	<2.0	<2.0		<2.0	<2.0	<2.0
Arsenic, As	ug/L	10	0.92	<5.0		0.78	<5.0	1.5
Barium, Ba	ug/L	2000	33		35	46	52	120
Beryllium, Be	ug/L	4	<1.0		0.33	<1.0	<1.0	<1.0
Cadmium, Cd	ug/L	5	<1.0	<1.0	0	<1.0	<1.0	<1.0
Chromium, Cr	ug/L	100	<2.0	<2 0	2.0	<2.0	<2.0	<2.0
Cobalt, Co	ug/L	None	1.6		19	49	9.3	0.48
Fluoride, F	mg/L	4	17		0.051	0.22	0.062	0.2
Lithium, Li	mg/L		062	1	0.0056	0.012	0.0091	0.0024
Lead, Pb	ug/L		.0		<1.0	<1.0	<1.0	<1.0
Mercury, Hg	ug/L	2		<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum, Mo	ug/L			<5.0	<5.0	<5.0	<5.0	<5.0
Radium 226 & 228 (combined)	pCi/L		NA	NA	NA	NA	NA	NA
Selenium, Se	/L		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Thallium, Tl		2	1.0	<1.0	0.34	<1.0	<1.0	<1.0

Notes:
Yellow highlight in mpound exceed
NA = Results not avai

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TABLE 2
SUMMARY OF ANALYTICAL RESULTS
OEPA (DISSOLVED) GROUNDWATER MONITORING PROGRAM PARAMETERS
Ohio Valley Electric Corporation
Kyger Creek Station
Gallia County, Ohio

Parameter	Units	OEPA VAP UPUS	KC-19-30	KC-19-31	KC-19-32	-33	KC-19-34	KC-19-35
Indicator Parameters (per OAC-3745-30-08, Appendix C)								
Calcium, Ca	mg/L	None	57	64	92	64	85	93
Chloride, Cl	mg/L	None	15	31		14	3	20
Potassium, K	mg/L	None	2.8	1.3	1.4	3	2.9	1.4
Sodium, Na	mg/L	None	19	13	29	33	39	14
Sulfate, SO4	mg/L	None	89	7	50	290	220	69
Metals (Dissolved)								
Antimony, Sb	ug/L	6	<2.0	<2.0	0	<2.0	<2.0	<2.0
Arsenic, As	ug/L	10	<5.0	<5.0		<5.0	<5.0	1.1
Barium, Ba	ug/L	2000	31	76		46	48	120
Beryllium, Be	ug/L	4		1 0		<1.0	0.36	<1.0
Boron, B	mg/L	None			4.8	2.6	8	0.038
Cadmium, Cd	ug/L	5	<		<1.0	<1.0	<1.0	<1.0
Chromium, Cr	ug/L	100	<2		<2.0	<2.0	<2.0	<2.0
Copper, Cu	ug/L	1500	<2.0		<2.0	<2.0	<2.0	<2.0
Iron, Fe	mg/L		<0.1	0.1	44	6.3	0.044	<0.1
Lead, Pb	ug/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Magnesium, Mg	mg/L	Non	13	13	44	22	12	13
Manganese, Mn	mg/L	None	0.2	0.12	2.6	17	3.2	1.6
Mercury, Hg		2		<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum, Mo	ug/			<5.0	<5.0	<5.0	<5.0	<5.0
Selenium, Se	ug/L			<5.0	<5.0	<5.0	<5.0	<5.0
Silver, Ag	ug/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Thallium, Tl			<1.0	<1.0	0.46	<1.0	<1.0	<1.0
Other								
Alkalinity	m	None	130	120	25	50	29	220
Total Organic C	mg/	None	0.26	0.41	0.53	0.3	0.29	0.41
Chemical Oxygen D D	mg/L	None	10	<10	<10	<10	<10	<10
Residue, Filterable, TD	m	None	320	320	810	530	500	320
Gross Alpha		None	NA	NA	NA	NA	NA	NA
Gross Beta	L	None	NA	NA	NA	NA	NA	NA

Notes:
OEPA VAP UPUS: Ohio Environmenta Protection Agency Unrestricted Potable Use Standard
* Lead standard is the USEPA Maximum Contaminant Level (MCL)
NA: Results not available

DRAFT

ATTACHMENT B

DATA FOR WELL REDEVELOPMENT

Re-Development

OEPA - MONITORING WELL PURGING & SAMPLING FORM

Site/Facility Name: Kyger Creek Station
Well Number: KC-9501 Date: 8/20/24
Field Personnel: CJC
Sampling Organization: AGES
Depth to water: 52.19 Begin to purge: 1340

Depth to ____ / ____ of screen (top) (bottom)
Depth of pump intake: NA
Purging device: 2" Bladder pump
Total volume purged: ~6.0 gal

	Time	DTW	Cycle Setting (Dis/Re)	Pumping Rate (mL/min)	Temp °C	Cond. (µohms/cm)	pH (S.U.)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)
*	1345	52.19	5/10	200	18.80	861.0	6.78	419.0	2.89	39.5
	1350	52.19	5/10	200	18.83	870.0	6.86	413.0	2.80	33.2
	1355	52.19	5/10	200	18.18	894.0	7.05	397.0	2.12	27.6
	1400	52.19	5/10	200	19.16	908.0	6.89	356.0	1.61	23.9
	1405	52.19	5/10	200	19.37	921.0	6.79	287.0	0.93	19.8
	1410	52.19	5/10	200	19.42	935.0	6.61	231.0	0.55	16.4
	1415	52.19	5/10	200	19.62	932.0	6.61	220.0	0.53	12.3
	1420	52.19	5/10	200	19.68	928.0	6.65	216.0	0.50	9.71
	1425	52.19	5/10	200	19.50	925.0	6.68	209.0	0.49	6.95
	1430	52.19	5/10	200	19.41	923.0	6.76	203.0	0.48	4.87
	1435	52.19	5/10	200	19.57	921.0	6.71	200.0	0.47	3.73
*	1440	52.19	5/10	200	19.63	928.0	6.65	207.0	0.51	23.5
	1445	52.19	5/10	200	19.41	924.0	6.68	202.0	0.48	17.3
	1450	52.19	5/10	200	19.03	917.0	6.72	198.0	0.45	8.54
	1455	52.19	5/10	200	18.91	913.0	6.74	197.0	0.43	5.67
	1500	52.19	5/10	200	19.03	915.0	6.75	197.0	0.43	3.55
	1505	52.19	5/10	200	19.19	916.0	6.76	196.0	0.44	2.03
*	1510	52.19	5/10	200	19.23	917.0	6.76	196.0	0.43	15.6
	1515	52.19	5/10	200	19.30	917.0	6.77	196.0	0.43	10.3
	1520	52.19	5/10	200	19.36	918.0	6.77	195.0	0.43	8.41
	1525	52.19	5/10	200	19.43	918.0	6.77	195.0	0.43	6.78
	1530	52.19	5/10	200	19.47	917.0	6.77	195.0	0.43	4.60
	1535	52.19	5/10	200	19.52	918.0	6.76	195.0	0.43	4.03
	1540	52.19	5/10	200	19.56	918.0	6.77	195.0	0.43	3.87
			EM	Redevelopment of this well						

Stabilization Criteria		3%	3%	± 0.1	± 10 mv	10%	10%

Sample ID: _____ Sample Date: _____ Sample Time: _____

Comments: * Surged well

Re-Development

OEPA - MONITORING WELL PURGING & SAMPLING FORM

Site/Facility Name: Kyger Creek Station
Well Number: KC-950L Date: 8/20/24
Field Personnel: CDC
Sampling Organization: AGES
Depth to water: 52.15 Begin purge = 1130

Depth to _____ / _____ of screen (top) (bottom)
Depth of pump intake: NA
Purging device: 2" Bladder pump
Total volume purged: ≈6.0 gals

Time	DTW	Cycle Setting (Dis/Re)	Pumping Rate (mL/min)	Temp °C	Cond. (µohms/cm)	pH (S.U.)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)
1135	52.15	5/10	200	17.52	756.0	7.62	458.0	4.18	31.8
1140	52.15	5/10	200	16.85	771.0	7.58	458.0	2.44	25.3
1145	52.15	5/10	200	16.22	778.0	7.57	451.0	1.38	20.6
1150	52.15	5/10	200	16.13	780.0	7.56	447.0	1.05	16.7
1155	52.15	5/10	200	16.10	779.0	7.52	435.0	0.81	12.1
1200	52.15	5/10	200	16.07	778.0	7.49	423.0	0.64	9.38
1205	52.15	5/10	200	16.16	761.0	7.48	418.0	0.60	7.65
1210	52.15	5/10	200	16.20	755.0	7.47	410.0	0.56	6.12
1215	52.15	5/10	200	16.25	743.0	7.46	405.0	0.53	4.93
1220	52.15	5/10	200	16.29	739.0	7.45	402.0	0.52	4.21
1225	52.15	5/10	200	16.31	742.0	7.48	410.0	0.55	19.8
1230	52.15	5/10	200	16.35	739.0	7.48	392.0	0.54	9.91
1235	52.15	5/10	200	16.30	737.0	7.47	385.0	0.51	7.35
1240	52.15	5/10	200	16.28	735.0	7.47	381.0	0.47	6.12
1245	52.15	5/10	200	16.21	734.0	7.46	375.0	0.46	5.45
1250	52.15	5/10	200	16.35	733.0	7.46	373.0	0.44	4.87
1255	52.15	5/10	200	16.33	732.0	7.46	368.0	0.44	2.61
1300	52.15	5/10	200	16.27	736.0	7.48	375.0	0.48	12.4
1305	52.15	5/10	200	16.33	731.0	7.46	362.0	0.44	8.98
1310	52.15	5/10	200	16.48	730.0	7.45	360.0	0.43	6.12
1315	52.15	5/10	200	16.56	728.0	7.45	359.0	0.42	4.91
1320	52.15	5/10	200	16.68	729.0	7.45	358.0	0.43	4.19
1325	52.15	5/10	200	16.72	729.0	7.45	358.0	0.42	3.87
1330	52.15	5/10	200	16.70	728.0	7.45	358.0	0.42	3.76
—	EM	Re development of well							
Stabilization Criteria				3%	3%	± 0.1	± 10 mv	10%	10%

Sample ID: _____ Sample Date: _____ Sample Time: _____

Comments: * = surged well

Re-Development

OEPA - MONITORING WELL PURGING & SAMPLING FORM

Site/Facility Name: Kyger Creek Station
Well Number: KC-9504 Date: 5/20/24
Field Personnel: CDC
Sampling Organization: AGES
Depth to water: 48.91 Begin to purge = 0910

Depth to ____ / ____ of screen (top) (bottom)
Depth of pump intake: ~2
Purging device: 2" Bladder pump
Total volume purged: ~6.0 gal

	Time	DTW	Cycle Setting (Dis/Re)	Pumping Rate (mL/min)	Temp °C	Cond. (µohms/cm)	pH (S.U.)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)
*	0915	48.92	5/10	200	17.36	1030.0	7.50	328.0	5.60	34.1
	0920	48.92	5/10	200	17.07	1020.0	7.46	312.0	2.65	21.6
	0925	48.91	5/10	200	17.25	996.0	7.31	95.0	1.36	17.3
	0930	48.92	5/10	200	17.27	950.0	7.29	93.0	0.89	14.5
	0935	48.91	5/10	200	17.38	946.0	7.23	94.0	0.51	11.9
	0940	48.91	5/10	200	17.51	942.0	7.19	95.0	0.43	9.41
	0945	48.92	5/10	200	17.73	938.0	7.12	98.0	0.36	7.87
	0950	48.91	5/10	200	17.91	935.0	7.09	105.0	0.37	5.31
	0955	48.92	5/10	200	18.12	932.0	7.01	109.0	0.40	4.06
*	1000	48.91	5/10	200	18.27	938.0	7.09	95.0	0.35	26.3
	1005	48.91	5/10	200	18.29	931.0	7.03	103.0	0.37	18.1
	1010	48.92	5/10	200	18.24	925.0	6.99	110.0	0.37	13.9
	1015	48.91	5/10	200	18.13	921.0	6.97	111.0	0.36	10.1
	1020	48.91	5/10	200	18.09	918.0	6.96	113.0	0.36	8.97
	1025	48.92	5/10	200	18.56	917.0	6.96	115.0	0.35	7.63
	1030	48.91	5/10	200	19.13	916.0	6.95	115.0	0.35	5.13
*	1035	48.92	5/10	200	19.47	915.0	6.95	116.0	0.35	4.68
	1040	48.91	5/10	200	19.83	922.0	6.98	112.0	0.34	11.3
	1045	48.91	5/10	200	20.05	908.0	6.96	114.0	0.35	9.81
	1050	48.91	5/10	200	20.22	892.0	6.95	118.0	0.35	7.74
	1055	48.91	5/10	200	20.28	890.0	6.96	121.0	0.35	5.88
	1100	48.91	5/10	200	20.32	888.0	6.91	122.0	0.34	5.01
	1105	48.92	5/10	200	20.29	886.0	6.95	123.0	0.35	4.73
	1110	48.91	5/10	200	20.26	885.0	6.96	123.0	0.34	4.61
	—	End well		Redevelopment		—	—	—	—	—

Stabilization Criteria			3%	3%	± 0.1	± 10 mv	10%	10%

Sample ID: _____ Sample Date: _____ Sample Time: _____

Comments: * = Surged well

Re-Development

OEPA - MONITORING WELL PURGING & SAMPLING FORM

Site/Facility Name: Kyger Creek Station
Well Number: KC-9507 Date: 8/20/24
Field Personnel: CDC
Sampling Organization: AGES
Depth to water: 48.97 Begin to purge: 0700

Depth to ____ / ____ of screen (top) (bottom)
Depth of pump intake: NA
Purging device: 2" Bladder pump
Total volume purged: ≈ 8.0 gals

	Time	DTW	Cycle Setting (Dis/Re)	Pumping Rate (mL/min)	Temp °C	Cond. (µohms/cm)	pH (S.U.)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)
*	0705	48.97	5/10	230	16.01	1930.0	6.65	452.0	4.90	29.7
	0710	48.97	5/10	230	15.99	1940.0	6.70	451.0	3.93	60.0
	0715	48.97	5/10	230	15.97	1940.0	6.82	445.0	2.46	55.0
	0720	48.97	5/10	230	15.84	1940.0	6.94	437.0	1.21	48.0
	0725	48.97	5/10	230	15.95	1930.0	6.98	434.0	1.03	41.0
	0730	48.97	5/10	230	15.97	1930.0	7.12	391.0	0.85	26.3
	0735	48.97	5/10	230	16.01	1930.0	7.28	362.0	0.69	18.7
	0740	48.97	5/10	230	16.04	1930.0	7.32	331.0	0.57	10.5
*	0745	48.97	5/10	230	16.02	1930.0	7.35	320.0	0.56	4.91
	0750	48.97	5/10	230	16.05	1950.0	7.26	328.0	0.63	23.7
	0755	48.97	5/10	230	16.08	1930.0	7.31	317.0	0.58	15.3
	0800	48.97	5/10	230	16.26	1910.0	7.42	265.0	0.55	11.6
	0805	48.97	5/10	230	16.40	1900.0	7.47	238.0	0.49	9.87
	0810	48.97	5/10	230	16.46	1890.0	7.49	230.0	0.48	7.13
	0815	48.97	5/10	230	16.58	1890.0	7.52	228.0	0.48	5.98
	0820	48.97	5/10	230	16.65	1890.0	7.54	227.0	0.47	4.31
	0825	48.97	5/10	230	16.70	1880.0	7.56	227.0	0.47	2.48
*	0830	48.97	5/10	230	16.73	1900.0	7.52	231.0	0.50	12.3
	0835	48.97	5/10	230	16.78	1890.0	7.56	228.0	0.48	6.35
	0840	48.97	5/10	230	16.82	1880.0	7.57	225.0	0.48	5.12
	0845	48.97	5/10	230	16.86	1880.0	7.58	221.0	0.47	4.73
	0850	48.97	5/10	230	16.91	1880.0	7.59	219.0	0.47	4.21
	0855	48.97	5/10	230	16.97	1880.0	7.60	218.0	0.47	3.95
	0900	48.97	5/10	230	17.01	1880.0	7.60	217.0	0.47	3.91
	—	End Redevelopment of this well.								

Stabilization Criteria			3%	3%	± 0.1	± 10 mv	10%	10%

Sample ID: _____ Sample Date: _____ Sample Time: _____

Comments: * = Surge Well

OEPA - MONITORING WELL PURGING & SAMPLING FORM Re-Development

Site/Facility Name: Kyger Creek Station
Well Number: KC-9508 Date: 8/19/24
Field Personnel: JC
Sampling Organization: AGES
Depth to water: 24.02 bgs Purge 1345

Depth to (top) / (bottom) of screen
Depth of pump intake: NA
Purging device: 2" Bladder Pump
Total volume purged: ≈ 6.0 gals

Time	DTW	Cycle Setting (Dis/Re)	Pumping Rate (mL/min)	Temp °C	Cond. (µohms/cm)	pH (S.U.)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)
* 1350	24.02	5/10	200.0	22.58	838.0	6.69	468.0	2.79	58.4
1355	24.02	5/10	200	21.36	847.0	6.91	434.0	1.32	32.7
1400	24.02	5/10	200	21.51	838.0	7.08	296.0	0.94	13.2
1405	24.02	5/10	200	21.42	836.0	7.11	264.0	0.91	6.81
1410	24.02	5/10	200	21.30	832.0	7.13	258.0	0.86	3.42
* 1415	24.02	5/10	200	21.38	838.0	7.10	261.0	1.03	26.7
1420	24.02	5/10	200	20.85	829.0	7.21	144.0	0.85	12.8
1425	24.02	5/10	200	20.81	827.0	7.21	123.0	0.84	8.23
1430	24.02	5/10	200	20.86	827.0	7.24	41.0	0.83	5.35
1435	24.02	5/10	200	20.79	827.0	7.29	0.0	0.82	2.71
* 1440	24.02	5/10	200	20.82	829.0	7.16	58.0	0.89	30.8
1445	24.02	5/10	200	20.87	828.0	7.23	9.0	0.86	19.3
1450	24.02	5/10	200	20.98	828.0	7.27	-23.0	0.81	11.6
1455	24.02	5/10	200	21.16	828.0	7.30	-36.0	0.77	8.21
1500	24.02	5/10	200	21.32	828.0	7.35	-49.0	0.75	5.98
1505	24.02	5/10	200	21.35	828.0	7.36	-52.0	0.75	3.27
* 1510	24.02	5/10	200	21.38	826.0	7.25	-12.0	0.84	23.5
1515	24.02	5/10	200	21.47	826.0	7.31	-54.0	0.73	8.36
1520	24.02	5/10	200	21.40	824.0	7.31	-60.0	0.72	5.12
1525	24.02	5/10	200	21.28	822.0	7.32	-67.0	0.71	4.01
1530	24.02	5/10	200	20.95	820.0	7.32	-69.0	0.70	3.82
1535	24.02	5/10	200	20.87	820.0	7.32	-71.0	0.70	2.40
1540	24.02	5/10	200	20.81	820.0	7.32	-72.0	0.69	2.45
1545	24.02	5/10	200	20.85	820.0	7.31	-72.0	0.69	2.42
Stabilization Criteria				3%	3%	± 0.1	± 10 mv	10%	10%

Sample ID: _____ Sample Date: _____ Sample Time: _____

Comments: * = Surge Well

Re-Development

OEPA - MONITORING WELL PURGING & SAMPLING FORM

Site/Facility Name: Kyger Creek Station
Well Number: KC-9509 Date: 8/19/24
Field Personnel: CC
Sampling Organization: AGES
Depth to water: 24.36 Begin purge: 1355

Depth to ____ / ____ of screen
(top) (bottom)
Depth of pump intake: ~9
Purging device: 2" Bladder pump
Total volume purged: ~7.0 gal

	Time	DTW	Cycle Setting (Dis/Re)	Pumping Rate (mL/min)	Temp °C	Cond. (µohms/cm)	pH (S.U.)	ORP (mV)	DO (mg/L)	Turbidity (NTUs)
*	1600	24.36	S/C	200	19.64	855.0	6.37	212.0	0.91	123.0
	1605	24.36		200	19.08	861.0	6.37	147.0	0.85	101.0
	1610	24.36		200	19.04	860.0	6.38	-7.0	0.81	19.2
	1615	24.36		200	19.01	861.0	6.38	-9.0	0.81	9.36
	1620	24.36		200	19.06	860.0	6.38	-12.0	0.80	5.14
*	1625	24.36		200	19.09	860.0	6.39	-19.0	0.80	3.97
	1630	24.36		200	19.07	865.0	6.37	-6.0	0.85	56.3
	1635	24.36		200	18.89	858.0	6.38	-17.0	0.81	26.7
	1640	24.36		200	18.94	852.0	6.38	-21.0	0.79	15.2
	1645	24.36		200	18.93	849.0	6.38	-26.0	0.79	9.81
	1650	24.36		200	18.87	833.0	6.37	-29.0	0.78	6.23
*	1655	24.36		200	18.82	829.0	6.38	-32.0	0.78	4.50
	1700	24.36		200	18.74	831.0	6.40	-28.0	0.81	19.0
	1705	24.36		200	18.69	829.0	6.37	-30.0	0.79	12.3
	1710	24.36		200	18.65	826.0	6.37	-32.0	0.78	6.51
	1715	24.36		200	18.62	826.0	6.38	-33.0	0.78	4.28
*	1720	24.36		200	18.64	829.0	6.39	-31.0	0.78	12.5
	1725	24.36		200	18.61	827.0	6.38	-32.0	0.78	9.63
	1730	24.36		200	18.59	826.0	6.37	-33.0	0.78	6.27
	1735	24.36		200	18.62	826.0	6.37	-32.0	0.78	4.32
	1740	24.36		200	18.60	825.0	6.38	-32.0	0.78	4.01
	1745	24.36		200	18.59	825.0	6.37	-32.0	0.79	3.97
	1750	24.36		200	18.59	824.0	6.37	-33.0	0.78	4.03
	1755	24.36	↓	200	18.56	824.0	6.37	-32.0	0.78	3.99

Stabilization Criteria		3%	3%	± 0.1	± 10 mv	10%	10%

Sample ID: _____ Sample Date: _____ Sample Time: _____

Comments: * = Surged well

APPENDIX B 2024 KYGER CREEK STATION *CLOSED NORTH FLY ASH POND GROUNDWATER SEMI-ANNUAL DATA ANALYSIS*

OHIO VALLEY ELECTRIC CORPORATION
3932 U. S. Route 23
P. O. Box 468
Piketon, Ohio 45661
740-289-7200

WRITER'S DIRECT DIAL NO:
(740) 289-7259

December 6, 2024

Delivered Electronically

Mr. Marco Deshaies
Division of Surface Water
Ohio Environmental Protection Agency
Southeast District Office
2195 Front Street
Logan, Ohio 43138

Dear Mr. Deshaies:

Re: Ohio Valley Electric Corporation
Kyger Creek Station- Closed North Fly Ash Pond
Groundwater Semi-Annual Data Analysis

Attached are field data (Attachment I) and laboratory analytical data (Attachment II) for the fifty-first (51) set of semi-annual samples collected on October 22, 2024, from groundwater monitoring wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508 and KC-9509 at the Ohio Valley Electric Corporation's (OVEC's) Kyger Creek Station Closed North Fly Ash Pond (CNFAP).

In accordance with the groundwater sampling and analysis plan dated July 5, 1996, for the North Fly Ash Pond Closure Project (hereinafter referred to as "the Plan") and the statistical method notification letter dated October 20, 1999, the analytical results of the semi-annual samples were statistically compared to the background data for the four Groundwater Contamination Indicator Parameters (alkalinity, specific conductivity, sulfate, and total dissolved solids) to determine if any significant change in groundwater quality has occurred. The statistical evaluation was performed by using the tolerance interval method for intrawell comparison in accordance with the Plan and notification letter.

An upper tolerance limit was calculated for each of the four parameters at each well using the background data set with a coverage of 95% (i.e., contains 95% of all possible sample measurements) and a tolerance coefficient of 95% (i.e., 95% degree of confidence with which the interval reaches the specified coverage).

The upper tolerance limits were constructed in accordance with "Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance" (U.S. EPA, 1989), using a one-sided tolerance factor of K=3.188 for n=8 found in Table 5 of Appendix B.

A summary of the sampling results as well as the calculated upper tolerance limits can

be seen for each well on the spreadsheets included under Attachment III.

In accordance with the Plan, verbal communication of parameters exceeding upper tolerance limits has been provided to you via voicemail on December 5, 2024, detailing that the concentrations for the parameter alkalinity exceeded the upper tolerance limit at wells KC-9501, KC-9502, and KC-9507; the concentrations for the parameter sulfate exceeded the upper tolerance limit at wells KC-9501, KC-9502,KC-9507; the concentration for conductivity exceeding the upper tolerance limit at well KC-9507; and the concentrations for the parameter total dissolved solids exceeded the upper tolerance limit at wells KC-9501, KC-9502, and KC-9507.

If you have any questions, please email or contact me at (740) 289-7259.

Sincerely,

Jeremy Galloway
Environmental Specialist

JDG:zsh

Attachments

Attachment I

MONITORING WELL SAMPLING

	KC-9501	KC-9502	KC-9504	KC-9507	KC-9508	KC-9509
DATE	10/22/2024	10/22/2024	10/23/2024	10/23/2024	10/23/2024	10/23/2024
PUMP TIME	5	6	7	6	5	6
FLOW (ml/mi	740	800	780	690	600	1170
VOL. PUMPE	3700	4800	5460	4140	3000	7020
TIME	1254	1336	932	1242	1305	1334
TEMPERATU	15.9	17	16.4	17.7	19	18.6
COND. (uS/cn	999	793	1040	1973	938	954
pH(S.U.)	7.78	5.86	6.56	6.78	7.08	6.99
TIME	1255	1337	933	1243	1306	1335
TEMPERATU	15.1	17.5	16.1	17	18.5	17.6
COND. (uS/cn	1008	790	1036	1982	945	979
pH(S.U.)	7.27	5.93	6.57	6.84	7.06	6.82
TIME	1256	1338	934	1244	1307	1336
TEMPERATU	14.90	15.20	16.00	16.60	18.00	17.00
COND. (uS/cn	1016	788	1012	2000	955	983
pH(S.U.)	7.27	5.77	6.31	6.86	7.06	6.76
TIME	1257	1339	935	1245	1308	1337
TEMPERATU	15.00	15.20	16.00	16.50	17.80	16.80
COND. (uS/cn	1017	788	1004	2004	954	988
pH(S.U.)	7.27	5.77	6.30	6.86	7.05	6.73
TIME		1340	936	1296		1338
TEMPERATURE(C)		15.30	16.00	16.30		16.80
COND. (uS/cm)		792	996	2004		988
pH(S.U.)		5.76	6.25	6.89		6.73
TIME			937			
TEMPERATURE(C)			16			
COND. (uS/cm)			991			
pH(S.U.)			6.23			
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
TIME						
TEMPERATURE(C)						
COND. (uS/cm)						
pH(S.U.)						
SAMPLE TIM	858	910	932	940	1009	1021
APPEARANC	Clear	Clear	turbid	turbid	turbid	clear/black particles
ODOR	None	None	None	None	None	None
SAMPLER	HC/KP	HC/KP	HC/KP	HC/KP	HC/KP	HC/KP

WELL #	LEVEL READING
KC-9501	52.50
KC-9502	52.30
KC-9503	
KC-9504	49.70
KC-9505	
KC-9506	
KC-9507	49.70
KC-9508	24.40
KC-9509	24.80
KC-9510	
KC-9511	
KC-9512	
KC-9513	
KC-9514	

DATE	RIVER LEVEL
10/12/2024	539.2
10/13/2024	539.3
10/14/2024	538.9
10/15/2024	539.1
10/16/2024	539.1
10/17/2024	539.3
10/18/2024	539.3
10/19/2024	539.0
10/20/2024	539.4
10/21/2024	539.1
10/22/2024	539.2
10/23/2024	539.1

CALIBRATION	
PARAMETER	TIME
pH	0800
CONDUCT.	0800

Attachment II

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9501 **Customer Description:**
Lab Number: 243179-001 **Preparation: Dissolved**
Date Collected: 10/22/2024 12:58 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	25.0	mg/L	25	0.8	0.3		CRJ	10/31/2024 18:29	EPA 300.1 -1997, Rev. 1.0
Sulfate	249	mg/L	25	8	2		CRJ	10/31/2024 18:29	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	72.3	µg/L	5	1.0	0.3		ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Calcium	149	mg/L	50	3	1	M1	ELH	11/19/2024 23:53	EPA 200.8-1994, Rev. 5.4
Iron	0.72	mg/L	5	0.10	0.02		ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Magnesium	29.3	mg/L	50	5.0	0.5	M1	ELH	11/19/2024 23:53	EPA 200.8-1994, Rev. 5.4
Manganese	0.887	mg/L	5	0.0050	0.0004		ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4
Sodium	19.9	mg/L	5	1.0	0.1		ELH	11/12/2024 02:31	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	253	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	710	mg/L	1	50	20		BLB	10/28/2024 09:36	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9502 **Customer Description:**
Lab Number: 243179-002 **Preparation: Dissolved**
Date Collected: 10/22/2024 13:41 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	25.2	mg/L	10	0.3	0.1		CRJ	10/31/2024 19:02	EPA 300.1 -1997, Rev. 1.0
Sulfate	356	mg/L	10	3.0	0.6		CRJ	10/31/2024 19:02	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	24.4	µg/L	5	1.0	0.3		ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Calcium	84	mg/L	50	3	1		ELH	11/20/2024 00:09	EPA 200.8-1994, Rev. 5.4
Iron	0.12	mg/L	5	0.10	0.02		ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Magnesium	28.6	mg/L	50	5.0	0.5		ELH	11/20/2024 00:09	EPA 200.8-1994, Rev. 5.4
Manganese	14.0	mg/L	5	0.0050	0.0004		ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4
Sodium	22.2	mg/L	5	1.0	0.1		ELH	11/12/2024 02:41	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	31	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	640	mg/L	1	50	20		BLB	10/28/2024 09:36	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9504 **Customer Description:**
Lab Number: 243179-003 **Preparation: Dissolved**
Date Collected: 10/23/2024 09:38 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	98.1	mg/L	25	0.8	0.3		CRJ	10/31/2024 20:08	EPA 300.1-1997, Rev. 1.0
Sulfate	365	mg/L	25	8	2		CRJ	10/31/2024 20:08	EPA 300.1-1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	27.1	µg/L	5	1.0	0.3		ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Calcium	135	mg/L	50	3	1		ELH	11/20/2024 00:15	EPA 200.8-1994, Rev. 5.4
Iron	2.12	mg/L	5	0.10	0.02		ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Magnesium	13.2	mg/L	50	5.0	0.5		ELH	11/20/2024 00:15	EPA 200.8-1994, Rev. 5.4
Manganese	0.401	mg/L	5	0.0050	0.0004		ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 02:52	EPA 200.8-1994, Rev. 5.4
Sodium	54	mg/L	50	10	1		ELH	11/12/2024 02:47	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	25	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	780	mg/L	1	50	20		BLB	10/28/2024 09:42	SM 2540C-2015

AMERICAN ELECTRIC POWER

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Water Analysis Report

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9507 **Customer Description:**
Lab Number: 243179-004 **Preparation: Dissolved**
Date Collected: 10/23/2024 12:48 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	122	mg/L	25	0.8	0.3		CRJ	10/31/2024 20:41	EPA 300.1-1997, Rev. 1.0
Sulfate	963	mg/L	25	8	2		CRJ	10/31/2024 20:41	EPA 300.1-1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	29.1	µg/L	5	1.0	0.3		ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Calcium	311	mg/L	50	3	1		ELH	11/25/2024 19:42	EPA 200.8-1994, Rev. 5.4
Iron	2.44	mg/L	5	0.10	0.02		ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Magnesium	37.0	mg/L	50	5.0	0.5		ELH	11/25/2024 19:42	EPA 200.8-1994, Rev. 5.4
Manganese	3.69	mg/L	5	0.0050	0.0004		ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 03:03	EPA 200.8-1994, Rev. 5.4
Sodium	91	mg/L	50	10	1		ELH	11/12/2024 02:58	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	64	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	1770	mg/L	1	50	20		BLB	10/28/2024 09:42	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9508 **Customer Description:**
Lab Number: 243179-005 **Preparation: Dissolved**
Date Collected: 10/23/2024 13:09 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	31.5	mg/L	25	0.8	0.3		CRJ	10/31/2024 21:14	EPA 300.1 -1997, Rev. 1.0
Sulfate	229	mg/L	25	8	2		CRJ	10/31/2024 21:14	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	58.2	µg/L	5	1.0	0.3		ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Calcium	147	mg/L	50	3	1		ELH	11/25/2024 19:47	EPA 200.8-1994, Rev. 5.4
Iron	4.66	mg/L	5	0.10	0.02		ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Magnesium	22.2	mg/L	50	5.0	0.5		ELH	11/25/2024 19:47	EPA 200.8-1994, Rev. 5.4
Manganese	1.84	mg/L	5	0.0050	0.0004		ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4
Sodium	15.2	mg/L	5	1.0	0.1		ELH	11/12/2024 03:14	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	209	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	670	mg/L	1	50	20		BLB	10/28/2024 09:48	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: KC-9509 **Customer Description:**
Lab Number: 243179-006 **Preparation: Dissolved**
Date Collected: 10/23/2024 13:39 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	42.4	mg/L	25	0.8	0.3		CRJ	10/31/2024 21:47	EPA 300.1 -1997, Rev. 1.0
Sulfate	266	mg/L	25	8	2		CRJ	10/31/2024 21:47	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	58.8	µg/L	5	1.0	0.3		ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Calcium	123	mg/L	50	3	1		ELH	11/25/2024 19:53	EPA 200.8-1994, Rev. 5.4
Iron	5.48	mg/L	5	0.10	0.02		ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Lead	<0.3	µg/L	5	1.0	0.3	U1	ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Magnesium	22.2	mg/L	50	5.0	0.5		ELH	11/25/2024 19:53	EPA 200.8-1994, Rev. 5.4
Manganese	11.1	mg/L	5	0.0050	0.0004		ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Selenium	<0.2	µg/L	5	2.5	0.2	U1	ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4
Sodium	17.5	mg/L	5	1.0	0.1		ELH	11/12/2024 03:25	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	170	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	680	mg/L	1	50	20		BLB	10/28/2024 09:48	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: Trip Blank **Customer Description:**
Lab Number: 243179-007 **Preparation: Dissolved**
Date Collected: 10/22/2024 10:15 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	0.02	mg/L	2	0.06	0.02	J1	CRJ	10/31/2024 22:52	EPA 300.1-1997, Rev. 1.0
Sulfate	0.2	mg/L	2	0.6	0.1	J1	CRJ	10/31/2024 22:52	EPA 300.1-1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	0.11	µg/L	1	0.20	0.05	J1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Calcium	<0.02	mg/L	1	0.05	0.02	U1	ELH	11/25/2024 19:58	EPA 200.8-1994, Rev. 5.4
Iron	0.004	mg/L	1	0.020	0.003	J1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Lead	0.06	µg/L	1	0.20	0.05	J1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Magnesium	<0.009	mg/L	1	0.100	0.009	U1	ELH	11/25/2024 19:58	EPA 200.8-1994, Rev. 5.4
Manganese	0.00031	mg/L	1	0.00100	0.00007	J1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4
Sodium	<0.02	mg/L	1	0.20	0.02	U1	ELH	11/12/2024 04:42	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	<20	mg/L	1	50	20	U1	BLB	10/28/2024 09:54	SM 2540C-2015

Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Customer Sample ID: Duplicate **Customer Description:**
Lab Number: 243179-008 **Preparation: Dissolved**
Date Collected: 10/22/2024 12:58 EDT **Date Received: 10/25/2024 11:30 EDT**

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	24.9	mg/L	25	0.8	0.3		CRJ	10/31/2024 23:25	EPA 300.1 -1997, Rev. 1.0
Sulfate	249	mg/L	25	8	2		CRJ	10/31/2024 23:25	EPA 300.1 -1997, Rev. 1.0

Metals

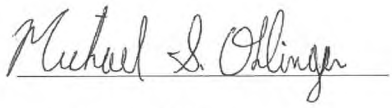
Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	70.6	µg/L	1	0.20	0.05		ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Calcium	149	mg/L	50	3	1	M1	ELH	11/25/2024 20:04	EPA 200.8-1994, Rev. 5.4
Iron	0.664	mg/L	1	0.020	0.003		ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Magnesium	30.1	mg/L	50	5.0	0.5	M1	ELH	11/25/2024 20:04	EPA 200.8-1994, Rev. 5.4
Manganese	0.836	mg/L	1	0.00100	0.00007	M1	ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	ELH	11/12/2024 04:52	EPA 200.8-1994, Rev. 5.4
Sodium	19	mg/L	50	10	1		ELH	11/12/2024 04:47	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	260	mg/L	1	20	5		MGK	10/28/2024 14:49	SM 2320B-2011
TDS, Filterable Residue	690	mg/L	1	50	20		BLB	10/28/2024 09:54	SM 2540C-2015

Report Verification

This report and the above data have been confirmed by the following analyst.



Michael Ohlinger, Chemist
Email: msohlinger@aep.com
Phone: 614-836-4184
Audinet: 8-210-4184

THIS TEST REPORT RELATES ONLY TO THE ITEMS TESTED AND SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF THE LABORATORY. ALL TEST RESULTS MEET ALL OF THE REQUIREMENTS OF THE ACCREDITING AUTHORITY, UNLESS OTHERWISE NOTED. ALL TIMES LISTED ARE IN THE EASTERN TIME ZONE.

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Water Analysis Report

Job ID: 243179 **Customer: Kyger Creek Plant** **Date Reported: 12/03/2024**

Data Qualifer Legend

M1 - The associated matrix spike (MS) or matrix spike duplicate (MSD) recovery was outside acceptance limits.
U1 - Not detected at or below method detection limit (MDL).
J1 - Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

Form COC-2
Rev. 3, 03/12/07

Chain-of-Custody Record and Analysis Request Form

243179

AEP AMERICAN ELECTRIC POWER

Location: (District, Region, Plant, etc.) OVEC - Kyger Creek Station

Program/Project: (If applicable)

Submitted/Requested By: H. E. Cleland

Phone/Fax/E-mail: Audinet 241-5323; hcleland@ovec.com

Sample(s) Origin: (NPDES Permit, Outfall No., etc.) OIB00005*QD; Monitoring Wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508, and KC-9509

Additional Information: (Site Description, Sample Type, etc.) Grab, Filtered through a .45 micron in-line filter

Analyses Requested: (Attach information if necessary) Alkalinity, Sulfate, TDS, Chloride

Results Turnaround: (Select One ☑) (Please date non-routine)

Routine	Priority	Rush	Date By:
X			

Weather Conditions Affecting Sampling:

Bottle or Analysis ID's	Preservatives and Filtering (Codes/Colors)	Sample Volume (mL)	Sampler(s) Initials	Flow	Select One Per Line: COMPOSITE Date/Time	COMPOSITE mL Added	GRAB Date/Time
KC-9501	B, Blue F, Pink	1000 mL	HC/KP				10/22/24 1258
KC-9502	B, Blue F, Pink	1000 ml	HC/KP				10/22/24 1341
KC-9504	B, Blue F, Pink	1000 ml	HC/KP				10/23/24 0938
KC-9507	B, Blue F, Pink	1000 ml	HC/KP				10/23/24 1248
KC-9508	B, Blue F, Pink	1000 ml	HC/KP				10/23/24 1309
KC-9509	B, Blue F, Pink	1000 ml	HC/KP				10/23/24 1339
Trip Blank	B, Blue F, Pink	1000 ml	HC				10/22/24 1145
Duplicate	B, Blue F, Pink	1000 ml	HC				10/22/24 1258

Units of Flow ☑: ☐ mgd ☐ gpm ☐ Other

Preservatives and Filtering

(Codes)	(Colors)
(A) None	{White}
(B) Cool, ≤ 6° C	{Blue}
(C) NaOH; pH > 12	{Yellow}
(D) HNO_3; pH < 2	{Red}
(E) 1:1 H_2SO_4; pH < 2	{Green}
(F) Filtered	{Pink}
(G) 1:1 HCl; pH < 2	{Gray}
(H) Zinc Acetate	{Black}
(I) Other	

Samplers Initials Code

Initials	Print Sampler Name(s)
HC	Henry Cleland
KP	Kristen Pelfrey

Relinquished By: (Sampling supervisor or personnel) Kristen Pelfrey **Date/Time:** 10/25/24 10:30

Transportation: ☑ ☐ Employee ☒ AEP Courier ☐ UPS ☐ Fed-Ex ☐ Other (Name):

Received by Transporter: **Date/Time:**

Relinquished by Transporter: **Date/Time:**

Received By: (Testing laboratory receiving personnel) Michael Ohlinger **Date/Time:** 10/25/24 ~~10/2~~ 11:30

Receipt Notes:

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, Ohio 43125
Phone: 8-210-4211 or 614-836-4211
Fax: 8-210-4168 or 614-836-4168

A PROPERLY FILLED OUT COPY OF THIS FORM MUST ACCOMPANY EACH SET OF SAMPLES SENT TO THE WATER TESTING LABORATORY.
ALSO, A TAG ON THE SAMPLE OR CONTAINER IS NECESSARY FOR THE SAMPLE(S) TO BE PROPERLY PROCESSED.
FEDERAL REGULATIONS REQUIRE THAT THIS INFORMATION BE RETAINED FOR AT LEAST THREE YEARS.
LABORATORY DATA FOR THESE SAMPLES SHOULD BE FILED WITH A COPY OF THIS CHAIN-OF-CUSTODY RECORD.

Form COC-2
Rev 3, 03/12/07

Chain-of-Custody Record and Analysis Request Form

AMERICAN ELECTRIC POWER

Location: (District, Region, Plant, etc.) OVEC - Kyger Creek Station

Program/Project: (If applicable)

Submitted/Requested By: H. E. Cleland

Phone/Fax/E-mail: Audinet 241-5323; hcleland@ovec.com

Sample(s) Origin: (NPDES Permit, Outfall No., etc.) OIB00005*QD; Monitoring Wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508, and KC-9509

Additional Information: (Site Description, Sample Type, etc.) Grab, Filtered through a .45 micron in-line filter

Analyses Requested: (Attach information if necessary) Barium, Calcium, Iron, Lead, Magnesium, Manganese, Selenium, Sodium

Results Turnaround: (Select One ☑) (Please date non-routine)

Routine	Priority	Rush	Date By:
X			

Weather Conditions Affecting Sampling:

Bottle or Analysis ID's	Preservatives and Filtering (Codes/Colors)	Sample Volume (mL)	Sampler(s) Initials	Flow	Select One Per Line: COMPOSITE Date/Time	COMPOSITE mL Added	GRAB Date/Time
KC-9501	D, Red F, Pink	1000 mL	HC/KP				10/22/24 1258
KC-9502	D, Red F, Pink	1000 ml	HC/KP				10/22/24 1341
KC-9504	D, Red F, Pink	1000 ml	HC/KP				10/23/24 0938
KC-9507	D, Red F, Pink	1000 ml	HC/KP				10/23/24 1248
KC-9508	D, Red F, Pink	1000 ml	HC/KP				10/23/24 1309
KC-9509	D, Red F, Pink	1000 ml	HC/KP				10/23/24 1339
Trip Blank	D, Red F, Pink	1000 ml	HC				10/22/24 1015
Duplicate	D, Red F, Pink	1000 ml	HC				10/22/24 1258

Units of Flow ☑: ☐ mgd ☐ gpm ☐ Other

Preservatives and Filtering

(Codes)	(Colors)
(A) None	{White}
(B) Cool, ≤ 6° C	{Blue}
(C) NaOH; pH > 12	{Yellow}
(D) HNO_3; pH < 2	{Red}
(E) 1:1 H_2SO_4; pH < 2	{Green}
(F) Filtered	{Pink}
(G) 1:1 HCl; pH < 2	{Gray}
(H) Zinc Acetate	{Black}
(I) Other	

Samplers Initials Code

Initials	Print Sampler Name(s)
HC	Henry Cleland
KP	Kristen Palfrey

Relinquished By: (Sampling supervisor or personnel) Kristen Palfrey **Date/Time:** 10/25/24 10:30

Transportation: ☑ ☐ Employee ☒ AEP Courier ☐ UPS ☐ Fed-Ex ☐ Other (Name):

Received by Transporter: **Date/Time:**

Relinquished by Transporter: **Date/Time:**

Received By: (Testing laboratory receiving personnel) Rachael Ohley **Date/Time:** 10/25/24 1720

Receipt Notes:

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, Ohio 43125
Phone: 8-210-4211 or 614-836-4211
Fax: 8-210-4168 or 614-836-4168

A PROPERLY FILLED OUT COPY OF THIS FORM MUST ACCOMPANY EACH SET OF SAMPLES SENT TO THE WATER TESTING LABORATORY.
ALSO, A TAG ON THE SAMPLE OR CONTAINER IS NECESSARY FOR THE SAMPLE(S) TO BE PROPERLY PROCESSED.
FEDERAL REGULATIONS REQUIRE THAT THIS INFORMATION BE RETAINED FOR AT LEAST THREE YEARS.
LABORATORY DATA FOR THESE SAMPLES SHOULD BE FILED WITH A COPY OF THIS CHAIN-OF-CUSTODY RECORD.

WATER & WASTE SAMPLE RECEIPT FORM

Form SOP-7102 Sample Receipt Form Rev.9, 10/07/24

Package Type

(Cooler) Box Bag Envelope

Delivery Type

UPS FedEX USPS

Other Courier

Plant/Customer Kyger Creek **Total # of Containers RECEIVED in Job:** 16

Opened By MSJ

Date/Time 10/25/24 11:30

Were all temperatures within 0-6°C? (Y) / N or N/A (Temps) **Initial:** MSJ on (ice) / no ice

If No, specify each deviation(s) on back of form. (IR Gun Ser# 240093386, *Expir.* 01/31/2026)

Was container in good condition? (Y) / N Comments _____

Was Chain of Custody received? (Y) / N Comments _____

Requested turnaround: Routine If **RUSH**, who was notified? _____

pH (15 min) Cr^{+6} (pres) (24 hr) NO_2 or NO_3 (48 hr) *ortho*-PO_4 (48 hr) Hg-diss (pres) (48 hr)

Was pH checked & Color Coding done? (Y) / N or N/A (pH) **Initial & Date:** MSJ 10/25/24

pH paper mfr LabRat ,PN 4801 ,LOT# X000RWDG21 ,EXPIR DATE 11/30/2025

*** Note changes to pH paper in comments below***

Was Add'l Preservative needed? Y / (N) If Yes: By whom & when: _____ (See Prep Book)

(Dissolved) Is sample filtration requested? Y / (N) Comments _____ (See Prep Book)

Was COC filled out properly? (Y) / N Comments _____

Were samples labeled properly? (Y) / N Comments _____

Were correct containers used? (Y) / N Comments _____

Was the customer contacted? If Yes: Person Contacted: _____

Initial & Date & Time : _____

Lab ID# 243179

Comments: _____

Logged by MSJ

(Record Test Count on back of form)

Total # of Containers LISTED on COC: 16

WATER & WASTE SAMPLE RECEIPT FORM (CONT)

REMINDER: Document the pertinent sample integrity information and deviations in sample receipt (as noted above) in the Sample or Job "Comments" field in the LIMS. **Comments below**:
i.e. Mark "LF" if needs Lab filtered, Temperature or Preservative deviation, Preserved upon arrival , etc.

JOB # : 243179 **Initial/ Date:** MSD 10/25/24 **Peer Review Initial/ Date:** KMB 10/29/24

Login Test Count from COC	LIMS Sample ID (or COC Sample Name)	Comments /Nonconformities	Peer Review Test Count from COC
17	243179-001		17
	-002		
	-003		
	-004		
	-005		
	-006		
	-007		
	-008		

Review for Received Jobs:

Job # 243179 Peer Review Initials & Date KMD 10/29/24

Mark Yes or No. *Mark "corrected by" with you Initials & Date when making corrections.*

STEP 1: Create Login Report and Compare to COC

1. Open LIMS, go to "Job Review". Select job number that is being reviewed.
2. Right click on Job, go to "Reports", select "Login Report";
3. Select "Export Document" When "PDF Export Options" appears, select "OK". Save "Login Report" to H:Internal/Login Reports/**Not Sent Login Reports**
4. Save with the following format:
    a. "Job Number" "Location Abbreviation" "General Sample Info" "Collection Date" Login Report
    b. Example: 241496 CK TRS & WWTP 5-(6,7)-24 Login Report
    c. Close the login report preview screen.

STEP 2: Reviewing and Receiving Jobs

Y / N **1. (For each sample) Does Count of Tests from COC match the Count of Tests on Login Report?**
- a. Especially for Total & Dissolved
- b. COUNT Tests on each Sample from COC & record on back of Sample Receipt Form.
- c. Compare Your Count to the Login Report (& to Test Count recorded at Login)

From Job Tab

Y / N **2. Is location correct?**
- a. Plant name listed
- b. Or correct Region in the Location field (i.e. wastes received from REC)

Y / N 3. **Is the Customer listed appropriately?** (Blank except for the following list.)
- i. Mitchell Water
- ii. Amos Water vs Amos Wells
- iii. Mountaineer Water
- iv. Welsh Water
- v. (Or in case of Wastes from REC – is Customer Name listed?)

Y / N **4. Is the COC signed and dated with the date/time received?**
- a. Does the Job "Date Received" match the COC?

Y / N **5. Is the "Due Date" in LIMS (or "Report Due" on Login Report) correct?**
- a. If "Date By" on COC is marked with a date, this date takes precedence.
- b. 28 days for wells marked "routine"
- c. 14 days for non-wells marked "routine"
- d. Rush is 3 business days.
- e. Priority is 1 week.

From Samples Tab

Y / N **6. Is Collection Date/Time entered correctly?**
- a. Eastern Plants should all match COC
- b. Western Plants should be 1 hour later in LIMS vs. COC

Y / N **7. Does "Customer Sample Name" match COC?**

a. Sampling Point (alias) (if available) similar to "Customer Sample Name"

Y / N **8. Do all of the "Date Results Required" on the <u>Samples</u> match the <u>Job</u>?**

a. If subsample due dates are incorrect,

i. Right click on job
ii. Go to "Workflow Login"
iii. Select "Modify"
iv. Go to "Sample Data" Tab
v. Click on first sample "Date Results Required" – make changes
vi. Hit Right Arrow Button at top right of window
vii. Select "Ok"

Y / N **9. Is the project selected and correct in LIMS?**

a. Either "CCR" for wells or "Other" for all other project types (or "Vault Manhole" for specific TCLP samples)

From Test Tab

Check the following items and verify they are correct. If incorrect, then check with Login Staff:

Y / N **10. Do tests listed on COC match what has been logged in LIMS?**

i. If Clinch or Glen Lyn (Va only) ensure that secondary tests are selected.
ii. <u>Except</u> Glen Lyn's "Addair Run"/"Bluestone Facility" which is in WV and should be primary tests.

Y / N **11. Is the "Sample Receipt Form" filled out completely and correctly?**

a. Based on COC ("dissolved", "request Filtration"), Did any samples require filtration ?

__a__ And IF SO was this marked YES on the Sample Receipt Form ?

corrected

<u>STEP 3: "Receive Job" in the LIMS</u>

When STEP 2 REVIEW is complete,

- Initial and Date the "Peer Reviewed By" line on top of <u>this</u> form.
- Go to the "Job" tab in "Job Review". Select right click on job number. Go to "Process", select "Receive Job".

<u>STEP 4: Re- create Login Report and Scan COC packet</u>

Reminder: If a change was made to the login, re-create (overwrite original) login report per STEP 1.

1. Add Peer Review form to COC packet (COC and Sample receipt form)
2. Scan full COC packet (COC, sample receipt form, login peer review checklist) and save to H:Internal/COC/WWAG/**Not Sent COC**
3. Save with the following format:
   a. COC "Job Number" "Location Abbreviation
   b. Example: COC 241496 CK
4. Place paper COC packet in folder with label and deliver to Chemist – who will email Login Report and COC to customer.

Water – Blue Solids – Pink Waste - Green

Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Project Description

Kyger Creek

For:

Kristen Pelfrey

Ohio Valley Electric Co.

Kyger Creek Station 5758 St Rt 7N

Cheshire, OH 45620

Tiffany Bailey

Customer Relationship Coordinator

Tiffany Bailey

Friday, November 15, 2024

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories Inc., - Marietta, OH. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Ohio Valley Electric Co.

Kristen Pelfrey
Kyger Creek Station 5758 St Rt 7N
Cheshire, OH 45620

Project Name: Kyger Creek

Project / PO Number: N/A
Received: 10/24/2024
Reported: 11/15/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
KC-9501	M4J1584-01	Wastewater	Grab		10/22/24 12:00	10/24/24 10:25
KC-9502	M4J1584-02	Wastewater	Grab		10/22/24 13:41	10/24/24 10:25
KC-9504	M4J1584-03	Wastewater	Grab		10/22/24 09:38	10/24/24 10:25
KC-9507	M4J1584-04	Wastewater	Grab		10/22/24 12:48	10/24/24 10:25
KC-9508	M4J1584-05	Wastewater	Grab		10/22/24 13:09	10/24/24 10:25
KC-9509	M4J1584-06	Wastewater	Grab		10/22/24 13:39	10/24/24 10:25

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Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Analytical Testing Parameters

Client Sample ID: KC-9501
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-01 **Collection Date:** 10/22/2024 12:00

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	0.2305	+/-1.19	1.08	pCi/L		10/30/24 0900	11/05/24 1600	AK
Gross Beta	1.056	+/-0.661	0.578	pCi/L		10/30/24 0900	11/05/24 1600	AK

Client Sample ID: KC-9502
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-02 **Collection Date:** 10/22/2024 13:41

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	-0.04086	+/-1.02	0.935	pCi/L		10/30/24 0900	11/05/24 1600	AK
Gross Beta	0.1656	+/-0.683	0.623	pCi/L		10/30/24 0900	11/05/24 1600	AK

Client Sample ID: KC-9504
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-03 **Collection Date:** 10/22/2024 9:38

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	1.083	+/-1.19	1.03	pCi/L		10/30/24 0900	11/06/24 1600	AK
Gross Beta	1.067	+/-0.671	0.588	pCi/L		10/30/24 0900	11/06/24 1600	AK

Client Sample ID: KC-9507
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-04 **Collection Date:** 10/22/2024 12:48

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	1.068	+/-1.87	1.65	pCi/L		10/30/24 0900	11/06/24 1600	AK
Gross Beta	2.030	+/-0.73	0.614	pCi/L		10/30/24 0900	11/06/24 1600	AK

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CERTIFICATE OF ANALYSIS

M4J1584

Client Sample ID: KC-9508
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-05 **Collection Date:** 10/22/2024 13:09

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	0.6156	+/-0.903	0.791	pCi/L		10/30/24 0900	11/06/24 1600	AK
Gross Beta	0.5484	+/-0.633	0.567	pCi/L		10/30/24 0900	11/06/24 1600	AK

Client Sample ID: KC-9509
Sample Matrix: Wastewater
Lab Sample ID: M4J1584-06 **Collection Date:** 10/22/2024 13:39

Analyses Performed by: Microbac Laboratories, Inc., Northbrook

Radiochemistry	Result	UNC	MDA	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 900.0								
Gross Alpha	1.604	+/-1.05	0.867	pCi/L		10/30/24 0900	11/06/24 1600	AK
Gross Beta	1.465	+/-0.62	0.526	pCi/L		10/30/24 0900	11/06/24 1600	AK

Definitions

MDA: Minimum Detectable Activity, Sample Specific - Concentration which can be counted with a precision +/- 100% at the 95% confidence level (1.96*sigma where sigma is the standard deviation of the net counting rate of the sample).
pCi/L: Picocuries per Liter
UNC: The uncertainty listed is the combined standard uncertainty with an expanded uncertainty of 2*sigma, which provides a level of confidence of approximately 95%.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 7.0°C

Cooler Inspection Checklist

Ice Present or not required?	Yes	Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes	Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes	Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes	Sample type identified on COC?	Yes
Correct type of Containers Received	Yes	Correct number of containers listed on COC?	Yes
Containers Intact?	Yes	COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes	Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes	Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes	Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes		

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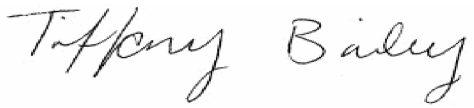
Microbac Laboratories Inc., - Marietta, OH

CERTIFICATE OF ANALYSIS

M4J1584

Report Comments

Reviewed and Approved By:



Tiffany Bailey
Customer Relationship Coordinator
Reported: 11/15/2024 15:37

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

MICROBAC Return to: 158 Starlite Drive Marietta Ohio 45750

CHAIN OF CUSTODY RECORD

Number

Instructions on back

Lab Report Address		Invoice Address		Turnaround Time	TO BE COMPLETED BY MICROBAC
Client Name:	Microbac	Client Name:	Same	[x] Routine (5 to 7 business days) [ ] RUSH* (notify lab)	Temperature Upon Receipt (°C) 7.0 Therm ID N
Address:	158 Starlite Drive	Address:			Holding Time
City, State, Zip:	Marietta, OH 45750	City, State, Zip:		(needed by)	Samples Received on Ice? Yes No N/A
Contact:	Alicia Walker	Contact:		Report Type	Custody Seals Intact? Yes No N/A
Telephone No.:	740-373-4071	Telephone No.:		[ ]Results Only [ ]Level 1 [ ]Level 2 [ ]Level3 [ ]Level 4 [ ]EDD	

Send Report via: [ ] Mail [ ] Fax [x] e-mail (address) hcleland@ovec.com Send Invoice via: [ ] Mail [ ] Fax [X] e-mail (address)

Project: KC Monitoring Well Sampling Location: Cheshire, OH PO No.: Compliance Monitoring? [X] Yes [ ] No ( ) Agency/Program

Sampled by (PRINT): Henry Cleland/Kristen Pelfrey Sampler Signature: Sampler Phone No.: 740-648-8484

M 4 J 1 5 8 4

Ohio Valley Electric Co.
Rec'd: 10/24/2024 10:25
By: Erin Porter Temp: 7 (Signature)

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Grab Analysis	Grab Bottles	Additional Notes
	KC-9501	10/22/24	1258	2	WW	G	1	1	1	Need one gallon containers
	KC-9502	10/22/24	1341	2	WW	G	1	1	1	Need one gallon containers
	KC-9504	10/23/24	0938	2	WW	G	1	1	1	Need one gallon containers
	KC-9507	10/23/24	1248	2	WW	G	1	1	1	Need one gallon containers
	KC-9508	10/23/24	1309	2	WW	G	1	1	1	Need one gallon containers
	KC-9509	10/23/24	1339	2	WW	G	1	1	1	Need one gallon containers

Possible Hazard Identification [ ] Hazardous [X] Non-Hazardous [ ] Radioactive Sample Disposition [ ] Dispose as appropriate [ ] Return [ ] Archive

Comments

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
	10/24/24 1025		
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
			10-24-24 1025

rev.12/26/2017

Sample Acceptance Policy for Environmental Chemistry and Microbiology

MICROBAC®

Work Order # M45584

COOLER TEMP >6° C LOG

SAMPLE ID	Bottle 1 °C	Bottle 2 °C	Bottle 3 °C	Bottle 4 °C	Bottle 5 °C	Bottle 6 °C

CW 10-24-24

pH Lot # NVA

pH Exceptions

SAMPLE ID	Bottle 1	Bottle 2	Bottle 3	Bottle 4	Bottle 5	Bottle 6

CW 10-24-24

CONSERVATIVE
EXCEPTIONS
X NONE
AS NOTED
CW 10-24-24

Document Control # 1957
Last 04-10-2019

Issued to: Document Master File

Attachment III

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9501
SAMPLING RESULTS

BACKGROUND	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magnesium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field mhos/cm	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
	1	10/14/97	169	63	118	43	2.3	4.1	0.36	<2	20.7	0.78	545	<5	22.5	196	509	15.59	7.18	51.7	539
	2	01/06/98	179	65	108	41	5.5	6.9	0.3	<2	18.8	0.57	539	<5	21.5	200	585	15.42	7.1	51.4	540
	3	05/22/98	181	68	114	40	1.8	4	0.68	<2	21	0.64	576	<5	22.4	194	815	16.06	7.12	50.9	539
	4	07/21/98	168	63	121	40	2	3	0.61	<2	21.2	0.72	564	<5	23.6	203	760	16.46	7.11	51	539
	5	10/21/98	161	61	115	41	3.7	4	0.6	<2	20.4	0.61	548	<5	21.1	211	761	15.86	6.83	51.7	539
	6	01/13/99	171	64	114	40	1.5	5.1	0.59	<2	21.2	0.56	547	<5	21.8	208	760	15.25	6.71	51.7	540
	7	04/21/99	176	61	109	39	6	5.9	0.54	<2	20.5	0.52	549	<5	20.9	201	811	15.76	6.58	50.7	541
	8	07/27/99	167	64	117	31	5	3.6	0.55	<2	21.3	0.56	562	<5	21.5	207	813	17.92	6.64	51.4	540
	95% Tol.	Upper	193	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	593	N/A	N/A	221	1095	N/A	N/A	N/A	N/A
	95% Tol.	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1	10/13/99	160	61	117	41	5	6.6	0.56	<2	21.8	0.49	538	<5	21.8	222	818	18.35	6.8	52	539
	2	05/04/00	179	67	122	46	2.6	3.2	0.59	<2	21.6	0.66	578	<5	23.2	196	880	16.47	6.2	51.5	538
	3	10/19/00	138	65	116	39	1.3	3.2	0.59	<2	21.5	0.52	568	<5	22	237	818	15.92	6.27	52.25	539
	4	04/25/01	152	–	–	–	–	–	–	–	–	–	600	–	–	214	864	16.37	6.34	51.83	539
	5	10/04/01	149	61	119	–	6	6.2	0.65	<2	22.3	0.53	571	<5	21.6	219	822	16.48	7.26	52.68	538
	6	06/05/02	162	–	–	36	–	–	–	–	–	–	620	–	–	234	814	16.35	7.24	51.50	538
	7	10/31/02	152	71	117	43	4.5	5.3	0.45	<2	20.9	0.63	565	<5	24.8	237	798	15.38	7.30	52.39	538
	8	04/08/03	133	–	–	–	–	–	–	–	–	–	570	–	–	258	826	15.29	7.34	49.50	541
	9	10/09/03	137	69	115	38	0.8	3.4	0.39	<2	20.1	0.61	552	<5	24	235	784	15.24	7.51	52.50	538
	10	05/05/04	153	–	–	–	–	–	–	–	–	–	563	–	–	214	791	15.16	7.43	50.55	540
	11	10/21/04	136	66	118	30	5	5.9	0.2	<2	18.1	0.65	529	<5	23.4	204	791	15.40	7.37	52.45	540
	12	04/26/05	140	–	–	–	–	–	–	–	–	–	517	–	–	207	803	15.20	7.27	49.00	542
	13	10/19/05	132	51	96.6	34	7.9	7.3	0.03	<2	16	0.37	732	<5	25.6	208	759	15.50	7.31	52.00	539
	14	04/18/06	128	–	–	–	–	–	–	–	–	–	489	–	–	198	764	15.40	7.26	51.84	539
	15	10/19/06	126	55	101	38	4.3	4.1	0.09	<10	15.8	0.57	492	<20	19.9	207	734	15.60	7.30	50.40	541
	16	04/27/07	127	–	–	–	–	–	–	–	–	–	541	–	–	192	840	14.60	7.41	50.14	539
	17	11/05/07	143	64	108	–	4.6	2.8	0.03	<5	15.8	0.69	566	<0.5	27.4	193	832	14.60	7.00	51.66	539
	18	04/22/08	160	–	–	–	–	–	–	–	–	–	591	–	–	186	513	14.62	5.87	52.80	539
	19	11/04/08	132	76	116	30.9	1.5	1.09	0.04	<0.05	19.4	0.89	519	<0.5	24.6	192	506	15.10	6.94	52.29	539
	20	04/23/09	132	–	–	30.3	–	–	–	–	–	–	500	–	–	192	762	13.78	7.21	51.22	539
	21	10/21/09	151	55	90.2	31.7	7.2	6.1	0.02	<10	15.2	0.36	499	<0.5	21.1	189	740	16.20	7.33	52.00	539
	22	04/20/10	151	–	–	–	–	–	–	–	–	–	500	–	–	189	759	14.90	7.50	51.85	539
	23	10/15/10	158	63	102	31.5	2.9	3.8	0.17	<10	17.8	0.61	495	<0.5	22.6	195	702	14.80	7.33	52.30	539
	24	06/07/11	164	–	–	–	–	–	–	–	–	–	513	–	–	185	748	14.80	6.72	50.50	539
	25	10/19/11	188	56	94.8	24.6	5.3	7.5	0.38	<10	18.3	0.44	484	<0.5	20.6	168	709	14.00	7.31	51.50	539
	26	04/25/12	204	–	–	20	–	–	–	–	–	–	503	–	–	147	684	14.10	7.35	51.62	539
	27	10/09/12	247	60.7	110	22.1	4.7	2.9	0.39	0.04	21	0.48	492	<0.1	21.5	146	739	13.60	7.08	52.30	539
	28	04/24/13	220	–	–	18.2	–	–	–	–	–	–	508	–	–	128	754	14.60	7.44	52.10	538
	29	10/24/13	218	63.3	114	22.7	1.9	1.2	0.34	0.06	19.9	0.53	508	<0.2	19.9	150	732	14.20	7.06	52.10	539
	30	04/17/14	228	–	–	–	–	–	–	–	–	–	531	–	–	155	781	14.30	7.45	51.10	540
	31	10/28/14	234	67	112	20.6	2.9	4.1	0.47	0.01	21.5	0.53	513	<0.1	20	160	835	14.70	7.03	52.20	538
	32	05/21/15	232	–	–	22.4	–	–	–	–	–	–	522	–	–	172	852	14.40	7.27	51.00	538
	33	10/29/15	235	68.5	126	20.7	4.9	7	0.53	0.02	24.8	0.61	558	<0.03	21	173	845	14.50	7.14	51.40	539
	34	04/21/16	252	–	–	22.9	–	–	–	–	–	–	528	–	–	173	789	15.00	7.27	51.70	539
	35	10/13/16	260	68.6	122	20.9	14.4	4.9	0.43	0.01	23.8	0.57	518	<0.03	20.2	160	887	15.00	7.16	52.90	539
	36	04/27/17	254	-	-	23.5	-	-	-	-	-	-	534	-	-	173	854	14.90	6.86	50.70	540
	37	10/17/17	259	76.4	124	22.2	2.6	8.3	0.56	0.01	24.1	0.64	569	<0.03	19.3	202	909	15.50	7.16	52.10	539
	38	06/06/18	256	-	-	23.7	-	-	-	-	-	-	591	-	-	206	894	14.90	7.18	50.90	540
	39	10/18/18	270	70.7	121	23.4	3	0	0.54	<0.02	23.3	0.59	578	<0.03	17.9	193	977	14.80	7.16	51.00	540
	40	04/22/19	247	-	–	23.8	-	-	-	-	-	-	603	-	-	199	959	14.50	7.11	48.40	541
	41	10/29/19	277	73.3	118	24	1.47	2.54	0.68	<0.05	26	0.49	578	<0.03	19.4	189	856	15.00	6.96	52.30	541
	42	06/12/20	261	-	-	26.2	-	-	-	-	-	-	683	-	-	242	927	15.60	7.23	51.00	536
	43	10/23/20	246	83.4	140	24.3	0.75	0.89	2.4	<0.05	28	0.7	763	<0.03	18.2	232	939	14.30	7.27	52.30	539
	44	04/28/21	244	-	-	26.5	-	-	-	-	-	-	651	-	-	242	997	14.60	7.43	51.70	539
	45	10/19/22	266	80.7	142	26	0.2	1.12	0.79	<0.03	28.4	0.75	660	<0.5	20	242	1007	15.7	7.13	52.6	539
	46	04/22/22	259	-	-	25.9	-	-	-	-	-	-	660	-	-	266	1016	14.7	7.23	50.2	541
	47	10/25/22	250	82.8	129	25.2	0.74	0	0.73	<0.05	27.1	0.73	670	<0.09	18.7	260	946	14.8	7.17	52.9	537
	48	05/24/23	232	-	-	25.2	-	-	-	-	-	-	680	-	-	263	614	14.6	7.29	52.3	537
	49	10/19/23	227	82.7	146	26.1	1.5	1.13	0.78	<0.05	29.3	0.83	690	<0.04	20.1	278	916	14.6	7.24	52.6	539
	50	05/14/24	253	-	-	25.6	-	-	-	-	-	-	710	-	-	261	1022	14.6	7.25	51.2	539
	51	10/22/24	250	72.3	149	25	0.23	1.06	0.72	<0.3	29.3	0.89	710	<0.2	19.9	249	1017	15.00	7.27	52.5	539

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9502
SAMPLING RESULTS

	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magnesium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field µmhos/cm	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
BACKGROUND	1	10/14/97	19	19	59.1	38	1	2.7	3.79	<2	20.9	16.5	464	<5	24.1	233	409	15.68	5.69	51.65	538.6
	2	01/06/98	17	21	56.1	40	4.8	12.8	5.37	3	18.2	11.6	449	<5	24.8	232	455	15.6	5.69	51.37	539.5
	3	05/22/98	19	24	55.6	40	<1	2.7	6.67	<2	19	12.6	494	<5	24.9	238	623	15.93	5.7	50.81	538.8
	4	07/21/98	17	19	59.4	40	<1	2.1	6.85	3	20	13.4	463	<5	25	236	604	16.4	5.48	50.9	539
	5	10/21/98	18	18	58.6	40	<1	2.1	5.54	<2	19	13.3	474	<5	23	232	606	15.91	5.49	51.62	539
	6	01/13/99	15	23	54.3	42	<1	1.5	6.86	2	18.7	11.4	470	<5	23.8	239	594	15.62	5.23	51.66	539.5
	7	04/21/99	15	16	53.5	34	<1	1.7	2.11	3	18	13.1	478	<5	22.1	236	633	16.25	5.24	50.65	541
	8	07/27/99	16	19	58.6	31	1.7	2.3	3.38	4	19.2	14.6	510	<5	24.1	220	634	17.89	5.36	51.36	540
		95% Tol. Upper	22	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	536	N/A	N/A	252	847	N/A	N/A	N/A	N/A
		95% Tol. Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SEMIANNUAL	1	10/13/99	18	16	59.7	45	0	5.8	1.64	<2	19.5	16.2	461	<5	23.3	239	640	16.96	5.49	51.9	538.5
	2	05/04/00	18	19	58.7	58	0.4	1.7	3.85	2	19.9	14.8	509	<5	25.3	251	687	16.46	5.19	51.46	538
	3	10/19/00	20	19	58.4	31	1.1	1.8	4.68	<2	19.7	13.9	509	<5	24.2	241	656	16.02	5.40	52.18	538.8
	4	04/25/01	18	–	–	–	--	–	--	--	–	--	546	--	–	240	593	15.86	5.89	51.67	539
	5	10/04/01	22	18	61.3	–	0	1.8	3.4	2	20	15	483	<5	22.9	237	658	16.29	5.90	52.61	538
	6	06/05/02	22	–	–	40	--	–	--	--	–	--	612	--	–	247	640	15.73	5.81	51.46	538
	7	10/31/02	21	20	61.5	39	0.8	2.1	4.44	<2	20.4	14.4	492	<5	24.5	248	641	15.39	5.91	52.31	538.4
	8	04/08/03	15	–	–	–	--	–	--	--	–	--	513	--	–	275	682	15.32	5.63	49.45	540.7
	9	10/09/03	20	23	62.1	42	0.8	1.1	4.23	<2	21.1	14.8	486	<5	23.2	250	651	15.41	6.22	52.48	538
	10	05/05/04	19	–	–	–	--	–	--	--	–	--	538	--	–	266	685	15.16	6.04	50.50	540
	11	10/21/04	23	19	69.6	33	0.6	0	12.2	<2	21.3	12.1	516	<5	24.9	279	726	15.40	5.86	52.00	540
	12	04/26/05	12	–	–	–	--	–	--	--	–	--	527	--	–	278	703	15.10	5.54	49.40	542
	13	1019/05	16	15	59.7	32	1.2	2.9	7.28	5	19.7	13	522	<5	27.8	260	693	15.80	5.67	51.94	539
	14	04/18/06	18	–	–	–	--	–	--	--	–	--	483	--	–	274	693	15.20	5.61	51.60	539
	15	10/19/06	15	16	56.3	32.9	1.7	3.2	7.18	<10	17.7	11.6	481	<20	19.2	278	694	15.40	5.57	50.30	541
	16	04/27/07	19	–	–	–	--	–	--	--	–	--	520	--	–	276	738	14.40	5.77	50.12	539
	17	11/05/07	18	7	64.5	–	1.1	0	6.26	<5	19.8	13	538	<0.5	25.3	259	716	14.60	5.81	51.57	539
	18	04/22/08	28	–	–	–	--	–	--	--	–	--	527	--	–	244	641	14.86	7.47	52.76	539
	19	11/04/08	26	<10	62.8	23.4	0.165	0.77	4.36	0.14	19.9	13.9	484	<0.5	24	226	438	15.12	5.91	52.18	539
	20	04/23/09	28	–	–	24.8	--	–	--	--	–	--	469	--	–	240	687	13.77	6.55	51.16	539
	21	10/21/09	27	<20	52.9	26.6	1.1	1.6	4.88	<10	17.3	11.7	484	<0.5	22.5	248	681	15.20	5.75	51.80	538.7
	22	04/20/10	31.5	–	–	–	--	–	--	--	–	--	487	--	–	247	708	14.80	5.96	51.68	539
	23	10/15/10	29.3	<20	60.1	32.2	0	2	5.74	<10	20.2	13.4	470	<0.5	23.9	300	627	14.70	5.91	52.20	539
	24	06/07/11	31.9	–	–	–	--	–	--	--	–	--	471	--	–	249	659	14.60	6.83	50.37	538.8
	25	10/19/11	32.8	<20	55.6	28.3	1.5	6	4.48	<10	18.2	11.8	478	<0.5	22.8	257	652	13.90	5.79	51.40	538.9
	26	04/25/12	31	–	–	23.9	--	–	--	--	–	--	478	--	–	240	616	14.00	5.55	51.58	538.7
	27	10/09/12	26	19	62.7	26.7	0.7	1.5	3.54	0.035	20.1	14.3	462	<0.1	24.7	228	646	13.50	5.03	52.12	538.5
	28	04/24/13	42	–	–	22.8	--	–	--	--	–	--	458	--	–	246	658	14.50	5.99	52.11	538.1
	29	10/24/13	33.8	18.9	62.1	26.6	0	0.8	4.89	0.144	19	14.2	474	<0.2	22.2	238	613	13.10	5.80	52.00	538.5
	30	04/17/14	33	–	–	–	--	–	--	--	–	--	480	--	–	246	680	14.20	5.84	51.00	540
	31	10/28/14	38.8	19.5	59	25.2	0.7	2.8	4.5	0.006	19.1	14.5	462	<0.1	23	242	690	14.70	6.50	52.20	538
	32	05/21/15	48.9	–	–	20.6	--	–	--	--	–	--	450	--	–	254	684	14.40	6.04	51.00	538.1
	33	10/29/15	41.1	19.6	66.4	25.8	1	1.1	2.44	0.016	20.8	18.6	446	<0.03	24.5	249	683	14.50	5.79	51.80	539
	34	04/21/16	45.7	–	–	21.7	--	–	--	--	–	--	473	--	–	261	644	14.80	5.75	51.70	539
	35	10/13/16	39.7	21.5	67.9	26.3	7.3	1.6	0.088	0.029	21.7	21.4	473	<0.03	23.4	264	761	14.90	5.51	52.80	538.9
	36	04/27/17	62.8	-	-	19.7	-	-	-	-	-	-	446	-	-	239	715	14.70	5.68	50.60	540.2
	37	10/17/17	59.2	20.1	64.6	23.2	0	10.1	3.28	0.01	20.7	15.1	470	<.03	22.1	259	710	15.30	5.89	52.00	539.1
	38	06/06/18	61	-	-	22.6	-	-	-	-	-	-	482	-	-	102	719	14.80	5.85	50.80	540.3
	39	10/18/18	48.3	22.4	68.4	27.1	0.6	1.7	0.531	0.03	21.2	20.6	515	0.04	22	275	811	14.10	5.73	50.90	539.8
	40	04/22/19	41.9	-	-	27.3	-	-	-	-	-	-	542	-	-	288	787	14.30	5.59	48.40	541.3
	41	10/29/19	29.7	24	63.1	27.2	0.049	1.13	0.401	<0.05	22.3	21.7	544	0.03	24.1	303	724	14.60	5.52	52.20	540.8
	42	06/12/20	28.4	-	-	27.9	-	-	-	-	-	-	559	-	-	305	730	15.40	5.45	51.00	536.2
	43	10/23/20	24.9	26.7	74.8	26.1	-0.49	2.46	0.162	<0.05	24.4	25.2	573	0.07	22.7	315	763	14.20	5.52	52.20	538.9
	44	04/28/21	28.8	-	-	27.7	-	-	-	-	-	-	566	-	-	310	997	14.40	5.60	51.70	539.2
	45	10/19/21	31	27.4	73.6	27.5	0.791	0.83	0.03	<0.3	24.4	24.5	580	<0.5	24	316	796	15.70	5.64	52.60	539
	46	04/22/22	42	-	-	23.5	-	-	-	-	-	-	520	-	-	299	1148	16.70	5.62	50.30	540.9
	47	10/25/22	27	28	74.4	27	-0.37	0.62	0.041	<0.05	24.4	26	590	<0.09	23.5	355	790	14.90	5.63	52.80	537.1
	48	05/24/23	25	-	-	25.2	-	-	-	-	-	-	590	-	-	356	512	14.50	5.70	52.30	537.3
	49	10/19/23	26	27.4	75.8	26.2	1.29	1	0.088	0.08	26	26.5	610	0.04	24.1	363	734	14.60	5.64	52.60	539.4
	50	05/14/24	37	-	-	25.5	-	-	-	-	-	-	630	-	-	340	824	14.40	5.83	51.20	539.3
	51	10/22/24	31	24.4	84	25.2	-0.04	0.17	0.12	<0.3	28.6	14	640	<0.2	22.2	356	792	15.30	5.76	52.30	539.2

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9504
SAMPLING RESULTS

BACKGROUND	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magneium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field mhos/c	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
	1	10/14/97	103	58	135	41	1.3	4.6	0.66	<2	17.9	0.85	683	<5	29.9	327	594	16.7	6.98	47.5	539
	2	01/06/98	98	52	135	40	2.8	4.3	0.41	3	15.3	0.7	667	<5	30.6	324	653	16.5	6.86	47.5	540
	3	05/22/98	101	55	139	38	<1	2.4	1.03	<2	16.9	0.83	727	<5	30.5	349	916	16.8	6.86	46.77	539
	4	07/21/98	94	54	145	40	<1	2.4	1.05	<2	16.7	0.8	704	<5	30.8	345	871	17.3	6.89	46.87	539
	5	10/21/98	95	53	150	37	<1	2.2	0.85	3	17.7	0.89	737	<5	30.4	369	915	16.6	6.78	47.88	539
	6	01/13/99	108	58	147	39	<1	2	1.06	2	17.8	0.81	744	<5	31.3	370	942	16.1	6.57	48	540
	7	04/21/99	89	45	138	32	28	29	0.33	<2	17.4	0.69	716	<5	28.6	371	1198	17.1	5.19	46.44	541
	8	07/27/99	118	49	179	35	4.3	5.8	0.85	<2	20.5	0.93	852	<5	32.1	421	1071	18.1	6.29	47.22	540
	95% Tol.	Upper	130	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	908	N/A	N/A	459	1528	N/A	N/A	N/A	N/A
	95% Tol.	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ASH	1	10/13/99	117	45	184	32	12	15.6	0.91	<2	22.3	1.06	856	<5	32.2	440	1118	17.1	6.37	47.9	539
SENSE	2	05/04/00	124	44	186	58	0.8	4.8	1.17	2	22.2	1.05	919	<5	29.2	429	1182	16.4	5.92	47.95	538
	3	10/19/00	118	40	190	36	5.6	11.6	1.44	<2	24	0.92	928	<5	29.7	467	1161	16.44	6.06	48.75	539
MIAL	4	04/25/01	122	–	–	–	–	–	–	–	–	–	1070	–	–	537	968	17.42	6.04	48.25	539
	5	10/04/01	116	35	222	–	2.8	5.1	1.75	<2	27.9	0.91	1010	<5	27.9	527	1105	16.99	5.64	49.01	538
	6	06/05/02	104	–	–	36	–	–	–	–	–	–	1050	–	–	561	1205	16.85	6.83	48.00	538
	7	10/31/02	99	38	203	42	4.3	4	1.69	<2	29.3	1.16	1010	<5	24	559	1203	16.48	6.87	48.70	538
	8	04/08/03	97	–	–	–	–	–	–	–	–	–	1040	–	–	555	1301	16.47	6.92	46.50	541
	9	10/09/03	93	36	198	43	1.9	1	1.81	<2	31.2	1.22	979	<5	23.2	524	1186	16.28	7.40	49.20	538
	10	05/05/04	107	–	–	–	–	–	–	–	–	–	1040	–	–	532	1216	15.50	6.97	46.90	540
	11	10/21/04	82	32	185	38	2.6	1.7	1.93	<2	31.2	0.94	941	<5	23.3	519	1141	16.80	6.89	48.72	540
	12	04/26/05	78	–	–	–	–	–	–	–	–	–	977	–	–	519	1221	16.70	6.97	45.45	542
	13	10/19/05	75	26	175	41	1.8	4.6	2.05	<2	34	1.04	1000	12	25.9	525	1216	17.10	6.97	48.50	539
	14	04/18/06	79	–	–	–	–	–	–	–	–	–	1050	–	–	565	1285	16.80	6.98	48.24	539
	15	10/19/06	70	27	213	47	10.8	4	1.84	<10	33.9	1.06	986	<20	17.7	558	1233	17.20	6.86	47.20	541
	16	04/27/07	69	–	–	–	–	–	–	–	–	–	1050	–	–	585	1350	16.20	7.11	46.65	539
	17	11/05/07	69	29	187	–	1.5	3.7	1.83	<5	32.1	1.27	1020	<0.5	23	503	1258	16.40	7.00	48.29	539
	18	04/22/08	144	–	–	–	–	–	–	–	–	–	1480	–	–	790	1413	17.47	6.83	57.68	539
	19	11/04/08	124	37	286	29.4	2.23	2.97	4.46	<0.05	46	3.37	1430	<0.5	23.1	820	1149	17.44	6.76	48.31	539
	20	04/23/09	127	–	–	34.5	–	–	–	–	–	–	1470	–	–	778	1607	16.15	7.63	47.32	539
	21	10/21/09	129	29	273	33.8	1.5	0	3.38	<10	38.3	2.65	1390	<0.5	21.2	785	1598	17.00	6.83	48.75	539
	22	04/20/10	138	–	–	–	–	–	–	–	–	–	1420	–	–	744	946	16.90	5.85	47.51	539
	23	10/15/10	127	34	277	38	1.9	0.9	4.28	<10	39.6	3.32	1330	<0.5	21.8	775	1432	16.80	6.80	48.23	539
	24	06/07/11	127	–	–	–	–	–	–	–	–	–	1280	–	–	668	1428	16.80	7.03	46.75	539
	25	10/19/11	123	24	207	36.2	2.1	3.5	3.8	<10	28.9	2.96	1180	<0.5	19.1	666	1366	15.80	6.73	48.05	539
	26	04/25/12	117	–	–	37.3	–	–	–	–	–	–	1090	–	–	541	1184	16.50	6.77	48.48	539
	27	10/09/12	111	26.5	208	37.3	3.3	3.3	4.18	0.41	29.6	3.08	957	<0.1	19.4	459	1181	15.60	6.78	49.08	539
	28	04/24/13	111	–	–	39	–	–	–	–	–	–	965	–	–	542	1211	16.50	7.13	48.84	538
	29	10/24/13	97.9	25.9	195	40.5	3	10.6	3.7	0.11	25	2.69	903	<0.2	15.9	452	1119	15.40	6.74	49.10	539
	30	014/17/14	99.7	–	–	–	–	–	–	–	–	–	949	–	–	484	1170	16.20	7.16	48.00	540
	31	10/28/14	89.9	26.6	184	42.4	2	2.3	3.51	0.01	24.3	2.52	898	<0.1	15.8	460	1226	16.60	6.49	49.20	538
	32	05/21/15	94.6	–	–	44.5	–	–	–	–	–	–	896	–	–	481	1500	16.10	6.84	48.10	538
	33	10/29/15	85.1	26.7	192	48.9	4.7	5.1	3.76	0.03	26.7	2.67	784	<0.03	16.6	464	1130	16.30	7.00	48.80	539
	34	04/21/16	92.1	–	–	45.2	–	–	–	–	–	–	795	–	–	428	1013	16.80	6.88	48.70	539
	35	10/13/16	86.6	26.7	166	45.8	16.5	4.6	3.2	0.01	23.7	2.28	757	<0.03	14.7	423	1137	16.50	6.91	49.60	539
	36	04/27/17	12.5	-	-	54.1	-	-	-	-	-	-	295	-	-	103	446	16.50	6.21	47.50	540
	37	10/17/17	21.8	30.2	63.1	52.6	1.5	0.5	0.82	0.04	6.92	0.32	321	<.03	17.9	128	485	17.10	6.25	49.20	539
	38	06/06/18	36.1	-	-	53.8	-	-	-	-	-	-	330	-	-	102	504	16.70	6.56	47.20	540
	39	10/18/18	14.7	28.9	55.9	63.9	0.9	0	0.82	<0.02	5.9	0.42	312	<0.03	17.7	114	557	14.10	6.12	47.80	540
	40	04/22/19	14.4	-	-	70.2	-	-	-	-	-	-	391	-	-	129	571	17.10	6.27	45.40	541
	41	10/29/19	10	29.4	75.4	85.2	0.8	1.82	0.3	<0.05	7.7	0.15	464	0.04	33	185	643	16.30	6.39	48.90	541
	42	06/12/20	20.7	-	-	79.3	-	-	-	-	-	-	490	-	-	202	550	18.20	6.74	47.50	536
	43	10/23/20	10	26	90.9	80.9	-0.13	2.55	0.18	0.07	8.83	0.27	575	0.03	36.5	226	738	16.00	6.39	49.10	539
	44	04/28/21	10	-	-	86.3	-	-	-	-	-	-	568	-	-	250	837	16.20	6.49	48.50	539
	45	10/19/21	14	23.3	88.2	85.4	0	0.27	1.31	<0.3	9.43	0.46	540	<0.5	52.1	249	882	17.00	6.31	49.20	539
	46	04/22/22	13	-	-	83.4	-	-	-	-	-	-	540	-	-	259	1200	16.30	6.82	47.10	541
	47	10/25/22	13	21.3	81.9	86.8	0.06	0.09	0.47	<0.05	8.41	0.17	540	<0.09	54.7	256	776	16.90	6.71	49.50	537
	48	05/24/23	22	-	-	78.7	-	-	-	-	-	-	550	-	-	243	490	16.1	6.25	49.2	537
	49	10/19/23	16	26.4	113	89.9	0.72	0.99	0.86	<0.05	11.4	0.36	650	<0.04	53.2	326	834	16.4	7.01	49.1	539
	50	05/14/24	21	-	-	93.9	-	-	-	-	-	-	760	-	-	352	1035	15.7	6.38	48.00	539
	51	10/23/24	25	27.1	135	98.1	1.08	1.07	2.12	<0.3	13.2	0.42	780	<0.2	54	365	991	16.00	6.23	49.70	539

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9507
SAMPLING RESULTS

	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magnesium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field umhos/cm	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
BACKGROUND DATA	1	10/14/97	40	28	150	35	4.6	5.5	18.5	<2	55.5	6.73	1000	<5	29.9	629	842	17.3	5.61	47.32	538.6
	2	01/06/98	42	24	138	37	3.4	6.3	14.1	3	45.8	4.42	993	<5	30.1	586	868	17.2	5.59	47.38	539.5
	3	05/22/98	44	29	141	30	<1	3.3	16.8	2	49	5.15	1080	<5	29.2	583	499	17.4	5.61	46.63	538.8
	4	07/21/98	46	24	162	28	10.9	16.2	17.5	<2	51.8	5.55	1060	<5	29.9	618	1236	17.8	5.64	46.77	539
	5	10/21/98	50	23	153	30	<1	3.1	17	<2	51.5	5.14	1050	<5	26.3	610	1209	17.2	5.57	47.8	539
	6	01/13/99	46	24	152	26	1.7	6.4	17.3	3	52.9	4.8	1070	<5	27.8	632	1214	16.7	5.16	47.98	539.5
	7	04/21/99	41	24	157	30	5	7.8	19.2	2	52.8	5.21	1130	<5	27.3	672	931	16.9	6.18	46.36	541
	8	07/27/99	38	22	156	29	9.6	6.6	22.5	<2	53.8	5.91	1110	<5	27.2	637	1306	19.4	5.3	47.15	540
	95% Tol	Upper	56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1214	N/A	N/A	713	1895	N/A	N/A	N/A	N/A
	95% Tol	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ASH POND SEMI ANNUAL	1	10/13/99	39	20	147	33	2.5	1.8	18.6	<2	49.5	4.93	954	<5	27.6	579	1226	17.2	5.36	47.86	538.5
	2	05/04/00	37	19	131	46	1.5	0.5	12.9	<2	43.4	3.72	981	<5	26.1	518	1182	16.9	5.07	48.35	538
	3	10/19/00	33	18	130	26	3.7	1.3	15.6	<2	45.3	4.34	919	<5	24.7	531	1138	16.82	5.28	48.69	538.8
	4	04/25/01	32	–	–	–	–	–	–	–	–	–	967	–	–	536	1309	17.26	5.68	48.17	539
	5	10/04/01	27	20	128	–	0.7	1.7	13.6	<2	41.8	3.57	860	<5	25.6	485	1267	17.75	6.91	48.99	538
	6	06/05/02	25	–	–	34	–	–	–	–	–	–	1110	–	–	563	1124	16.90	5.62	48.00	538
	7	10/31/02	24	24	122	41	0.7	1.9	18.6	<2	41.1	4.32	853	<5	24.6	530	1051	16.70	5.75	48.60	538.4
	8	04/08/03	22	–	–	–	–	–	–	–	–	–	843	–	–	505	1051	16.65	5.67	46.40	540.7
	9	10/09/03	22	21	118	45	0.8	2.6	18.6	<2	38.9	4.06	820	<5	22.9	479	1048	16.49	5.95	48.10	538
	10	05/05/04	22	–	–	–	–	–	–	–	–	–	941	–	–	515	1112	16.56	5.79	46.80	540
	11	10/21/04	21	19	123	34	0.8	2.5	26.4	<2	39.2	5.28	810	<5	24.3	514	1074	16.90	5.67	48.35	540
	12	04/26/05	22	–	–	–	–	–	–	–	–	–	782	–	–	463	1053	16.70	5.62	45.40	542
	13	10/19/05	20	13	96	39	0.7	1.2	17	<2	31.4	3.12	707	<5	25.3	400	961	17.10	5.71	48.35	539
	14	04/18/06	20	–	–	–	–	–	–	–	–	–	755	–	–	448	976	16.90	5.66	48.15	539
	15	10/19/06	20	15	103	36.9	0.7	0.9	27.5	<10	32.7	4.71	724	<20	21.2	445	1015	17.20	5.52	47.28	541
	16	04/27/07	22	–	–	–	–	–	–	–	–	–	808	–	–	463	1072	16.30	5.73	46.64	539
	17	11/05/07	25	17	100	–	2	3	31.4	<5	31.2	5.59	810	<0.5	23.2	396	996	16.50	5.62	48.15	539
	18	04/22/08	31	–	–	–	–	–	–	–	–	–	1120	–	–	649	1121	17.68	6.29	57.67	539
	19	11/04/08	26	22	232	36.6	-0.21	0.84	8.31	<0.05	31.5	1.89	1040	<0.5	16.2	592	894	17.49	6.22	52.49	539
	20	04/23/09	28	–	–	41.5	–	–	–	–	–	–	997	–	–	560	1200	16.30	7.01	47.22	539
	21	10/21/09	28	<20	144	40.5	2.6	0	8.44	<10	18.8	1.65	827	0.5	14.1	492	1060	17.20	5.86	48.80	538.7
	22	04/20/10	24	–	–	–	–	–	–	–	–	–	698	–	–	408	1022	17.00	6.93	47.40	539
	23	10/15/10	21.2	21	122	51.6	0.6	0	5.19	<10	14.2	0.937	593	<0.5	13.6	382	770	16.60	6.08	48.10	539
	24	06/07/11	26.7	–	–	–	–	–	–	–	–	–	627	–	–	319	858	16.80	7.07	46.85	538.8
	25	10/19/11	20.2	<20	77.8	40.9	3.1	4.7	1.26	<10	8.66	0.395	433	<0.5	10.6	212	543	15.80	5.81	48.02	538.9
	26	04/25/12	17	–	–	43.7	–	–	–	–	–	–	489	–	–	207	604	16.50	6.10	48.42	538.7
	27	10/09/12	14	21.3	85.4	49	1.4	2.6	0.64	0.03	8.18	0.211	433	<0.1	11.4	171	577	15.60	5.66	48.97	538.5
	28	04/24/13	15	–	–	48.8	–	–	–	–	–	–	402	–	–	168	557	16.40	6.33	48.78	538.1
	29	10/24/13	14.2	24.8	73.7	50.1	0	3.5	1.26	0.09	7.47	0.392	349	<0.2	11.3	142	517	15.40	6.74	49.10	538.5
	30	04/17/14	14.6	–	–	–	–	–	–	–	–	–	393	–	–	135	537	16.10	6.19	48.10	540
	31	10/28/14	25	25.2	60.7	50.8	0	4.7	0.13	0.02	6.46	0.277	343	<0.1	11.5	128	520	16.60	6.56	49.10	538
	32	05/21/15	26.5	–	–	56	–	–	–	–	–	–	353	–	–	136	546	15.90	6.26	48.00	538.1
	33	10/29/15	13.2	26.4	60.8	56.3	0.5	13.1	1.02	0.02	6.17	0.264	348	<0.03	12.8	130	484	16.30	6.13	48.70	539
	34	04/21/16	14.3	–	–	53.9	–	–	–	–	–	–	320	–	–	121	443	16.50	6.01	48.60	539
	35	10/13/16	14.8	29.3	61.6	54.6	0	0	1.22	0.03	6.73	0.382	339	0.04	16.2	133	510	16.40	6.02	49.60	538.9
	36	04/27/17	93.1	-	-	46.5	-	-	-	-	-	-	724	-	-	360	1054	16.50	6.95	46.90	540.2
	37	10/17/17	93.9	25.3	146	46	1.4	3.7	2.61	0.01	21.1	1.79	651	<0.03	13.6	346	970	16.70	6.93	48.70	539.1
	38	06/06/18	102	-	-	49.6	-	-	-	-	-	-	694	-	-	343	1089	16.60	6.93	47.10	540.3
	39	10/18/18	93.8	27.1	141	55.3	4.6	1.2	2.4	<0.02	19.2	1.65	662	<0.03	12.4	319	1121	15.90	6.99	47.80	539.8
	40	04/22/19	87.1	-	-	64.4	-	-	-	-	-	-	825	-	-	383	1230	16.00	6.59	45.50	541.3
	41	10/29/19	89.2	38.4	173	65.6	1.24	1.48	3.36	<0.05	25.1	2.64	911	<>0.03	28	462	1231	16.60	6.99	48.90	540.8
	42	06/12/20	75.5	-	-	71.6	-	-	-	-	-	-	1050	-	-	537	1280	18.10	6.74	47.50	536.2
	43	10/23/20	100	31.3	207	63.5	-0.43	1.16	2.98	<0.05	26.8	2.44	945	<0.03	23.3	479	1350	16.50	6.99	49.10	538.9
	44	04/28/21	87.9	-	-	74.7	-	-	-	-	-	-	1080	-	-	566	1474	15.80	6.99	48.50	539.2
	45	10/19/21	92	32.1	222	73.8	0.45	0.7	3.11	<0.3	29.7	3.08	1120	<0.5	35.3	592	1537	17.80	7.02	49.20	539
	46	04/22/22	91	-	-	90.1	-	-	-	-	-	-	1380	-	-	814	1662	16.60	7.06	47.20	540.9
	47	10/25/22	83	32.5	249	87.6	0	1.16	3.05	<0.05	31.6	3.14	1340	<0.09	55.6	777	1615	17.00	6.96	49.60	537.1
	48	05/24/23	58	-	-	102	-	-	-	-	-	-	1430	-	-	827	1068	16.40	6.92	49.20	537.3
	49	10/19/23	67	31	271	101	1.23	0.93	3.84	<0.05	33.2	3.26	1560	<0.04	73.7	876	1714	16.00	7.01	49.10	539
	50	05/14/24	68	-	-	117	-	-	-	-	-	-	1750	-	-	982	2146	15.90	6.95	48.20	539.3
	51	10/23/24	64	29.1	311	122	1.07	2.03	2.44	<0.3	37	3.69	1770	<0.2	91	963	2004	16.30	6.89	49.70	539.1

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9508
SAMPLING RESULTS

BACKGROUND	Round	Date	Alkalinity (total) mg/l	Barium (diss) ug/l	Calcium (diss) mg/l	Chloride mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Iron (diss) mg/l	Lead (diss) ug/l	Magnesium (diss) mg/l	Manganese (diss) mg/l	Residue, Filterable, TDS mg/l	Selenium (diss) ug/l	Sodium (diss) mg/l	Sulfate mg/l	Conductivity Field mhos/cm	Temperature Field °C	pH Field S.U.	Well Elev. ft.	River Elev. ft.
	1	10/14/97	237	99	132	21	5.6	8.6	1.07	<2	20	1.24	558	<5	14.7	190	512	15	6.94	23.5	539
	2	01/06/98	244	90	124	21	5.5	9.1	1.17	2	17.1	0.92	568	<5	15.3	196	588	14.9	6.85	23.4	540
	3	05/22/98	236	99	133	22	2.5	4.7	2.15	<2	19.6	0.88	607	<5	15.7	203	840	15.1	6.91	22.7	539
	4	07/21/98	230	98	146	21	3.1	3.8	2.35	<2	20.7	0.97	598	<5	15.8	208	805	15.4	6.81	22.8	539
	5	10/21/98	210	101	144	23	3.3	3.9	2.32	<2	20	0.89	621	<5	14.9	245	819	15.1	6.83	23.5	539
	6	01/13/99	233	98	136	21	3.5	5.2	2.28	2	19.7	0.86	600	<5	15.3	221	824	14.9	6.4	23.6	540
	7	04/21/99	224	101	138	20	5	5.7	1.99	<2	19.2	0.78	608	<5	15.5	230	975	16.1	6.33	22.4	541
	8	07/27/99	228	102	151	23	1.2	3.4	2.08	<2	20.7	0.79	659	<5	16.2	235	893	16.5	6.44	23.2	540
	95% Tol.	Upper	263	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	702	N/A	N/A	279	1275	N/A	N/A	N/A	N/A
	95% Tol.	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1	10/13/99	228	104	155	23	2.6	3.2	2.22	<2	20.8	0.78	631	<5	16.7	247	904	15.3	6.56	23.7	539
	2	05/04/00	221	104	158	32	0	2.3	2.29	<2	21.2	0.79	660	<5	16.8	247	969	15.3	5.93	23.9	538
	3	10/19/00	238	108	156	23	5.9	4	2.08	<2	21.8	0.94	645	<5	16.5	253	980	15.33	5.96	24.03	539
	4	04/25/01	229	–	–	–	–	–	–	–	–	–	691	–	–	264	729	15.14	5.97	23.58	539
	5	10/04/01	244	111	171	–	4	4.4	2.58	<2	22.6	1.1	681	<5	16.9	273	974	15.34	6.96	24.27	538
	6	06/05/02	233	–	–	24	–	–	–	–	–	–	754	–	–	283	962	15.25	6.98	23.46	538
	7	10/31/02	233	116	172	26	3.4	6.7	2.95	<2	24.4	0.95	736	<5	18.1	315	1002	14.79	7.01	24.31	538
	8	04/08/03	224	–	–	–	–	–	–	–	–	–	807	–	–	357	1087	14.81	6.89	24.80	541
	9	10/09/03	227	99	193	24	1.3	4.2	3.23	<2	27.2	1.04	827	<5	19.8	370	996	15.10	7.24	24.30	538
	10	05/05/04	228	–	–	–	–	–	–	–	–	–	896	–	–	380	1157	14.78	7.14	22.40	540
	11	10/21/04	227	78	216	13	3.3	5	4.08	<2	27.2	1.09	841	<5	20.9	372	1148	15.00	6.93	24.00	540
	12	04/26/05	229	–	–	–	–	–	–	–	–	–	803	–	–	351	1103	15.00	6.91	21.00	542
	13	10/19/05	231	60	171	22	1.9	3.3	4.02	<2	24.3	0.98	778	<5	20.5	320	1064	15.10	6.96	23.77	539
	14	04/18/06	228	–	–	–	–	–	–	–	–	–	761	–	–	332	1056	15.30	6.89	23.52	539
	15	10/19/06	226	68	194	23.4	0	0.5	3.94	<10	25.6	0.95	759	<20	18.1	325	1050	15.30	6.88	22.04	541
	16	04/27/07	231	–	–	–	–	–	–	–	–	–	795	–	–	314	1134	14.30	6.99	22.25	539
	17	11/05/07	164	65	178	–	2	0.5	3.82	<5	24.8	1.09	882	<0.5	20.9	326	1112	14.40	6.93	23.68	539
	18	04/22/08	207	–	–	–	–	–	–	–	–	–	794	–	–	320	852	14.80	7.16	25.83	539
	19	11/04/08	199	74	200	23.3	2.99	1.2	4.24	<0.05	28.5	1.43	820	<0.5	20.5	337	751	15.30	7.11	24.49	539
	20	04/23/09	231	–	–	30.2	–	–	–	–	–	–	806	–	–	334	1078	14.10	7.49	22.68	539
	21	10/21/09	229	68	165	27.4	0.7	3.2	4.2	<10	24.4	0.94	774	<0.5	24.8	326	1083	15.20	6.96	24.00	539
	22	04/20/10	230	–	–	–	–	–	–	–	–	–	815	–	–	340	1005	14.90	7.02	23.20	539
	23	10/15/10	235	71	169	29.2	0	2.1	4.59	<10	26.3	1	742	<0.5	20.9	395	970	15.00	6.93	23.60	539
	24	06/07/11	241	–	–	–	–	–	–	–	–	–	738	–	–	288	1019	14.90	7.36	22.37	539
	25	10/19/11	234	71	165	27.4	3.1	5	4.2	<10	25.4	0.98	796	<0.5	21.6	336	1037	14.20	6.75	23.01	539
	26	04/25/12	242	–	–	26.5	–	–	–	–	–	–	834	–	–	330	1020	15.00	6.89	23.70	539
	27	10/09/12	229	75.5	194	27.3	3.5	3.5	5.33	0.04	29.9	1.06	838	<0.1	25	336	1112	14.20	6.72	23.91	539
	28	04/24/13	237	–	–	27.7	–	–	–	–	–	–	825	–	–	399	1161	15.40	7.09	23.90	538
	29	10/24/13	223	70.9	189	29.8	1	2.3	5.41	0.08	27.1	1	830	<0.2	21.7	346	1109	14.80	6.59	23.70	539
	30	04/17/14	225	–	–	–	–	–	–	–	–	–	844	–	–	346	1131	15.10	7.04	23.20	540
	31	10/28/14	223	64.7	178	28.7	2.3	4.1	5.34	0.01	25.7	1.04	836	<0.1	21.3	364	1195	16.00	6.65	23.90	538
	32	05/21/15	216	–	–	–	–	–	–	–	–	–	847	–	–	394	1231	15.30	6.76	22.10	538
	33	10/29/15	213	67	208	32.7	1.9	2.5	6.5	0.02	30.5	1.3	800	<0.03	25.4	384	1184	15.80	6.71	23.50	539
	34	04/21/16	215	–	–	30.7	–	–	–	–	–	–	868	–	–	391	1106	16.50	6.85	23.80	539
	35	10/13/16	234	67	192	31.8	2.5	2	5.95	0.01	27.6	1.31	866	<0.03	21.9	420	1296	16.20	6.84	24.30	539
	36	04/27/17	210	-	-	31.9	-	-	-	-	-	-	834	-	-	381	1188	16.45	6.75	22.30	540
	37	10/17/17	237	57.1	176	30.4	3	0.4	5.79	0.01	26.2	1.19	788	<0.03	20.4	370	1135	17.30	6.83	24.00	539
	38	06/06/18	225	-	-	30.7	-	-	-	-	-	-	777	-	-	342	1122	16.00	6.85	22.70	540
	39	10/18/18	237	55.9	162	29.7	3.4	1.4	5.32	0.06	22.7	1.19	391	<0.03	17.8	317	1208	15.70	6.84	22.90	540
	40	04/22/19	215	-	-	31	-	-	-	-	-	-	810	-	-	352	1163	16.90	6.96	20.30	541
	41	10/29/19	208	65.2	164	33	-0.66	2.83	6.51	<0.05	25.5	1.46	838	0.03	19.9	362	1061	17.40	6.82	23.90	541
	42	06/12/20	228	-	-	31.1	-	-	-	-	-	-	793	-	-	338	1071	18.10	7.00	22.70	536
	43	10/23/20	221	61.4	168	29.5	0.84	2.56	6.49	<0.05	24.2	1.73	783	<0.03	17.7	311	1198	17.60	6.98	23.80	539
	44	04/28/21	208	-	-	30.7	-	-	-	-	-	-	735	-	-	297	1050	16.90	6.89	23.30	539
	45	10/19/21	217	56	149	30.3	0.39	1.67	5.74	<0.3	21.9	1.68	680	<0.5	17.6	283	1068	17.60	6.90	24.10	539
	46	04/22/22	224	-	-	31.8	-	-	-	-	-	-	670	-	-	295	1216	17.00	7.12	22.40	541
	47	10/25/22	213	63.1	134	33.6	-0.13	0.44	5.55	<0.05	21.3	1.81	690	<0.09	16	284	966	16.40	6.83	24.40	537
	48	05/24/23	208	-	-	33.2	-	-	-	-	-	-	680	-	-	272	606	16.90	6.98	24.30	537
	49	10/19/23	203	61.7	147	32.5	1.04	0.89	2.83	<0.05	21.8	1.59	660	<0.04	16.7	266	863	16.80	7.02	49.10	539
	50	05/14/24	232	-	-	31	-	-	-	-	-	-	640	-	-	221	954	16.10	7.05	23.30	539
	51	10/23/24	209	58.2	147	31.5	0.62	0.55	4.66	<0.3	22.2	1.84	670	<0.2	15.2	229	954	17.80	7.05	24.40	539

OHIO VALLEY ELECTRIC CORPORATION
KYGER CREEK FLY ASH POND CLOSURE PROJECT
MONITORING WELL KC-9509
SAMPLING RESULTS

			Alkalinity	Barium	Calcium	Chloride	Gross Alpha	Gross Beta	Iron	Lead	Magnesium	Manganese	Residue, Filterable, TDS	Selenium	Sodium	Sulfate	Conductivity	Temperature	pH	Well	River
	Round	Date	(total) mg/l	(diss) ug/l	(diss) mg/l	mg/l	pCi/l	pCi/l	(diss) mg/l	(diss) ug/l	(diss) mg/l	(diss) mg/l	mg/l	(diss) ug/l	(diss) mg/l	mg/l	Field mhos/cm	Field °C	Field S.U.	Elev. ft.	Elev. ft.
BACKGROUND	1	10/14/97	195	51	133	18	<1	2.7	2.65	<2	22.4	0.87	603	<5	17.2	241	485	14.9	6.62	23.8	539
	2	01/06/98	201	45	122	24	1.5	3.1	1.58	2	19.3	0.48	605	<5	17.4	235	597	14.9	6.59	23.7	540
	3	05/22/98	210	47	128	21	<1	2.2	2.41	<2	20.4	0.58	642	<5	16.4	225	832	15.1	6.65	23	539
	4	07/21/98	201	47	143	21	<1	2.8	2.6	<2	22.3	0.63	621	<5	17.2	245	814	15.4	6.36	23.1	539
	5	10/21/98	230	45	141	23	1.6	3	2.19	<2	21.4	0.59	618	<5	15.7	220	820	15	6.48	23.8	539
	6	01/13/99	206	48	135	21	<1	2.5	2.39	<2	21.2	0.56	624	<5	16.6	261	827	14.9	5.87	24	540
	7	04/21/99	212	45	133	24	3.2	2.4	1.56	4	19.7	0.44	589	<5	15.6	235	857	15.3	6.14	22.8	541
	8	07/27/99	207	45	144	16	4.3	4.1	1.76	<2	21.3	0.47	646	<5	16.1	244	869	16.1	6.14	23.6	540
	95% Tol.	Upper	241	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	680	N/A	N/A	279	1213	N/A	N/A	N/A	N/A
	95% Tol.	Lower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SEMIANNUAL	1	10/13/99	204	48	147	21	0.5	2	3.3	<2	21.9	0.62	622	<5	17.5	255	885	15.2	6.27	23.9	539
	2	05/04/00	197	59	152	30	0	0.3	4.75	2	22.3	0.81	694	<5	18.2	278	959	15.3	5.65	23.6	538
	3	10/19/00	201	55	168	15	2.2	1.8	2.34	<2	25.2	0.62	736	<5	18.9	326	1017	15.21	5.76	24.45	539
	4	04/25/01	200	–	–	–	–	–	–	–	–	–	831	–	–	383	787	15.14	5.50	23.83	539
	5	10/04/01	206	63	175	–	2.3	3.3	2.48	<2	25	0.68	734	<5	19.1	324	1027	15.32	6.75	24.62	538
	6	06/05/02	190	–	–	23	–	–	–	–	–	–	793	–	–	348	992	15.21	6.69	23.75	538
	7	10/31/02	162	74	164	24	0	2.1	4.35	<2	27.7	1.08	803	<5	23.3	395	1040	14.75	6.56	24.70	538
	8	04/08/03	151	–	–	–	–	–	–	–	–	–	894	–	–	457	1136	14.85	6.40	22.10	541
	9	10/09/03	149	59	178	25	1.3	4.6	1.32	<2	30.1	1.07	864	<5	22	443	1020	15.05	6.78	24.60	538
	10	05/05/04	151	–	–	–	–	–	–	–	–	–	876	–	–	426	1101	14.89	6.58	22.68	540
	11	10/21/04	149	65	184	18	1.6	4.3	4.14	<2	28.3	2.48	849	<5	22.1	436	1127	14.90	6.21	23.23	540
	12	04/26/05	162	–	–	–	–	–	–	–	–	–	863	–	–	420	1129	15.00	6.31	21.90	542
	13	10/19/05	152	49	165	22	1.5	4.3	2.45	3	28.2	5.36	846	<5	24.1	430	1093	15.10	6.48	24.15	539
	14	04/18/06	165	–	–	–	–	–	–	–	–	–	841	–	–	410	1050	15.40	6.52	24.05	539
	15	10/19/06	155	53	172	25.1	0.7	3.9	1.83	<10	25.1	8.99	761	<20	17.9	394	1023	15.20	6.47	22.36	541
	16	04/27/07	158	–	–	–	–	–	–	–	–	–	830	–	–	381	1131	14.40	6.71	22.60	539
	17	11/05/07	180	51	170	–	3	5.6	2.52	<5	26.6	8.58	896	<0.5	22.5	398	1173	14.40	6.61	24.00	539
	18	04/22/08	164	–	–	–	–	–	–	–	–	–	745	–	–	328	794	14.95	6.63	26.16	539
	19	11/04/08	167	59	145	21.8	1.67	1.61	3.61	<0.05	23.3	9	664	<0.5	18.4	263	622	15.26	6.84	23.94	539
	20	04/23/09	167	–	–	25.5	–	–	–	–	–	–	693	–	–	304	921	14.09	7.51	22.98	539
	21	10/21/09	162	54	127	25.1	1.2	3.7	5.24	<10	22.6	10.2	742	<0.5	19.8	351	994	15.20	6.44	24.50	539
	22	04/20/10	170										781			349	1069	15.00	6.59	23.49	539
	23	10/15/10	177	58	162	34.1	4.9	2.9	2.82	<10	28.7	10.1	825	<0.5	22.8	451	1032	15.00	6.66	24.18	539
	24	06/07/11	184	–	–	–	–	–	–	–	–	–	834	–	–	361	1058	14.80	7.11	22.85	539
	25	10/19/11	177	44	156	27.8	4.4	6.2	2.29	<10	27	10	868	<0.5	23	432	1069	14.20	6.38	23.60	539
	26	04/25/12	207	–	–	27	–	–	–	–	–	–	861	–	–	391	1013	14.80	6.47	23.25	539
	27	10/09/12	147	63.1	63.6	25.3	3	3.1	3.16	0.1	20.2	14.8	923	<0.1	25.3	430	1160	14.20	6.22	24.42	539
	28	04/24/13	176	–	–	26.5	–	–	–	–	–	–	900	–	–	471	1188	15.40	6.71	24.35	538
	29	10/24/13	137	72.6	158	26.5	2.3	0	6.76	0.51	27.8	22.5	832	<0.2	22.8	401	1069	15.00	6.22	24.90	539
	30	04/17/14	131	–	–	–	–	–	–	–	–	–	922	–	–	454	1173	15.40	6.59	23.70	540
	31	10/28/14	118	63.6	155	29.4	2.2	0	2.21	0.01	28.2	29.1	915	<0.1	24.7	473	1260	16.10	6.44	24.30	538
	32	05/21/15	143	–	–	31.7	–	–	–	–	–	–	918	–	–	478	1262	15.40	6.63	23.40	538
	33	10/29/15	112	49.6	166	32	6.1	0	2.55	0.02	31.1	33.8	886	<0.03	26.5	497	1204	15.70	6.13	23.80	539
	34	04/21/16	109	–	–	31.9	–	–	–	–	–	–	877	–	–	499	950	16.60	6.15	24.20	539
	35	10/13/16	113	62	134	29.2	3.1	2.7	7.04	0.01	26	36.2	779	<0.03	23.5	460	1126	16.50	6.11	24.69	539
	36	04/27/17	110	-	-	32.2	-	-	-	-	-	-	854	-	-	463	1155	16.44	6.19	22.80	540
	37	10/17/17	134	41.8	157	31.3	2.8	0	1.72	0.01	29	30.6	828	<0.03	23.7	464	1043	17.30	6.83	24.00	539
	38	06/06/18	168	-	-	32.7	-	-	-	-	-	-	824	-	-	414	1119	16.00	6.50	23.10	540
	39	10/18/18	150	49.5	147	33.4	1.5	5.1	2.38	0.21	25.7	26.2	828	<0.03	20.9	405	1212	16.10	6.43	23.30	540
	40	04/22/19	162	-	-	33	-	-	-	-	-	-	812	-	-	375	1103	17.20	6.68	20.70	541
	41	10/29/19	126	49.4	132	40.1	0.93	2.53	1.95	<0.05	26.1	30.1	804	<0.03	21.9	402	1045	17.10	6.70	24.90	541
	42	06/12/20	126	-	-	38.3	-	-	-	-	-	-	768	-	-	373	1068	17.20	6.93	23.20	536
	43	10/23/20	136	54.9	132	37.3	-0.19	1.53	3.53	<0.05	23.6	26.7	783	<0.03	18.8	330	1172	16.70	6.70	24.20	539
	44	04/28/21	158	-	-	35.6	-	-	-	-	-	-	720	-	-	324	1034	16.40	6.80	23.70	539
	45	10/19/21	148	62.2	117	40.8	0	0.86	6.45	<0.3	21.2	23.7	660	<0.5	18.9	296	1063	16.90	6.73	24.60	539
	46	04/22/22	144	-	-	44	-	-	-	-	-	-	670	-	-	325	980	16.60	6.82	22.90	541
	47	10/25/22	144	67.5	119	45.8	0.6	1.02	3.45	<0.05	22	19	680	<0.09	17.6	324	952	17.40	6.51	24.80	537
	48	05/24/23	150	-	-	39.8	-	-	-	-	-	-	690	-	-	310	600	16.50	6.62	24.30	537
	49	10/19/23	150	49.4	122	41.4	0.91	0.84	2.46	<0.05	21.1	16.7	700	<0.04	16.6	305	868	16.30	6.62	24.60	539
	50	05/14/24	164	-	-	44.0	-	-	-	-	-	-	680	-	-	293	979	16.20	6.64	23.40	539
	51	10/23/24	170	58.8	123	42.4	1.6	1.47	5.48	<0.3	22.2	11.1	680	<0.2	17.5	266	988	16.80	6.73	24.80	539

APPENDIX C 1998 AND 2017 OEPA INTEROFFICE MEMORANDUM

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George V. Voinovich
Governor

To: Dan Messerly through Bruce Goff, DSW-SEDO

From: David Hunt through Mike Preston, DDAGW-SEDO

Subject: Ohio Valley Electric Corporation - Ground Water Quality Results for May 1998
(DDAGW #: 07/22/98-04-3-05-0 3757)

Date: August 28, 1998

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Introduction

The Ohio Valley Electric Corporation (OVEC) site is located in Gallia County, Ohio on State Route 7 approximately five miles north of Gallipolis, Ohio. There are two fly ash ponds at the OVEC site: the north and the south ponds. The PTI for closure plan is only for the closure of the north pond, while the south pond will continue to be used for fly ash disposal. The PTI was approved without OVEC having to address DDAGW's comments on the proposed ground water monitoring plan. The geology of interest beneath the OVEC site consists of unconsolidated sand and gravel formations of the Ohio River Valley Aquifer. There are two industrial, nonpotable well fields up river and down river of the north and south ponds. The industrial well fields and the Ohio River are the major influence of the ground water flow patterns at the OVEC site.

There are ten ground water monitoring wells at the closure site (KC-9501 through KC-9510) However, only wells KC-9501, KC-9502, KC-9504, KC-9507, KC-9508 and KC-9509 have been selected by OVEC for ground water monitoring purposes. Dedicated bladder pumps have been installed in these six wells for sampling purposes. The ground water monitoring package submitted on July 10, 1998 included ground water data for these six wells. The package also included water level data for fourteen wells present at the site. The six wells are proposed to be sampled quarterly for two years. No up gradient well was sampled, which is necessary to determine if an intrawell statistical approach is appropriate. DDAGW has commented on this before, but OVEC maintains that they will implement the ground water monitoring program in the approved PTI, which does not include a background well being monitored.

In a previous IOC to DSW, DDAGW outlined that based upon a comparison of shallow wells verses deep wells it appears that the water quality at the OVEC site is being impacted. Please refer to the January 1998 IOC for further information on the November sampling results.

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The following are DDAGW's comments on the ground water monitoring data results in the July 1998 submittal for the OVEC site.

Observations

1. Since no background well was sampled, DDAGW has made several comparisons with the ground water quality results to evaluate whether the north fly ash pond has impacted ground water. These comparisons include shallow wells to deep wells, the wells on site to two ambient stations within the Ohio River Valley Aquifer, and the two well clusters monitoring the north fly ash pond to the cluster on the southern side of the south fly ash pond. The following are several observations about the water quality.

    a. The shallow wells tend to have lower pH and alkalinity than the deeper wells at two of the three locations. The shallow wells KC-9502 and KC-9507 show pH ranging between 5.61 to 5.75, while the deeper well at the respective clusters, KC-9501 and KC-9504, showed pH near 7.0. Alkalinity in the deeper well 9501 was 181 ug/l, while the shallower well 9502 was at 19 ug/l.

    b. Shallow wells 9502 and 9507 have higher concentrations of manganese, and iron verses the deep wells 9501 and 9504. Well 9501 has a manganese concentration of 0.64 mg/l while the shallow well at the same cluster has a manganese concentration of 12.6 mg/l. Iron is 1.03 mg/l in the deep well (9504) but is 16.8 mg/l in shallow well (9507).

    c. In addition to the iron and manganese, 9507 (shallow well) has slightly higher concentrations of magnesium (Mg), TDS and sulfate (SO4) when compared to the deep well, 9504.

    d. The water quality for the cluster 9508 and 9509 was very similar for all parameters.

    e. There has been fairly good consistency in water quality between the three ground water sampling events that have been performed to date, with the following exceptions: well 9502 is showing an increasing trend of iron (3.79 in 10/97 to 6.67 in 5/98); conductivity in well 9507 dropped from 850 in 10/97 and 868 in 1/98 down to 499 in 5/98; 9508 is showing a slight increase in iron between the three events while manganese is slightly decreasing.

    f. Shallow wells 9502 and 9507 are close to being directly down gradient of the north fly ash pond while 9508 is located side gradient, or southward, of the south fly ash pond. Since there is no real difference between the deep and shallow wells at the 9508/09 location it stands to reason that the differences in water quality between shallow and deep at the other two locations may be related to a release from the north fly ash pond. Alkalinity, barium, calcium and pH are higher in the shallow well 9508 than found in 9502 and 9507. Iron and manganese are much

higher in 9502 and 9507 verses 9508. TDS, sulfate, and magnesium are higher in 9507 than found at 9508.

g. DDAGW maintains two ground water ambient stations within the Ohio River Valley Aquifer near the OVEC site. The Middleport Well #4 and the Gallia Rural Water #4 stations are located near the OVEC site. Water quality from July 1998 at these two ambient locations was compared to the water quality being found at the OVEC site. Magnesium, barium, sodium, calcium and chloride are all similar in concentration in the ambient wells as found at the OVEC site. However, iron and manganese levels are much higher (1 to 2 orders of magnitude higher) in all of the wells (shallow and deep) at the OVEC site when compared to the ambient water quality. Interestingly, the OVEC deep wells show very similar alkalinity to the ambient wells.

Comments

1. No water level map was submitted with the three water quality reports. A potentiometric map should be submitted with the water quality data report.

2. In the June 25, 1997 memo on the ground water quality SAP, DDAGW recommended the inclusion of the background well KC-9506 in the initial two year sampling. As noted, this is particularly important in determining if an intrawell statistical approach is the best method for evaluating whether a release has occurred. Given the water quality from the first tbree quarters of monitoring, it appears that there are differences in water quality between the shallow and deep wells in two of the three clusters. Other differences in water quality were also evaluated above. These differences in water quality may be reflective of a release to ground water from the north pond. If a release has occurred at the OVEC site, then intrawell statistics cannot be used to evaluate a release. In order for OVEC to effectively demonstrate that no release has occurred and that intrawell comparison is appropriate, DDAGW continues to recommend that KC-9506 be included in the sampling effort.

3. Based on the water quality data and the submitted water level depth data, DDAGW continues to recommend tbat another monitoring well cluster be installed between the clusters 9501/9502 and 9504/9507 on the east side of the north fly ash pond. OVEC declined to install this well cluster in 1997 given that OEPA approved the PTI without this well as a component of the proposed ground water monitoring program. If OVEC will not install this monitoring well as part of detection monitoring program, then the cluster would likely be installed during assessment activities. Based on the review of the water quality data it is likely that assessment activities will be necessary.

Conclusion

DDAGW has completed its review of the July 1998 Ground Water Quality Report for the North Pond closure at the OVEC site in Gallia County. DDAGW made several ohservations

concerning the water quality data generated to date. Based on the water quality data it appears that there is a difference in water quality between the shallow and deep portions of the Ohio River Valley Aquifer on the down gradient side of the site. This may be an indication of a release from the north or south ponds. Should you have any further questions regarding this review or the site in general, please contact me.

cc: Scott Sutliffe, DDAGW-CO

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DDAGW #: 07/22/98-04-3-05-0 3757

Gallia Co, OIB00005*DD Ohio Valley Electric Corp Kyger Creek

Ohio Environmental Protection Agency

Interoffice Memo

To: Marco Deshaies DSW, SEDO.

From: Steve Lowry through Steve Williams DDAGW, SEDO.

Date: February 7, 2017

RE: Ohio Valley Electric Corporation (OVEC), Kyger Creek Station, North Fly Ash Pond Closure Project, Internal Technical Review, Ground Water Program, Gallia County, OIB00005*PD

Subject: Review of the December 2015, May 2016 and December 2016 North Fly Ash Pond Closure Project Semi-annual groundwater sampling results.

INTRODUCTION

The DDAGW has reviewed the December 14, 2015, May 25, 2016 and the December 2, 2016 dated submittals containing the semiannual groundwater sampling and statistical analysis results from the North Fly Ash Pond Closure Project. These reports include data from the corresponding October 2015, April 2016 and October 2016 sampling events.

Groundwater monitoring of the North Fly Ash Pond is required as part of a January 15, 1997 PTI. Groundwater monitoring at the site began in October of 1997. The North Pond is closed and located immediately north of the adjacent and open South Fly Ash Pond. The North Fly Ash Pond was first used in the 1950's.

The statistical evaluations of groundwater quality contained in the above noted submittals indicate that the upper tolerance limits for the following parameters were exceeded at the following wells:

Alkalinity at wells KC-9501 and KC-9502, exceeded during all three sampling events.

Sulfate at wells KC-9508 and KC-9509, exceeded during all three sampling events, and at well KC-9502 during both 2016 events and KC-9504 during the October 2015 event.

TDS at wells KC-9508 and KC-9509, exceeded during all three sampling events.

Conductivity at well KC-9508 exceeded during the October 2016 sampling event.

Statistical exceedances have been declared by the facility for at least one parameter per sampling event since the beginning of the statistical evaluations, in October of 1999. As with past submittals, OVEC contends that "these statistical exceedances are due to natural variation and not associated with the North Fly Ash Closure Project".

The PTI does not include any provisions for further investigations related to the statistical increases, or for an assessment of the groundwater quality.

BACKGROUND

The facility has been conducting semi-annual groundwater monitoring at the North Fly Ash Pond since 1997. The PTI "Groundwater Sampling and Analysis Plan" is a rather brief document. The plan outlines sampling protocols and parameters and requires a statistical analysis of the four indicator parameters and a requirement to notify Ohio EPA of any statistically significant increases within 15 days of receipt of the analysis. As noted above, the plan does not contain any requirements for additional investigations or for the implementation of a groundwater assessment.

Per the PTI, during the spring sampling event, the statistical parameters of Alkalinity, Specific Conductance, Sulfate and TDS are collected and analyzed. During each fall sampling event, the above four parameters and an additional 12 water quality parameters are collected. The above three noted submittals contain the field parameters for the six sampled wells, total water depth measurements, river stage measurements, the laboratory data sheets for the sampled parameters, and a table that shows the sampling results for each parameter and the intra-well 95% confidence interval value for each of the statistical parameters.

Groundwater flow maps were not included in the submitted documents. The groundwater flow direction at the site is difficult to accurately determine due to the limited number of water level measurements included in the submittals. The lack of a submitted water level from an upgradient well also hinders evaluation of groundwater flow directions. Additionally, clarification may be necessary as water level data appears to be reported as a depth to water, from the top of the monitoring well inner casing, as opposed to mean sea level.

The North Fly Ash Pond is monitored by six wells which represent three well clusters, each monitoring two separate units. These wells are screened in sand and gravel deposits associated with the Ohio River. The wells range in depth from approximately 34 feet to 94 feet below grade. The well screens of each well cluster are separated by a distance of approximately two to five feet. The well clusters (shallow listed first) are grouped as follows: KC-9502/KC-9501, KC-9507/KC-9504, and KC-9509/KC-9508. Groundwater monitoring was not initiated at the North Fly Ash Pond until approximately 40 years after waste placement was initiated.

Wells KC-9509/KC-9508 are located primarily downgradient of the South Fly Ash Pond. These wells show the most significant impact to groundwater. The shallow well KC-9509 is showing statistically significant increases in conductivity, TDS and sulfate. Conductivity has increased from 485 umohs/cm in 1997 to 1,126 umoh/cm in 2016. TDS has increased from 603 mg/l to 779 mg/l and sulfate has increased from 241 mg/l to 460 mg/l over the same time period. The deeper well KC-9508 is showing

statistically significant increases in TDS and sulfate along with a visually increasing trend in conductivity since 2010. TDS in well KC-9508 has increased from 558 mg/l in 1997 to 866 mg/l in 2016, sulfate has increased from 190 mg/l in 2010 to 420 mg/l in 2016 and conductivity has increased from 512 umohs/cm in 1997 to 1,296 umoh/cm over the same time period.

Wells KC-9501/9502, located at the northernmost portion of the North Fly Ash Pond, has shown a statistically significant increase in alkalinity in both wells. Alkalinity in well KC-9501 has increased from 169 mg/l to 260 mg/l, and well KC-9502 from 19 mg/l to 45.7 mg/l over the 1997 to 2016 time period.

Wells KC 9507/9504 located downgradient of the North Fly Ash Pond reveals mostly decreasing trends in all statistically evaluated parameters, with the exception of deep well KC-9504, which has a statistically increasing trend for sulfate. The sulfate concentration in well KC-9504 started out at a concentration of 327 mg/l in 1997 and is currently at 423 mg/l. The sulfate concentration in this well was as high as 820 mg/l in 2008. The trend for sulfate in this well has been decreasing since 2008. TDS in this well is currently at a concentration of 757 mg/l with a past high of 1480 mg/l in 2008.

For comparison purposes, un-impacted groundwater from Ohio River sand and gravel deposits, from the Proctorville Wellfield (Lawrence County), reveal the following average concentrations: Alkalinity 58.2 mg/l, Conductivity 320.1 umhos/cm, TDS 195.7 mg/l and Sulfate 46.1 mg/l.

The sampling of additional existing groundwater monitoring wells, such as background well KC-9506 and possibly the KC-9505/9503 cluster may provide additional information regarding groundwater quality, flow directions and the extent of impacted ground water in the area of the North Fly Ash Pond. The installation of additional appropriately placed downgradient wells would also allow for a more meaningful evaluation of groundwater quality and flow directions in the area of the North Fly Ash Pond.

As shown in the December 14, 2015, the May 25, 2016 and the December 2, 2016 dated submittals titled "North Fly Ash Pond Closure Project, Groundwater Semiannual Data Analysis" the drinking water health standard was exceeded in all six monitoring wells for the parameter manganese. DDAGW will conduct a detailed review of potential receptors in the area. However, a preliminary review shows no private wells or public well fields immediately down gradient of the Kyger Creek Station, North Fly Ash Pond Closure Project.

RECOMMENDATIONS

1. The DDAGW has reviewed the December 14, 2015, the May 25, 2016 and the December 2, 2016 dated submittals titled "North Fly Ash Pond Closure Project,

Groundwater Semiannual Data Analysis". In these documents OVEC has presented the results of a statistical analysis of groundwater and concluded that the nine statistical exceedances are due to "natural variation and not associated with the North Fly Ash Pond Closure Project". The DDAGW does not concur with OVEC's statement that "these statistical exceedances are due to natural variation and are not associated with the North Fly Ash Closure Project". OVEC has not undertaken any known field activities to demonstrate that the statistically elevated concentrations of sulfate, TDS, Conductivity or Alkalinity are not the result of the operation of the North Fly Ash Pond. The DDAGW recommends that an assessment of groundwater quality be conducted at the North Fly Ash Pond.

To better evaluate the declared statistical exceedances, the DDAGW recommends that OVEC make improvements to the groundwater monitoring system for the North Fly Ash Pond and then conduct as assessment of groundwater quality as outlined in Attachment "G" of Guidance Document GD0303.010 titled "Ground Water Monitoring Program Plan Requirements for Wastewater Facilities".

2. The DDAGW recommends the following improvements be made to the groundwater monitoring network at the North Fly Ash Pond:

    a. That water level measurements and groundwater sampling results from background well KC-9506 be included in all future submittals. This sampling data point would represent background water quality for the North Fly Ash Pond and allow for a more meaningful evaluation of groundwater quality.

    b. That water level measurements from well KC-9510, KC-9503 and KC-9505 also be included in all future submittals.

    c. That OVEC evaluate the usefulness of including wells KC9503 and KC-9505 into the groundwater monitoring network.

    d. That the 10 groundwater monitoring wells installed in the area of the North Fly Ash Pond (KC-9501 to KC-9510) be resurveyed to ensure that the collected water level measurements accurately reflect site conditions.

    e. That future submittals include ground water flow maps derived from the above noted monitoring wells and that the water level measurements are recorded in reference to mean sea level.

    f. That upon determining current groundwater flow directions in the area of the North Fly Ash Pond, OVEC evaluate the adequacy of the current groundwater monitoring network. At this time the installation of an additional shallow groundwater monitoring well between existing wells KC9502 and KC-9507 appears to be appropriate.

Conclusion

The DDAGW has reviewed the December 14, 2015, May 25, 2016 and the December 2, 2016 dated submittals titled North Fly Ash Pond Closure Project submittals. The DDAGW has recommended that OVEC make improvements to the groundwater monitoring network at the North Fly Ash Pond and that an assessment of groundwater quality be conducted.

44711, 44712, 44713



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APPENDIX F ANALYTICAL DATA SUMMARY

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01
Date		2016-08-26	2016-10-03	2016-11-28	2017-02-07	2017-03-28	2017-05-03	2017-06-13	2017-07-14	2018-02-28	2018-05-16	2018-09-18	2019-03-16	2019-09-19	2020-03-11
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L			222	214						240	210	200 B	190	200
Aluminum	mg/L					0.49	0.045 J	0.05 U	0.05 U						
Antimony	mg/L	2E-05 J	2E-05 J	1E-05 J	2E-05 J	0.002 B	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00078	0.00042	0.0004	0.00106	0.0022 J	0.005 U	0.005 U	0.005 U	0.0011 J	0.00089 J	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.0725	0.0611	0.0641	0.0625	0.075 B	0.063	0.064	0.062	0.069	0.072	0.066	0.064	0.059	0.06
Beryllium	mg/L	1E-05 J	2E-05 U	2E-05 U	9E-06 J	0.001 U	0.001 U	0.001 U	0.001 U	0.00035 J	0.001 U	0.001 U^+	0.001 U	0.001 U^-	0.001 U^-
Bicarbonate Alkalinity as CaCO3	mg/L									220	240	210	200 B	190	200
Boron	mg/L	0.104	0.095	0.11	0.162	0.11 J	0.12	0.13 J	0.13 JB	0.12	0.12	0.12	0.11	0.096 J	0.11
Bromide	mg/L			0.1 J	0.1 J	0.19 J	0.16 J	0.15 J	0.16 J						
Cadmium	mg/L	2E-05 J	2E-05 J	2E-05 J	2E-05	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	113	105	114	107	110 JB	100	110	110	110	100	100	100	96	100
Carbonate Alkalinity as CaCO3	mg/L									5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	20.4	21.5	22.2	23.4	23	22	22	23	23	19	25	27	21	27
Chromium	mg/L	0.0004	0.0002	0.000207	0.000312	0.0013 JB	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	mg/L	0.00052	0.000168	0.000164	0.000439	0.00095 J	0.0002 J	0.001 U	0.001 U	0.00046 J	0.0006 J	0.00031 J	0.00025 J	0.001 U	0.00019 J
Conductivity, Field	uS/cm	645	646	661	644						621				633
Copper	mg/L					0.0014 JB	0.002 U	0.002 U	0.002 U						
Dissolved Oxygen, Field	mg/L	0.76	0.16	0.78	0.76						0.17				
Dissolved Solids, Total	mg/L	434	402	380	360	420	400	420 J	420 J	410	380	410	390	350	380
Fluoride	mg/L	0.1 J	0.1 J	0.1 J	0.1 J	0.14	0.14	0.14	0.14	0.12	0.13 F2	0.12	0.12	0.12	0.13
Iron	mg/L					1.4 B	0.16	0.085 J	0.1 U						
Lead	mg/L	0.00244	0.000255	0.000283	0.00058	0.001 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001	0.001 U	0.00079 J	0.001 U	0.001 U
Lithium	mg/L	0.008	0.0009 J	0.006	0.004	0.0034 J	0.0024 J	0.0035 J	0.0038 J	0.002 J	0.008 U	0.0031 J*+^+	0.002 J	0.002 J	0.008 U^-
Magnesium	mg/L			13.4	12.8	12 B	13	14	13	12	12	12	13	12	13
Manganese	mg/L					0.19 JB	0.1	0.048	0.049						
Mercury	mg/L	5E-06 U	5E-06 U	5E-06 U	5E-06 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U						
Molybdenum	mg/L	0.00037	0.00071	0.00055	0.00147	0.0014 J	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nickel	mg/L					0.0018 JB	0.002 U	0.002 U	0.002 U						
Oxidation-Reduction Potential, Field	mV														
pH, Field	pH units	6.82	6.83	6.85	6.75	6.82	6.79	6.76	6.67		6.83	6.86	6.93	6.94	6.96
Potassium	mg/L			1.57	1.74	1.6 B	1.4	1.4	1.4	1.6	1.5	1.4	1.6	1.4	1.5
Radium-226	pCi/L	0.244	0.323	0.186	0.173	0.0827 U	0.0201 U	0.418	0.0636 U						
Radium-226/228	pCi/L	0.549	0.526	1.114	0.449	0.316	0.0267 U	0.559	0.195 U						
Radium-228	pCi/L	0.305	0.203	0.928	0.276	0.233 U	0.00664 U	0.141 U	0.131 U						
Redox Potential, Field	mV	148.6	166.8	93	135.6										
Selenium	mg/L	0.0002	0.0002	0.0001	0.0001 J	0.0011 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L					9.6E-05 J	0.001 U	0.001 U	0.001 U						
Sodium	mg/L			11.6	10.8	10 JB	11 B	11	11 J	11	11	11	11	9.6	11
Strontium	mg/L			0.19	0.174	0.18 B	0.16 B	0.17 B	0.17						
Sulfate	mg/L	112	105	111	95.3	92	92	95	95	91	84 F1	98	110	110	92
Temperature, Field	deg C	16.2	13.9	13.8	14.4						14.5				14
Thallium	mg/L	1E-05 J	8.4E-05	2E-05 J	1E-05 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	9.2	5.1	6.1	13.6	18.3	2.1	1.8	0.5		15.3	4.23		8	2
Vanadium	mg/L					0.0012 J									
Zinc	mg/L					0.02 U	0.02 U	0.02 U	0.02 U						

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01
Date		2020-09-09	2021-03-13	2021-09-18	2022-03-31	2022-04-27	2022-06-28	2022-10-11	2022-10-11	2022-12-13	2022-12-13	2023-03-01	2023-04-10	2023-10-02	2023-10-02
Sample Type		N	N	N	N	N	N	FD	N	FD	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	190	200	190	210	210	220	210	210	210	210	200	220 J		210
Aluminum	mg/L				0.047 J										
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U
Arsenic	mg/L	0.0022 J	0.00099 J	0.005 U	0.002 U	0.005 U	0.0082		0.0018 J	0.0045 J	0.0046 J	0.0036 J	0.004 J		0.00083 J
Barium	mg/L	0.071	0.067	0.061	0.065	0.058	0.15		0.064	0.097	0.094	0.09	0.084		0.059
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	190	200	190	210	210	220	210	210	210	210	200	220 J		210
Boron	mg/L	0.15 J	0.093 J	0.1	0.2 U			0.098 J	0.098 J				0.11		0.13
Bromide	mg/L														
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.0001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
Calcium	mg/L	96	100	100	110			100	100				91		96
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U
Chloride	mg/L	29	32	34	21			28	28				27		26
Chromium	mg/L	0.002 U	0.001 J	0.005 U	0.005 U	0.005 U	0.005		0.005 U	0.0028 J	0.0026 J	0.005 U	0.0019 J		0.005 U
Cobalt	mg/L	0.001	0.00067 J	0.00038 J	0.00023 J	0.001 U	0.0043		0.00071 J	0.0023	0.0023	0.0021	0.0018		0.00037 J
Conductivity, Field	uS/cm	612	622	618	610	605.4		632	632	623	623	638	591	570	
Copper	mg/L				0.005 U										
Dissolved Oxygen, Field	mg/L				0.33	1.02		0.9	0.9	0.52	0.52	0.39	0.59	1.2	
Dissolved Solids, Total	mg/L	360	440	420	360 J			400	390				400		350
Fluoride	mg/L	0.046 J	0.096	0.13	0.14	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.12		0.13
Iron	mg/L				0.11										
Lead	mg/L	0.001	0.00058 J	0.001 U	0.0006 J	0.001 U	0.0056		0.00072 J	0.0031	0.0028	0.0023	0.0023		0.00072 J
Lithium	mg/L	0.004 J	0.0033 J	0.0026 J	0.0029 J	0.0024 J	0.0064 J		0.0038 J	0.0051 J	0.0045 J	0.0052 J	0.0062 J		0.0045 J
Magnesium	mg/L	13	13	13	12	12	13	13	13	13	13	13	11		12
Manganese	mg/L				0.12										
Mercury	mg/L				0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00014 JB	0.00014 JB	0.0002 U	0.0002 U		0.0002 U
Molybdenum	mg/L	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.0013 J		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U
Nickel	mg/L				0.005 U										
Oxidation-Reduction Potential, Field	mV				83.6			97.7	97.7	15.5	15.5	210.5	181	127.3	
pH, Field	pH units	6.97	6.82	6.81	6.82	6.82		6.79	6.79	7.03	7.03	6.7	6.54	6.84	
Potassium	mg/L	1.6	1.5	1.4	1.5 J	1.4	2.3	1.6	1.6	1.9	1.9	1.7	1.6		1.4
Radium-226	pCi/L				0.0525 U	0.0643 U	0.19 U	0.194 U	0.11 U	0.089 U	0.07 U	0.123 U	0.207 U		-0.033 U
Radium-226/228	pCi/L				-0.0522 U	0.371 U	1.56	1.22 U	1.33 U	1.24 U	1.35 U	0.976	0.259 U		1.15
Radium-228	pCi/L				-0.105 U	0.307 U	1.37	1.03 U	1.22 U	1.15 U G	1.28 U G	0.853 U	0.0517 U		1.19
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U
Silver	mg/L				0.001 U										
Sodium	mg/L	11	11	13	13	11	12	12	12	13	13	12	11		12
Strontium	mg/L				0.18										
Sulfate	mg/L	100	95	94	80			88	88				91		89
Temperature, Field	deg C	14	13	14	15	13.7		13.6	13.6	13.5	13.5	14.9	13.8	14.6	
Thallium	mg/L	0.00021 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.00087 J	0.001 U		0.001 U
Turbidity, Field	NTU	26.5	10.4	5.38	20.1	2.51		45.73	45.73	91.76	91.76	54.26	51.35	10.96	
Vanadium	mg/L														
Zinc	mg/L				0.02 U										

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-01	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02
	Date	2024-03-19	2024-03-19	2024-10-04	2024-10-04	2025-03-20	2025-10-01	2016-08-25	2016-10-03	2016-11-28	2017-02-07	2017-03-28	2017-05-03	2017-06-13	2017-06-13
	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L		220		220	220	190			285	273				
Aluminum	mg/L											0.15	0.078	0.041 J	0.035 J
Antimony	mg/L		0.002 U		0.002	0.002 U	0.002 U	6E-05	3E-05 J	4E-05 J	2E-05 J	0.00035 JB	0.002 U	0.002 U	
Arsenic	mg/L		0.0018 J		0.0011	0.0021 J	0.00099 J	0.00159	0.00124	0.00146	0.00067	0.00072 J	0.00075 J	0.005 U	0.00075 J
Barium	mg/L		0.072		0.072	0.09	0.069	0.0515	0.0489	0.0492	0.0358	0.05 B	0.048	0.049	0.051
Beryllium	mg/L		0.001 U		0.001	0.001 U	0.001 U	3.5E-05	2.3E-05	2.6E-05	7E-06 J	0.001 U	0.001 U	0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L		220		220	220	190								
Boron	mg/L		0.11		0.12	0.12	0.11 J	1.72	1.92	2.17	2.08	2.5 J	2.4	2.6 J	2.7 J
Bromide	mg/L									0.624	0.483	0.73	0.12 J	0.74	0.74
Cadmium	mg/L		0.001 U		0.001	0.001 U	0.001 U	0.0003	0.00031	0.0003	0.00025	0.00035 J	0.00032 J	0.00043 J	0.00041 J
Calcium	mg/L		99		100	100	92	149	156	168	161	170 JB	180	180	180
Carbonate Alkalinity as CaCO3	mg/L		5 U		5	5 U	5 U								
Chloride	mg/L		27		24	16	22	82.8	91.8	95	97.3	100	21	110	110
Chromium	mg/L		0.005 U		0.005	0.0012 J	0.005 U	0.0013	0.0008	0.00129	0.00432	0.0012 JB	0.0015 J	0.0016 J	0.002 U
Cobalt	mg/L		0.00097 J		0.00061	0.0014	0.00067 J	0.00333	0.00257	0.00266	0.00178	0.0019	0.0018	0.0018	0.0017
Conductivity, Field	uS/cm	664		637		588	562	1279	1355	1436	1434				
Copper	mg/L											0.0014 JB	0.002 U	0.002 U	0.002 U
Dissolved Oxygen, Field	mg/L	1.72		0.86		0.81	0.43	0.63	0.39	0.94	1.18				
Dissolved Solids, Total	mg/L		380		370	350	350	824	858	896	860	1000	1000	1100 J	1000 J
Fluoride	mg/L		0.11		0.12	0.091	0.14	0.19	0.1 J	0.08 J	0.17	0.17	0.032 J	0.17	0.17
Iron	mg/L											0.39 B	0.27	0.15	0.11
Lead	mg/L		0.0011		0.0011	0.002	0.0021	0.00284	0.00184	0.00158	0.000589	0.0008 J	0.00068 J	0.0006 J	0.00068 J
Lithium	mg/L		0.0047 J		0.0039	0.004 J	0.008 U	0.01	0.004	0.005	0.001 U	0.0022 J	0.008 U	0.008 U	0.008 U
Magnesium	mg/L		12		12	13	12			43.9	43.9	46 B	51	51	52
Manganese	mg/L											4.1 JB	4.3	4.4	4.5
Mercury	mg/L		0.0002 U		0.0002	0.0002 U	0.0002 U	3E-06 J	7E-06	5E-06 U	3E-06 J	0.0002 U	0.0002 U		
Molybdenum	mg/L		0.005 U		0.005	0.005 U	0.005 U	0.00109	0.00044	0.00081	0.00201	0.01 U	0.01 U	0.01 U	
Nickel	mg/L											0.022 B	0.022	0.02	0.021
Oxidation-Reduction Potential, Field	mV	230		121.9		79.3	96.2								
pH, Field	pH units	6.84		6.75		6.84	6.83	6.2	6.19	6.14	6.1	6.18	6.13		6.08
Potassium	mg/L		1.5		1.6	1.7	1.5			3.66	3.43	3.6 B	3.7	3.6	3.6
Radium-226	pCi/L		-0.106 U		0.0131 U	-0.0304 U	0.0916 U	0.934	0.233	0.12	0.204	0.0599 U	0.0438 U	0.113	0.072 U
Radium-226/228	pCi/L		-0.568 U		0.162 U	-0.128 U	0.237 U	1.073	0.855	0.0347	0.1452	0.298 U	0.375 U	0.29 U	0.305 U
Radium-228	pCi/L		-0.462 U		0.149 U	-0.0981 U	0.145 U	0.139	0.622	-0.0853	-0.0588	0.238 U	0.331 U	0.177 U	0.233 U
Redox Potential, Field	mV							112.3	164.6	115.3	143.3				
Selenium	mg/L		0.005 U		0.005	0.005 U	0.005 U	0.0003	0.0002	0.0002	6E-05 J	0.00048 J	0.005 U	0.005 U	0.005 U
Silver	mg/L											0.001 U	0.001 U	0.001 U	0.001 U
Sodium	mg/L		12		13	13	12			67.3	64.6	68 JB	74 B	73	74
Strontium	mg/L									0.499	0.479	0.55 B	0.56 B	0.51 B	0.53 B
Sulfate	mg/L		87		83	39	75	288	341	359	346	410	80	430	420
Temperature, Field	deg C	13.5		16.4		13	15	19.9	17.2	16	16.2				
Thallium	mg/L		0.001 U		0.001	0.001 U	0.001 U	0.000128	3E-05 J	9.3E-05	3E-05 J	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	23.14		23.29		48.35	19.54	8.1	9.6	9.3	5.4	2.2	2.5		2
Vanadium	mg/L											0.005 U			
Zinc	mg/L											0.02 U	0.02 U	0.02 U	0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02
Date		2017-07-19	2018-02-28	2018-05-15	2018-05-15	2018-09-18	2018-09-18	2019-03-16	2019-09-18	2020-03-11	2020-09-09	2021-03-13	2021-09-18	2022-03-31	2022-04-27
Sample Type		N	N	FD	N	FD	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L			300	310	280	280	290 B	250	280	240	250	230	260	260
Aluminum	mg/L	0.1												0.05 U	
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00078 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U
Barium	mg/L	0.052	0.035	0.043	0.046	0.044	0.042	0.038	0.031	0.036	0.027	0.031	0.031	0.036	0.035
Beryllium	mg/L	0.001 U	0.001 U	0.00043 J	0.00073 J	0.001 U^+	0.001 U^+	0.001 U	0.001 U	0.001 U^-	0.001 U	0.001 U^-	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		260	300	310	280	280	290 B	250	280	240	250	230	260	260
Boron	mg/L	2.7 JB	2	2.3	2.4	2.5	2.5	2.3	1.4	1.9	1.3	1.7	1.4	1.9 J	
Bromide	mg/L	0.77													
Cadmium	mg/L	0.00036 J	0.00034 J	0.00045 J	0.00055 J	0.00038 J	0.00037 J	0.00034 J	0.00026 J	0.00025 J	0.001 U	0.001 U	0.001 U	0.00028	0.00026 J
Calcium	mg/L	190	160	160	170	170	160	150	130	140	110	130	130	170	
Carbonate Alkalinity as CaCO3	mg/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	110	97	110	110	100	100	96	68	82	62	76	69	78	
Chromium	mg/L	0.0011 J	0.014	0.002 U	0.0012 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U
Cobalt	mg/L	0.0025	0.0018	0.0018	0.0021	0.0015	0.0015	0.0011	0.00069 J	0.00078 J	0.00058 J	0.00067 J	0.00082 J	0.00079	0.0008 J
Conductivity, Field	uS/cm				1469					1361	1091	1292	1177	1431	1383
Copper	mg/L	0.002 U												0.005 U	
Dissolved Oxygen, Field	mg/L				0.26									0.35	0.72
Dissolved Solids, Total	mg/L	1100 J	900	950	980	970	980	920	580	880	690	930	860	900 J	
Fluoride	mg/L	0.16	0.16	0.16	0.16	0.16	0.2	0.15	0.15	0.18	0.12	0.14	0.19	0.19	0.19
Iron	mg/L	0.39												0.1 U	
Lead	mg/L	0.00089 J	0.001 U	0.00085 J	0.0014	0.001 U	0.001 U	0.00053 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U
Lithium	mg/L	0.0025 J	0.008 U	0.008 U	0.008 U	0.0023 J*+^+	0.0025 J*+^+	0.008 U	0.008 U	0.008 U^-	0.008 U	0.008 U	0.008 U	0.01 U	0.0022 J
Magnesium	mg/L	49	41	44	47	44	45	44	36	43	33	36	37	42	44
Manganese	mg/L	4.7												3.9	
Mercury	mg/L	0.0002 U												0.0002 U	0.0002 U
Molybdenum	mg/L	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0012 J	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U
Nickel	mg/L	0.024												0.014	
Oxidation-Reduction Potential, Field	mV													78.9	63.7
pH, Field	pH units	6.02			6.18		6.2	6.33	6.43	6.43	6.5	6.3	6.48	6.25	6.33
Potassium	mg/L	4	3.8	3.8	3.9	3.6	3.6	3.8	2.6	3.5	2.6	2.6	2.8	3.5	3.5
Radium-226	pCi/L	0.0813 U												0.168 U	0.0517 U
Radium-226/228	pCi/L	-0.104 U												0.175 U	0.374 U
Radium-228	pCi/L	-0.186 U												0.00741 U	0.323 U
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.00099 J	0.005 U	0.00093 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.001 U												0.001 U	
Sodium	mg/L	73 JB	63	66	70	68	68	69	56	70	58	63	65	78	80
Strontium	mg/L	0.63												0.53	
Sulfate	mg/L	440	360	390	390	390	400	370	310	340	260	360	340	400	
Temperature, Field	deg C				17.5					15	17	16	17	16	16.1
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00022 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	7.4			17.3		2.02		5	1	0.6	10.6	0.4	7	0.19
Vanadium	mg/L														
Zinc	mg/L	0.02 U												0.02 U	

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02	BAC-02
Date		2022-06-28	2022-10-17	2022-12-07	2023-03-02	2023-04-10	2023-09-27	2023-09-27	2023-09-27	2024-03-20	2024-03-20	2024-10-08	2024-10-08	2025-03-28	2025-09-26
Sample Type		N	N	N	N	N	FD	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	270	13	260	260	290 J	260		250		290		290	290	240
Aluminum	mg/L														
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.00099 J	0.002 U		0.002 U		0.002 U		0.002	0.002 U	0.002 U
Arsenic	mg/L	0.017	0.0063	0.01	0.008	0.0045 J	0.0041 J		0.0043 J		0.0049 J		0.0023	0.0024 J	0.0024 J
Barium	mg/L	0.32	0.13	0.18	0.17	0.091	0.091		0.13		0.11 J		0.067	0.061	0.044
Beryllium	mg/L	0.00069 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	270	13	260	260	290 J	260		250		290		290	290	240
Boron	mg/L		1.3			1.6	1.3		1.1		1.5		1.5	1.7	1.2 J
Bromide	mg/L														
Cadmium	mg/L	0.00047 J	0.0003 J	0.00048 J	0.00079 J	0.00067 J	0.00036 J		0.00032 J		0.00034 J		0.00023	0.00031 J	0.0004 J
Calcium	mg/L		130			140	140		130		140		140	150	120
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U		5 U		5 U		5 U		5	5 U	5 U
Chloride	mg/L		69			76 J	62		63		77		69	75	59
Chromium	mg/L	0.022	0.0087	0.013	0.013	0.0068	0.0055		0.0057		0.006		0.0025	0.003 J	0.0021 J
Cobalt	mg/L	0.01	0.0044	0.0075	0.0063	0.0033	0.0032		0.0032		0.0037		0.0018	0.0022	0.0016
Conductivity, Field	uS/cm		1345	1389	1364	1352		1202		1415		1367		1431	1208
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		0.76	1.06	0.59	0.99		0.94		1.44		0.78		0.79	0.6
Dissolved Solids, Total	mg/L		940 J			890 J	800		690		900		810	800	720
Fluoride	mg/L	0.23	0.15	0.17	0.17	0.16 J	0.22		0.23		0.18		0.17	0.21	0.28
Iron	mg/L														
Lead	mg/L	0.017	0.0064	0.0089	0.0095	0.0041	0.0049		0.0048		0.0049		0.002	0.0019	0.0019
Lithium	mg/L	0.012	0.0063 J	0.0077 J	0.0082	0.0067 J	0.0047 J		0.0041 J		0.0058 J		0.0044	0.008 U	0.008 U
Magnesium	mg/L	42	37	42	40	38	39		36		40		38	43	34
Manganese	mg/L														
Mercury	mg/L	0.00017 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U
Molybdenum	mg/L	0.0016 J	0.005 U	0.0011 J	0.005 U	0.0015 J	0.005 U		0.005 U		0.005 U		0.005	0.005 U	0.0011 J
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		93.3	43.3	198.1	202		60.7		46.5		56.6		44.8	111.4
pH, Field	pH units		6.59	6.58	6.17	6.23		6.64		6.59		6.69		6.26	6.55
Potassium	mg/L	4.8	3.2	4.3	3.7	3.2	3.2		3.1		3.5		3.4	3.8	2.9
Radium-226	pCi/L	0.453	0.68	0.288	0.613 U	0.113 U	0.414 U		0.194 U		0.0498 U		0.0949 U	0.0293 U	0.15 U
Radium-226/228	pCi/L	0.319 U	1.46	0.772 U	4.12	2.62	1.98		1.9		1.73		-0.239 U	0.301 U	1.39 J
Radium-228	pCi/L	-0.134 U	0.776 U	0.484 U G	3.51	2.51	1.56		1.7		1.68		-0.334 U G *	0.272 U	1.24
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.0011 J	0.005 U	0.005 U	0.0012 J	0.005 U		0.005 U		0.005 U		0.005	0.005 U	0.005 U
Silver	mg/L														
Sodium	mg/L	72	66	71	70	68	71		71		74		83	80	70
Strontium	mg/L														
Sulfate	mg/L		340			390 J	310		310		380		320	330	290
Temperature, Field	deg C		15.5	15.7	15.4	15.8		16.6		15.9		18.6		18.9	19.2
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.00061 J	0.001 U		0.001 U		0.001 U		0.001	0.001 U	0.0006 J
Turbidity, Field	NTU		260.27	203.14	283.04	119.14		110.51		113.07		51.93		75.77	50.25
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03
Date		2016-08-26	2016-10-03	2016-11-28	2017-02-07	2017-03-28	2017-05-02	2017-05-02	2017-06-13	2017-07-14	2018-02-28	2018-05-15	2018-09-18	2019-03-16	2019-09-19
Sample Type		N	N	N	N	N	FD	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L			96.6	88.2							100	93	91 B	85
Aluminum	mg/L					0.059	0.049 J	0.042 J	0.05 U	0.05 U					
Antimony	mg/L	5E-05	2E-05 J	2E-05 J	3E-05 J	0.00048 JB	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00027	0.00024	0.00016	0.00031	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.0469	0.045	0.0422	0.0426	0.05 B	0.048	0.048	0.045	0.044	0.047	0.045	0.042	0.044	0.04
Beryllium	mg/L	1E-05 J	2E-05 U	2E-05 U	8E-06 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U^+	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L										90	100	93	91 B	85
Boron	mg/L	2.14	2.06	2.07	2.24	2.3 J	2.1	2.1	2 J	2 JB	2.3	2.5	2.2	2.2	2
Bromide	mg/L			0.151	0.1 J	0.17 J	0.15 J	0.15 J		0.16 J					
Cadmium	mg/L	0.00015	9E-05	8E-05	8E-05	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	97.8	93.7	90.4	95.7	97 JB	96	96	89	88	95	96	92	91	87
Carbonate Alkalinity as CaCO3	mg/L										5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	52.1	52.8	48.2	52.2	68	72	72	62	61	62	56	57	59	52
Chromium	mg/L	0.0007	0.0006	0.000458	0.00115	0.00054 JB	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	mg/L	0.000468	0.00026	0.000169	0.000317	0.00027 J	0.00024 J	0.00025 J	0.001 U	0.001 U	0.001 U	0.0002 J	0.00024 J	0.0003 J	0.001 U
Conductivity, Field	uS/cm	767	752	749	762							731			
Copper	mg/L					0.0031 B	0.002 B	0.0019 JB	0.0017 JB	0.002 U					
Dissolved Oxygen, Field	mg/L	1.1	0.2	0.68	0.83							0.15			
Dissolved Solids, Total	mg/L	528	476	416	514	520	510	510	500 J	500 J	500	540	500	480	480
Fluoride	mg/L	0.07 J	0.09 J	0.07 J	0.07 J	0.071	0.071	0.071	0.071	0.07	0.072	0.085	0.073	0.12	0.062
Iron	mg/L					0.14 B	0.13	0.1	0.1 U	0.1 U					
Lead	mg/L	0.00184	0.000641	0.00048	0.00168	0.00093 J	0.00096 J	0.00083 J	0.00055 J	0.001 U	0.001 U	0.0017	0.00067 J	0.0027	0.00049 J
Lithium	mg/L	0.009	0.006	0.007	0.006	0.0056 J	0.0049 J	0.0049 J	0.0033 J	0.0067 J	0.0043 J	0.0031 J	0.0053 J*+^+	0.0043 J	0.0046 J
Magnesium	mg/L			16.2	17.6	17 B	18	18	17	17	17	17	16	18	16
Manganese	mg/L					0.24 JB	0.23	0.22	0.19	0.15					
Mercury	mg/L	5E-06 U	1.6E-05	5E-06 U	5E-06 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U					
Molybdenum	mg/L	0.00031	0.00138	0.0005	0.0006	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0041 J
Nickel	mg/L					0.0044 B	0.0042	0.048	0.0035	0.0035					
Oxidation-Reduction Potential, Field	mV														
pH, Field	pH units	6.12	6.03	6.04	6.05	6.07		6.05	5.89	5.93		6.16	6.12	6.26	6.19
Potassium	mg/L			1.9	2.12	1.9 B	1.9	1.9	1.8	1.8	1.8	1.7	1.8	2	1.7
Radium-226	pCi/L	0.0989	0.13	0.0518	0.281	0.0181 U	0.065 U	-0.0333 U	0.0442 U	0.235					
Radium-226/228	pCi/L	0.2129	-0.14	0.3818	0.17	0.102 U	0.345	0.271 U	0.0882 U	0.506					
Radium-228	pCi/L	0.114	-0.27	0.33	-0.111	0.0838 U	0.28 U	0.304 U	0.044 U	0.272					
Redox Potential, Field	mV	213.7	236.8	192.3	248.5										
Selenium	mg/L	7E-05 J	6E-05 J	0.0001 U	4E-05 J	0.005 U	0.005 U	0.005 U	0.005 U	0.0011 JB	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L					3.3E-05 J	0.001 U	0.001 U	0.001 U	0.001 U					
Sodium	mg/L			30.5	31.2	31 JB	34 B	34 B	33	34 J	31	30	31	32	29
Strontium	mg/L			0.211	0.222	0.22 B	0.22 B	0.22 B	0.2 B	0.21					
Sulfate	mg/L	211	204	200	196	180	180	180	190	190 J	210	200	200	200	210
Temperature, Field	deg C	18.6	15.4	14.5	14.8							16.5			
Thallium	mg/L	3E-05 J	2E-05 J	1E-05 J	3E-05 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00054 J
Turbidity, Field	NTU	3.9	8.1	7.6	5.1	2.1		4.2	2.3	1.9		1.03	1.36		2
Vanadium	mg/L					0.005 U									
Zinc	mg/L					0.02 U	0.02 U	0.02 U	0.02 U	0.02 U					

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03
Date		2020-03-12	2020-03-12	2020-09-10	2021-03-13	2021-09-18	2021-09-18	2022-04-01	2022-04-28	2022-06-21	2022-10-13	2022-12-14	2023-03-03	2023-04-07	2023-10-02
Sample Type		FD	N	N	N	FD	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	100	100	86	89	85	86	81	84	96	86	89	82	95	
Aluminum	mg/L							0.04 J							
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	
Arsenic	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.011	0.0071	0.0011 J	0.0013 J	
Barium	mg/L	0.046	0.045	0.037	0.045	0.042	0.041	0.042	0.039	0.038	0.18	0.13	0.052	0.054	
Beryllium	mg/L	0.001 U^-	0.001 U^-	0.001 U	0.001 U^-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00064 J	0.001 U	0.001 U	0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	100	100	86	89	85	86	81	84	96	86	89	82	95	
Boron	mg/L	1.6	1.6	1.7	1.9	1.8	1.8	2.3			1.8			1.8	
Bromide	mg/L														
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0001 U	0.001 U	0.001 U	0.00022 J	0.001 U	0.001 U	0.001 U	
Calcium	mg/L	100	100	73	83	84	84	88			81			75	
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Chloride	mg/L	78	78	63	79	64	64	51			57			54	
Chromium	mg/L	0.001 J	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.0012 J	0.005 U	0.005 U	0.016	0.012	0.005 U	0.0023 J	
Cobalt	mg/L	0.001 U	0.001 U	0.0003 J	0.00052 J	0.00031 J	0.00029 J	0.00022 J	0.001 U	0.001 U	0.014	0.0093	0.0016	0.0018	
Conductivity, Field	uS/cm	819	819	684	750	681	681	730	684		695	648	724	653	745
Copper	mg/L							0.0025 J							
Dissolved Oxygen, Field	mg/L							0.27	0.39		1.46	0.69	0.22	1.34	1.02
Dissolved Solids, Total	mg/L	560	550	420	560	510	470	440			460 J			460	
Fluoride	mg/L	0.068	0.081	0.037 J	0.045 J	0.066	0.065	0.063	0.064	0.054	0.058	0.047 J	0.062	0.05 U	
Iron	mg/L							0.1							
Lead	mg/L	0.00081 J	0.00073 J	0.0016	0.0025	0.001	0.00096 J	0.00097	0.001 U	0.00052 J	0.026	0.024	0.0037	0.0045	
Lithium	mg/L	0.0021 J^-	0.0023 J^-	0.0059 J	0.0057 J	0.0055 J	0.0062 J	0.0068 J	0.0067 J	0.0031 J	0.013	0.012	0.0064 J	0.0079 J	
Magnesium	mg/L	20	19	15	16	17	16	16	16	17	17	17	16	15	
Manganese	mg/L							0.12							
Mercury	mg/L							0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00014 JB	0.0002 U	0.0002 U	
Molybdenum	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.0011 J	0.005 U	0.005 U	0.005 U	
Nickel	mg/L							0.0024 J							
Oxidation-Reduction Potential, Field	mV							118.5	81.1		129.7	142.5	204.4	165.6	127
pH, Field	pH units	6.19	6.19	6.27	6.05	6.09	6.09	5.97	6.04		6	5.99	5.89	5.99	6.07
Potassium	mg/L	2	2	1.8	1.8	1.9	1.9	1.8	1.8	1.9	4.3	3.1	2	2	
Radium-226	pCi/L							0.0737 U	0.0646 U	0.0577 U	0.586 U	0.41 U	0.197	0.0535 U	
Radium-226/228	pCi/L							0.244 U	0.275 U	0.711	2.44 U	4.61	0.954 U	0.555 U	
Radium-228	pCi/L							0.171 U	0.21 U	0.653	1.85 U	4.2 G	0.758 U	0.501 U	
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Silver	mg/L							0.001 U							
Sodium	mg/L	35	34	37	32	34	34	29	28	30	29	30	30	29	
Strontium	mg/L							0.23							
Sulfate	mg/L	200	200	170	180	180	180	190			190			190	
Temperature, Field	deg C	15	15	16	15	17	17	14	15.2		15.2	13.5	14.2	14.5	16.1
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 J	0.001 U	0.001 U	0.001 U	
Turbidity, Field	NTU	0.9	0.9	2.9	8	2.4	2.4	6.7	1.1		632.99	254.9	53.77	50.14	17.9
Vanadium	mg/L														
Zinc	mg/L							0.01 J							

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-03	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04
Date		2023-10-02	2024-03-21	2024-03-21	2024-11-01	2025-03-21	2025-10-01	2016-08-26	2016-10-03	2016-11-28	2017-02-07	2017-03-28	2017-05-02	2017-06-13	2017-07-19
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	81		90	88	95	98			107	111				
Aluminum	mg/L											0.041 J	0.76	0.63	1.6
Antimony	mg/L	0.002 U		0.002 U	0.002	0.002 U	0.002 U	9E-05	7E-05	4E-05 J	7E-05	0.00046 JB	0.002 U	0.00071 J	0.002 U
Arsenic	mg/L	0.00081 J		0.00076 J	0.0012	0.005 U	0.005 U	0.00183	0.00134	0.00212	0.0017	0.002 J	0.0033 J	0.0045 J	0.0086
Barium	mg/L	0.043		0.048	0.052	0.04	0.04	0.0624	0.0583	0.059	0.0597	0.06 B	0.07	0.065	0.077
Beryllium	mg/L	0.001 U		0.001 U	0.001	0.001 U	0.001 U	2E-05 J	6E-06 J	9E-06 J	2.1E-05	0.001 U	0.001 U	0.00059 J	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	81		90	88	95	98								
Boron	mg/L	2.1		1.9	2.1	1.9	2.2 J	2.56	2.53	2.61	2.7	2.7 J	2.5	2.7 J	2.5 JB
Bromide	mg/L									0.1 J	0.1 J		0.17 J	0.16 J	0.17 J
Cadmium	mg/L	0.001 U		0.001 U	9.7E-05	0.00011 J	0.00012 J	0.00011	4E-05	2E-05	9E-05	0.001 U	0.001 U	0.00036 J	0.00022 J
Calcium	mg/L	85		79	87	82	90	99.1	98.2	96.7	99.6	94 JB	94	83	86
Carbonate Alkalinity as CaCO3	mg/L	5 U		5 U	5	5 U	5 U								
Chloride	mg/L	55		61	61	60	58	42.6	44.5	40.9	40		48	47	49
Chromium	mg/L	0.005 U		0.0013 J	0.0024	0.005 U	0.005 U	0.0006	0.0009	0.000238	0.00081	0.00034 JB	0.005	0.0029	0.0039
Cobalt	mg/L	0.00063 J		0.0012	0.0016	0.00051 J	0.00057 J	0.00807	0.00627	0.00577	0.00553	0.0066	0.0083	0.0087	0.0095
Conductivity, Field	uS/cm		749		705	694	711	696	761	751	765				
Copper	mg/L											0.00037 JB	0.0088 B	0.0055 B	0.0064
Dissolved Oxygen, Field	mg/L		1.6		0.97	0.77	0.85	0.77	0.4	0.67	0.98				
Dissolved Solids, Total	mg/L	440		430	530	540	500	516	488	448	498		530	520 J	520 J
Fluoride	mg/L	0.064		0.046 J	0.061	0.071	0.062	0.08 J	0.09 J	0.08 J	0.09 J		0.11	0.079	0.077
Iron	mg/L											1.8 B	3.8	4.6	8.7
Lead	mg/L	0.0027		0.0034	0.0035	0.0011	0.0025	0.00106	0.000367	0.000277	0.00102	0.00037 J	0.0035	0.0037	0.0064
Lithium	mg/L	0.0079 J		0.0078 J	0.0079	0.0075 J	0.0057 J	0.007	0.006	0.01	0.006	0.0067 J	0.0068 J	0.0048 J	0.0082
Magnesium	mg/L	17		16	18	16	18			17.7	18	18 B	19	18	17
Manganese	mg/L											1.4 JB	2	1.4	1.4
Mercury	mg/L	0.0002 U		0.0002 U	0.0002	0.0002 U	0.0002 U	5E-06 U	1.9E-05	5E-06 U	5E-06 U	0.0002 U	0.0002 U		0.0002 U
Molybdenum	mg/L	0.005 U		0.005 U	0.005	0.005 U	0.005 U	0.00057	0.00465	0.00037	0.00365	0.00061 J	0.01 U	0.01 U	0.01 U
Nickel	mg/L											0.012 B	0.013	0.0088	0.012
Oxidation-Reduction Potential, Field	mV		95.3		178.9	96.5	148.4								
pH, Field	pH units		6.04		5.87	5.93	6.19	6.41	6.17	6.19	6.23	6.18	6.2	6.04	5.94
Potassium	mg/L	2		2	2.3	2	1.8			1.95	2	1.9 B	2	1.8	2.1
Radium-226	pCi/L	0.0328 U		0.158 U	0.0856 U	0.211 UJ	0.0857 U	0.764	0.226	0.235	0.19		0.17	0.152	0.274
Radium-226/228	pCi/L	0.719 U		1.09	1.18 U	-0.0517 UJ	0.975 J	0.8152	0.467	0.34	0.017		0.641	0.178 U	0.576
Radium-228	pCi/L	0.686 U		0.932	1.09 U	-0.263 U	0.889 J	0.0512	0.241	0.105	-0.173		0.47	0.0263 U	0.302 U
Redox Potential, Field	mV							330.2	59.6	24	24.3				
Selenium	mg/L	0.005 U		0.005 U	0.005	0.005 U	0.005 U	0.0001	6E-05 J	8E-05 J	0.0001 J	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L											0.00011 J	0.002	0.00026 J	0.00042 J
Sodium	mg/L	33		30	31	36	32			28.7	27.9	27 JB	29 B	27	27 JB
Strontium	mg/L									0.218	0.218	0.21 B	0.21 B	0.16 B	0.19
Sulfate	mg/L	200		180	180	170	190	215	214	209	200		220 J	230	220
Temperature, Field	deg C		14.7		14.8	14.5	16.4	19.35	16.6	15.1	15				
Thallium	mg/L	0.001 U		0.001 U	0.001	0.001 U	0.001 U	7.2E-05	4E-05 J	3E-05 J	5.3E-05	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU		33.83		42.05	12.83	11.88	9.1	5	9	9.2	0.8	44.7	58.9	108.1
Vanadium	mg/L														
Zinc	mg/L											0.02 U	0.016 J	0.02 U	0.016 J

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04
Date		2018-03-01	2018-03-01	2018-05-15	2018-09-18	2019-03-16	2019-03-16	2019-09-18	2019-09-18	2020-03-12	2020-09-10	2021-03-13	2021-09-18	2022-04-01	2022-04-01
Sample Type		FD	N	N	N	FD	N	FD	N	N	N	N	N	FD	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	92	91	96	91	100 B	100 B	96	96	100	89	96	94	98	96
Aluminum	mg/L													0.038 J	0.05 U
Antimony	mg/L	0.002 U	0.0013 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00089 J	0.0018 J	0.0036 J	0.0034 J	0.0014 J	0.0021 J	0.0023 J	0.0029 J	0.0041 J	0.0079	0.0049 J	0.0034 J	0.002 U	0.0012 J
Barium	mg/L	0.041	0.04	0.052	0.049	0.041	0.042	0.043	0.044	0.043	0.044	0.04	0.041	0.038	0.038
Beryllium	mg/L	0.001 U	0.0004 J	0.001 U	0.001 U^+	0.001 U	0.001 U	0.001 U^-	0.001 U^-	0.001 U^-	0.001 U	0.001 U^-	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	92	91	96	91	100 B	100 B	96	96	100	89	96	94	98	96
Boron	mg/L	2.8	2.8	2.9	2.8	3	2.9	2.7	2.6	2.4	2.4	2.4	2.4	2.9 J	2.8 J
Bromide	mg/L														
Cadmium	mg/L	0.00028 J	0.0004 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	5.6E-05 J	0.0001 U
Calcium	mg/L	94	94	95	92	95	96	90	91	92	89	79	92	86	93
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	52	52	49	40	41	41	37	37	45	48	41	42	44	44
Chromium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U
Cobalt	mg/L	0.0018	0.0018	0.0044	0.0043	0.0018	0.0017	0.0026	0.0025	0.0021	0.0027	0.0023	0.002	0.00022 J	0.0013 J
Conductivity, Field	uS/cm			721						736	730	705	693	743	743
Copper	mg/L													0.005 U	0.005 U
Dissolved Oxygen, Field	mg/L			0.93										0.71	0.71
Dissolved Solids, Total	mg/L	500	490	540	490	520	520	470	480	490	490	550	560	460 J	430 J
Fluoride	mg/L	0.087	0.084	0.085	0.082	0.082	0.078	0.082	0.08	0.087	0.04 J	0.061	0.087	0.077	0.078
Iron	mg/L													0.096 J	0.78 J
Lead	mg/L	0.001 U	0.001 U	0.0012	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00048 J	0.0017	0.00083 J	0.001 U	0.00094 J	0.0005 UJ
Lithium	mg/L	0.0048 J	0.0058 J	0.0046 J	0.0085 *+^+	0.0049 J	0.005 J	0.0045 J	0.0052 J	0.0024 J^-	0.0071 J	0.0055 J	0.0065 J	0.005 J	0.0052 J
Magnesium	mg/L	18	18	18	17	18	18	17	17	18	19	17	19	18	14
Manganese	mg/L													0.11 J	0.26 J
Mercury	mg/L													0.0002 U	0.0002 U
Molybdenum	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.002 U
Nickel	mg/L													0.0026 J	0.0036 J
Oxidation-Reduction Potential, Field	mV													41.6	41.6
pH, Field	pH units			6.17	6.24		6.46		6.39	6.37	6.39	6.2	6.26	6.16	6.16
Potassium	mg/L	1.8	1.8	1.8	1.8	1.9	2	1.7	1.8	1.8	1.8	1.7	1.8	1.7	1.6
Radium-226	pCi/L													0.168 U	0.113 U
Radium-226/228	pCi/L													0.423 U	0.629
Radium-228	pCi/L													0.256 U	0.517 U
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.00089 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0011 J
Silver	mg/L													0.001 U	0.00091 J
Sodium	mg/L	29	28	28	27	28	28	26	27	28	28	25	26	26	26
Strontium	mg/L													0.22	0.22
Sulfate	mg/L	210	220	220	220	220	220	230	230	210	230	220	230	210	210
Temperature, Field	deg C			19.6						15	19	15	18	14	14
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00047 J
Turbidity, Field	NTU			33.2	21.5				28	34.8	32	30	10	10	10
Vanadium	mg/L														
Zinc	mg/L													0.02 U	0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04	BAC-04
Date		2022-04-28	2022-06-21	2022-10-12	2022-12-09	2023-03-02	2023-04-07	2023-10-03	2023-10-03	2024-03-21	2024-03-21	2024-10-09	2024-10-09	2025-03-31	2025-09-26
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	97	100	96		100	110		100		110		110	110	120
Aluminum	mg/L														
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.00057 J	0.002 U	0.002 U		0.002 U		0.002 U		0.002	0.002 U	0.002 U
Arsenic	mg/L	0.0016 J	0.0038 J	0.0013 J	0.0015 J	0.0013 J	0.0015 J		0.0019 J		0.005 U		0.00087	0.00078 J	0.005 U
Barium	mg/L	0.035	0.047	0.038	0.042 F1F2	0.042	0.041		0.042		0.04		0.042	0.044	0.037
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.00066 J		0.001	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	97	100	96		100	110		100		110		110	110	120
Boron	mg/L			2.3			2.3		2.5		2.5		2.3	2.4	2.3 J
Bromide	mg/L														
Cadmium	mg/L	0.001 U	0.00023 J	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U
Calcium	mg/L			88			83		96		95		96	100	100
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U		5 U	5 U		5 U		5 U		5	5 U	5 U
Chloride	mg/L			44			42		39		37		40	42	38
Chromium	mg/L	0.027	0.005 U	0.005 U	0.005 U	0.005 U	0.0016 J		0.005 U		0.005 U		0.005	0.005 U	0.005 U
Cobalt	mg/L	0.0016	0.0026	0.0016	0.002	0.0022	0.0021		0.0018		0.0017		0.0011	0.0012	0.00099 J
Conductivity, Field	uS/cm	691		750	721	739	738	727		797		828		783	796
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.84		0.57	0.71	0.3	0.69	1.02		1.79		0.74		0.75	0.4
Dissolved Solids, Total	mg/L			490 J			480		470		510		500	530	520
Fluoride	mg/L	0.082	0.07	0.07	0.086	0.083	0.032 J		0.084		0.065		0.082	0.09	0.12
Iron	mg/L														
Lead	mg/L	0.001 U	0.0027	0.001 U	0.00054 J	0.00098 J	0.001 U		0.001 U		0.00054 J		0.001	0.001 U	0.001 U
Lithium	mg/L	0.0059 J	0.0042 J	0.0067 J	0.0068 J	0.0059 J	0.0074 J		0.0064 J		0.0091		0.0071	0.008 U	0.0058 J
Magnesium	mg/L	16	19	20	20	19	18		21		20		20	21	20
Manganese	mg/L														
Mercury	mg/L	0.00023	0.00013 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U
Molybdenum	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U		0.005 U		0.005	0.005 U	0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	74.9		-4.5	-47.7	18.5	-30.1	29.9		30.3		11.1		69.5	-16.3
pH, Field	pH units	6.18		6.07	6.04	6.05	6.23	6.14		6.09		6.06		6.05	6.39
Potassium	mg/L	1.6	2	1.8	2	1.9	1.7		1.8		1.8		1.8	2	1.7
Radium-226	pCi/L	0.0871 U	0.0773 U	0.133 U	0.042 U	0.144 U	0.151 U		0.0597 U		0.172 U		0.102 U	0.204 U	0.339 J
Radium-226/228	pCi/L	0.346 U	0.00318 U	0.582 U		0.641 U	0.692 U		0.851 J		0.696		0.87	0.458 U	1.08 J
Radium-228	pCi/L	0.259 U	-0.0742 U	0.449 U	0.418 U	0.497 U	0.541 U		0.791 J		0.524 U		0.768	0.254 U	0.741
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U		0.005 U		0.005	0.005 U	0.005 U
Silver	mg/L														
Sodium	mg/L	23	27	27	28	26	25		28		26		27	29	26
Strontium	mg/L														
Sulfate	mg/L			230 J			210		210		240		250	240	240
Temperature, Field	deg C	15.4		17	14.8	15.3	14.6	17.4		14.6		18		14.8	17.5
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.00034 J	0.001 U	0.001 U		0.0002 J		0.00063 J		0.001	0.001 U	0.001 U
Turbidity, Field	NTU	8.31		5.15	8.54	12.8	6.64	3.83		4.63		2.68		4.8	5.78
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05
Date		2016-08-26	2016-10-03	2016-11-28	2017-02-07	2017-03-28	2017-05-03	2017-06-13	2017-07-19	2018-03-01	2018-05-16	2018-06-20	2018-09-18	2019-03-16	2019-09-18
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L			144	105					160	90	65	79	64 B	84
Aluminum	mg/L					0.11	0.17	0.43	0.43						
Antimony	mg/L	0.00023	7E-05	9E-05	3E-05 J	0.00048 JB	0.00057 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00298	0.00143	0.00177	0.00065	0.00086 J	0.00097 J	0.0013 J	0.00084 J	0.0013 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.0585	0.0478	0.0459	0.0495	0.04 B	0.052	0.039	0.041	0.038	0.057	0.053	0.053	0.048	0.04
Beryllium	mg/L	0.000118	4.7E-05	5.9E-05	1E-05 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U^+	0.001 U^+	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L									160	90	65	79	64 B	84
Boron	mg/L	3.32	3.72	3.99	2.78	4.5 J	3.2	4.5 J	4.3 JB	3.9	2.9	2.8	2.8	2.5	2.5
Bromide	mg/L			0.09 J	0.1 J	0.13 J	0.14 J	0.1 J	0.1 J						
Cadmium	mg/L	0.00033	9E-05	5E-05	8E-05	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00031 J	0.00029 J	0.00044 J	0.00041 J	0.00023 J
Calcium	mg/L	93.4	90.8	97.7	89	94 JB	100	90	87	84	74	70	76	70	69
Carbonate Alkalinity as CaCO3	mg/L									5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	31.6	28.5	24.6	36.2	24	34	21	21	21	32	31	37	37	32
Chromium	mg/L	0.0048	0.0018	0.00208	0.000652	0.0016 JB	0.0013 J	0.0027	0.0092	0.0034	0.0013 J	0.0022	0.002 U	0.0011 J	0.002 U
Cobalt	mg/L	0.0111	0.00814	0.00536	0.00852	0.004	0.0078	0.0042	0.0037	0.0031	0.013	0.01	0.012	0.0092	0.0076
Conductivity, Field	uS/cm	730	706	702	751						673				
Copper	mg/L					0.0013 JB	0.002 U	0.0023 B	0.0042						
Dissolved Oxygen, Field	mg/L	3.43	1.19	0.59	0.86						0.5				
Dissolved Solids, Total	mg/L	522	468	452	494	480	540	460 J	460 J	420	470	470	480	470	450
Fluoride	mg/L	0.1 J	0.15	0.17	0.1 J	0.21	0.17	0.22	0.21	0.22	0.11	0.091	0.092	0.084	0.094
Iron	mg/L					0.63 B	0.78	1.7	1.4						
Lead	mg/L	0.0066	0.00248	0.0021	0.000631	0.0008 J	0.0012	0.0019	0.0015	0.002	0.0011	0.0013	0.00058 J	0.001 U	0.00064 J
Lithium	mg/L	0.015	0.007	0.01	0.006	0.0042 J	0.0048 J	0.0021 J	0.0045 J	0.0033 J	0.0072 J	0.011	0.0095 *+^+	0.0084	0.0066 J
Magnesium	mg/L			16.9	17.9	16 B	20	16	15	16	18	19	19	20	19
Manganese	mg/L					3.4 JB	7.7	3	2						
Mercury	mg/L	3E-06 J	1.4E-05	3E-06 J	5E-06 U	0.0002 U	0.0002 U		0.0002 U						
Molybdenum	mg/L	0.00147	0.00118	0.00139	0.00237	0.0011 J	0.01 U	0.01 U	0.01 U	0.0012 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nickel	mg/L					0.0095 B	0.02	0.008	0.012						
Oxidation-Reduction Potential, Field	mV														
pH, Field	pH units	6.58	6.63	6.64	6.2	6.72	6.47	6.63	6.53		6.06		6.09	6.1	6.31
Potassium	mg/L			1.7	1.7	1.4 B	1.6	1.4	1.5	1.4	1.6	1.7	1.6	1.8	1.4
Radium-226	pCi/L	0.41	1.12	0.378	0.0928	0.123	-0.0279 U	0.0494 U	0.0901 U						
Radium-226/228	pCi/L	0.127	2.056	0.554	0.2258	0.241 U	0.253 U	0.0636 U	0.13 U						
Radium-228	pCi/L	-0.283	0.936	0.176	0.133	0.118 U	0.281 U	0.0142 U	0.0398 U						
Redox Potential, Field	mV	9.9	111.5	14	68.6										
Selenium	mg/L	0.0004	0.0002	0.0002	4E-05 J	0.005 U	0.0011 J		0.005 U	0.005 U	0.005 U	0.00091 J	0.005 U	0.005 U	0.005 U
Silver	mg/L					0.0011	5.7E-05 J	0.00011 J	0.00013 J						
Sodium	mg/L			22.9	28.3	21 JB	28 B	22	21 JB	21	25	25	25	26	23
Strontium	mg/L			0.16	0.162	0.15 B	0.17 B	0.13 B	0.13						
Sulfate	mg/L	200	190	184	216	170	220 J	170	160	150	220	210	230	240	230
Temperature, Field	deg C	20.4	18.5	15.4	15.5						16.6				
Thallium	mg/L	7.3E-05	5E-05 J	4E-05 J	5.4E-05	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	96.7	72.3	50.1	7.8	6.2	5.3	26.6	25.1		21.3		16.1		37
Vanadium	mg/L					0.005 U									
Zinc	mg/L					0.015 J	0.02 U	0.015 J	0.031						

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05
Date		2020-03-11	2020-09-10	2021-03-13	2021-09-18	2022-04-01	2022-04-28	2022-06-21	2022-10-12	2022-12-09	2023-03-02	2023-04-07	2023-10-03	2023-10-03	2024-03-21
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	88	61	93	140	82	66	64	110		57	79		61	
Aluminum	mg/L					0.049 J									
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	
Arsenic	mg/L	0.005 U	0.005 U	0.005 U	0.00081 J	0.002 U	0.005 U	0.005 U	0.005 U	0.0013 J	0.001 J	0.00083 J		0.00098 J	
Barium	mg/L	0.04	0.039	0.031	0.031	0.034	0.031	0.041	0.032	0.036	0.045	0.041		0.037	
Beryllium	mg/L	0.001 U^-	0.001 U	0.001 U^-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	88	61	93	140	82	66	64	110		57	79		61	
Boron	mg/L	2.8	2.5	2.9	3	2.8 J			2.7			2.3		2.4	
Bromide	mg/L														
Cadmium	mg/L	0.00038 J	0.00038 J	0.001 U	0.001 U	0.00025	0.00025 J	0.00046 J	0.00023 J	0.00025 J	0.00048 J	0.00032 J		0.00052 J	
Calcium	mg/L	79	68	73	100	80			80			74		79	
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U		5 U	
Chloride	mg/L	29	38	29	22	22			26			35		38	
Chromium	mg/L	0.0015 J	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 J		0.005 U	
Cobalt	mg/L	0.0056	0.0071	0.0038	0.0028	0.0045	0.005	0.0074	0.006	0.0044	0.0081	0.0081		0.0079	
Conductivity, Field	uS/cm	694	709	674	699	667	651		720	691	794	697	766		812
Copper	mg/L					0.005 U									
Dissolved Oxygen, Field	mg/L					0.55	0.57		0.57	0.85	0.3	1.39	1.29		1.97
Dissolved Solids, Total	mg/L	440	480	540	520	420 J			470 J			520		520	
Fluoride	mg/L	0.13	0.041 J	0.1	0.2	0.12	0.1	0.087	0.12	0.17	0.11	0.048 J		0.11	
Iron	mg/L					0.91									
Lead	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.0014	0.0015	0.0016		0.00062 J	
Lithium	mg/L	0.0029 J^-	0.0091	0.0055 J	0.0036 J	0.0056 J	0.0072 J	0.0072 J	0.0078 J	0.0068 J	0.01	0.011		0.013 J	
Magnesium	mg/L	19	20	17	21	17	15	22	21	21	23	20		24	
Manganese	mg/L					7.2									
Mercury	mg/L					0.0002 U	0.00021	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U	
Molybdenum	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	
Nickel	mg/L					0.029									
Oxidation-Reduction Potential, Field	mV					99.1	89.2		44.2	85.9	102.8	65	146		121.1
pH, Field	pH units	6.33	6.15	6.26	6.69	5.98	5.98		6.14	6.28	5.8	6.07	5.89		6.04
Potassium	mg/L	1.6	1.5	1.2	1.4	1.3	1.3	1.6	1.4	1.7	1.7	1.6		1.6	
Radium-226	pCi/L					0.05 U	0.125	0.0585 U	0.126 U	0.127 U	0.234 U	0.0139 U		0.123 U	
Radium-226/228	pCi/L					0.276 U	0.255 U	1.01	0.495 U		-0.862 U	0.0549 U		1.11 J	
Radium-228	pCi/L					0.226 U	0.131 U	0.953	0.369 U	0.492 U	-1.1 U	0.041 U		0.986 J	
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	
Silver	mg/L					0.001 U									
Sodium	mg/L	24	26	21	21	20	19	26	20	21	28	25		29	
Strontium	mg/L					0.15									
Sulfate	mg/L	220	250	240	210	220			230 J			270		270	
Temperature, Field	deg C	15	16	15	17	14	14.9		16	14.6	15.1	14.5	16		14.5
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00069 J	0.001 U		0.001 U	
Turbidity, Field	NTU	9.6	7.5	7.2	10.2	6.7	3.84		14.23	29.71	27.17	41.53	13.45		15.62
Vanadium	mg/L														
Zinc	mg/L					0.02 U									

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-05	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06
	Date	2024-03-21	2024-10-09	2024-10-09	2025-03-31	2025-03-31	2025-09-26	2025-09-26	2020-09-10	2021-03-13	2021-09-18	2022-03-31	2022-04-28	2022-06-28	2022-10-17
	Sample Type	N	N	N	FD	N	FD	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	89		70	130	130	86	86	180	140	170	180	180	190	
Aluminum	mg/L											0.05 U			
Antimony	mg/L	0.002 U		0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.005 U		0.005	0.005 U	0.005 U	0.005 U	0.005 U	0.00091 J	0.00091 J	0.00093 J	0.0008 J	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.032		0.031	0.03	0.033	0.03	0.029	0.09	0.084	0.097	0.12	0.11	0.11	0.076
Beryllium	mg/L	0.001 U		0.0003	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	89		70	130	130	86	86	180	140	170	180	180	190	180
Boron	mg/L	2.7		2.5	2.6	2.7	2.1 J	2.1 J	1.7	1.4	1.7	1.9 J	1.6	1.7	1.7
Bromide	mg/L														
Cadmium	mg/L	0.00029 J		0.00045	0.0002 J	0.00028 J	0.00043 J	0.00043 J	0.001 U	0.001 U	0.001 U	0.0001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	92		80	100	100	80	76	100	84	120	120	120	110	120
Carbonate Alkalinity as CaCO3	mg/L	5 U		5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	31		35	26	26	36	36	25	26	25	26	25	25	24
Chromium	mg/L	0.005 U		0.005	0.005 U	0.005 U	0.002 J	0.002 J	0.0017 J	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt	mg/L	0.0057		0.0066	0.004	0.0043	0.0053	0.0051	0.0054	0.0043	0.0047	0.0034	0.0035	0.0037	0.0037
Conductivity, Field	uS/cm		830			789		752	772	747	768	803	789		815
Copper	mg/L											0.005 U			
Dissolved Oxygen, Field	mg/L		1.22			0.73		0.29				0.6	0.49		0.64
Dissolved Solids, Total	mg/L	580		520	550	540	510	480	510	560	570	520 J	500	510	560 J
Fluoride	mg/L	0.098		0.1	0.17	0.17	0.14	0.12	0.048 J	0.067	0.11	0.093	0.093	0.089	
Iron	mg/L											7.5			
Lead	mg/L	0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U
Lithium	mg/L	0.0088		0.011	0.008 U	0.008 U	0.0088	0.0087	0.007 J	0.0049 J	0.006 J	0.0055 J	0.0055 J	0.0051 J	0.0049 J
Magnesium	mg/L	21		22	23	23	24	23	25	20	28	24	26	26	
Manganese	mg/L											2.1			
Mercury	mg/L	0.0002 U		0.0002	0.00014 J	0.0002 U	0.0002 U	0.0002 U				0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L	0.005 U		0.005	0.005 U	0.005 U	0.005 U	0.005 U	0.0012 J	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U
Nickel	mg/L											0.0039 J			
Oxidation-Reduction Potential, Field	mV		116.2			119.4		60.8				-98.9	-30.2		-49.6
pH, Field	pH units		5.83			6.27		6.21	6.81	6.66	6.76	6.58	6.7		6.56
Potassium	mg/L	1.6		1.5	1.6	1.6	1.5	1.4	1.5	1.5	1.5	1.3 J	1.4	1.4	
Radium-226	pCi/L	0.137 U		0.135	0.192 U	0.137 U	0.12 U	0.169 U				0.179 U	0.265	0.289	0.221
Radium-226/228	pCi/L	1.08		0.377 U	0.665	0.275 U	1.61 J	1.36 J				0.599	0.533 U	0.809	1.11
Radium-228	pCi/L	0.942		0.242 U *	0.473 U	0.138 U	1.49	1.19				0.42 U	0.268 U	0.52	0.89
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U		0.0014	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L											0.001 U			
Sodium	mg/L	26		29	24	25	23	22	15	13	17	16	16	16	
Strontium	mg/L											0.14			
Sulfate	mg/L	270		310	250	250	260	260	200	190	220	210	220	210	
Temperature, Field	deg C		15.5			15.3		16.2	16	14	15	15	14.6		14.4
Thallium	mg/L	0.00039 J		0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU		3.03			4.53		5.03	15	7.4	3.5	8.5	2.97		7.59
Vanadium	mg/L														
Zinc	mg/L											0.02 U			

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06
Date		2022-12-07	2022-12-07	2022-12-07	2022-12-07	2023-03-02	2023-03-02	2023-04-12	2023-04-12	2023-04-12	2023-04-12	2023-06-13	2023-06-13	2023-08-17	2023-08-17
Sample Type		FD	FD	N	N	N	N	FD	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	190	180	190	200	190	190	190	190	110 U	110 U		200		200
Aluminum	mg/L														
Antimony	mg/L		0.002 U		0.002 U	0.002 U		0.002 U	0.002 U		0.002 U		0.002 U		0.002 U
Arsenic	mg/L		0.00092 J		0.0009 J	0.005 U		0.005 U	0.00095 J		0.00085 J		0.005 U		0.001 J
Barium	mg/L		0.1		0.097	0.09		0.096	0.097		0.094		0.072		0.091
Beryllium	mg/L		0.001 U		0.001 U	0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	190	180	190	200	190	190	190	190	110 U	110 U		200		200
Boron	mg/L	1.8		1.8			1.9	1.9	1.9	1.8					
Bromide	mg/L														
Cadmium	mg/L		0.001 U		0.001 U	0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U
Calcium	mg/L	120		120			120	120	120	110					
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U		5 U
Chloride	mg/L	24		24			24	24	24	24					
Chromium	mg/L		0.005 U		0.005 U	0.005 U		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U
Cobalt	mg/L		0.0036		0.0037	0.0031		0.0041	0.0042		0.0039		0.0032		0.0041
Conductivity, Field	uS/cm	817		817		840			814			770		807	
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.96		0.96		0.68			0.69			1.1		1.15	
Dissolved Solids, Total	mg/L	550		560			560	530	540	550					
Fluoride	mg/L	0.093	0.094	0.09	0.094	0.098	0.098	0.098	0.097	0.098	0.098		0.091		0.092
Iron	mg/L														
Lead	mg/L		0.001 U		0.001 U	0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U
Lithium	mg/L		0.0057 J		0.006 J	0.0053 J		0.0066 J	0.0079 J		0.0076 J		0.0034 J		0.0079 J
Magnesium	mg/L	27	27	27	27	25	27	26	26	26	25		22		27
Manganese	mg/L														
Mercury	mg/L		0.0002 U		0.0002 U	0.0002 U		0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002 U
Molybdenum	mg/L		0.005 U		0.005 U	0.005 U		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	-36.3		-36.3		-46.9			-56.5			89.1		61.1	
pH, Field	pH units	6.62		6.62		6.59			6.57			6.56		6.56	
Potassium	mg/L	1.6	1.5	1.6	1.5	1.4	1.5	1.4	1.4	1.4	1.4		1.2		1.5
Radium-226	pCi/L		0.2		0.233	0.142		0.226	0.284		0.182		0.177		0.111 U
Radium-226/228	pCi/L		0.478 U		0.331 U	1.02		0.844	0.174 U		0.189 U		7.53		0.768
Radium-228	pCi/L		0.278 U		0.0976 U	0.875		0.618	-0.11 U		0.0079 U		7.36		0.657
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.005 U	0.005 U		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U
Silver	mg/L														
Sodium	mg/L	16	16	16	16	15	16	16	16	16	15		13		17
Strontium	mg/L														
Sulfate	mg/L	220		220			220	230	230	210					
Temperature, Field	deg C	14.6		14.6		14.2			15.4			15.3		16	
Thallium	mg/L		0.001 U		0.001 U	0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.0013
Turbidity, Field	NTU	4.01		4.01		5.09			11.02			6.83		7.32	
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-06	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07
	Date	2023-09-27	2023-09-27	2024-03-20	2024-03-20	2024-10-08	2024-10-08	2024-10-08	2025-03-27	2025-09-24	2020-09-09	2021-03-13	2021-03-13	2021-09-18	2022-03-31
	Sample Type	N	N	N	N	FD	N	N	N	N	N	FD	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L		200		200	210		210	200	190	120	120	110	110	120
Aluminum	mg/L														0.028 J
Antimony	mg/L		0.002 U		0.002 U	0.002		0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L		0.005 U		0.00078 J	0.005		0.001	0.00089 J	0.00077 J	0.0018 J	0.0012 J	0.0011 J	0.001 J	0.002 U
Barium	mg/L		0.086		0.099 J	0.14		0.11	0.11	0.093	0.061	0.054	0.055	0.053	0.057
Beryllium	mg/L		0.001 U		0.001 U	0.001		0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		200		200	210		210	200	190	120	120	110	110	120
Boron	mg/L		1.8		1.6	1.6		1.6	1.9	1.9 J	1.3	1.1	1.1	1.1	1.4 J
Bromide	mg/L														
Cadmium	mg/L		0.001 U		0.001 U	0.001		0.001	0.00013 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	7E-05 J
Calcium	mg/L		110		110	120		120	120	110	85	75	76	87	100
Carbonate Alkalinity as CaCO3	mg/L		5 U		5 U	5		5	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L		24		26	26		26	26	26	27	26	26	27	25
Chromium	mg/L		0.005 U		0.005 U	0.005		0.005	0.005 U	0.005 U	0.0012 J	0.002 U	0.002 U	0.005 U	0.005 U
Cobalt	mg/L		0.0033		0.0033	0.0028		0.0026	0.0033	0.0034	0.013	0.0046	0.0046	0.0026	0.002
Conductivity, Field	uS/cm	792		832			817		804	772	654	632	632	619	681
Copper	mg/L														0.005 U
Dissolved Oxygen, Field	mg/L	1.1		2.15			0.82		0.81	0.37					1.01
Dissolved Solids, Total	mg/L		560		540	510		500	550	540	450	490	460	510	450 J
Fluoride	mg/L		0.1		0.072	0.093		0.096	0.097	0.11	0.05 U	0.049 J	0.044 J	0.082	0.081
Iron	mg/L														0.31
Lead	mg/L		0.001 U		0.001 U	0.001		0.001	0.001 U	0.001 U	0.0012	0.001 U	0.001 U	0.001 U	0.0005 U
Lithium	mg/L		0.008 U		0.007 J	0.0067		0.0068	0.0073 J	0.0047 J	0.0084	0.0052 J	0.0055 J	0.0063 J	0.0057 J
Magnesium	mg/L		26		24	25		25	27	26	21	18	18	20	20
Manganese	mg/L														0.21
Mercury	mg/L		0.0002 U		0.0002 U	0.0002		0.0002	0.0002 U	0.0002 U					0.0002 U
Molybdenum	mg/L		0.005 U		0.005 U	0.005		0.005	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U
Nickel	mg/L														0.0028 J
Oxidation-Reduction Potential, Field	mV	16.7		-73.6			-92.2		-72.4	-77.4					92.4
pH, Field	pH units	6.62		6.65			6.61		6.83	6.71	6.51	6.17	6.17	6.32	6.23
Potassium	mg/L		1.4		1.3	1.5		1.5	1.5	1.3	1.4	1.4	1.4	1.3	1.4 J
Radium-226	pCi/L		0.304		0.28	0.428		0.235	0.238 U	0.0521 U					0.167 U
Radium-226/228	pCi/L		0.695		1.02	0.669		0.457 U	0.683	0.468 U					0.314 U
Radium-228	pCi/L		0.391 U		0.738	0.241 U		0.222 U	0.445 U	0.415 U					0.147 U
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.005 U	0.005		0.005	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L														0.001 U
Sodium	mg/L		16		16	21		17	17	16	16	14	14	16	15
Strontium	mg/L														0.12
Sulfate	mg/L		230		220	210		210	190 J	190	200	190	190	180	190
Temperature, Field	deg C	15.2		14.4			15.3		14.7	16.3	17	14	14	15	15
Thallium	mg/L		0.001 U		0.001 U	0.001		0.001	0.00056 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	6.71		7.04			16.04		6.37	11.91	23.8	2.3	2.3	2.6	6.4
Vanadium	mg/L														
Zinc	mg/L														0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07
Date		2022-04-28	2022-06-28	2022-10-14	2022-10-14	2022-12-07	2022-12-07	2023-03-02	2023-03-02	2023-03-02	2023-03-02	2023-04-12	2023-04-12	2023-04-12	2023-06-13
Sample Type		N	N	FD	N	N	N	FD	FD	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	130	140	130	140	140	140	130	130	130	130	130	5 U	140 U	
Aluminum	mg/L														
Antimony	mg/L	0.002 U	0.002 U		0.00081 J		0.002 U	0.002 U		0.002 U		0.002 U		0.002 U	
Arsenic	mg/L	0.005 U	0.005 U		0.005 U		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U	
Barium	mg/L	0.056	0.049		0.047		0.047	0.047		0.048		0.045		0.045	
Beryllium	mg/L	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	130	140	130	140	140	140	130	130	130	130	130	5 U	140 U	
Boron	mg/L	1.2	1.2	0.96		1			1.1		1.1	1.2	1.1		
Bromide	mg/L														
Cadmium	mg/L	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U	
Calcium	mg/L	90	82	86		89			94		95	90	91		
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Chloride	mg/L	25	25	24		26			25		25	26	26		
Chromium	mg/L	0.005 U	0.005 U		0.005 U		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U	
Cobalt	mg/L	0.0019	0.0017		0.0015		0.0013	0.0015		0.0015		0.0017		0.0017	
Conductivity, Field	uS/cm	649		634	634	680				689		616			601
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.54		2.99	2.99	2.34				1.65		0.76			1.15
Dissolved Solids, Total	mg/L	780	370	440 J	420 J	450			450		440	440	440		
Fluoride	mg/L	0.082	0.073	0.076	0.076	0.076	0.077	0.081	0.083	0.08	0.079	0.076	0.075	0.084	
Iron	mg/L														
Lead	mg/L	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U	
Lithium	mg/L	0.006 J	0.0053 J		0.0049 J		0.0056 J	0.0062 J		0.0062 J		0.0077 J		0.007 J	
Magnesium	mg/L	21	19	19	20	20	20	21	22	21	22	20	20	20	
Manganese	mg/L														
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002 U	
Molybdenum	mg/L	0.005 U	0.005 U		0.0018 J		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	71.6		81.6	81.6	155.7				205.9		164.6			37.3
pH, Field	pH units	6.29		6.29	6.29	6.3				6.22		6.15			6.21
Potassium	mg/L	1.3	1.2	1.3		1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	
Radium-226	pCi/L	0.0366 U	0.0744 U	0.064 U	0.101 U		0.00268 U	0.124		0.0841 U		0.0649 U		0.0631 U	
Radium-226/228	pCi/L	0.252 U	0.56	0.436 U	-0.028 U		-0.174 U	1.12		0.498 U		0.174 U		0.158 U	
Radium-228	pCi/L	0.215 U	0.486	0.372 U	-0.129 U		-0.177 U	0.992		0.414 U		0.109 U		0.0948 U	
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005 U		0.005 U		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U	
Silver	mg/L														
Sodium	mg/L	15	15	14		15	15	16	16	16	16	16	16	16	
Strontium	mg/L														
Sulfate	mg/L	190	180	170	170	190			190		190	200	190		
Temperature, Field	deg C	14.3		14.6	14.6	14.4				14		14.7			14.9
Thallium	mg/L	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U	
Turbidity, Field	NTU	1.27		4.97	4.97	3.64				6.7		2.47			2.31
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-07	BAC-08
	Date	2023-06-13	2023-08-17	2023-08-17	2023-09-27	2023-09-27	2024-03-20	2024-03-20	2024-03-20	2024-10-07	2024-10-07	2025-03-24	2025-09-24	2025-09-24	2022-10-12
	Sample Type	N	N	N	N	N	FD	N	N	N	N	N	FD	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	120		130		130	140		140		120	130	120	110	200
Aluminum	mg/L														
Antimony	mg/L	0.00079 J		0.002 U		0.002 U	0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.005 U		0.005 U		0.005 U	0.005 U		0.005 U		0.005	0.005 U	0.00084 J	0.005 U	0.0028 J
Barium	mg/L	0.037		0.04		0.037 J	0.045		0.042		0.037	0.038	0.034	0.035	0.14
Beryllium	mg/L	0.001 U		0.001 U		0.001 U	0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	120		130		130	140		140		120	130	120	110	200
Boron	mg/L					1.1	1.1		1.1		1.1	1.2	1.3 J	1.3 J	0.098 J
Bromide	mg/L														
Cadmium	mg/L	0.001 U		0.001 U		0.001 U	0.001 U		0.001 U		0.001	8.6E-05 J	0.001 U	8.4E-05 J	0.001 U
Calcium	mg/L					82	89		81		84	87	83	85	86
Carbonate Alkalinity as CaCO3	mg/L	5 U		5 U		5 U	5 U		5 U		5	5 U	5 U	5 U	5 U
Chloride	mg/L					25	26		26		27	25	25	25	19
Chromium	mg/L	0.005 U		0.005 U		0.005 U	0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt	mg/L	0.0015		0.0016		0.0013	0.0014		0.0013		0.00098	0.0012	0.0012	0.0013	0.0028
Conductivity, Field	uS/cm		576		586			676		670		625		616	580
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		1.37		1.17			2.2		1.29		1.5		0.3	0.5
Dissolved Solids, Total	mg/L					410	440		450		400	430	450	430	370
Fluoride	mg/L	0.11		0.069		0.078	0.055		0.067		0.082	0.091	0.09	0.088	0.14
Iron	mg/L														
Lead	mg/L	0.001 U		0.001 U		0.001 U	0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U
Lithium	mg/L	0.0044 J		0.0063 J		0.006 J	0.0074 J		0.0067 J		0.0068	0.0072 J	0.0045 J	0.005 J	0.0046 J
Magnesium	mg/L	18		20		20	20		19		19	21	21	22	12
Manganese	mg/L														
Mercury	mg/L	0.0002 U		0.0002 U		0.0002 U	0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L	0.0015 J		0.005 U		0.005 U	0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U	0.0031 J
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		171.6		174.3			193.4		113.4		118.5		137.7	-127.8
pH, Field	pH units		6.14		6.19			6.23		6.1		6.18		6.17	6.68
Potassium	mg/L	1.2		1.3		1.3	1.3		1.2		1.3	1.4	1.2	1.2	1.2
Radium-226	pCi/L	0.00868 U		0.0279 U		-0.0123 U	0.043 UJ		-0.0168 UJ		0.253	0.171 UJ	0.157 U	0.0282 U	0.256 U
Radium-226/228	pCi/L	1.59		1.61		0.393 U	-0.12 UJ		0.0466 UJ		0.362 U	-0.0477 UJ	0.706 J	0.382 U	0.537 U
Radium-228	pCi/L	1.58		1.59		0.406 U	-0.164 UJ		0.0634 UJ		0.109 U	-0.219 U	0.549 U	0.354 U	0.281 U
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U		0.005 U		0.005 U	0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L														
Sodium	mg/L	14		16		16	15		14		16	18	16	17	11
Strontium	mg/L														
Sulfate	mg/L					170	180		180		180	160	180	180	79
Temperature, Field	deg C		15.6		15.1			13.9		17.3		14.4		15.5	15.7
Thallium	mg/L	0.00042 J		0.001 U		0.001 U	0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU		2.6		1.73			2.23		7.51		4.09		2.96	15.25
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08
Date		2022-12-07	2022-12-07	2023-03-01	2023-03-01	2023-04-11	2023-04-11	2023-04-11	2023-06-12	2023-06-12	2023-08-17	2023-08-17	2023-09-28	2023-09-28	2023-10-10
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	190	180	190	200	210	240 J	210	210	210	190	200		190	190
Aluminum	mg/L														
Antimony	mg/L		0.002 U	0.002 U		0.002 U		0.002 U		0.002 U		0.002 U		0.002 U	
Arsenic	mg/L		0.0018 J	0.0041 J		0.0033 J		0.0036 J		0.0022 J		0.0023 J		0.001 J	
Barium	mg/L		0.12	0.16		0.18		0.18		0.14		0.13		0.11	
Beryllium	mg/L		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	190	180	190	200	210	240 J	210	210	210	190	200		190	190
Boron	mg/L	0.13			0.12	0.11	0.11		0.11		0.11			0.1	0.11
Bromide	mg/L														
Cadmium	mg/L		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U	
Calcium	mg/L	88			91	93	93		96		99			90	92
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U
Chloride	mg/L	20			21	24	22		23		24			23	24
Chromium	mg/L		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U		0.0013 J		0.005 U	
Cobalt	mg/L		0.0042	0.0025		0.0026		0.0026		0.0021		0.002		0.0014	
Conductivity, Field	uS/cm	570		600		555			533		540		488.3		568
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.54		1.13		0.78			0.92		1.59		1.01		1.33
Dissolved Solids, Total	mg/L	360			350	350	350		350		350			350	390
Fluoride	mg/L	0.11	0.15	0.15	0.12	0.19	0.13	0.13	0.12	0.12	0.12	0.12		0.09	0.14
Iron	mg/L														
Lead	mg/L		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U		0.00047 J		0.001 U	
Lithium	mg/L		0.003 J	0.0045 J		0.0056 J		0.0051 J		0.0022 J		0.005 J		0.0021 J	
Magnesium	mg/L	14	14	12	13	12	12	12	13	12	13	13		13	12
Manganese	mg/L														
Mercury	mg/L		0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U	
Molybdenum	mg/L		0.0022 J	0.002 J		0.0023 J		0.0018 J		0.0021 J		0.0013 J		0.005 U	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	-190.3		-72.1		-72.1			27		137.6		-2.4		-8.7
pH, Field	pH units	6.83		6.53		6.77			6.6		6.62		6.61		6.65
Potassium	mg/L	1.3	1.3	1.4	1.4	1.3	1.3	1.2	1.6	1.5	1.5	1.5		1.4	1.5
Radium-226	pCi/L		0.053 U	0.161		0.0283 U		0.0642 U		0.0425 U		0.205		0.203 U	
Radium-226/228	pCi/L		0.427 U	0.125 U		-0.135 U		0.195 U		0.338 U		0.487 U		0.471 U	
Radium-228	pCi/L		0.374 U	-0.0363 U		-0.164 U		0.131 U		0.296 U		0.282 U		0.268 U	
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U	
Silver	mg/L														
Sodium	mg/L	16	15	13	13	12	12	12	13	13	12	13		13	12
Strontium	mg/L														
Sulfate	mg/L	100			83	89	86		80		82			78	83
Temperature, Field	deg C	14.4		15.9		14.5			14.5		15.2		15.4		15
Thallium	mg/L		0.001 U	0.001 U		0.00029 J		0.001 U		0.001 U		0.001 U		0.001 U	
Turbidity, Field	NTU	5.59		2.45		2.54			9.58		6.81		9.94		15.49
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-08	BAC-09	BAC-09
	Date	2023-10-10	2023-12-12	2023-12-12	2023-12-12	2023-12-12	2023-12-12	2024-03-22	2024-03-22	2024-10-07	2024-10-07	2025-03-24	2025-09-24	2022-10-11	2022-12-13
	Sample Type	N	FD	FD	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	190	180	180		180	180		190		180	180	190	73	45
Aluminum	mg/L														
Antimony	mg/L	0.002 U		0.002 U			0.002 U		0.002 U		0.002	0.00076 J	0.002 U	0.001 J	0.00072 J
Arsenic	mg/L	0.0014 J		0.00087 J			0.005 U		0.005 U		0.005	0.005 U	0.0008 J	0.0015 J	0.0012 J
Barium	mg/L	0.11		0.085			0.087		0.086		0.074	0.083	0.084	5.7	16
Beryllium	mg/L	0.001 U		0.001 U			0.001 U		0.001 U		0.00027	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	190	180	180		180	180		190		180	180	190	73	45
Boron	mg/L		0.11			0.11			0.12		0.1	0.12	0.11 J	0.26	
Bromide	mg/L														
Cadmium	mg/L	0.001 U		0.001 U			0.001 U		0.001 U		8E-05	0.00015 J	0.00011 J	0.001 U	0.001 U
Calcium	mg/L		85	79		85	81		84		74	86	87	760	
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U		5 U	5 U		5 U		5	5 U	5 U	5 U	5 U
Chloride	mg/L		23			22			21		15	15	19	6700	
Chromium	mg/L	0.005 U		0.005 U			0.005 U		0.005 U		0.0012	0.005 U	0.005 U	0.0065	0.0073
Cobalt	mg/L	0.0016		0.0016			0.0017		0.0017		0.00096	0.00073 J	0.00063 J	0.0022	0.0024
Conductivity, Field	uS/cm				581			572		536		526	555	18188	20063
Copper	mg/L														
Dissolved Oxygen, Field	mg/L				1.54			1.8		2.2		2.73	0.41	1.7	0.37
Dissolved Solids, Total	mg/L		330			340			320		340	330	350	9500	
Fluoride	mg/L	0.11	0.1	0.1		0.1	0.1		0.12		0.15	0.15	0.13	0.73	0.46
Iron	mg/L														
Lead	mg/L	0.001 U		0.001 U			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.0017	0.002
Lithium	mg/L	0.0049 J		0.0048 JB			0.0054 JB		0.004 J		0.0041	0.0044 J	0.008 U	0.11	0.11
Magnesium	mg/L	12	13	12		13	13		12		12	13	13	180	230
Manganese	mg/L														
Mercury	mg/L	0.0002 U		0.0002 U			0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U	0.00013 JB
Molybdenum	mg/L	0.005 U		0.005 U			0.005 U		0.0011 J		0.005	0.0012 J	0.005 U	0.052	0.014
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV				157.1			44.6		118.5		112.2	36.3	-55.4	-129.4
pH, Field	pH units				6.55			6.58		6.41		6.41	6.64	7.31	7.14
Potassium	mg/L	1.4	1.1	1.2		1.2	1.2		1.2		1.1	1.2	1.2	10	11
Radium-226	pCi/L	0.139 U		0 U			0.276 U		0.177 U		0.074 U	-0.0303 UJ	-0.00808 U	3.68 J	7.53
Radium-226/228	pCi/L	0.515 U		0.759 U			0.583 U		0.783		0.303 U	0.234 UJ	0.495 U	9.36 J	16.2
Radium-228	pCi/L	0.375 U		0.759 U			0.307 U		0.606 U		0.229 U G	0.264 U	0.503 U	5.69 J	8.68 G
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U		0.005 U			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L														
Sodium	mg/L	12	12	12 B		13	12 B		12		12	14	13	2300	2800
Strontium	mg/L														
Sulfate	mg/L		77			77			78		78	77	73	42	
Temperature, Field	deg C				13.2			13.9		15.6		13.3	15.2	14.8	12.8
Thallium	mg/L	0.001 U		0.001 U			0.00032 J		0.00042 J		0.001	0.00051 J	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU				12.29			8.72		15.11		4.36	4.42	101.41	124.81
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-09	BAC-09	BAC-09	BAC-09	BAC-09	BAC-09	BAC-09	BAC-09	BAC-09	BAC-09	BAC-09	BAC-09	BAC-10	BAC-10	BAC-10
	Date	2022-12-13	2023-04-06	2023-04-06	2023-10-02	2023-10-02	2024-03-19	2024-03-19	2024-10-04	2024-10-04	2025-03-20	2025-10-01	2022-10-13	2022-12-14	2022-12-14
	Sample Type	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit															
Alkalinity, Total as CaCO3	mg/L	51	120	120		170		210		150	120	140	230	230	240
Aluminum	mg/L														
Antimony	mg/L		0.004 U	0.004 U		0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.00057 J	0.002 U	
Arsenic	mg/L		0.0022 J	0.0023 J		0.0016 J		0.0029 J		0.0016	0.0011 J	0.00099 J	0.0078	0.0048 J	
Barium	mg/L		2.3	2.1		2.6		0.86		5.4	4.9	3.8	0.11	0.079	
Beryllium	mg/L		0.002 U	0.002 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.0018	0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	51	120	120		170		210		150	120	140	230	230	240
Boron	mg/L	0.23	0.25	0.25		0.25		0.16		0.21	0.23	0.19 J	0.67		0.79
Bromide	mg/L														
Cadmium	mg/L		0.002 U	0.002 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.00038 J	0.00024 J	
Calcium	mg/L	980	450	440		260		55		400	360	280	110		120
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U		5 U		5 U		5	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L		4600	4700		1600		460		3300	2400	3100	51		
Chromium	mg/L		0.006 J	0.0076 J		0.0063		0.018		0.003	0.0016 J	0.0062	0.0092	0.0072	
Cobalt	mg/L		0.0024	0.0023		0.0019		0.0068		0.0012	0.0005 J	0.00095 J	0.01	0.0056	
Conductivity, Field	uS/cm			10933	4430		1537		10241		8227	6452	1010	1023	
Copper	mg/L														
Dissolved Oxygen, Field	mg/L			0.69	1.63		1.43		0.46		0.57	0.9	1.18	1.04	
Dissolved Solids, Total	mg/L	11000	6800	6900		2900 J		1700		6100	4600	3500	650 J		640
Fluoride	mg/L		0.87	0.85		1.6		0.99		0.44	1.1	0.51	0.16	0.12	
Iron	mg/L														
Lead	mg/L		0.0021	0.0022		0.0024		0.0069		0.0011	0.00052 J	0.001	0.0069	0.0046	
Lithium	mg/L		0.1	0.098		0.06		0.044		0.075	0.076	0.055	0.0089	0.0074 J	
Magnesium	mg/L	230	110	100		63		16		97	77	64	26	32	32
Manganese	mg/L														
Mercury	mg/L		0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U	0.00015 JB	
Molybdenum	mg/L		0.086	0.085		0.068		0.041		0.014	0.013	0.013	0.0014 J	0.005 U	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV			-166.5	-143.3		-11		-186.8		-125.1	-168.4	-2	57.5	
pH, Field	pH units			7.79	7.72		8.55		7.67		7.8	7.62	6.37	6.35	
Potassium	mg/L	11	6.8	6.6		4.9		4		5.8	5.7	4.1	2.3	2.8	2.8
Radium-226	pCi/L		2.1	11.9		2.46		1.43		3.58	3.13	2.69 J	0.738	0.215 U	
Radium-226/228	pCi/L		3.7	13.3		7.14		3.42		9.5	6.63	6.43 J	4.79 J	2.3	
Radium-228	pCi/L		1.6	1.42		4.68		1.99 U		5.93 G	3.5	3.75 J	4.05 J	2.08 U G	
Redox Potential, Field	mV														
Selenium	mg/L		0.01 U	0.01 U		0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.0019 J	0.005 U	
Silver	mg/L														
Sodium	mg/L	2800 F2	1600	1500		1200		460		1600	1300	1100	52	61	61
Strontium	mg/L														
Sulfate	mg/L		64	62		74		100		54	430	62	240		
Temperature, Field	deg C			13.1	14.8		13.3		17.5		12.1	15.9	16	14.8	
Thallium	mg/L		0.002 U	0.002 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.0017	0.001 U	
Turbidity, Field	NTU			82.52	88.03		290.15		59.47		20.04	28.4	131.31	143.22	
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10
Date		2023-02-27	2023-02-27	2023-04-11	2023-04-11	2023-04-11	2023-04-11	2023-04-11	2023-06-14	2023-06-14	2023-08-15	2023-08-15	2023-08-15	2023-08-15	2023-09-26
Sample Type		N	N	FD	FD	N	N	N	N	N	FD	FD	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	220	220	240 J	240 J	240	5 U	240	200	210	220	220	220	220	
Aluminum	mg/L														
Antimony	mg/L		0.002 U		0.002 U	0.0007 J		0.00074 J		0.002 U		0.002 U		0.00069 J	
Arsenic	mg/L		0.003 J		0.0052	0.0047 J		0.0047 J		0.002 J		0.0035 J		0.0043 J	
Barium	mg/L		0.057		0.078	0.078		0.075		0.041		0.052		0.055	
Beryllium	mg/L		0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	220	220	240 J	240 J	240	5 U	240	200	210	220	220	220	220	
Boron	mg/L	0.71		0.73		0.75	0.73		0.45		0.51		0.49		
Bromide	mg/L														
Cadmium	mg/L		0.00059 J		0.00024 J	0.00031 J		0.00026 J		0.001 U		0.001 U		0.00028 J	
Calcium	mg/L	110		120		120	120		100		110		100		
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Chloride	mg/L	45		52		51	51		41		47		47		
Chromium	mg/L		0.0033 J		0.0061	0.0063		0.0058		0.0028 J		0.0045 J		0.0053	
Cobalt	mg/L		0.0031		0.0052	0.0051		0.005		0.0021		0.0032		0.0037	
Conductivity, Field	uS/cm	1010				1022			700				892		895
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.15				0.97			1.58				1.72		1.87
Dissolved Solids, Total	mg/L	640		690		680	700		510		580		560		
Fluoride	mg/L	0.16	0.14	0.22	0.22	0.13	0.21	0.23	0.15	0.15	0.15	0.15	0.15	0.15	
Iron	mg/L														
Lead	mg/L		0.0024		0.0037	0.0035		0.0035		0.0018		0.0033		0.0035	
Lithium	mg/L		0.0039 J		0.0067 J	0.0072 J		0.0068 J		0.0031 J		0.0065 J		0.0073 J	
Magnesium	mg/L	27	28	29	30	30	30	29	25	24	28	27	27	27	
Manganese	mg/L														
Mercury	mg/L		0.0002 U		0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U	
Molybdenum	mg/L		0.005 U		0.005 U	0.0017 J		0.0016 J		0.005 U		0.005 U		0.005 U	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	70.5				135.4			134.5				134.9		155.2
pH, Field	pH units	6.26				6.41			6.35				6.64		6.42
Potassium	mg/L	2.2	2.3	2.6	2.5	2.6	2.7	2.4	1.8	1.7	2	1.9	1.9	1.9	
Radium-226	pCi/L		0.155 U		0.288 U	0.345 U		0.263 U		0.0864 U		0.292 U		0.325	
Radium-226/228	pCi/L		1.93 U		1.25 U	-0.269 U		0.0376 U		0.952 U		1 U		-0.916 U	
Radium-228	pCi/L		1.78 U		0.963 U	-0.614 U		-0.225 U		0.866 U		0.708 U		-1.24 U	
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U		0.0009 J	
Silver	mg/L														
Sodium	mg/L	52	54	55	56	57	56	55	43	41	49	48	47	47	
Strontium	mg/L														
Sulfate	mg/L	230		270		310	270		170		220 J		120 J		
Temperature, Field	deg C	15.3				15.2			15.5				16.9		16.4
Thallium	mg/L		0.001 U		0.001 U	0.00062 J		0.00053 J		0.00022 J		0.001 U		0.0015	
Turbidity, Field	NTU	66.46				99.16			49.77				66.2		29.94
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-10	BAC-11
Date		2023-09-26	2023-10-11	2023-10-11	2023-12-11	2023-12-11	2023-12-11	2024-03-18	2024-03-18	2024-10-08	2024-10-08	2024-10-08	2025-03-19	2025-09-29	2022-10-17
Sample Type		N	N	N	N	N	N	N	N	FD	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	220	220	220		240	4.4 J		260	260		260	250	200	190
Aluminum	mg/L														
Antimony	mg/L	0.002 U		0.002 U			0.002 U		0.002 U	0.002		0.002	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.0012 J		0.0014 J			0.005 U		0.0021 J	0.00096		0.0008	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.042 J		0.039			0.005 U		0.06	0.049		0.052	0.046	0.03	130
Beryllium	mg/L	0.001 U		0.001 U			0.001 U		0.001 U	0.001		0.001	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	220	220	220		240	4.4 J		260	260		260	250	200	190
Boron	mg/L	0.55	0.51			1			0.9	0.79		0.81	0.9	0.34 J	0.25
Bromide	mg/L														
Cadmium	mg/L	0.001 U		0.001 U			0.001 U		0.001 U	0.00015		0.00014	0.001 U	8.4E-05 J	0.001 U
Calcium	mg/L	110	110			130	1 U		130	130		130	130	110	2900
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U		5 U	5 U		5 U	5		5	5 U	5 U	5 U
Chloride	mg/L	48	48			55			64	59		59	110	64	27000
Chromium	mg/L	0.0023 J		0.0015 J			0.005 U		0.0024 J	0.005		0.005	0.005 U	0.005 U	0.011
Cobalt	mg/L	0.0015		0.0014			0.001 U		0.0022	0.00093		0.00088	0.00072 J	0.00054 J	0.0027
Conductivity, Field	uS/cm		792		1167			1274			1185		1101	949	59168
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		1.88		1.87			2.32			1.54		1.6	0.56	0.36
Dissolved Solids, Total	mg/L	580	580			780			820	730		730	720	580	41000 J
Fluoride	mg/L	0.097	0.17	0.15		0.11	0.05 U		0.13	0.16		0.17	0.24 J	0.19	0.63 J
Iron	mg/L														
Lead	mg/L	0.0015		0.0012			0.001 U		0.0017	0.0006		0.0006	0.001 U	0.001 U	0.0028
Lithium	mg/L	0.008 U		0.0059 J			0.008 U		0.0056 J	0.0052		0.0052	0.004 J	0.008 U	0.33
Magnesium	mg/L	29	27	26		33	1 U		33	31		31	34	27	750
Manganese	mg/L														
Mercury	mg/L	0.0002 U		0.0002 U			0.0002 U		0.0002 U	0.0002		0.0002	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L	0.005 U		0.005 U			0.005 U		0.005 U	0.005		0.005	0.005 U	0.005 U	0.002 J
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		143.8		195.4			111.8			130.6		101	106.4	-439
pH, Field	pH units		6.4		6.33			6.36			6.42		6.34	6.48	7.08
Potassium	mg/L	1.8	1.6	1.6		3.1	1 U		2.5	2		2.1	2.3	1.4	25
Radium-226	pCi/L	0.18 U		0.0435 U			0.0258 U		0.0274 U	0.0332 U		0.0747 U	-0.108 U	0.163 U	57 J
Radium-226/228	pCi/L	0.905		0.652			1.3		0.903	-0.0993 U		0.294 U	0.504 U	1.83 J	197 J
Radium-228	pCi/L	0.725 U		0.608 U			1.28		0.875	-0.133 U * G		0.219 U	0.613	1.67	140 J
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U		0.005 U			0.005 U		0.005 U	0.005		0.005	0.005 U	0.005 U	0.0018 J
Silver	mg/L														
Sodium	mg/L	50	47	45		62	1 U		68	66		67	69	38	10000
Strontium	mg/L														
Sulfate	mg/L	200	210			290			340	310		300	210	210	25 U
Temperature, Field	deg C		16.3		14.7			14.3			19.1		15	17.8	15.5
Thallium	mg/L	0.001 U		0.001 U			0.00056 J		0.001 U	0.001		0.001	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU		34.81		84.81			42.23			27.41		8.68	8.85	196.2
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11	BAC-11
Date		2022-12-07	2022-12-07	2022-12-16	2022-12-16	2023-04-06	2023-09-27	2023-09-27	2024-03-20	2024-03-20	2024-10-08	2024-10-08	2025-03-28	2025-03-28	2025-09-26
Sample Type		N	N	N	N	N	N	N	N	N	N	N	FD	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	16	15	23	25	39		32		28 J		24	33 J	29 J	15 J
Aluminum	mg/L														
Antimony	mg/L		0.002 U		0.00078 J^1+	0.02 U		0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.002 U
Arsenic	mg/L		0.001 J		0.005 U	0.05 U		0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.0021 J
Barium	mg/L		170		140	140		160		150		150	130	140	150
Beryllium	mg/L		0.001 U		0.001 U	0.01 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	16	15	23	25	39		32		28 J		24	33 J	29 J	15 J
Boron	mg/L	0.29		0.28		0.38		0.4		0.4		0.34	0.37	0.37	0.41 J
Bromide	mg/L														
Cadmium	mg/L		0.001 U		0.001 U	0.01 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.00039 J
Calcium	mg/L	2400		2500		2200		2600		2500		2900	2500	2600	2900
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U		5 U		5 U		5	5 U	5 U	5 U
Chloride	mg/L	27000		26000		23000		33000		25000		25000	28000	27000	29000
Chromium	mg/L		0.0095		0.005 U	0.05 U		0.0037 J		0.0016 J		0.0019	0.0021 J	0.0024 J	0.0034 J
Cobalt	mg/L		0.0032		0.00083 J	0.0027 J		0.0012		0.00082 J		0.0009	0.0011	0.0014	0.0014
Conductivity, Field	uS/cm	56038				48189	39301		62435		59022			57370	61427
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.27				0.3	0.71		1.37		1.62			0.4	0.44
Dissolved Solids, Total	mg/L	33000		32000		38000		38000		35000		35000 J	32000	31000	36000
Fluoride	mg/L	2.5 U	0.67 J	1 U	1.3 U	2.5 U		5 U		1.3 U		5	5 U	5 U	5 U
Iron	mg/L														
Lead	mg/L		0.0018		0.001 UF1	0.01 U		0.00091 J		0.001 U		0.00046	0.05 U	0.05 U	0.00093 J
Lithium	mg/L		0.29		0.28	0.32		0.35		0.34		0.28	0.27 J	0.29 J	0.33
Magnesium	mg/L	720	900	770	750	660		770		740		790	790	810	850
Manganese	mg/L														
Mercury	mg/L		0.0002 U		0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L		0.002 J		0.002 J	0.05 U		0.0021 J		0.002 J		0.0045	0.0042 J	0.0043 J	0.0042 J
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	-450				-484.7	-450.1		-332.1		-190.4			-242.6	-326.5
pH, Field	pH units	7.28				7.31	7.09		7.06		7.14			7.16	7.12
Potassium	mg/L	26	25	24	23	22		25		23		22	24	25	25
Radium-226	pCi/L		49.3		31.5	49.3 J		42.4 J		22.8 J		0.567	0.274 U	0.452 U	18 J
Radium-226/228	pCi/L		200		106	214 J		234 J		215 J		85.1	0.485 U	1.09	143 J
Radium-228	pCi/L		151		74.1 *	165 J		192 J		192 J		84.5	0.211 U	0.641 U	125 J
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.005 U	0.05 U		0.0011 J		0.00098 J		0.00094	0.005 U	0.005 U	0.0013 J
Silver	mg/L														
Sodium	mg/L	10000	12000	10000	10000	9200		11000		10000		11000	10000	10000	11000
Strontium	mg/L														
Sulfate	mg/L	50 U		20 U		50 U		72 J		25 U		100	100 U	100 U	87 J
Temperature, Field	deg C	15.7				15	17.4		15.8		18.8			16.8	17.5
Thallium	mg/L		0.001 U		0.0002 JF1	0.01 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.00099 J
Turbidity, Field	NTU	141.6				116.72	38.27		31.23		29.79			59.94	30.15
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12
	Date	2022-10-17	2022-12-14	2022-12-14	2023-02-27	2023-02-27	2023-04-11	2023-04-11	2023-04-11	2023-06-14	2023-06-14	2023-08-18	2023-08-18	2023-08-18	2023-08-18
	Sample Type	N	N	N	N	N	N	N	N	N	N	FD	FD	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	120	110	110	93	92	100	110 J	100	96	98	84	84	85	83
Aluminum	mg/L														
Antimony	mg/L	0.002 U	0.0012 J			0.002 U	0.002 U		0.002 U		0.002 U		0.002 U		0.002 U
Arsenic	mg/L	0.017	0.026			0.015	0.016		0.0065		0.01		0.0094		0.0095
Barium	mg/L	0.36	0.35			0.2	0.21		0.13		0.15		0.13		0.13
Beryllium	mg/L	0.001 U	0.00069 J			0.001 U	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	120	98	110	93	92	100	110 J	100	96	98	84	84	85	83
Boron	mg/L	2.3		2.3	2.2		2	2		1.9		1.9		1.9	
Bromide	mg/L														
Cadmium	mg/L	0.00034 J	0.00041 J			0.00021 J	0.00023 J		0.001 U		0.00022 J		0.001 U		0.001 U
Calcium	mg/L	73		67	77		77	78		84		79		80	
Carbonate Alkalinity as CaCO3	mg/L	5 U	13	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	50			56		58	59		66		68		68	
Chromium	mg/L	0.0082	0.015			0.0074	0.008		0.0041 J		0.0058		0.0036 J		0.0037 J
Cobalt	mg/L	0.033	0.039			0.02	0.022		0.0088		0.011		0.011		0.01
Conductivity, Field	uS/cm	694	611		727		654			724				703	
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.6	0.45		0.06		0.71			0.82				1.02	
Dissolved Solids, Total	mg/L	390 J		430	440		460	460		490		510		510	
Fluoride	mg/L	0.083	0.067		0.068	0.095	0.082	0.082	0.086 J	0.068	0.069	0.065	0.066	0.065	0.062
Iron	mg/L														
Lead	mg/L	0.018	0.028			0.014	0.015		0.0047		0.0092		0.0065		0.0062
Lithium	mg/L	0.013	0.018			0.011	0.014		0.0098		0.0093		0.011		0.011
Magnesium	mg/L	17	16	17	17	17	17	18	17	20	20	20	21	20	20
Manganese	mg/L														
Mercury	mg/L	0.0002 U	0.00018 JB			0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U
Molybdenum	mg/L	0.0052	0.004 J			0.0021 J	0.0024 J		0.002 J		0.0015 J		0.0012 J		0.0012 J
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	-22.9	8.6		26.9		32.8			61.1				63.7	
pH, Field	pH units	6.57	6.18		5.94		6.08			5.86				5.85	
Potassium	mg/L	3.4	3.8	4	3.3	3.3	3.2	3.2	2.7	3.1	3.3	3.1	3.2	3.1	3.1
Radium-226	pCi/L	1.43	1.03			0.7	0.406 UJ		-0.0255 U		0.363		0.33		0.358
Radium-226/228	pCi/L	3.8	13.7			3.39	-1.02 UJ		0.298 U		1.09 U		0.377 U		1.22 U
Radium-228	pCi/L	2.36	12.7 G			2.69 U	-1.43 UJ		0.324 U		0.729 U		0.047 U		0.858 U
Redox Potential, Field	mV														
Selenium	mg/L	0.0012 J	0.005 U			0.005 U	0.005 U		0.005 U		0.005 U		0.005 U		0.005 U
Silver	mg/L														
Sodium	mg/L	27	25	27	28	28	28	29	28	32	33	31	33	32	32
Strontium	mg/L														
Sulfate	mg/L	180			180		200	200		190		230		240	
Temperature, Field	deg C	15.2	14.4		15.3		16.1			15.6				16.1	
Thallium	mg/L	0.001 U	0.001 U			0.001 U	0.00022 J		0.001 U		0.001 U		0.001 U		0.001 U
Turbidity, Field	NTU	241.64	384.21		158.14		137.24			80.64				114.23	
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-12	BAC-13
Date		2023-09-29	2023-09-29	2023-10-12	2023-10-12	2023-12-12	2023-12-12	2023-12-12	2024-03-18	2024-03-18	2024-10-02	2024-10-02	2025-03-19	2025-09-25	2022-10-12
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L		83	86	86		87	85		100		89	100	86	54
Aluminum	mg/L														
Antimony	mg/L		0.002 U		0.002 U			0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.002 U
Arsenic	mg/L		0.0051		0.006			0.0078		0.003 J		0.0035	0.0029 J	0.0046 J	0.0014 J
Barium	mg/L		0.1		0.11			0.099		0.073		0.083	0.078	0.084	2.5
Beryllium	mg/L		0.001 U		0.001 U			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		83	86	86		87	85		100		89	100	86	54
Boron	mg/L		1.9	1.9			2.2			2.1		1.7	2.3	2.1 J	0.29
Bromide	mg/L														
Cadmium	mg/L		0.00023 J		0.00021 J			0.001 U		0.001 U		0.00024	0.001 U	0.0004 J	0.001 U
Calcium	mg/L		82	82			82	78		76		87	86	82	170
Carbonate Alkalinity as CaCO3	mg/L		5 U	5 U	5 U		5 U	5 U		5 U		5	5 U	5 U	5 U
Chloride	mg/L		65	64			53			54		66	81	62	1800
Chromium	mg/L		0.0024 J		0.0029 J			0.003 J		0.005 U		0.0017	0.005 U	0.0014 J	0.0056
Cobalt	mg/L		0.0076		0.008			0.01		0.0053		0.0044	0.0039	0.0035	0.0019
Conductivity, Field	uS/cm	647		773		783			738		779		726	767	6188
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	1.44		1.07		1.21			1.6		0.62		0.6	0.19	15.77
Dissolved Solids, Total	mg/L		500	500 J			440			460		490	460	490	2900
Fluoride	mg/L		0.067	0.095	0.061		0.051	0.048 J		0.066		0.085	0.28	0.084	0.65
Iron	mg/L														
Lead	mg/L		0.0038		0.0045			0.0067		0.0026		0.00088	0.00052 J	0.0014	0.00091 J
Lithium	mg/L		0.012		0.011 J			0.012 B		0.0076 J		0.0089	0.0086	0.0068 J	0.052
Magnesium	mg/L		20	20	20		20	19		17		18	20	21	37
Manganese	mg/L														
Mercury	mg/L		0.0002 U		0.0002 U			0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L		0.005 U		0.005 U			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.02
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	51.2		43.3		32.7			22.4		-13.9		26.5	35.8	-54.8
pH, Field	pH units	5.93		5.96		6			6.12		6.07		6.04	6.01	7.45
Potassium	mg/L		2.8	3.1	3		2.8	2.7		2.2		2.5	2.5	2.5	6.9
Radium-226	pCi/L		0.266		0.245 U			0.305 U		0.315		0.132	0.0656 U	0.7 J	1.85
Radium-226/228	pCi/L		0.921		1.15 U			0.616 U		1.6		0.0424 U	0.924	1.29 J	5.57 J
Radium-228	pCi/L		0.655 U		0.902 U			0.31 U G		1.28		-0.0896 U	0.858	0.591 U	3.72 J
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.005 U			0.005 U		0.005 U		0.00098	0.005 U	0.005 U	0.005 U
Silver	mg/L														
Sodium	mg/L		32	32	32		31	30 B		27		30	31	31	840
Strontium	mg/L														
Sulfate	mg/L		220 J	190			210			190		200	180	210	3.1
Temperature, Field	deg C	16.4		15.8		15.1			14.3		16.9		17.5	16.4	16.6
Thallium	mg/L		0.00028 J		0.001 U			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	60.78		68.54		84.33			51.18		31.28		13.59	26.3	131.79
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-13	BAC-13	BAC-13	BAC-13	BAC-13	BAC-13	BAC-13	BAC-13	BAC-13	BAC-13	BAC-13	BAC-13	BAC-14	BAC-14
Date		2022-12-09	2022-12-09	2023-04-07	2023-10-03	2023-10-03	2023-10-03	2024-03-21	2024-03-21	2024-10-09	2024-10-09	2025-03-31	2025-09-26	2022-10-18	2022-12-14
Sample Type		N	N	N	FD	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	70		52	67		67		83		83	90	80	81	77
Aluminum	mg/L														
Antimony	mg/L		0.002 U	0.004 U	0.002 U		0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L		0.0009 J	0.0026 J	0.003 J		0.0033 J		0.0028 J		0.0027	0.005 U	0.0018 J	0.0081	0.0069
Barium	mg/L		3.6	5.1	5.6		5.8		3.6		3.1	3	3.4	0.12	0.12
Beryllium	mg/L		0.001 U	0.002 U	0.001 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	70		52	67		67		83		83	90	80	81	77
Boron	mg/L	0.35		0.35	0.36		0.35		0.41		0.39	0.4	0.39 J	2.6	
Bromide	mg/L														
Cadmium	mg/L		0.001 U	0.002 U	0.001 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	230		300	340		350		230		180	210	210	74	
Carbonate Alkalinity as CaCO3	mg/L	5 U		5 U	5 U		5 U		5 U		5	5 U	5 U	5 U	5 U
Chloride	mg/L	2600		3100	3300		3300		2300		1700	2000	2400	36	
Chromium	mg/L		0.005 U	0.01 U	0.005 U		0.005 U		0.0013 J		0.005	0.005 U	0.005 U	0.0046 J	0.0041 J
Cobalt	mg/L		0.00095 J	0.00058 J	0.00069 J		0.00076 J		0.00058 J		0.00018	0.00024 J	0.00028 J	0.0032	0.0029
Conductivity, Field	uS/cm	7287		7128		6713		7129		6608		6418	6911	672	628
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.4		0.9		1.71		2.84		1.03		0.59	0.49	0.84	0.37
Dissolved Solids, Total	mg/L	3300		4600	4900		5000		3400		1700	3100	3500	430	
Fluoride	mg/L	0.67	0.7	0.46	0.85		0.85		0.84		0.92	1	1.1	0.055	0.047 J
Iron	mg/L														
Lead	mg/L		0.001 U	0.002 U	0.001 U		0.00056 J		0.001 U		0.001	0.001 U	0.001 U	0.0031	0.0032
Lithium	mg/L		0.056	0.063	0.068		0.064		0.056		0.049	0.05	0.048	0.0079 J	0.0079 J
Magnesium	mg/L	50	49	63	70		72		45		38	42	43	20	22
Manganese	mg/L														
Mercury	mg/L		0.0002 U	0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L		0.02	0.016	0.017		0.017		0.015		0.011	0.011	0.008	0.0023 J	0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	-128.9		-158.8		-149		-137.6		-154.6		-86	-212.3	-9.8	-39.1
pH, Field	pH units	7.21		7.34		7.32		7.31		7.45		7.48	7.66	5.99	6.07
Potassium	mg/L	7.6	7.6	8	8.5		8.6		6.5		5.8	6.2	5.7	1.9	2
Radium-226	pCi/L		2.14	3.56	2.35		3.05		2.01		1.94	1.73	1.91 J	0.504	0.315
Radium-226/228	pCi/L			7.06	4.93		6.42		4.53		3.48	3.76	6.81 J	1.02 U	2.2
Radium-228	pCi/L		3.06	3.51	2.58		3.37		2.53		1.54	2.03	4.9	0.515 U	1.89 G
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U	0.01 U	0.005 U		0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L														
Sodium	mg/L	1200	1100	1400	1400		1500		1000		980	970	980	21	23
Strontium	mg/L														
Sulfate	mg/L	2 U		5 U	5 U		5 U		5 U		2.1	5 U	6.3	220	
Temperature, Field	deg C	15		14.3		16.9		14.8		18.9		14.4	17.6	14	13.4
Thallium	mg/L		0.001 U	0.002 U	0.001 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	5.39		5.29		3.14		9.09		2.27		2.91	4.89	78.23	63.88
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14
Date		2022-12-14	2023-02-27	2023-02-27	2023-04-11	2023-04-11	2023-04-11	2023-06-14	2023-06-14	2023-06-14	2023-06-14	2023-08-18	2023-08-18	2023-09-29	2023-09-29
Sample Type		N	N	N	N	N	N	FD	FD	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	74	77	64	89	220 J	82	97	88	97	97	81	81		83
Aluminum	mg/L														
Antimony	mg/L			0.002 U	0.002 U		0.002 U		0.002 U		0.002 U		0.002 U		0.00085 J
Arsenic	mg/L			0.0045 J	0.0039 J		0.0049 J		0.0032 J		0.0033 J		0.0039 J		0.0025 J
Barium	mg/L			0.11	0.11		0.11		0.1		0.1		0.096		0.099
Beryllium	mg/L			0.001 U	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	74	77	64	89	220 J	82	97	88	97	97	81	81		83
Boron	mg/L	2.7	2.9		2.8	2.7		2.9		2.8		2.8			2.8
Bromide	mg/L														
Cadmium	mg/L			0.001 U	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.00021 J
Calcium	mg/L	73	78		77	74		77		76		75			77
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U
Chloride	mg/L		34		34	34		31		31		32			33
Chromium	mg/L			0.0025 J	0.0016 J		0.002 J		0.0014 J		0.0014 J		0.0015 J		0.005 U
Cobalt	mg/L			0.0023	0.0021		0.0023		0.0021		0.002		0.0021		0.0019
Conductivity, Field	uS/cm		708		631					583		671		602	
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		0.13		0.47					0.85		1.01		1.17	
Dissolved Solids, Total	mg/L	470	440		470	470		450		450		460			470
Fluoride	mg/L		0.051	0.073	0.067	0.066	0.068	0.057	0.058	0.057	0.057	0.06	0.057		0.065
Iron	mg/L														
Lead	mg/L			0.002	0.00076 J		0.0011		0.0011		0.001		0.00078 J		0.00091 J
Lithium	mg/L			0.007 J	0.0066 J		0.0069 J		0.0046 J		0.0044 J		0.0063 J		0.0081
Magnesium	mg/L	22	21	21	21	20	20	22	22	22	21	20	21		22
Manganese	mg/L														
Mercury	mg/L			0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U
Molybdenum	mg/L			0.0011 J	0.005 U		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		-30.7		-17.7					58.7		32.1		4.4	
pH, Field	pH units		5.96		6.08					5.97		5.91		6	
Potassium	mg/L	2	1.9	1.8	1.6	1.6	1.6	1.7	1.6	1.7	1.6	1.6	1.8		1.6
Radium-226	pCi/L			0.121 U	0.354		0.438		0.196		0.199 U		0.332		0.246
Radium-226/228	pCi/L			1.61 U	0.0335 U		0.507 U		0.702 U		0.54 U		1.02		1.08
Radium-228	pCi/L			1.48 U	-0.32 U		0.0693 U		0.506 U		0.341 U		0.685 U		0.836
Redox Potential, Field	mV														
Selenium	mg/L			0.005 U	0.005 U		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U
Silver	mg/L														
Sodium	mg/L	23	23	23	22	22	22	23	23	23	23	22	23		24
Strontium	mg/L														
Sulfate	mg/L		210		220 J	220		230		230		250			220
Temperature, Field	deg C		14.4		15.1					14.3		14.8		15.2	
Thallium	mg/L			0.001 U	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.0011
Turbidity, Field	NTU		28.27		22.1					21.65		26.74		19.47	
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14	BAC-14
Date		2023-10-12	2023-10-12	2023-10-12	2023-10-12	2023-12-12	2023-12-12	2023-12-12	2024-03-18	2024-03-18	2024-10-02	2024-10-02	2025-03-19	2025-03-19	2025-09-25
Sample Type		FD	FD	N	N	N	N	N	N	N	N	N	FD	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	82	81	82	82		82	81		77		82	93	96	75
Aluminum	mg/L														
Antimony	mg/L		0.002 U		0.002 U			0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.002 U
Arsenic	mg/L		0.0021 J		0.0019 J			0.0023 J		0.0024 J		0.0021	0.0023 J	0.002 J	0.0018 J
Barium	mg/L		0.1		0.099			0.089		0.09		0.084	0.098	0.099	0.095
Beryllium	mg/L		0.001 U		0.001 U			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	82	81	82	82		82	81		77		82	93	96	75
Boron	mg/L	2.8		2.7			2.8			2.6		2.7	2.9	2.9	3 J
Bromide	mg/L														
Cadmium	mg/L		0.001 U		0.001 U			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U
Calcium	mg/L	76		75			76	71		74		75	81	82	77
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U		5 U	5 U		5 U		5	5 U	5 U	5 U
Chloride	mg/L	33		33			31			33		34	16	13	32
Chromium	mg/L		0.0016 J		0.0015 J			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U
Cobalt	mg/L		0.002		0.002			0.0017		0.0018		0.0016	0.0019	0.0018	0.0018
Conductivity, Field	uS/cm			624		713			723		727			685	684
Copper	mg/L														
Dissolved Oxygen, Field	mg/L			1.18		1.36			1.66		0.6			0.58	0.61
Dissolved Solids, Total	mg/L	440 J		430 J			470			480		470	460	460	480
Fluoride	mg/L	0.07	0.046 J	0.066	0.056 J		0.046 J	0.046 J		0.057		0.069	0.054	0.046 J	0.072
Iron	mg/L														
Lead	mg/L		0.00099 J		0.00093 J			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U
Lithium	mg/L		0.008 U		0.008 U			0.0076 JB		0.0065 J		0.006	0.0066 J	0.0072 J	0.0047 J
Magnesium	mg/L	22	22	22	21		22	21		21		19	23	23	23
Manganese	mg/L														
Mercury	mg/L		0.0002 U		0.0002 U			0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L		0.005 U		0.005 U			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV			-6		-38.1			-49.4		-23.2			-29.5	-49.4
pH, Field	pH units			6.03		6.05			6.14		5.98			6.07	6.08
Potassium	mg/L	1.7	1.6	1.6	1.6		1.4	1.4		1.4		1.2	1.5	1.5	1.3
Radium-226	pCi/L		0.382		0.25 U			0.281		-0.0201 U		0.263	0.16 U	0.265 U	0.875 J
Radium-226/228	pCi/L		1.39		0.995 U			0.671 U		0.595		1.58	1.06 J	0.691 J	1.2 J
Radium-228	pCi/L		1.01		0.745 U			0.39 U		0.615		1.32	0.904 J	0.427 UJ	0.325 U
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.005 U			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U
Silver	mg/L														
Sodium	mg/L	23	23	23	22		23	22 B		22		20	24	24	23
Strontium	mg/L														
Sulfate	mg/L	230		220			230			220		240	37	55	230
Temperature, Field	deg C			14.4		13.9			13.5		17.9			15.1	15.8
Thallium	mg/L		0.001 U		0.001 U			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU			4.73		4.33			2.55		7.27			3.39	6.24
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-15	BAC-15	BAC-15	BAC-15	BAC-15	BAC-15	BAC-15	BAC-15	BAC-15	BAC-15	BAC-15	BAC-15	BAC-16	BAC-16
	Date	2022-10-13	2022-12-05	2022-12-05	2023-04-06	2023-10-03	2023-10-03	2024-03-19	2024-03-19	2024-10-02	2024-10-02	2025-03-18	2025-09-25	2022-10-13	2022-12-05
	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	98	74	74	71		51		50		38	49	45 J	170	150
Aluminum	mg/L														
Antimony	mg/L	0.0011 J		0.0026 F1F2	0.002 U		0.00091 J		0.002 U		0.002	0.002 U	0.002 U	0.002 U	
Arsenic	mg/L	0.042		0.11 F1F2	0.0028 J		0.0036 J		0.005 U		0.0038	0.0019 J	0.0024 J	0.008	
Barium	mg/L	0.4		1.1 F1F2	0.071		0.085		0.04		0.076	0.054	0.054	0.12	
Beryllium	mg/L	0.0037		0.0095 F1F2	0.001 U		0.00075 J		0.001 U		0.00059	0.001 U	0.001 U	0.00086 J	
Bicarbonate Alkalinity as CaCO3	mg/L	98	74	74	71		51		50		38	49	45 J	170	150
Boron	mg/L	0.44	0.43		0.39		0.51		0.35		0.49	0.41	0.42 J	1.4	1.3
Bromide	mg/L														
Cadmium	mg/L	0.00077 J		0.0017 F1F2	0.00033 J		0.00058 J		0.00027 J		0.00042	0.001 U	0.00029 J	0.00023 J	
Calcium	mg/L	42	40		31		32		28		30	29	26	92	95
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U		5 U		5 U		5	5 U	5 U	5 U	5 U
Chloride	mg/L	1.2	0.99 J		0.95 J		0.92 J		0.85 J		0.88	110	0.81 J	25	26
Chromium	mg/L	0.077		0.23 F1F2	0.0067		0.0076		0.005 U		0.0098	0.0042 J	0.0043 J	0.013	
Cobalt	mg/L	0.046		0.12 F1F2	0.0051		0.0091		0.0017		0.0087	0.0034	0.0029	0.0099	
Conductivity, Field	uS/cm	387.6	375		330.9	358.3		313.5		185.2		285.5	341.5	706	686
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	1.26	1.57		2.04	6.37		2.89		3.03		1.62	2.66	0.8	0.54
Dissolved Solids, Total	mg/L	260 J	260		210		190		180		240	180	190 J	460 J	500
Fluoride	mg/L	0.049 J	0.063	0.05	0.033 J		0.044 J		0.042 J		0.046	0.25	0.066	0.051	0.066
Iron	mg/L														
Lead	mg/L	0.069		0.19 F1F2	0.0041		0.0056		0.00068 J		0.0065	0.0029	0.0041	0.0078	
Lithium	mg/L	0.05		0.17 F1F2	0.0068 J		0.0072 J		0.0043 J		0.0094	0.0054 J	0.0039 J	0.011	
Magnesium	mg/L	16	18	38 F1F2	11		12		9.5		11	10	9.7	20	21
Manganese	mg/L														
Mercury	mg/L	0.00022		0.0005	0.0002 U		0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U	
Molybdenum	mg/L	0.0075		0.017 F1F2	0.005 U		0.0014 J		0.005 U		0.005	0.005 U	0.005 U	0.0031 J	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	112.8	177.3		147.9	150.1		208.4		117.5		116.9	114.1	-37.9	-41.7
pH, Field	pH units	5.82	5.79		6.09	5.83		5.55		6.02		5.34	5.8	6.42	6.45
Potassium	mg/L	4.1	6.8	22 F1	1.7		1.8		0.75 J		2	1.3	1.1	2.6	2.6
Radium-226	pCi/L	0.791		4.24 G	0.593 U		1.4		0.105 U		0.584	0.142 U	0.0202 U	0.418 U	
Radium-226/228	pCi/L	2.68		12 G	1.64 U		4.68		0.536 U		2.28	0.589 U	0.837 U	4.37 J	
Radium-228	pCi/L	1.89 U		7.79 U G	1.05 U		3.28		0.431 U		1.7 G	0.447 U	0.817 U	3.96 J	
Redox Potential, Field	mV														
Selenium	mg/L	0.0039 J		0.0034 JF1F2	0.005 U		0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.0014 J	
Silver	mg/L														
Sodium	mg/L	12	11	11 F1F2	11		12		11		11	12	12	14	14
Strontium	mg/L														
Sulfate	mg/L	98	100		89		100		89		99	80	82	190	190
Temperature, Field	deg C	15.7	13.9		13.2	16.6		13.4		20		16.1	18.3	14.3	13.5
Thallium	mg/L	0.00079 J		0.002 F1F2	0.001 U		0.00099 J		0.001 U		0.001	0.001 U	0.001 U	0.00027 J	
Turbidity, Field	NTU	784.73	767.78		79.2	84.31		25.83		132.46		65.94	383.59	204.33	120.27
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

		Location	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16
		Date	2022-12-05	2023-02-27	2023-02-27	2023-02-27	2023-02-27	2023-04-12	2023-04-12	2023-04-12	2023-06-14	2023-06-14	2023-08-17	2023-08-17	2023-10-02	2023-10-02
		Sample Type	N	FD	FD	N	N	N	N	N	N	N	N	N	FD	N
Analyte	Unit															
Alkalinity, Total as CaCO3	mg/L		170	160	150	160	160	160	200 J	200 J	160	170	160	160	160	
Aluminum	mg/L															
Antimony	mg/L		0.0014 J		0.002 U		0.002 U	0.002 U		0.002 U		0.002 U		0.002 U	0.002 U	
Arsenic	mg/L		0.0071		0.0035 J		0.0035 J	0.0011 J		0.0017 J		0.005 U		0.0012 J	0.005 U	
Barium	mg/L		0.1		0.084		0.082	0.062		0.063		0.051		0.051	0.045	
Beryllium	mg/L		0.001 U		0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U	0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L		170	160	150	160	160	160	200 J	200 J	160	170	160	160	160	
Boron	mg/L			1.5		1.5		1.5	1.5		1.6		1.4		1.5	
Bromide	mg/L															
Cadmium	mg/L		0.00025 J		0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U	0.001 U	
Calcium	mg/L			100		100		100	100		120		100		100	
Carbonate Alkalinity as CaCO3	mg/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Chloride	mg/L			26		26		26	27		26		28		28	
Chromium	mg/L		0.0099		0.006		0.006	0.005 U		0.005 U		0.0013 J		0.0015 J	0.005 U	
Cobalt	mg/L		0.0074		0.0046		0.0048	0.0023		0.0024		0.0018		0.0021	0.0012	
Conductivity, Field	uS/cm					731		730			579		628			641
Copper	mg/L															
Dissolved Oxygen, Field	mg/L					0.11		0.43			0.86		0.99			0.97
Dissolved Solids, Total	mg/L			470		460		490	470		480		460		480	
Fluoride	mg/L		0.059	0.046 J	0.066	0.044 J	0.071	0.06	0.06	0.061	0.054	0.054	0.053	0.054	0.061	
Iron	mg/L															
Lead	mg/L		0.0061		0.0036		0.0037	0.001 U		0.001 U		0.00083 J		0.0012	0.00069 J	
Lithium	mg/L		0.01		0.0081		0.0088	0.0069 J		0.0069 J		0.0038 J		0.0083	0.0066 J	
Magnesium	mg/L		23	22	22	22	23	22	21	21	25	23	23	23	23	
Manganese	mg/L															
Mercury	mg/L		0.0002 U		0.0002 U		0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002 U	0.0002 U	
Molybdenum	mg/L		0.0033 J		0.0012 J		0.0013 J	0.005 U		0.005 U		0.005 U		0.005 U	0.005 U	
Nickel	mg/L															
Oxidation-Reduction Potential, Field	mV					-14.5		-7			68.9		129			138.8
pH, Field	pH units					6.33		6.38			6.26		6.34			6.4
Potassium	mg/L		2.6	2.5	2.3	2.3	2.4	1.6	1.6	1.6	1.9	1.7	1.8	1.7	1.6	
Radium-226	pCi/L		0.307		0.213 U		0.123 U	0.0691 U		0.178		0.0532 U		-0.0187 U	0.0389 U	
Radium-226/228	pCi/L		1.53		1.91		1.8	0.00257 U		0.556 U		0.473 U		1.17	3.49 J	
Radium-228	pCi/L		1.22 U G		1.69		1.68	-0.0666 U		0.377 U		0.42 U		1.19	3.45 J	
Redox Potential, Field	mV															
Selenium	mg/L		0.005 U		0.005 U		0.005 U	0.005 U		0.005 U		0.005 U		0.005 U	0.005 U	
Silver	mg/L															
Sodium	mg/L		15	15	15	15	15	15	15	15	17	16	15	16	16	
Strontium	mg/L															
Sulfate	mg/L			190		180		200	200		180		190		190	
Temperature, Field	deg C					13.5		15.1			14.6		15.2			14.8
Thallium	mg/L		0.0006 J		0.001 U		0.001 U	0.001 U		0.001 U		0.001 U		0.001 U	0.001 U	
Turbidity, Field	NTU					92.19		19.96			6.01		42.15			9.43
Vanadium	mg/L															
Zinc	mg/L															

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-16	BAC-17	BAC-17
Date		2023-10-02	2023-10-11	2023-10-11	2023-12-12	2023-12-12	2023-12-12	2024-03-19	2024-03-19	2024-10-01	2024-10-01	2025-03-18	2025-09-25	2022-10-13	2022-12-08
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit															
Alkalinity, Total as CaCO3	mg/L	160	160	160		170	170		170		140	170	150	54	48	
Aluminum	mg/L															
Antimony	mg/L	0.002 U		0.002 U			0.002 U		0.002 U		0.002	0.002 UJ	0.002 U	0.002 U		
Arsenic	mg/L	0.0011 J		0.0011 J			0.0018 J		0.005 U		0.005	0.005 U	0.001 J	0.0013 J		
Barium	mg/L	0.043		0.046			0.053		0.055		0.039	0.049	0.04	0.045		
Beryllium	mg/L	0.001 U		0.001 U			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.0013		
Bicarbonate Alkalinity as CaCO3	mg/L	160	160	160		170	170		170		140	170	150	54	48	
Boron	mg/L	1.5	1.5			1.5			1.3		1.4	1.5	1.6 J	4.2	4.1	
Bromide	mg/L															
Cadmium	mg/L	0.001 U		0.001 U			0.001 U		0.001 U		0.0001	0.001 U	8.5E-05 J	0.00027 J		
Calcium	mg/L	97	97			100	100		98		110	100	96	49	49	
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U		5 U	5 U		5 U		5	5 U	5 U	5 U	5 U	
Chloride	mg/L	28	28			26			27		26	16	24	21	21	
Chromium	mg/L	0.005 U		0.005 U			0.0024 J		0.005 U		0.005	0.005 U	0.005 U	0.005 U		
Cobalt	mg/L	0.0014		0.0016			0.0022		0.0016		0.00081	0.00086 J	0.00057 J	0.041		
Conductivity, Field	uS/cm		640		759			773		728		677	689	613	616	
Copper	mg/L															
Dissolved Oxygen, Field	mg/L		1.12		1.23			1.43		0.64		0.57	0.38	1.31	0.87	
Dissolved Solids, Total	mg/L	470	560			490			480		490	460	460	420 J	390	
Fluoride	mg/L	0.062	0.065	0.044 J		0.045 J	0.045 J		0.049 J		0.096	0.092	0.067	0.074	0.061	
Iron	mg/L															
Lead	mg/L	0.00067 J		0.0011			0.0014		0.001 U		0.001	0.001 U	0.001 U	0.0015		
Lithium	mg/L	0.007 J		0.0078 J			0.0092 B		0.007 J		0.0065	0.0064 J	0.0042 J	0.0055 J		
Magnesium	mg/L	22	22	22		23	22		21		22	23	23	29	30	
Manganese	mg/L															
Mercury	mg/L	0.0002 U		0.0002 U			0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U		
Molybdenum	mg/L	0.005 U		0.005 U			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U		
Nickel	mg/L															
Oxidation-Reduction Potential, Field	mV		129.8		54.8			96.2		71.8		53.4	82.6	-1.2	13.9	
pH, Field	pH units		6.38		6.46			6.4		6.25		6.33	6.41	5.74	5.85	
Potassium	mg/L	1.5	1.8	1.6		1.8	1.8		1.5		1.4	1.6	1.4	1.2	1.1	
Radium-226	pCi/L	0.0636 U		0.111 U			0.239 U		0.136 U		0.0488 U	0.0183 U	0.156 U	0.247 U		
Radium-226/228	pCi/L	1.66 J		0.79 U			-0.0968 U		0.75 U		0.133 U	0.465 U	1.13 J	4.04 J		
Radium-228	pCi/L	1.6 J		0.679 U			-0.336 U G		0.614 U		0.0842 U	0.447 U	0.977	3.8 J		
Redox Potential, Field	mV															
Selenium	mg/L	0.005 U		0.005 U			0.005 U		0.005 U		0.00092	0.005 U	0.005 U	0.005 U		
Silver	mg/L															
Sodium	mg/L	15	15	15		15	15 B		15		15	15	15	20	22	
Strontium	mg/L															
Sulfate	mg/L	190	190			180			190		190	39	180	240	220	
Temperature, Field	deg C		14.4		13.6			13.5		17.2		14.4	16.3	14.5	13.6	
Thallium	mg/L	0.001 U		0.001 U			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.00053 J		
Turbidity, Field	NTU		41.01		43.91			17.04		5.91		6.85	5.07	53.14	38.13	
Vanadium	mg/L															
Zinc	mg/L															

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-17	BAC-17	BAC-17	BAC-17	BAC-17	BAC-17	BAC-17	BAC-17	BAC-17	BAC-17	BAC-18	BAC-18	BAC-18	BAC-18
Date		2022-12-08	2023-04-06	2023-10-02	2023-10-02	2024-03-19	2024-03-19	2024-10-01	2024-10-01	2025-03-18	2025-09-25	2022-10-14	2022-12-06	2022-12-06	2023-03-02
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L		58		39		45		27	50	62	92	100	98	100
Aluminum	mg/L														
Antimony	mg/L	0.00061 J	0.002 U		0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U
Arsenic	mg/L	0.00085 J	0.00084 J		0.005 U		0.015		0.005	0.005 U	0.0035 J	0.0018 J		0.0018 J	0.0015 J
Barium	mg/L	0.037	0.041		0.032		0.087		0.029	0.031	0.051	0.055		0.045	0.039
Beryllium	mg/L	0.001 U	0.001 U		0.001 U		0.0049		0.00045	0.001 U	0.00051 J	0.001 U		0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		58		39		45		27	50	62	92	100	98	100
Boron	mg/L		3.6		4		3.2		4.1	4	3.8 J	1.4	1.3		
Bromide	mg/L														
Cadmium	mg/L	0.00022 J	0.0002 J		0.00028 J		0.0008 J		0.00034	0.001 U	0.00042 J	0.001 U		0.001 U	0.001 U
Calcium	mg/L		45		45		54		44	58	49	77	76		
Carbonate Alkalinity as CaCO3	mg/L		5 U		5 U		5 U		5	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L		20		21		22		22	28 J	20	26	26		
Chromium	mg/L	0.005 U	0.0029 J		0.005 U		0.0055		0.005	0.005 U	0.0071	0.0032 J		0.005 U	0.005 U
Cobalt	mg/L	0.037	0.034		0.044		0.04		0.064	0.035	0.016	0.0059		0.0039	0.0034
Conductivity, Field	uS/cm		614	576		654		618		590	549	618	625		636
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		1.14	1.28		1.56		0.82		0.9	5.61	0.47	0.45		0.06
Dissolved Solids, Total	mg/L		400		400		410		430	390	380	400 J	400		
Fluoride	mg/L	0.081	0.038 J		0.056		0.084		0.073	0.044 J	0.09	0.042 J	0.057	0.052	0.063
Iron	mg/L														
Lead	mg/L	0.00086 J	0.0013		0.00085 J		0.0027		0.001	0.001 U	0.005	0.0031		0.0011	0.0014
Lithium	mg/L	0.0047 J	0.0064 J		0.0058 J		0.006 J		0.0049	0.005 J	0.0066 J	0.0075 J		0.0068 J	0.0066 J
Magnesium	mg/L	29	26		28		26		25	29	27	20	19	21	20
Manganese	mg/L														
Mercury	mg/L	0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U
Molybdenum	mg/L	0.005 U	0.005 U		0.005 U		0.0038 J		0.005	0.005 U	0.005 U	0.0012 J		0.0015 J	0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		1	99.1		75.6		43.5		58.9	143.4	-31.3	27.8		50.2
pH, Field	pH units		6.17	5.58		5.62		5.41		5.49	5.88	5.98	6.03		5.91
Potassium	mg/L	1.2	1.1		0.95 J		1.1		0.79	0.97 J	1.5	1.5	1.4	1.5	1.4
Radium-226	pCi/L	0.173 U	0.291 U		0.0479 U		0.122 U		0.453	-0.036 U	0.306 U	0.213 U		0.101 U	0.0983 U
Radium-226/228	pCi/L		0.0672 U		0.559 U		0.847 U		1.63	0.82 U	0.915 U	2.48 J		0.527 U	0.791 U
Radium-228	pCi/L	0.255 U	-0.224 U		0.511 U		0.725 U		1.18 G	0.856	0.609 U	2.27 J		0.427 U	0.693 U
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005 U		0.005 U		0.00092 J		0.005	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U
Silver	mg/L														
Sodium	mg/L	21	20		22		19		20	22	20	14	14	15	14
Strontium	mg/L														
Sulfate	mg/L		220		240		250		240	68 J	170	200	190		
Temperature, Field	deg C		13.1	15.7		13.3		17		14.8	18.9	15.3	14.3		14.3
Thallium	mg/L	0.00051 J	0.001 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Turbidity, Field	NTU		67.13	36.11		3821.62		69.53		55.63	204.32	69.8	26.19		33.27
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18
Date		2023-03-02	2023-04-12	2023-04-12	2023-04-12	2023-06-13	2023-06-13	2023-08-17	2023-08-17	2023-09-27	2023-09-27	2023-10-11	2023-10-11	2023-10-11	2023-10-11
Sample Type		N	N	N	N	N	N	N	N	N	N	FD	FD	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	96	95	140	110 U	95	94	88	90		86	88	88	87	88
Aluminum	mg/L														
Antimony	mg/L		0.002 U		0.002 U		0.002 U		0.002 U		0.002 U		0.002 U		0.002 U
Arsenic	mg/L		0.0012 J		0.001 J		0.005 U		0.00086 J		0.005 U		0.005 U		0.005 U
Barium	mg/L		0.039		0.037		0.029		0.029		0.024 J		0.024		0.026
Beryllium	mg/L		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	96	95	140	110 U	95	94	88	90		86	88	88	87	88
Boron	mg/L	1.4	1.5	1.4		1.5		1.4			1.4	1.4		1.3	
Bromide	mg/L														
Cadmium	mg/L		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U
Calcium	mg/L	79	81	79		83		79			72	77		76	
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	25	25	25		25		25			25	25		25	
Chromium	mg/L		0.0013 J		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U
Cobalt	mg/L		0.0029		0.0027		0.0019		0.0019		0.0008 J		0.0011		0.0012
Conductivity, Field	uS/cm		593			551		566		565				580	
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		1.29			0.83		1		1.18				1.19	
Dissolved Solids, Total	mg/L	420	410	410		400		400			390	380 J		390 J	
Fluoride	mg/L	0.064	0.057	0.058	0.059	0.051	0.053	0.054	0.054		0.061	0.064	0.051	0.075	0.03 J
Iron	mg/L														
Lead	mg/L		0.00073 J		0.001 U		0.00057 J		0.0012		0.001 U		0.001 U		0.001 U
Lithium	mg/L		0.0077 J		0.0079 J		0.0041 J		0.0076 J		0.0062 J		0.0074 J		0.0082
Magnesium	mg/L	21	20	20	20	21	19	21	21		19	20	18	20	20
Manganese	mg/L														
Mercury	mg/L		0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U
Molybdenum	mg/L		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		37.7			69.8		145.2		119.8				96.6	
pH, Field	pH units		6.02			5.94		5.89		5.99				5.95	
Potassium	mg/L	1.5	1.3	1.2	1.3	1.4	1.3	1.4	1.3		1.2	1.3	1.2	1.2	1.3
Radium-226	pCi/L		0.244 U		0.109 U		0.178		0.148 U		0.0718 U		0.0855 U		-0.004 U
Radium-226/228	pCi/L		0.46 U		0.349 U		-0.153 U		0.847 U		0.0479 U		0.93 U		0.438 U
Radium-228	pCi/L		0.217 U		0.239 U		-0.331 U		0.699 U		-0.0238 U		0.845 U		0.442 U
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U
Silver	mg/L														
Sodium	mg/L	15	15	15	15	17	15	16	16		16	16	15	16	16
Strontium	mg/L														
Sulfate	mg/L	190	200	190		180		190			190	190		190	
Temperature, Field	deg C		15.2			15.1		15.6		15.7				14.9	
Thallium	mg/L		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U
Turbidity, Field	NTU		18.93			9.42		23.4		5.15				6.73	
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-18	BAC-19	BAC-19	BAC-19	BAC-19	BAC-19
Date		2023-12-12	2023-12-12	2023-12-12	2024-03-20	2024-03-20	2024-10-07	2024-10-07	2025-03-24	2025-09-24	2022-10-14	2022-12-06	2022-12-06	2023-04-05	2023-09-27
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L		86	87		100		96	96	94	140	150	140	160	
Aluminum	mg/L														
Antimony	mg/L			0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.0016 J		0.00074 J	0.002 U	
Arsenic	mg/L			0.00077 J		0.005 U		0.005	0.005 U	0.00078 J	0.005 U		0.0013 J	0.005 U	
Barium	mg/L			0.029		0.027		0.024	0.024	0.026	0.42		0.57	0.59	
Beryllium	mg/L			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L		86	87		100		96	96	94	140	150	140	160	
Boron	mg/L		1.5			1.4		1.3	1.5	1.5 J	0.19	0.22		0.22	
Bromide	mg/L														
Cadmium	mg/L			0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	
Calcium	mg/L		76 F1	76		81		76	80	77	78	80		84	
Carbonate Alkalinity as CaCO3	mg/L		5 U	5 U		5 U		5	5 U	5 U	5 U	5 U	5 U	5 U	
Chloride	mg/L		23			25		25	23	24	780	900		870	
Chromium	mg/L			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U	
Cobalt	mg/L			0.0016		0.0015		0.00054	0.00058 J	0.00086 J	0.00022 J		0.00038 J	0.00033 J	
Conductivity, Field	uS/cm	610			637		645		610	617	2724	3007		3023	2703
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	1.48			1.67		0.67		0.87	0.35	0.56	0.4		0.79	1.17
Dissolved Solids, Total	mg/L		390			420		360	410	400	930 J	1200		1500	
Fluoride	mg/L		0.041 J	0.041 J		0.053		0.058	0.071	0.067	0.6	0.53	0.58	0.54	
Iron	mg/L														
Lead	mg/L			0.001 U		0.001 U		0.001	0.001 U	0.00054 J	0.001 U		0.001 U	0.001 U	
Lithium	mg/L			0.008 B		0.0085		0.0068	0.0072 J	0.0045 J	0.024		0.028	0.027	
Magnesium	mg/L		20	20		21		19	21	21	14	16	16	17	
Manganese	mg/L														
Mercury	mg/L			0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U	
Molybdenum	mg/L			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.016		0.013	0.0084	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	117.1			73.8		75.4		57	97.2	-215.8	-153		-174.1	-71.2
pH, Field	pH units	5.92			6.07		6.06		6.08	6.12	7.47	7.56		7.4	7.31
Potassium	mg/L		1.4	1.4		1.2		1.2	1.3	1.2	3	2.8	2.9	2.8	
Radium-226	pCi/L			-0.0336 U		0.0271 U		0.114	0.0298 UJ	0.142 U	0.346		0.767	0.717	
Radium-226/228	pCi/L			0.0856 U		0.237 U		0.443 U	0.875 J	0.557 U	3.87 J		1.99	1.12	
Radium-228	pCi/L			0.119 U		0.21 U		0.329 U	0.846	0.415 U	3.53 J		1.22	0.404 U	
Redox Potential, Field	mV														
Selenium	mg/L			0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U	
Silver	mg/L														
Sodium	mg/L		15	15 B		15		15	17	16	380	410	440	440	
Strontium	mg/L														
Sulfate	mg/L		180			190		190	170	180	3.7	10		7.3	
Temperature, Field	deg C	13.7			14.2		17.2		15	16.4	15.3	14.2		15.6	15.5
Thallium	mg/L			0.001 U		0.00045 J		0.001	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	
Turbidity, Field	NTU	9.02			6.24		9.88		10.52	8.42	6.91	3.18		5.1	3.09
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-19	BAC-19	BAC-19	BAC-19	BAC-19	BAC-19	BAC-19	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21
Date		2023-09-27	2024-03-20	2024-03-20	2024-10-07	2024-10-07	2025-03-24	2025-09-24	2022-10-10	2022-12-14	2022-12-14	2023-02-24	2023-02-24	2023-04-10	2023-04-10
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	150		160		170	160	150	230	240	240	230	240	250 J	250 J
Aluminum	mg/L														
Antimony	mg/L	0.002 U		0.002 U		0.002	0.002 U	0.002 U	0.002 U	0.002 U			0.002 U	0.002 U	
Arsenic	mg/L	0.005 U		0.005 U		0.005	0.005 U	0.0011 J	0.0091	0.0086			0.0038 J	0.003 J	
Barium	mg/L	0.57		0.58		0.62	0.64	0.62	0.18	0.18			0.16	0.15	
Beryllium	mg/L	0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.00077 J	
Bicarbonate Alkalinity as CaCO3	mg/L	150		160		170	160	150	230	240	240	230	240	250 J	250
Boron	mg/L	0.22		0.23		0.23	0.25	0.26 J	0.33		0.3	0.37		0.37	0.32
Bromide	mg/L														
Cadmium	mg/L	0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U	
Calcium	mg/L	91		97		100	110	110	130		120	130		120	120
Carbonate Alkalinity as CaCO3	mg/L	5 U		5 U		5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	920		1000		1000	960	1000	72			66		74	65
Chromium	mg/L	0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.01	0.01			0.005 U	0.005 U	
Cobalt	mg/L	0.00026 J		0.00041 J		0.00034	0.00037 J	0.00037 J	0.0039	0.0036			0.00094 J	0.00051 J	
Conductivity, Field	uS/cm		3296		3502		3348	3417	977	796		971		936	
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		2.03		0.8		0.74	0.24	0.42	0.43		0.06		0.48	
Dissolved Solids, Total	mg/L	1500		1600		1300	1700	1700	550		530	530		560	500
Fluoride	mg/L	0.56		0.5		0.51	0.56	0.57	0.059	0.093		0.068	0.058	0.074 J	0.096 J
Iron	mg/L														
Lead	mg/L	0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.0069	0.0066			0.0015	0.0007 J	
Lithium	mg/L	0.03		0.032		0.032	0.035	0.03	0.011	0.01			0.006 J	0.0077 J	
Magnesium	mg/L	19		19		20	22	23	16	16	16	15	16	14	14
Manganese	mg/L														
Mercury	mg/L	0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U	0.00013 JB			0.0002 U	0.0002 U	
Molybdenum	mg/L	0.0075		0.006		0.006	0.0065	0.0057	0.0016 J	0.0011 J			0.005 U	0.0015 J	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		-124.2		-95.8		41.1	-102.6	-152	-148.3		-129.7		-141	
pH, Field	pH units		7.32		7.28		7.27	7.3	6.87	6.88		6.79		6.85	
Potassium	mg/L	2.9		2.7		3	3	2.8	3.3	3.2	3.5	2.4	2.5	2.1	2.1
Radium-226	pCi/L	0.475		0.897		0.992	0.572 J	0.732 J	1.18	0.502			0.397	0.308 U	
Radium-226/228	pCi/L	1.47		1.83		2.02	1.52 J	2.23 J	2.78 J	3.4			0.871 U	0.807 U	
Radium-228	pCi/L	0.99		0.934		1.02	0.947	1.5	1.6 J	2.9 G			0.474 U	0.499 U	
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.005 U	0.005 U			0.005 U	0.001 J	
Silver	mg/L														
Sodium	mg/L	470		450		550	550	550	29	27	29	28	30	27	25
Strontium	mg/L														
Sulfate	mg/L	9.4		9.3		11	9.2	10	140			130		140	120
Temperature, Field	deg C		13.9		16.6		14.8	16.3	15	12.9		13.1		14.1	
Thallium	mg/L	0.001 U		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U			0.00026 J	0.00044 J	
Turbidity, Field	NTU		2.67		5.17		8.03	5.92	195.41	208.19		16.38		13.89	
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21
Date		2023-04-10	2023-06-12	2023-06-12	2023-06-12	2023-06-12	2023-08-16	2023-08-16	2023-09-28	2023-09-28	2023-10-11	2023-10-11	2023-12-13	2023-12-13	2023-12-13
Sample Type		N	FD	FD	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	250 J	240	240	250	250	240	240		240	240	240		230	230
Aluminum	mg/L														
Antimony	mg/L	0.002 U		0.002 U		0.002 U		0.002 U		0.002 U		0.002 U			0.002 U
Arsenic	mg/L	0.0031 J		0.0075		0.0057		0.0075		0.005		0.006			0.0032 J
Barium	mg/L	0.15		0.19		0.18		0.19		0.18		0.17			0.14
Beryllium	mg/L	0.00067 J		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	250 J	240	240	250	250	240	240		240	240	240		230	230
Boron	mg/L		0.42		0.42		0.39			0.39	0.37			0.32	
Bromide	mg/L														
Cadmium	mg/L	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U
Calcium	mg/L		140		140		140			140	130			110	110
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U		5 U	5 U
Chloride	mg/L		68		73		77			74	77			55	
Chromium	mg/L	0.005 U		0.0057		0.0047 J		0.0076		0.0042 J		0.0038 J			0.0019 J
Cobalt	mg/L	0.00076 J		0.0025		0.0022		0.0029		0.0016		0.0017			0.0012
Conductivity, Field	uS/cm				899		947		722		1004		921		
Copper	mg/L														
Dissolved Oxygen, Field	mg/L				0.81		1.06		0.89		1.25		1.37		
Dissolved Solids, Total	mg/L		540		550		540			530	550			500	
Fluoride	mg/L	0.11	0.078	0.079	0.075	0.087 J	0.069	0.076		0.052	0.1	0.1		0.074	0.074
Iron	mg/L														
Lead	mg/L	0.0007 J		0.0042		0.0033		0.005		0.0029		0.0029			0.0011
Lithium	mg/L	0.006 J		0.0059 J		0.0059 J		0.0099		0.0062 J		0.0087			0.0074 JB
Magnesium	mg/L	14	16	16	16	15	17	15		16	16	15		14	14
Manganese	mg/L														
Mercury	mg/L	0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U			0.0002 U
Molybdenum	mg/L	0.0015 J		0.0012 J		0.0023 J		0.0012 J		0.005 U		0.005 U			0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV				-80.7		-94.4		-138.6		-134.4		-139.1		
pH, Field	pH units				6.81		6.86		6.82		6.81		6.89		
Potassium	mg/L	2	2.9	2.7	2.7	2.6	2.8	2.8		2.6	2.8	2.4		1.8	2
Radium-226	pCi/L	0.239		0.419 U		0.65		0.567 U		1.14		0.527			0.119 U
Radium-226/228	pCi/L	0.34 U		1.89 U		2.32 U		2.05 U		1.23 U		1.84			0.313 U
Radium-228	pCi/L	0.1 U		1.47 U		1.67		1.48 U		0.0899 U		1.31			0.194 U
Redox Potential, Field	mV														
Selenium	mg/L	0.001 J		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U			0.005 U
Silver	mg/L														
Sodium	mg/L	25	31	29	30	28	32	30		32	30	27		26	26 B
Strontium	mg/L														
Sulfate	mg/L		120		130		130			130	130			100	
Temperature, Field	deg C				13.9		14.8		14.1		13.5		13		
Thallium	mg/L	0.00048 J		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U
Turbidity, Field	NTU				70.7		91.81		58.11		90.87		37.73		
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-21	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22
Date		2024-03-22	2024-03-22	2024-10-03	2024-10-03	2025-04-09	2025-10-09	2022-10-12	2022-12-14	2022-12-14	2023-02-24	2023-02-24	2023-04-10	2023-04-10	2023-04-10
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L		240		230	220	220	230	230	250	220 J	220 J	240 J	230 J	230 J
Aluminum	mg/L														
Antimony	mg/L		0.002 U		0.002	0.002 U	0.002 U	0.002 U	0.002 U			0.002 U	0.002 U		0.002 U
Arsenic	mg/L		0.0066		0.0036	0.0029 J	0.004 J	0.0019 J	0.0029 J			0.0024 J	0.0023 J		0.0017 J
Barium	mg/L		0.18		0.17	0.14	0.19	0.15	0.15			0.14	0.13		0.13
Beryllium	mg/L		0.001 U		0.001	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U		0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		240		230	220	220	230	230	250	220	220	240 J	230 J	230 J
Boron	mg/L		0.38		0.43	0.21	0.39 J	0.2		0.2	0.24		0.22	0.23	
Bromide	mg/L														
Cadmium	mg/L		0.00028 J		0.00023	8.4E-05 J	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U		0.001 U
Calcium	mg/L		120		130	92	130	140		140	150		140	150	
Carbonate Alkalinity as CaCO3	mg/L		5 U		5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L		65		71	32	64	49			36		36	35	
Chromium	mg/L		0.0082		0.002	0.0014 J	0.002 J	0.005 U	0.003 J			0.005 U	0.005 U		0.005 U
Cobalt	mg/L		0.0038		0.0011	0.0018	0.00059 J	0.00055 J	0.0015			0.00066 J	0.00073 J		0.00059 J
Conductivity, Field	uS/cm	887		935		585	845	990	933		984		950		
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	1.74		0.69		0.84	0.28	0.41	0.44		0.28		0.46		
Dissolved Solids, Total	mg/L		490		530	400	520	640		600	540		750	610	
Fluoride	mg/L		0.069		0.084	0.18	0.081	0.077	0.068		0.079	0.076	0.084	0.25 U	0.083
Iron	mg/L														
Lead	mg/L		0.0061		0.0012	0.00098 J	0.0011	0.001 U	0.0017			0.00055 J	0.00061 J		0.0005 J
Lithium	mg/L		0.01		0.0075	0.0042 J	0.0048 J	0.0054 J	0.0059 J			0.0044 J	0.0059 J		0.0053 J
Magnesium	mg/L		14		16	13	15	18	20	19	19	19	18	19	18
Manganese	mg/L														
Mercury	mg/L		0.0002 U		0.0002	0.0002 U	0.0002 U	0.0002 U	0.00013 JB			0.0002 U	0.0002 U		0.0002 U
Molybdenum	mg/L		0.0012 J		0.0015	0.005 U	0.005 U	0.0011 J	0.005 U			0.005 U	0.005 U		0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	-147.3		-141.7		-39.5	-156.1	-143.1	-124		-94		-126.3		
pH, Field	pH units	6.81		6.88		6.6	6.88	6.76	6.8		6.69		6.81		
Potassium	mg/L		2.8		2.7	1.6	2	2.5	3.1	3.1	2.8	2.9	2.6	2.9	2.6
Radium-226	pCi/L		0.681		0.225	0.387	0.591 U	0.206 U	0.251 U			0.288	0.351		0.236
Radium-226/228	pCi/L		1.5 U		0.842	0.971	1.15 J	0.8 J	2.86			0.421 U	1.74		0.668
Radium-228	pCi/L		0.823 U		0.616 U	0.584	0.557 U	0.594 J	2.61 G			0.133 U	1.39		0.432 U
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.0015	0.005 U	0.005 U	0.005 U	0.005 U			0.005 U	0.005 U		0.005 U
Silver	mg/L														
Sodium	mg/L		28		35	25	31	21	23	22	21	21	18	19	20
Strontium	mg/L														
Sulfate	mg/L		120		140	76	130	220			230		290	260	
Temperature, Field	deg C	13.4		16.3		13.3	15.2	13.5	12.6		13.4		14.1		
Thallium	mg/L		0.001 U		0.001	0.001 U	0.001 U	0.00032 J	0.001 U			0.001 U	0.001 U		0.001 U
Turbidity, Field	NTU	187.49		111.59		26.49	22.8	13.03	60.34		7.7		20.39		
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22
	Date	2023-06-12	2023-06-12	2023-08-16	2023-08-16	2023-09-28	2023-09-28	2023-10-11	2023-10-11	2023-12-13	2023-12-13	2023-12-13	2023-12-13	2023-12-13	2024-03-22
	Sample Type	N	N	N	N	N	N	N	N	FD	FD	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	230	230	220	220		220	230	230	230	220		230	220	
Aluminum	mg/L														
Antimony	mg/L		0.002 U		0.002 U		0.002 U		0.002 U		0.002 U			0.002 U	
Arsenic	mg/L		0.0025 J		0.0029 J		0.004 J		0.0023 J		0.0022 J			0.0019 J	
Barium	mg/L		0.14		0.13		0.19		0.14		0.13			0.13	
Beryllium	mg/L		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	230	230	220	220		220	230	230	230	220		230	220	
Boron	mg/L	0.23		0.23			0.28	0.22		0.23			0.22		
Bromide	mg/L														
Cadmium	mg/L		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U	
Calcium	mg/L	160		160			210	150		160	150		160	160	
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U		5 U	5 U	5 U	5 U	5 U		5 U	5 U	
Chloride	mg/L	33		32			35	38		37			37		
Chromium	mg/L		0.0019 J		0.0031 J		0.0033 J		0.0013 J		0.005 U			0.005 U	
Cobalt	mg/L		0.0013		0.0022		0.0022		0.0012		0.0007 J			0.00067 J	
Conductivity, Field	uS/cm	880		776		689		963				1030			986
Copper	mg/L														
Dissolved Oxygen, Field	mg/L	0.87		1.3		1.12		1.2				1.35			1.76
Dissolved Solids, Total	mg/L	600		610			630	580		610			590		
Fluoride	mg/L	0.082	0.081	0.078	0.076		0.061	0.09	0.07	0.061	0.06		0.058	0.058	
Iron	mg/L														
Lead	mg/L		0.0014		0.0025		0.0025		0.0014		0.001 U			0.001 U	
Lithium	mg/L		0.0036 J		0.0068 J		0.0066 J		0.0068 J		0.0061 JB			0.0061 JB	
Magnesium	mg/L	19	20	20	18		26	19	19	20	19		20	20	
Manganese	mg/L														
Mercury	mg/L		0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U			0.0002 U	
Molybdenum	mg/L		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U			0.005 U	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV	-31.3		-55.9		-103.1		-107.6				-115.7			-117.8
pH, Field	pH units	6.69		6.81		6.77		6.79				6.84			6.75
Potassium	mg/L	3.1	3	3.1	2.8		3.9	2.9	2.8	2.7	2.6		2.7	2.7	
Radium-226	pCi/L		0.345		0.243		0.648		0.176 U		0.283 U			0.287 U	
Radium-226/228	pCi/L		0.815 U		0.404 U		1.4		1.23		0.938			0.771 U	
Radium-228	pCi/L		0.47 U		0.161 U		0.749		1.05		0.655 U			0.484 U	
Redox Potential, Field	mV														
Selenium	mg/L		0.005 U		0.005 U		0.005 U		0.005 U		0.005 U			0.005 U	
Silver	mg/L														
Sodium	mg/L	21	21	20	19		26	19	19	21	19 B		20	20 B	
Strontium	mg/L														
Sulfate	mg/L	230		240			240	240		240			240		
Temperature, Field	deg C	13.7		14.3		14		13.8				13			13.3
Thallium	mg/L		0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U	
Turbidity, Field	NTU	27.03		62.11		36.12		28.35				8.05			11.83
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-22	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23
Date		2024-03-22	2024-10-03	2024-10-03	2024-10-03	2025-04-02	2025-10-02	2022-10-11	2022-12-13	2022-12-13	2023-03-01	2023-03-01	2023-04-11	2023-04-11	2023-04-11
Sample Type		N	FD	N	N	N	N	N	N	N	N	N	FD	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	230	230		230	230	220	220	220	230	220	220	230	230	240 J
Aluminum	mg/L														
Antimony	mg/L	0.002 U	0.002		0.002	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U		0.00075 J	0.002 U	
Arsenic	mg/L	0.0013 J	0.0017		0.0019	0.0022 J	0.0016 J	0.0017 J	0.0024 J		0.0018 J		0.0019 J	0.0017 J	
Barium	mg/L	0.13	0.14		0.13	0.13	0.12	0.12	0.13		0.14		0.14	0.14	
Beryllium	mg/L	0.001 U	0.001		0.001	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	230	230		230	230	220	220	220	230	220	220	230	230	240 J
Boron	mg/L	0.22	0.21		0.21	0.2	0.21 J	0.25		0.24		0.28	0.29	0.28	0.28
Bromide	mg/L														
Cadmium	mg/L	0.001 U	0.001		8.7E-05	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U	0.001 U	
Calcium	mg/L	150	150		150	160	150	120		130		130	130	130	130
Carbonate Alkalinity as CaCO3	mg/L	5 U	5		5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	39	38		38	38	38	44				46	44	43	44
Chromium	mg/L	0.005 U	0.005		0.005	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U		0.005 U	0.005 U	
Cobalt	mg/L	0.00068 J	0.00089		0.00083	0.0007 J	0.00059 J	0.0013	0.0016		0.0011		0.0011	0.001	
Conductivity, Field	uS/cm			994		927	893	846	766		824			795	
Copper	mg/L														
Dissolved Oxygen, Field	mg/L			0.58		0.58	0.64	0.4	1.28		0.15			0.6	
Dissolved Solids, Total	mg/L	600	610		600	590	290 J	490		520		500	500	490	500
Fluoride	mg/L	0.066	0.092		0.092	0.096	0.083	0.13	0.15		0.14	0.11	0.14	0.14	0.14
Iron	mg/L														
Lead	mg/L	0.001 U	0.001		0.001	0.001 U	0.001 U	0.001 U	0.00085 J		0.001 U		0.001 U	0.001 U	
Lithium	mg/L	0.0059 J	0.0051		0.0051	0.005 J	0.0038 J	0.0032 J	0.0033 J		0.0026 J		0.0056 J	0.0046 J	
Magnesium	mg/L	19	19		20	19	20	15	16	16	16	16	15	15	15
Manganese	mg/L														
Mercury	mg/L	0.0002 U	0.0002		0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U		0.0002 U	0.0002 U	
Molybdenum	mg/L	0.005 U	0.005		0.005	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U		0.0019 J	0.005 U	
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV			-119.5		-78.8	-124.8	-76	-107.7		-71.4			-55.8	
pH, Field	pH units			6.86		6.74	6.87	7.2	7.04		6.78			6.95	
Potassium	mg/L	2.6	2.8		2.8	2.6	2.5	1.8	2.1	2.1	2	2	1.9	1.9	1.9
Radium-226	pCi/L	0.388	0.277		0.133	0.362	0.442 U	0.326	0.275		0.141		0.242	0.243	
Radium-226/228	pCi/L	0.949	1.12		0.224 U	0.802	1.68 J	1.05 J	1.69		0.596		0.0252 U	0.159 U	
Radium-228	pCi/L	0.561 U	0.847		0.0915 U	0.441 U	1.24	0.719 J	1.42		0.455 U		-0.216 U	-0.084 U	
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005		0.005	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U		0.005 U	0.005 U	
Silver	mg/L														
Sodium	mg/L	18	20		20	18	20	19	19	20	19	20	19	18	19
Strontium	mg/L														
Sulfate	mg/L	240	250		250	220	220	140				150	150	150	150
Temperature, Field	deg C			16.3		14	15.1	15	13.2		14.8			14.4	
Thallium	mg/L	0.001 U	0.001		0.001	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.00086 J	0.001 U	
Turbidity, Field	NTU			20.91		4.69	5.57	7.79	34.88		5.79			5.25	
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23	BAC-23
Date		2023-04-11	2023-06-12	2023-06-12	2023-08-16	2023-08-16	2023-09-28	2023-09-28	2023-10-10	2023-10-10	2023-12-13	2023-12-13	2023-12-13	2024-03-21	2024-03-21
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	240 J	240	230	230	230		230	230	230		230	230		240
Aluminum	mg/L														
Antimony	mg/L	0.002 U		0.002 U		0.002 U		0.002 U		0.002 U			0.002 U		0.002 U
Arsenic	mg/L	0.002 J		0.0014 J		0.0018 J		0.0012 J		0.0019 J			0.0015 J		0.00098 J
Barium	mg/L	0.13		0.12		0.13		0.12		0.13			0.13		0.14
Beryllium	mg/L	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U		0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	240 J	240	230	230	230		230	230	230		230	230		240
Boron	mg/L		0.27		0.27			0.24	0.27			0.28			0.3
Bromide	mg/L														
Cadmium	mg/L	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U		0.001 U
Calcium	mg/L		130		130			120	130			130	130		130
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U		5 U	5 U	5 U		5 U	5 U		5 U
Chloride	mg/L		43		44			42	45			41			49
Chromium	mg/L	0.005 U		0.005 U		0.005 U		0.005 U		0.005 U			0.005 U		0.005 U
Cobalt	mg/L	0.001		0.0009 J		0.0011		0.00087 J		0.00094 J			0.00086 J		0.00092 J
Conductivity, Field	uS/cm		755		670		732		736		868			868	
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		0.95		1.24		1.08		1.18		1.52			1.59	
Dissolved Solids, Total	mg/L		500		470			520	490			510			490
Fluoride	mg/L	0.14	0.13	0.13	0.13	0.13		0.096	0.15	0.12		0.1	0.1		0.11
Iron	mg/L														
Lead	mg/L	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U		0.001 U
Lithium	mg/L	0.0046 J		0.008 U		0.0041 J		0.0032 J		0.0049 J			0.0046 JB		0.0038 J
Magnesium	mg/L	15	15	14	16	16		15	16	15		16	16		15
Manganese	mg/L														
Mercury	mg/L	0.0002 U		0.0002 U		0.0002 U		0.0002 U		0.0002 U			0.0002 U		0.0002 U
Molybdenum	mg/L	0.005 U		0.005 U		0.005 U		0.005 U		0.005 U			0.005 U		0.005 U
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		21.5		14.1		-54.6		-61.3		-68.3			-80.7	
pH, Field	pH units		6.85		6.9		6.92		6.95		7.01			6.94	
Potassium	mg/L	1.8	2	1.8	2	2		1.8	2	1.9		1.9	1.9		1.9
Radium-226	pCi/L	0.125 U		0.227		0.166		0.441		0.252			0.181 U		0.201
Radium-226/228	pCi/L	0.297 U		0.566		0.336 U		1.24		0.981			0.818		0.628
Radium-228	pCi/L	0.172 U		0.339 U		0.17 U		0.801		0.729			0.637		0.427 U
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U		0.005 U		0.005 U		0.005 U		0.005 U			0.005 U		0.005 U
Silver	mg/L														
Sodium	mg/L	18	19	17	20	20		19	20	19		20	20 B		19
Strontium	mg/L														
Sulfate	mg/L		140		140			140	150			130			140
Temperature, Field	deg C		14.4		14.8		14.6		14.6		13.6			13.6	
Thallium	mg/L	0.001 U		0.001 U		0.001 U		0.001 U		0.001 U			0.001 U		0.001 U
Turbidity, Field	NTU		4.77		5.15		5.71		3.32		2.03			3.93	
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Analyte	Unit	Location / Date / Sample Type	BAC-23 2024-10-04 N	BAC-23 2024-10-04 N	BAC-23 2025-04-02 FD	BAC-23 2025-04-02 N	BAC-23 2025-10-03 N	MW-1 2016-08-25 N	MW-1 2016-10-03 N	MW-1 2016-11-28 N	MW-1 2017-02-07 N	MW-1 2017-03-28 FD	MW-1 2017-03-28 N	MW-1 2017-05-03 N	MW-1 2017-06-13 N	MW-1 2017-07-14 FD
Alkalinity, Total as CaCO3	mg/L			220	220	220	210			249	245					
Aluminum	mg/L											0.068	0.092	0.085	0.061	0.05 U
Antimony	mg/L			0.002	0.002 U	0.002 U	0.002 U	2E-05 J	2E-05 J	2E-05 J	2E-05 J	0.00063 JB	0.0006 JB	0.002 U	0.002 U	0.002 U
Arsenic	mg/L			0.00087	0.00097 J	0.0013 J	0.00078 J	0.00102	0.00087	0.00073	0.00087	0.00061 J	0.00064 J	0.005 U	0.005 U	0.005 U
Barium	mg/L			0.13	0.11	0.11	0.11	0.0982	0.0914	0.0985	0.0899	0.1 B	0.1 B	0.1	0.11	0.1
Beryllium	mg/L			0.001	0.001 U	0.001 U	0.001 U	2E-05 J	1E-05 J	6E-06 J	7E-06 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L			220	220	220	210									
Boron	mg/L			0.26	0.22	0.23	0.24 J	0.053	0.044	0.058	0.048	0.074 J	0.081 J	0.06 J	0.066 J	0.067 JB
Bromide	mg/L									0.119	0.099	0.14 J	0.14 J	0.12 J	0.13 J	0.13 J
Cadmium	mg/L			0.001	0.001 U	0.001 U	0.001 U	2E-05 J	1E-05 J	5E-06 J	8E-06 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L			130	120	120	120	114	113	124	121	120 JB	120 JB	120	120	120
Carbonate Alkalinity as CaCO3	mg/L			5	5 U	5 U	5 U									
Chloride	mg/L			40	33	33	31	19.4	19.9	19.5	20	20	20	21	22	22
Chromium	mg/L			0.005	0.005 U	0.005 U	0.005 U	0.0007	0.0003	0.000175	0.000219	0.00027 JB	0.00049 JB	0.002 U	0.002 U	0.002 U
Cobalt	mg/L			0.00077	0.00074 J	0.00074 J	0.00073 J	0.000964	0.000769	0.000672	0.000763	0.0007 J	0.00072 J	0.00072 J	0.0007 J	0.00069 J
Conductivity, Field	uS/cm		828			731	689	714	712	717	707					
Copper	mg/L											0.002 U	0.00074 JB	0.002 U	0.002 U	0.002 U
Dissolved Oxygen, Field	mg/L		0.87			0.83	0.88	0.57	0.54	0.75	0.75					
Dissolved Solids, Total	mg/L			480	460	470	480	466	440	447	455	460	470	470	490 J	470 J
Fluoride	mg/L			0.14	0.14	0.13	0.17	0.09	0.09	0.01	0.1	0.11	0.11	0.11	0.11	0.11
Iron	mg/L											0.24 B	0.27 B	0.3	0.24	0.093 J
Lead	mg/L			0.001	0.001 U	0.001 U	0.001 U	0.000495	0.000355	0.000124	0.000214	0.00031 J	0.00035 J	0.001 U	0.001 U	0.001 U
Lithium	mg/L			0.008	0.008 U	0.008 U	0.008 U	0.008	0.004	0.006	0.006	0.0041 J	0.004 J	0.0033 J	0.0046 J	0.0052 J
Magnesium	mg/L			15	14	13	15			14.1	14.2	13 B	13 B	14	14	14
Manganese	mg/L											0.48 JB	0.48 JB	0.5	0.51	0.49
Mercury	mg/L			0.0002	0.0002 U	0.0002 U	0.0002 U	5E-06 U	1.3E-05	5E-06 U	5E-06 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L			0.005	0.005 U	0.005 U	0.005 U	0.00045	0.00023	0.00022	0.00042	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Nickel	mg/L											0.00053 JB	0.00068 JB	0.002 U	0.002 U	0.002 U
Oxidation-Reduction Potential, Field	mV		-68.3			2.2	-79.4									
pH, Field	pH units		6.93			6.94	6.96	7.21	7.2	7.16	7.09		7.16	7.15	7.13	
Potassium	mg/L			2	1.8	1.8	1.8			1.57	1.82	1.4 B	1.4 B	1.4	1.4	1.4
Radium-226	pCi/L			0.118 U	0.14 U	0.0572 U	0.293 U	1.63	0.285	0.309	0.248	0.119 U	0.209	0.179	0.069 U	0.17
Radium-226/228	pCi/L			0.52 U	0.56 J	1.5 J	0.563 U	2.081	2.045	0.2551	0.918	0.567	0.537	0.527	0.525	0.342
Radium-228	pCi/L			0.402 U	0.42 UJ	1.45 J	0.27 U	0.451	1.76	-0.0539	0.67	0.449	0.328 U	0.348 U	0.456	0.171 U
Redox Potential, Field	mV							-85.8	-29.2	-37.6	-37.5					
Selenium	mg/L			0.005	0.005 U	0.005 U	0.005 U	0.0001	7E-05 J	4E-05 J	5E-05 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L											0.00014 J	0.00025 J	0.00021 J	0.00019 J	0.001 U
Sodium	mg/L			19	18	16	18			16	13.5	15 JB	15 JB	16 B	15	16 J
Strontium	mg/L									0.218	0.219	0.2 B	0.2 B	0.2 B	0.2 B	0.2
Sulfate	mg/L			150	130	130	140	125	126	127	119	120	120	130	130	130
Temperature, Field	deg C		18.3			15.2	15.1	15.1	13.7	12.6	12.9					
Thallium	mg/L			0.001	0.001 U	0.001 U	0.001 U	3E-05 J	2E-05 J	1E-05 J	3E-05 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU		4.31			3.11	3.11	8.6	7	9	8.8		2.9	3.3	3	
Vanadium	mg/L											0.005 U	0.005 U			
Zinc	mg/L											0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

		Location	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Date	2017-07-14	2018-02-28	2018-05-15	2018-09-18	2019-03-16	2019-09-17	2020-03-11	2020-09-10	2021-03-13	2021-09-20	2022-03-31	2022-03-31	2022-04-27	2022-04-27
		Sample Type	N	N	N	N	N	N	N	N	N	N	FD	N	FD	N
Analyte	Unit															
Alkalinity, Total as CaCO3	mg/L				230	220	220 B	220	220	220	230	240	230	230	230	230
Aluminum	mg/L	0.05 U											0.037 J	0.026 J		
Antimony	mg/L	0.002 U	0.0012 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00094 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.002 U	0.005 U	0.005 U
Barium	mg/L	0.1	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.13	0.13	0.12	0.11
Beryllium	mg/L	0.001 U	0.00036 J	0.00031 J	0.001 U^+	0.001 U	0.001 U	0.00036 J^-	0.001 U	0.001 U^-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		220	230	220	220 B	220	220	220	230	240	230	230	230	230	230
Boron	mg/L	0.068 JB	0.054 J	0.054 J	0.076 J	0.054 J	0.056 J	0.066 J	0.093 J	0.052 J	0.069 J	0.2 U	0.2 U			
Bromide	mg/L	0.13 J														
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 J	0.001 U	0.001 U	0.001 U	0.0001 U	0.0001 U	0.001 U	0.001 U	
Calcium	mg/L	120	120	120	120	120	120	120	120	110	130	150	150			
Carbonate Alkalinity as CaCO3	mg/L		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	22	24	25	27	30	28	37	38	41	41	42	42			
Chromium	mg/L	0.002 U	0.002 U	0.002 U	0.00098 J	0.001 J	0.002 U	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt	mg/L	0.00078 J	0.00085 J	0.00085 J	0.00084 J	0.00069 J	0.00054 J	0.00083 J	0.00059 J	0.00054 J	0.00083 J	0.00065	0.00062	0.00057 J	0.00053 J	
Conductivity, Field	uS/cm			717				779	756	767	782	794	794		789	
Copper	mg/L	0.002 U										0.005 U	0.005 U			
Dissolved Oxygen, Field	mg/L			0.12								0.97	0.97		0.58	
Dissolved Solids, Total	mg/L	480 J	470	500	490	520	510	490	470	590	490	470 J	500 J			
Fluoride	mg/L	0.11	0.11	0.11	0.1	0.093	0.098	0.11	0.078	0.082	0.11	0.11	0.11	0.1	0.11	
Iron	mg/L	0.095 J										0.1	0.08 J			
Lead	mg/L	0.00076 J	0.00076 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.0005 U	0.001 U	0.001 U	
Lithium	mg/L	0.0051 J	0.0033 J	0.0029 J	0.0058 J*+^+	0.0035 J	0.0083 B^+	0.0025 J^-	0.0042 J	0.0042 J	0.0046 J	0.0045 J	0.0033 J	0.0046 J	0.004 J	
Magnesium	mg/L	13	14	14	14	15	15	15	14	14	15	15	16	15	14	
Manganese	mg/L	0.47										0.57	0.58			
Mercury	mg/L	0.0002 U										0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Molybdenum	mg/L	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.002 U	0.002 U	0.005 U	0.005 U	
Nickel	mg/L	0.002 U										0.005 U	0.005 U			
Oxidation-Reduction Potential, Field	mV											33.4	33.4		43.9	
pH, Field	pH units	6.98		7.14	7.16	7.35	7.29	7.3	7.42	7.19	7.3	6.98	6.98		7.14	
Potassium	mg/L	1.4	1.5	1.4	1.5	1.6	1.5	1.5	1.4	1.2	1.5	1.5 J	1.7 J	1.5	1.4	
Radium-226	pCi/L	0.258										0.0911 U	0.0844 U	0.175	0.0509 U	
Radium-226/228	pCi/L	0.518										0.489 U	0.112 U	0.291 U	0.372 U	
Radium-228	pCi/L	0.259 U										0.398 U	0.0278 U	0.116 U	0.321 U	
Redox Potential, Field	mV															
Selenium	mg/L	0.0012 JB	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0009 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Silver	mg/L	0.001 U										0.001 U	0.001 U			
Sodium	mg/L	15 J	15	17	15	17	15	17	15	14	17	18	19	16	15	
Strontium	mg/L	0.2										0.27	0.27			
Sulfate	mg/L	130	140	140	140	150	140	140	140	140	140	130	130			
Temperature, Field	deg C			14.1				13	13	13	13	13	13		13.1	
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00067 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Turbidity, Field	NTU	0.6		11.3	2.72		4	3.8	2.3	1.9	4.8	6.5	6.5		0.01	
Vanadium	mg/L															
Zinc	mg/L	0.02 U										0.02 U	0.02 U			

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-6
Date		2022-06-21	2022-10-10	2022-12-12	2023-02-24	2023-04-07	2023-09-28	2023-09-28	2024-03-22	2024-03-22	2024-10-03	2024-10-03	2025-04-01	2025-10-02	2016-08-26
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	230	240	230	240	250		240		250		240	230	230	
Aluminum	mg/L														
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.0006 J		0.002 U		0.00081	0.002 U	0.002 U	2E-05 J
Arsenic	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U		0.005 U		0.005	0.00095 J	0.005 U	0.00029
Barium	mg/L	0.12	0.093	0.12	0.12	0.12		0.13		0.12		0.12	0.11	0.12	0.148
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U		0.001 U		0.001	0.001 U	0.001 U	2E-05 U
Bicarbonate Alkalinity as CaCO3	mg/L	230	240	230	240	250		240		250		240	230	230	
Boron	mg/L		0.1 U			0.064 J		0.062 J		0.085 J		0.079	0.063 J	0.1 U	0.045
Bromide	mg/L														
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.0002 J	0.001 U		0.00024 J		0.001 U		0.0002	0.00021 J	0.001 U	4E-05
Calcium	mg/L		130			120		130		130		130	130	120	123
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U		5 U		5 U		5	5 U	5 U	
Chloride	mg/L		42			41		39		37		35	32	32	17.1
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.0017 J		0.005 U		0.005 U		0.005	0.005 U	0.005 U	0.0005
Cobalt	mg/L	0.0011	0.00052 J	0.00065 J	0.00074 J	0.00042 J		0.0011		0.00067 J		0.00064	0.00085 J	0.00052 J	0.000403
Conductivity, Field	uS/cm		815	844	814	706	644		797		802		753	754	716
Copper	mg/L														
Dissolved Oxygen, Field	mg/L		1.32	1.16	0.99	1.4	1.18		3.3		0.73		0.85	1.32	0.04
Dissolved Solids, Total	mg/L		570			490		480		450		440	480	480	476
Fluoride	mg/L	0.1	0.1	0.11	0.11	0.073		0.078		0.086		0.1	0.11	0.12	0.08 J
Iron	mg/L														
Lead	mg/L	0.0009 J	0.001 U	0.001 U	0.001 U	0.001 U		0.00083 J		0.001 U		0.001	0.00068 J	0.001 U	3.9E-05
Lithium	mg/L	0.0028 J	0.0041 J	0.0051 J	0.0041 J	0.0059 J		0.006 J		0.0053 J		0.0054	0.0054 J	0.004 J	0.007
Magnesium	mg/L	16	16	16	15	14		17		15		15	14	16	
Manganese	mg/L														
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 UF1	0.0002 U	0.0002 U		0.0002 U		0.0002 U		0.0002	0.0002 U	0.0002 U	5E-06 U
Molybdenum	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.0011 J		0.005 U		0.0012	0.005 U	0.005 U	0.00073
Nickel	mg/L														
Oxidation-Reduction Potential, Field	mV		50.5	12.3	131.2	142.2	71.1		74.7		-37.5		-0.9	-80	
pH, Field	pH units		7.17	7.59	7.08	7.14	7.14		7.14		7.17		7.48	7.33	7
Potassium	mg/L	1.6	1.5	1.5	1.5	1.4		1.7		1.5		1.6	1.6	1.5	
Radium-226	pCi/L	0.235	0.0798 U	0.0801 U	0.0889	0.00883 U		0.181 U		0.272		0.196	0.0859 U	0.438 J	0.87
Radium-226/228	pCi/L	0.988	0.485 U	0.816	0.256 U	0.356 U		0.357 U		0.602		1.09	0.708	1.16 J	1.663
Radium-228	pCi/L	0.753	0.405 U	0.735	0.167 U	0.347 U		0.176 U		0.33 U		0.896	0.622	0.719	0.793
Redox Potential, Field	mV														165.3
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U		0.005 U		0.0019	0.005 U	0.005 U	3E-05 J
Silver	mg/L														
Sodium	mg/L	17	17	18	17	16		20		18		19	18	19	
Strontium	mg/L														
Sulfate	mg/L		130			130		130		130		130	130	130	131
Temperature, Field	deg C		14.7	12.3	12.6	12.9	13.4		12.4		14.1		13.1	14.5	17.2
Thallium	mg/L	0.001 U	0.0004 J	0.001 U	0.00071 J	0.001 U		0.00071 J		0.001 U		0.00066	0.00071 J	0.001 U	2E-05 J
Turbidity, Field	NTU		2.28	6.54	1.79	2.62	6.44		3.56		3.11		5.95	4.71	5.5
Vanadium	mg/L														
Zinc	mg/L														

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location		MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
Date		2016-10-03	2016-11-28	2017-02-07	2017-03-28	2017-05-03	2017-06-13	2017-07-14	2018-02-28	2018-05-16	2018-09-18	2019-03-16	2019-09-18	2020-03-11	2020-09-09
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	FD
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L		259	257						250	220	230 B	220	230	220
Aluminum	mg/L				0.05 U	0.05 U	0.05 U	0.05 U							
Antimony	mg/L	5E-05 U	5E-05 U	1E-05 J	0.00059 JB	0.002 U	0.002 U	0.002 U	0.0015 J	0.002 U	0.002 U	0.002 U	0.00071 J	0.002 U	0.002 U
Arsenic	mg/L	0.00035	0.00031	0.00031	0.00042 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	0.138	0.141	0.123	0.15 B	0.15	0.14	0.14	0.15	0.14	0.15	0.13	0.13	0.13	0.13
Beryllium	mg/L	2E-05 U	2E-05 U	2E-05 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00069 J	0.001 U	0.001 U^+	0.001 U	0.001 U	0.001 U^-	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L								240	250	220	230 B	220	230	220
Boron	mg/L	0.054	0.045	0.122	0.065 J	0.06 J	0.067 J	0.064 JB	0.075 J	0.08 J	0.073 J	0.059 J	0.04 J	0.051 J	0.081 J
Bromide	mg/L		0.107	0.3 U	0.14 J	0.12 J	0.12 J	0.12 J							
Cadmium	mg/L	3E-05	3E-05	3E-05	0.001 U	0.001 U	0.001 U	0.001 U	0.00022 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	116	123	106	120 JB	120	120	120	120	120	120	120	110	110	110
Carbonate Alkalinity as CaCO3	mg/L								5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	17.8	18	17.9	19	20	20	20	22	22	23	23	22	23	24
Chromium	mg/L	0.0001	0.000822	0.00476	0.001 JB	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	mg/L	0.000377	0.000383	0.000376	0.00052 J	0.00044 J	0.00047 J	0.00053 J	0.00063 J	0.00065 J	0.00065 J	0.0005 J	0.00046 J	0.00044 J	0.00049 J
Conductivity, Field	uS/cm	718	726	719						729				726	685
Copper	mg/L				0.002 U	0.002 U	0.002 U	0.002 U							
Dissolved Oxygen, Field	mg/L	0.3	0.66	0.99						0.13					
Dissolved Solids, Total	mg/L	434	456	454	480	460	480 J	470 J	470	460	480	450	340	450	430
Fluoride	mg/L	0.09 J	0.09	0.3 U	0.098	0.095	0.096	0.095	0.1	0.095	0.11	0.083	0.083	0.095	0.033 J
Iron	mg/L				0.031 JB	0.1 U	0.1 U	0.1 U							
Lead	mg/L	2E-05	2E-05 J	2.1E-05	0.00028 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium	mg/L	0.003	0.005	0.006	0.0042 J	0.0033 J	0.0049 J	0.0053 J	0.0031 J	0.0021 J	0.0049 J*+^+	0.0032 J	0.0035 J	0.008 U^-	0.0056 J
Magnesium	mg/L		14.2	12.8	14 B	14	15	14	14	14	14	15	13	14	14
Manganese	mg/L				1.3 JB	1.5	1.4	1.5							
Mercury	mg/L	2E-06 J	5E-06 U	5E-06 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U							
Molybdenum	mg/L	0.00069	0.00064	0.00128	0.00078 J	0.01 U	0.01 U	0.01 U	0.0017 J	0.005 U	0.005 U	0.005 U	0.0053	0.005 U	0.005 U
Nickel	mg/L				0.00046 JB	0.002 U	0.002 U	0.002 U							
Oxidation-Reduction Potential, Field	mV														
pH, Field	pH units	7.04	7	6.96	7.03	6.96	6.95	6.89		7.01	7.03	7.17	7.21	7.19	7.21
Potassium	mg/L		1.93	1.64	1.7 B	1.7	1.6	1.7	1.7	1.7	1.6	1.8	1.6	1.7	1.6
Radium-226	pCi/L	0.444	0.31	0.141	0.0546 U	0.124	0.113	0.174							
Radium-226/228	pCi/L	1.32	1.032	0.249	0.283 U	0.159 U	0.665	0.259 U							
Radium-228	pCi/L	0.876	0.722	0.108	0.228 U	0.0352 U	0.552	0.0855 U							
Redox Potential, Field	mV	171	105.8	145.2											
Selenium	mg/L	0.0001 U	4E-05 J	5E-05 J	0.005 U	0.005 U	0.005 U	0.005 U	0.001 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L				4.4E-05 J	0.001 U	0.001 U	0.001 U							
Sodium	mg/L		14.4	10.8	13 JB	13 B	13	14 J	13	13	13	14	13	13	14
Strontium	mg/L		0.228	0.174	0.22 B	0.21 B	0.21 B	0.22							
Sulfate	mg/L	123	127	118	120	130	130	130	130	120	130	130	140	120	130
Temperature, Field	deg C	14.7	13.6	13.9						14.2				13	14
Thallium	mg/L	4E-05 J	2E-05 J	8.7E-05	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00081 J	0.001 U	0.00027 J
Turbidity, Field	NTU	1.9	4	1.6	0.2	0.2	1.5	2.4		2.19	0.97		4	0.3	0.3
Vanadium	mg/L				0.005 U										
Zinc	mg/L				0.02 U	0.02 U	0.02 U	0.02 U							

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
	Date	2020-09-09	2021-03-13	2021-09-18	2022-03-31	2022-04-27	2022-06-28	2022-06-28	2022-10-11	2022-12-13	2023-03-01	2023-04-07	2023-09-29	2023-09-29	2024-03-21
	Sample Type	N	N	N	N	N	FD	N	N	N	N	N	N	N	FD
Analyte	Unit														
Alkalinity, Total as CaCO3	mg/L	220	230	210	230	230	230	240	230	230	220	240		230	250
Aluminum	mg/L				0.05 U										
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.00085 J	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U
Arsenic	mg/L	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U
Barium	mg/L	0.13	0.12	0.13	0.14	0.12	0.16	0.19	0.12	0.12	0.14	0.13		0.12	0.13
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	220	230	210	230	230	230	240	230	230	220	240		230	250
Boron	mg/L	0.082 J	0.026 J	0.1 U	0.2 U				0.1 U			0.057 J		0.073 J	0.075 J
Bromide	mg/L														
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Calcium	mg/L	110	100	110	130				110			110		110	120
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		5 U	5 U
Chloride	mg/L	24	24	26	24				27			25		28	26
Chromium	mg/L	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U
Cobalt	mg/L	0.00049 J	0.00044 J	0.00057 J	0.00046 J	0.00039 J	0.00073 J	0.00095 J	0.00041 J	0.00044 J	0.00053 J	0.00045 J		0.00044 J	0.0005 J
Conductivity, Field	uS/cm	685	686	675	723	702			755	687	713	645	592		
Copper	mg/L				0.005 U										
Dissolved Oxygen, Field	mg/L				0.42	1.02			0.7	1.34	0.79	1.32	1.82		
Dissolved Solids, Total	mg/L	440	440	490	420 J				440			430		430	420
Fluoride	mg/L	0.038 J	0.071	0.097	0.098	0.091	0.088	0.094	0.094	0.093	0.094	0.06		0.093	0.071
Iron	mg/L				0.1 U										
Lead	mg/L	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.00056 J	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Lithium	mg/L	0.0049 J	0.0034 J	0.0031 J	0.0035 J	0.004 J	0.0044 J	0.0048 J	0.0049 J	0.0042 J	0.0061 J	0.0052 J		0.0063 J	0.0055 J
Magnesium	mg/L	14	12	14	13	13	14	14	13	14	14	13		14	14
Manganese	mg/L				1.5										
Mercury	mg/L				0.0002 U	0.00018 J	0.0002 U	0.0002 U	0.0002 U	0.00013 JB	0.0002 U	0.0002 U		0.0002 U	0.0002 U
Molybdenum	mg/L	0.005 U	0.0015 J	0.005 U	0.002 U	0.005 U	0.0012 J	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U
Nickel	mg/L				0.005 U										
Oxidation-Reduction Potential, Field	mV				92.9				55.6	52.5	206.7	167.4	109.5		
pH, Field	pH units	7.21	7	7.08	7.01	7.03			7.32	7.18	6.89	6.97	7.02		
Potassium	mg/L	1.6	1.7	1.6	1.7 J	1.6	1.7	1.8	1.5	1.6	1.8	1.6		1.6	1.7
Radium-226	pCi/L				0.0507 U	0.0377 U	0.0864 U	0.152	0.0567 U	0.0985 U	0.0353 U	0.167 U		0.0871 U	0.131 UJ
Radium-226/228	pCi/L				0.024 U	0.16 U	0.334 U	0.647	0.527	0.976	0.191 U	0.611		0.376 U	0.81 J
Radium-228	pCi/L				-0.0267 U	0.122 U	0.247 U	0.495	0.471 U	0.877	0.156 U	0.444 U		0.289 U	0.679 J
Redox Potential, Field	mV														
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U	0.005 U
Silver	mg/L				0.001										
Sodium	mg/L	14	12	14	14	13	14	13	13	14	15	13		14	14
Strontium	mg/L				0.23										
Sulfate	mg/L	130	120	120	110				120			110		120	120
Temperature, Field	deg C	14	13	15	15	13.6			15	13.6	14.6	13.5	14.6		
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00029 J	0.001 U	0.001 U	0.001 U	0.00028 J	0.001 U		0.001 U	0.001 U
Turbidity, Field	NTU	0.3	0.6	0.3	2.9	0.15			2.7	4.19	2.84	3	2.41		
Vanadium	mg/L														
Zinc	mg/L				0.02 U										

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

Appendix F
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

	Location	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
	Date	2024-03-21	2024-03-21	2024-10-04	2024-10-04	2025-03-19	2025-10-01
	Sample Type	N	N	N	N	N	N
Analyte	Unit						
Alkalinity, Total as CaCO3	mg/L		240		240	240	230
Aluminum	mg/L						
Antimony	mg/L		0.002 U		0.002	0.002 U	0.002 U
Arsenic	mg/L		0.005 U		0.005	0.005 U	0.005 U
Barium	mg/L		0.13		0.13	0.13	0.12
Beryllium	mg/L		0.001 U		0.001	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		240		240	240	230
Boron	mg/L		0.075 J		0.061	0.069 J	0.1 U
Bromide	mg/L						
Cadmium	mg/L		0.001 U		0.001	0.001 U	0.001 U
Calcium	mg/L		120		110	120	110
Carbonate Alkalinity as CaCO3	mg/L		5 U		5	5 U	5 U
Chloride	mg/L		26		28	80	28
Chromium	mg/L		0.005 U		0.005	0.005 U	0.005 U
Cobalt	mg/L		0.00053 J		0.00035	0.00039 J	0.00034 J
Conductivity, Field	uS/cm	760		752		708	718
Copper	mg/L						
Dissolved Oxygen, Field	mg/L	2.3		2.63		2.45	1
Dissolved Solids, Total	mg/L		420		440	420	440
Fluoride	mg/L		0.072		0.094	0.46	0.099
Iron	mg/L						
Lead	mg/L		0.001 U		0.001	0.001 U	0.001 U
Lithium	mg/L		0.0056 J		0.0052	0.0048 J	0.0041 J
Magnesium	mg/L		13		13	15	14
Manganese	mg/L						
Mercury	mg/L		0.0002 U		0.0002	0.0002 U	0.0002 U
Molybdenum	mg/L		0.005 U		0.005	0.005 U	0.005 U
Nickel	mg/L						
Oxidation-Reduction Potential, Field	mV	104.3		51.7		69.4	87.7
pH, Field	pH units	7.09		7.27		7.03	7.24
Potassium	mg/L		1.6		1.7	1.7	1.5
Radium-226	pCi/L		0 UJ		0.0658 U	0.0365 U	0.0317 U
Radium-226/228	pCi/L		0.344 J		-0.0875 U	0.304 U	0.54 U
Radium-228	pCi/L		0.344 UJ		-0.153 U	0.268 U	0.508 U
Redox Potential, Field	mV						
Selenium	mg/L		0.005 U		0.005	0.005 U	0.005 U
Silver	mg/L						
Sodium	mg/L		14		15	15	15
Strontium	mg/L						
Sulfate	mg/L		120		120	190	120
Temperature, Field	deg C	13.5		18.3		17.5	16
Thallium	mg/L		0.001 U		0.001	0.001 U	0.001 U
Turbidity, Field	NTU	3.94		6.95		4.27	3.82
Vanadium	mg/L						
Zinc	mg/L						

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed
F2 = MS/MSD Relative Percent Difference exceeds control limits

APPENDIX G LABORATORY ANALYTICAL REPORTS

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620
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JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-220875-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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Authorization

Roxanne Cisneros

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Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-220875-1 — Eurofins Cleveland

Job Narrative
240-220875-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/22/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 2.8°C, 3.3°C, 4.9°C, 8.1°C and 17.1°C.

Metals
Method 6020B - Total Recoverable: The continuing calibration verification (CCV) associated with batch 240-649793 recovered above the upper control limit for lithium, arsenic, and antimony. The samples associated with this CCV were below the reporting limit for the affected analytes; therefore, the data have been reported.
MW-6-F-20250319-01 (240-220875-8) and BAC-01-F-20250320-01 (240-220875-9)

Method 6020B - Total Recoverable: The continuing calibration verification (CCV) associated with batch 240-649793 recovered above the upper control limit for arsenic and antimony. The samples associated with this CCV were below the reporting limit for the affected analytes; therefore, the data have been reported.
BAC-09-F-20250320-01 (240-220875-10)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 300.0_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for the following sample associated with analytical batch 240-649412 were outside control limits: BAC-17-F-20250318-01 (240-220875-1), (240-220875-B-1 MS) and (240-220875-B-1 MSD). The associated laboratory control sample (LCS) recovery met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-220875-1	BAC-17-F-20250318-01	Water	03/18/25 11:27	03/22/25 08:00
240-220875-2	BAC-16-F-20250318-01	Water	03/18/25 12:58	03/22/25 08:00
240-220875-3	BAC-15-F-20250318-01	Water	03/18/25 14:15	03/22/25 08:00
240-220875-4	BAC-10-F-20250319-01	Water	03/19/25 10:28	03/22/25 08:00
240-220875-5	BAC-14-F-20250319-01	Water	03/19/25 12:04	03/22/25 08:00
240-220875-6	BAC-12-F-20250319-01	Water	03/19/25 13:50	03/22/25 08:00
240-220875-7	DUP_004-F-20250319-01	Water	03/19/25 00:00	03/22/25 08:00
240-220875-8	MW-6-F-20250319-01	Water	03/19/25 15:20	03/22/25 08:00
240-220875-9	BAC-01-F-20250320-01	Water	03/20/25 13:19	03/22/25 08:00
240-220875-10	BAC-09-F-20250320-01	Water	03/20/25 15:09	03/22/25 08:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Client Sample ID: BAC-17-F-20250318-01 — Lab Sample ID: 240-220875-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4000		100	57	ug/L	1		6010D	Total Recoverable
Barium	31		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.22	J B	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	58000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	35		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	5.0	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	29000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	970	J	1000	220	ug/L	1		6020B	Total Recoverable
Sodium	22000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	50		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	50		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	390		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	28	F1 F2	1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.044	J F1 F2	0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	68	F1 F2	1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-16-F-20250318-01 — Lab Sample ID: 240-220875-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1500		100	57	ug/L	1		6010D	Total Recoverable
Barium	49		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	100000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.86	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	6.4	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	170		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	170		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	460		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	16		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.092		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	39		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-15-F-20250318-01 — Lab Sample ID: 240-220875-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	410		100	57	ug/L	1		6010D	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample ID: BAC-15-F-20250318-01 (Continued)

Lab Sample ID: 240-220875-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.9	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	54		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.23	J B	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	29000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	4.2	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	3.4		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	2.9		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	5.4	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	10000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	12000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	49		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	49		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	180		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	110		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.25		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	80		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: BAC-10-F-20250319-01

Lab Sample ID: 240-220875-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	900		100	57	ug/L	1		6010D	Total Recoverable
Barium	46		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.092	J B	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	130000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.72	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.0	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	34000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	69000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	250		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	720		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	110		5.0	0.64	mg/L	5		300.0	Total/NA
Fluoride	0.24	J	0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	210		5.0	1.7	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Client Sample ID: BAC-14-F-20250319-01 — Lab Sample ID: 240-220875-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2900		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.0	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	99		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	82000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	1.8		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	7.2	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	24000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	96		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	96		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	460		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	13		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.046	J	0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	55		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-12-F-20250319-01 — Lab Sample ID: 240-220875-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2300		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.9	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	78		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.11	J B	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	86000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	3.9		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	0.52	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	8.6		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	31000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	100		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	100		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	460		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	81		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.28		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	180		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Client Sample ID: DUP_004-F-20250319-01 — Lab Sample ID: 240-220875-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2900		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.3	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	98		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	81000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	1.9		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	6.6	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	24000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	93		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	93		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	460		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	16		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.054		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	37		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: MW-6-F-20250319-01 — Lab Sample ID: 240-220875-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	69	J	100	57	ug/L	1		6010D	Total Recoverable
Barium	130		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	120000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.39	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.8	J ^+	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	15000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	240		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	240		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	420		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	80		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.46		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	190		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-01-F-20250320-01 — Lab Sample ID: 240-220875-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	120		100	57	ug/L	1		6010D	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-01-F-20250320-01 (Continued)
Lab Sample ID: 240-220875-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1	J ^+	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	90		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	100000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	1.2	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	1.4		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	2.0		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	4.0	J ^+	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	13000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	350		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	16		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.091		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	39		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-09-F-20250320-01
Lab Sample ID: 240-220875-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	230		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	1.1	J ^+	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	4900		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	360000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	1.6	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	0.50	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	0.52	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	76		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	77000		1000	61	ug/L	1		6020B	Total Recoverable
Molybdenum	13		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	5700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	1300000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	120		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	120		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	4600		50	39	mg/L	1		2540 C-2020	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-09-F-20250320-01 (Continued)
Lab Sample ID: 240-220875-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2400		50	6.4	mg/L	50		300.0	Total/NA
Fluoride	1.1		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	430		5.0	1.7	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-17-F-20250318-01
Date Collected: 03/18/25 11:27
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4000**		100	57	ug/L		03/25/25 05:00	03/25/25 19:43	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/25/25 05:00	03/26/25 16:33	1
Arsenic	ND		5.0	0.75	ug/L		03/25/25 05:00	03/26/25 16:33	1
Barium	**31**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 16:33	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 16:33	1
Cadmium	**0.22**	**J B**	1.0	0.077	ug/L		03/25/25 05:00	03/26/25 16:33	1
Calcium	**58000**		1000	250	ug/L		03/25/25 05:00	03/26/25 16:33	1
Chromium	ND		5.0	1.2	ug/L		03/25/25 05:00	03/26/25 16:33	1
Cobalt	**35**		1.0	0.086	ug/L		03/25/25 05:00	03/26/25 16:33	1
Lead	ND		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 16:33	1
Lithium	**5.0**	**J**	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 16:33	1
Magnesium	**29000**		1000	61	ug/L		03/25/25 05:00	03/26/25 16:33	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 16:33	1
Potassium	**970**	**J**	1000	220	ug/L		03/25/25 05:00	03/26/25 16:33	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 16:33	1
Sodium	**22000**		1000	880	ug/L		03/25/25 05:00	03/26/25 16:33	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 16:33	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 15:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**50**		5.0	2.6	mg/L			03/24/25 17:13	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**50**		5.0	2.6	mg/L			03/24/25 17:13	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 17:13	1
Total Dissolved Solids (SM 2540 C-2020)	**390**		10	7.8	mg/L			03/24/25 12:16	1
Chloride (EPA 300.0)	**28**	**F1 F2**	1.0	0.13	mg/L			03/25/25 04:27	1
Fluoride (EPA 300.0)	**0.044**	**J F1 F2**	0.050	0.024	mg/L			03/25/25 04:27	1
Sulfate (EPA 300.0)	**68**	**F1 F2**	1.0	0.35	mg/L			03/25/25 04:27	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0360	U	0.325	0.326	1.00	0.670	pCi/L	03/26/25 07:49	04/24/25 15:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.6*		*30 - 110*	*03/26/25 07:49*	*04/24/25 15:47*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.856**		0.576	0.581	1.00	0.841	pCi/L	03/26/25 07:52	04/24/25 11:50	1

Client Sample ID: BAC-17-F-20250318-01
Date Collected: 03/18/25 11:27
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-1
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.6*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:50*	*1*
Y Carrier	*71.8*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.820	U	0.661	0.666	5.00	0.841	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-16-F-20250318-01
Date Collected: 03/18/25 12:58
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-2
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1500**		100	57	ug/L		03/25/25 05:00	03/25/25 20:12	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	F1	2.0	0.57	ug/L		03/25/25 05:00	03/26/25 16:35	1
Arsenic	ND		5.0	0.75	ug/L		03/25/25 05:00	03/26/25 16:35	1
Barium	**49**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 16:35	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 16:35	1
Cadmium	ND		1.0	0.077	ug/L		03/25/25 05:00	03/26/25 16:35	1
Calcium	**100000**		1000	250	ug/L		03/25/25 05:00	03/26/25 16:35	1
Chromium	ND		5.0	1.2	ug/L		03/25/25 05:00	03/26/25 16:35	1
Cobalt	**0.86**	**J**	1.0	0.086	ug/L		03/25/25 05:00	03/26/25 16:35	1
Lead	ND		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 16:35	1
Lithium	**6.4**	**J**	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 16:35	1
Magnesium	**23000**		1000	61	ug/L		03/25/25 05:00	03/26/25 16:35	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 16:35	1
Potassium	**1600**		1000	220	ug/L		03/25/25 05:00	03/26/25 16:35	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 16:35	1
Sodium	**15000**		1000	880	ug/L		03/25/25 05:00	03/26/25 16:35	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 16:35	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 15:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**170**		5.0	2.6	mg/L			03/24/25 17:17	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**170**		5.0	2.6	mg/L			03/24/25 17:17	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 17:17	1
Total Dissolved Solids (SM 2540 C-2020)	**460**		10	7.8	mg/L			03/24/25 12:16	1
Chloride (EPA 300.0)	**16**		1.0	0.13	mg/L			03/25/25 04:46	1
Fluoride (EPA 300.0)	**0.092**		0.050	0.024	mg/L			03/25/25 04:46	1
Sulfate (EPA 300.0)	**39**		1.0	0.35	mg/L			03/25/25 04:46	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0183	U	0.252	0.252	1.00	0.486	pCi/L	03/26/25 07:49	04/24/25 15:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.6*		*30 - 110*	*03/26/25 07:49*	*04/24/25 15:47*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.447	U	0.370	0.372	1.00	0.580	pCi/L	03/26/25 07:52	04/24/25 11:50	1

Client Sample ID: BAC-16-F-20250318-01
Date Collected: 03/18/25 12:58
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-2
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.6*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:50*	*1*
Y Carrier	*86.4*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.465	U	0.448	0.449	5.00	0.580	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-15-F-20250318-01
Date Collected: 03/18/25 14:15
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-3
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**410**		100	57	ug/L		03/25/25 05:00	03/25/25 20:50	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/25/25 05:00	03/26/25 17:17	1
Arsenic	**1.9**	**J**	5.0	0.75	ug/L		03/25/25 05:00	03/26/25 17:17	1
Barium	**54**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 17:17	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 17:17	1
Cadmium	**0.23**	**J B**	1.0	0.077	ug/L		03/25/25 05:00	03/26/25 17:17	1
Calcium	**29000**		1000	250	ug/L		03/25/25 05:00	03/26/25 17:17	1
Chromium	**4.2**	**J**	5.0	1.2	ug/L		03/25/25 05:00	03/26/25 17:17	1
Cobalt	**3.4**		1.0	0.086	ug/L		03/25/25 05:00	03/26/25 17:17	1
Lead	**2.9**		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 17:17	1
Lithium	**5.4**	**J**	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 17:17	1
Magnesium	**10000**		1000	61	ug/L		03/25/25 05:00	03/26/25 17:17	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 17:17	1
Potassium	**1300**		1000	220	ug/L		03/25/25 05:00	03/26/25 17:17	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 17:17	1
Sodium	**12000**		1000	880	ug/L		03/25/25 05:00	03/26/25 17:17	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 17:17	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 16:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**49**		5.0	2.6	mg/L			03/24/25 17:24	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**49**		5.0	2.6	mg/L			03/24/25 17:24	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 17:24	1
Total Dissolved Solids (SM 2540 C-2020)	**180**		10	7.8	mg/L			03/24/25 12:16	1
Chloride (EPA 300.0)	**110**		1.0	0.13	mg/L			03/25/25 04:56	1
Fluoride (EPA 300.0)	**0.25**		0.050	0.024	mg/L			03/25/25 04:56	1
Sulfate (EPA 300.0)	**80**		5.0	1.7	mg/L			03/25/25 23:09	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142	U	0.242	0.242	1.00	0.425	pCi/L	03/26/25 07:49	04/24/25 15:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.2*		*30 - 110*	*03/26/25 07:49*	*04/24/25 15:40*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.447	U	0.450	0.452	1.00	0.727	pCi/L	03/26/25 07:52	04/24/25 11:50	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Client Sample ID: BAC-15-F-20250318-01
Date Collected: 03/18/25 14:15
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-3
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.2*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:50*	*1*
Y Carrier	*86.7*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.589	U	0.511	0.513	5.00	0.727	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-10-F-20250319-01
Date Collected: 03/19/25 10:28
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-4
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**900**		100	57	ug/L		03/25/25 05:00	03/28/25 02:52	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/25/25 05:00	03/26/25 17:20	1
Arsenic	ND		5.0	0.75	ug/L		03/25/25 05:00	03/26/25 17:20	1
Barium	**46**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 17:20	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 17:20	1
Cadmium	**0.092**	**J B**	1.0	0.077	ug/L		03/25/25 05:00	03/26/25 17:20	1
Calcium	**130000**		1000	250	ug/L		03/25/25 05:00	03/26/25 17:20	1
Chromium	ND		5.0	1.2	ug/L		03/25/25 05:00	03/26/25 17:20	1
Cobalt	**0.72**	**J**	1.0	0.086	ug/L		03/25/25 05:00	03/26/25 17:20	1
Lead	ND		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 17:20	1
Lithium	**4.0**	**J**	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 17:20	1
Magnesium	**34000**		1000	61	ug/L		03/25/25 05:00	03/26/25 17:20	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 17:20	1
Potassium	**2300**		1000	220	ug/L		03/25/25 05:00	03/26/25 17:20	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 17:20	1
Sodium	**69000**		1000	880	ug/L		03/25/25 05:00	03/26/25 17:20	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 17:20	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 16:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**250**		5.0	2.6	mg/L			03/24/25 17:28	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**250**		5.0	2.6	mg/L			03/24/25 17:28	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 17:28	1
Total Dissolved Solids (SM 2540 C-2020)	**720**		10	7.8	mg/L			03/25/25 18:07	1
Chloride (EPA 300.0)	**110**		5.0	0.64	mg/L			03/25/25 05:05	5
Fluoride (EPA 300.0)	**0.24**	**J**	0.25	0.12	mg/L			03/25/25 05:05	5
Sulfate (EPA 300.0)	**210**		5.0	1.7	mg/L			03/25/25 05:05	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.108	U	0.135	0.135	1.00	0.348	pCi/L	03/26/25 07:49	04/24/25 15:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.3*		*30 - 110*	*03/26/25 07:49*	*04/24/25 15:40*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.613**		0.378	0.383	1.00	0.557	pCi/L	03/26/25 07:52	04/24/25 11:50	1

Client Sample ID: BAC-10-F-20250319-01
Date Collected: 03/19/25 10:28
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-4
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.3*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:50*	*1*
Y Carrier	*86.4*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.504	U	0.401	0.406	5.00	0.557	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-14-F-20250319-01
Date Collected: 03/19/25 12:04
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-5
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2900**		100	57	ug/L		03/25/25 05:00	03/28/25 02:57	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/25/25 05:00	03/26/25 17:23	1
Arsenic	**2.0**	**J**	5.0	0.75	ug/L		03/25/25 05:00	03/26/25 17:23	1
Barium	**99**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 17:23	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 17:23	1
Cadmium	ND		1.0	0.077	ug/L		03/25/25 05:00	03/26/25 17:23	1
Calcium	**82000**		1000	250	ug/L		03/25/25 05:00	03/26/25 17:23	1
Chromium	ND		5.0	1.2	ug/L		03/25/25 05:00	03/26/25 17:23	1
Cobalt	**1.8**		1.0	0.086	ug/L		03/25/25 05:00	03/26/25 17:23	1
Lead	ND		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 17:23	1
Lithium	**7.2**	**J**	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 17:23	1
Magnesium	**23000**		1000	61	ug/L		03/25/25 05:00	03/26/25 17:23	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 17:23	1
Potassium	**1500**		1000	220	ug/L		03/25/25 05:00	03/26/25 17:23	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 17:23	1
Sodium	**24000**		1000	880	ug/L		03/25/25 05:00	03/26/25 17:23	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 17:23	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**96**		5.0	2.6	mg/L			03/24/25 17:33	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**96**		5.0	2.6	mg/L			03/24/25 17:33	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 17:33	1
Total Dissolved Solids (SM 2540 C-2020)	**460**		10	7.8	mg/L			03/25/25 18:07	1
Chloride (EPA 300.0)	**13**		1.0	0.13	mg/L			03/25/25 05:24	1
Fluoride (EPA 300.0)	**0.046**	**J**	0.050	0.024	mg/L			03/25/25 05:24	1
Sulfate (EPA 300.0)	**55**		1.0	0.35	mg/L			03/25/25 05:24	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.265	U	0.222	0.224	1.00	0.333	pCi/L	03/26/25 07:49	04/24/25 15:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*30 - 110*	*03/26/25 07:49*	*04/24/25 15:41*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.427	U	0.317	0.319	1.00	0.485	pCi/L	03/26/25 07:52	04/24/25 11:50	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Client Sample ID: BAC-14-F-20250319-01
Date Collected: 03/19/25 12:04
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-5
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		30 - 110	03/26/25 07:52	04/24/25 11:50	1
Y Carrier	85.6		30 - 110	03/26/25 07:52	04/24/25 11:50	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.691		0.387	0.390	5.00	0.485	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-12-F-20250319-01
Date Collected: 03/19/25 13:50
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-6
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2300**		100	57	ug/L		03/25/25 05:00	03/28/25 03:01	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/25/25 05:00	03/26/25 17:26	1
Arsenic	**2.9**	**J**	5.0	0.75	ug/L		03/25/25 05:00	03/26/25 17:26	1
Barium	**78**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 17:26	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 17:26	1
Cadmium	**0.11**	**J B**	1.0	0.077	ug/L		03/25/25 05:00	03/26/25 17:26	1
Calcium	**86000**		1000	250	ug/L		03/25/25 05:00	03/26/25 17:26	1
Chromium	ND		5.0	1.2	ug/L		03/25/25 05:00	03/26/25 17:26	1
Cobalt	**3.9**		1.0	0.086	ug/L		03/25/25 05:00	03/26/25 17:26	1
Lead	**0.52**	**J**	1.0	0.45	ug/L		03/25/25 05:00	03/26/25 17:26	1
Lithium	**8.6**		8.0	3.4	ug/L		03/25/25 05:00	03/26/25 17:26	1
Magnesium	**20000**		1000	61	ug/L		03/25/25 05:00	03/26/25 17:26	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 17:26	1
Potassium	**2500**		1000	220	ug/L		03/25/25 05:00	03/26/25 17:26	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 17:26	1
Sodium	**31000**		1000	880	ug/L		03/25/25 05:00	03/26/25 17:26	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 17:26	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 16:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**100**		5.0	2.6	mg/L			03/24/25 17:38	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**100**		5.0	2.6	mg/L			03/24/25 17:38	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 17:38	1
Total Dissolved Solids (SM 2540 C-2020)	**460**		10	7.8	mg/L			03/25/25 18:07	1
Chloride (EPA 300.0)	**81**		1.0	0.13	mg/L			03/25/25 05:53	1
Fluoride (EPA 300.0)	**0.28**		0.050	0.024	mg/L			03/25/25 05:53	1
Sulfate (EPA 300.0)	**180**		1.0	0.35	mg/L			03/25/25 05:53	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0656	U	0.203	0.204	1.00	0.382	pCi/L	03/26/25 07:49	04/24/25 15:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.5*		*30 - 110*	*03/26/25 07:49*	*04/24/25 15:41*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.858**		0.459	0.465	1.00	0.649	pCi/L	03/26/25 07:52	04/24/25 11:51	1

Client Sample ID: BAC-12-F-20250319-01
Date Collected: 03/19/25 13:50
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-6
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.5*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:51*	*1*
Y Carrier	*76.6*		*30 - 110*	*03/26/25 07:52*	*04/24/25 11:51*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.924**		0.502	0.508	5.00	0.649	pCi/L		04/24/25 21:35	1

Client Sample ID: DUP_004-F-20250319-01

Lab Sample ID: 240-220875-7

Date Collected: 03/19/25 00:00

Matrix: Water

Date Received: 03/22/25 08:00

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2900**		100	57	ug/L		03/25/25 05:00	03/28/25 03:06	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/25/25 05:00	03/26/25 17:29	1
Arsenic	**2.3**	**J**	5.0	0.75	ug/L		03/25/25 05:00	03/26/25 17:29	1
Barium	**98**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 17:29	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 17:29	1
Cadmium	ND		1.0	0.077	ug/L		03/25/25 05:00	03/26/25 17:29	1
Calcium	**81000**		1000	250	ug/L		03/25/25 05:00	03/26/25 17:29	1
Chromium	ND		5.0	1.2	ug/L		03/25/25 05:00	03/26/25 17:29	1
Cobalt	**1.9**		1.0	0.086	ug/L		03/25/25 05:00	03/26/25 17:29	1
Lead	ND		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 17:29	1
Lithium	**6.6**	**J**	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 17:29	1
Magnesium	**23000**		1000	61	ug/L		03/25/25 05:00	03/26/25 17:29	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 17:29	1
Potassium	**1500**		1000	220	ug/L		03/25/25 05:00	03/26/25 17:29	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 17:29	1
Sodium	**24000**		1000	880	ug/L		03/25/25 05:00	03/26/25 17:29	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 17:29	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 16:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**93**		5.0	2.6	mg/L			03/24/25 17:53	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**93**		5.0	2.6	mg/L			03/24/25 17:53	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 17:53	1
Total Dissolved Solids (SM 2540 C-2020)	**460**		10	7.8	mg/L			03/25/25 18:07	1
Chloride (EPA 300.0)	**16**		1.0	0.13	mg/L			03/25/25 06:03	1
Fluoride (EPA 300.0)	**0.054**		0.050	0.024	mg/L			03/25/25 06:03	1
Sulfate (EPA 300.0)	**37**		1.0	0.35	mg/L			03/25/25 06:03	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.160	U	0.200	0.200	1.00	0.330	pCi/L	03/26/25 07:49	04/24/25 15:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*03/26/25 07:49*	*04/24/25 15:41*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.904**		0.375	0.384	1.00	0.489	pCi/L	03/26/25 07:52	04/24/25 11:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Client Sample ID: DUP_004-F-20250319-01
Date Collected: 03/19/25 00:00
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-7
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		30 - 110	03/26/25 07:52	04/24/25 11:51	1
Y Carrier	85.6		30 - 110	03/26/25 07:52	04/24/25 11:51	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.06		0.425	0.433	5.00	0.489	pCi/L		04/24/25 21:35	1

Client Sample ID: MW-6-F-20250319-01
Date Collected: 03/19/25 15:20
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-8
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**69**	**J**	100	57	ug/L		03/25/25 05:00	03/28/25 03:19	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^+	2.0	0.57	ug/L		03/25/25 05:00	03/26/25 17:37	1
Arsenic	ND	^+	5.0	0.75	ug/L		03/25/25 05:00	03/26/25 17:37	1
Barium	**130**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 17:37	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 17:37	1
Cadmium	ND		1.0	0.077	ug/L		03/25/25 05:00	03/26/25 17:37	1
Calcium	**120000**		1000	250	ug/L		03/25/25 05:00	03/26/25 17:37	1
Chromium	ND		5.0	1.2	ug/L		03/25/25 05:00	03/26/25 17:37	1
Cobalt	**0.39**	**J**	1.0	0.086	ug/L		03/25/25 05:00	03/26/25 17:37	1
Lead	ND		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 17:37	1
Lithium	**4.8**	**J ^+**	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 17:37	1
Magnesium	**15000**		1000	61	ug/L		03/25/25 05:00	03/26/25 17:37	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 17:37	1
Potassium	**1700**		1000	220	ug/L		03/25/25 05:00	03/26/25 17:37	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 17:37	1
Sodium	**15000**		1000	880	ug/L		03/25/25 05:00	03/26/25 17:37	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 17:37	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 16:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**240**		5.0	2.6	mg/L			03/24/25 17:57	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**240**		5.0	2.6	mg/L			03/24/25 17:57	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 17:57	1
Total Dissolved Solids (SM 2540 C-2020)	**420**		10	7.8	mg/L			03/25/25 18:07	1
Chloride (EPA 300.0)	**80**		1.0	0.13	mg/L			03/25/25 06:13	1
Fluoride (EPA 300.0)	**0.46**		0.050	0.024	mg/L			03/25/25 06:13	1
Sulfate (EPA 300.0)	**190**		1.0	0.35	mg/L			03/25/25 06:13	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0365	U	0.114	0.114	1.00	0.221	pCi/L	03/27/25 07:51	04/23/25 05:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.0*		*30 - 110*	*03/27/25 07:51*	*04/23/25 05:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.268	U	0.322	0.323	1.00	0.531	pCi/L	03/27/25 08:01	04/22/25 12:07	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Client Sample ID: MW-6-F-20250319-01
Date Collected: 03/19/25 15:20
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-8
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.0*		*30 - 110*	*03/27/25 08:01*	*04/22/25 12:07*	*1*
Y Carrier	*84.1*		*30 - 110*	*03/27/25 08:01*	*04/22/25 12:07*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.304	U	0.342	0.343	5.00	0.531	pCi/L		04/24/25 21:36	1

Client Sample ID: BAC-01-F-20250320-01
Date Collected: 03/20/25 13:19
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-9
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**120**		100	57	ug/L		03/25/25 05:00	03/28/25 03:24	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^+	2.0	0.57	ug/L		03/25/25 05:00	03/26/25 17:40	1
Arsenic	**2.1**	**J ^+**	5.0	0.75	ug/L		03/25/25 05:00	03/26/25 17:40	1
Barium	**90**		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 17:40	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 17:40	1
Cadmium	ND		1.0	0.077	ug/L		03/25/25 05:00	03/26/25 17:40	1
Calcium	**100000**		1000	250	ug/L		03/25/25 05:00	03/26/25 17:40	1
Chromium	**1.2**	**J**	5.0	1.2	ug/L		03/25/25 05:00	03/26/25 17:40	1
Cobalt	**1.4**		1.0	0.086	ug/L		03/25/25 05:00	03/26/25 17:40	1
Lead	**2.0**		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 17:40	1
Lithium	**4.0**	**J ^+**	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 17:40	1
Magnesium	**13000**		1000	61	ug/L		03/25/25 05:00	03/26/25 17:40	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 17:40	1
Potassium	**1700**		1000	220	ug/L		03/25/25 05:00	03/26/25 17:40	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 17:40	1
Sodium	**13000**		1000	880	ug/L		03/25/25 05:00	03/26/25 17:40	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 17:40	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 16:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			03/24/25 18:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			03/24/25 18:04	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 18:04	1
Total Dissolved Solids (SM 2540 C-2020)	**350**		10	7.8	mg/L			03/26/25 13:58	1
Chloride (EPA 300.0)	**16**		1.0	0.13	mg/L			03/25/25 06:22	1
Fluoride (EPA 300.0)	**0.091**		0.050	0.024	mg/L			03/25/25 06:22	1
Sulfate (EPA 300.0)	**39**		1.0	0.35	mg/L			03/25/25 06:22	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0304	U	0.169	0.169	1.00	0.368	pCi/L	03/27/25 07:51	04/23/25 05:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.6*		*30 - 110*	*03/27/25 07:51*	*04/23/25 05:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0981	U	0.477	0.477	1.00	0.909	pCi/L	03/27/25 08:01	04/22/25 12:07	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Client Sample ID: BAC-01-F-20250320-01
Date Collected: 03/20/25 13:19
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-9
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.6*		*30 - 110*	*03/27/25 08:01*	*04/22/25 12:07*	*1*
Y Carrier	*81.1*		*30 - 110*	*03/27/25 08:01*	*04/22/25 12:07*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.128	U	0.506	0.506	5.00	0.909	pCi/L		04/24/25 21:36	1

Client Sample ID: BAC-09-F-20250320-01
Date Collected: 03/20/25 15:09
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-10
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	230		100	57	ug/L		03/25/25 05:00	03/28/25 03:29	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	^+	2.0	0.57	ug/L		03/25/25 05:00	03/26/25 17:43	1
Arsenic	1.1	J ^+	5.0	0.75	ug/L		03/25/25 05:00	03/26/25 17:43	1
Barium	4900		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 17:43	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 17:43	1
Cadmium	ND		1.0	0.077	ug/L		03/25/25 05:00	03/26/25 17:43	1
Calcium	360000		1000	250	ug/L		03/25/25 05:00	03/26/25 17:43	1
Chromium	1.6	J	5.0	1.2	ug/L		03/25/25 05:00	03/26/25 17:43	1
Cobalt	0.50	J	1.0	0.086	ug/L		03/25/25 05:00	03/26/25 17:43	1
Lead	0.52	J	1.0	0.45	ug/L		03/25/25 05:00	03/26/25 17:43	1
Lithium	76		8.0	3.4	ug/L		03/25/25 05:00	03/27/25 11:37	1
Magnesium	77000		1000	61	ug/L		03/25/25 05:00	03/26/25 17:43	1
Molybdenum	13		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 17:43	1
Potassium	5700		1000	220	ug/L		03/25/25 05:00	03/26/25 17:43	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 17:43	1
Sodium	1300000		1000	880	ug/L		03/25/25 05:00	03/26/25 17:43	1
Thallium	ND		1.0	0.51	ug/L		03/25/25 05:00	03/26/25 17:43	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 16:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	120		5.0	2.6	mg/L			03/24/25 18:09	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	120		5.0	2.6	mg/L			03/24/25 18:09	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			03/24/25 18:09	1
Total Dissolved Solids (SM 2540 C-2020)	4600		50	39	mg/L			03/26/25 13:58	1
Chloride (EPA 300.0)	2400		50	6.4	mg/L			03/25/25 06:42	50
Fluoride (EPA 300.0)	1.1		0.25	0.12	mg/L			03/25/25 06:32	5
Sulfate (EPA 300.0)	430		5.0	1.7	mg/L			03/25/25 06:32	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.13		0.479	0.556	1.00	0.260	pCi/L	03/27/25 07:51	04/23/25 05:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*03/27/25 07:51*	*04/23/25 05:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.50		0.610	0.690	1.00	0.542	pCi/L	03/27/25 08:01	04/22/25 12:11	1

Client Sample ID: BAC-09-F-20250320-01
Date Collected: 03/20/25 15:09
Date Received: 03/22/25 08:00

Lab Sample ID: 240-220875-10
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*03/27/25 08:01*	*04/22/25 12:11*	*1*
Y Carrier	*83.7*		*30 - 110*	*03/27/25 08:01*	*04/22/25 12:11*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**6.63**		0.776	0.886	5.00	0.542	pCi/L		04/24/25 21:36	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-220875-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-220875-1	BAC-17-F-20250318-01	72.6
240-220875-2	BAC-16-F-20250318-01	84.6
240-220875-3	BAC-15-F-20250318-01	89.2
240-220875-4	BAC-10-F-20250319-01	86.3
240-220875-5	BAC-14-F-20250319-01	95.8
240-220875-6	BAC-12-F-20250319-01	79.5
240-220875-7	DUP_004-F-20250319-01	94.4
240-220875-8	MW-6-F-20250319-01	91.0
240-220875-9	BAC-01-F-20250320-01	85.6
240-220875-10	BAC-09-F-20250320-01	99.3
LCS 160-709342/2-A	Lab Control Sample	90.0
LCS 160-709461/2-A	Lab Control Sample	90.2
MB 160-709342/1-A	Method Blank	91.4
MB 160-709461/1-A	Method Blank	87.3

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-220875-1	BAC-17-F-20250318-01	72.6	71.8
240-220875-2	BAC-16-F-20250318-01	84.6	86.4
240-220875-3	BAC-15-F-20250318-01	89.2	86.7
240-220875-4	BAC-10-F-20250319-01	86.3	86.4
240-220875-5	BAC-14-F-20250319-01	95.8	85.6
240-220875-6	BAC-12-F-20250319-01	79.5	76.6
240-220875-7	DUP_004-F-20250319-01	94.4	85.6
240-220875-8	MW-6-F-20250319-01	91.0	84.1
240-220875-9	BAC-01-F-20250320-01	85.6	81.1
240-220875-10	BAC-09-F-20250320-01	99.3	83.7
LCS 160-709343/2-A	Lab Control Sample	90.0	83.7
LCS 160-709471/2-A	Lab Control Sample	90.2	82.6
MB 160-709343/1-A	Method Blank	91.4	85.6
MB 160-709471/1-A	Method Blank	87.3	83.4

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-649339/1-A
Matrix: Water
Analysis Batch: 649607

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		03/25/25 05:00	03/25/25 19:34	1

Lab Sample ID: LCS 240-649339/2-A
Matrix: Water
Analysis Batch: 649607

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			1000	1050		ug/L		105	80 - 120		

Lab Sample ID: 240-220875-1 MS
Matrix: Water
Analysis Batch: 649607

Client Sample ID: BAC-17-F-20250318-01
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron	4000		1000	5160		ug/L		118	75 - 125		

Lab Sample ID: 240-220875-1 MSD
Matrix: Water
Analysis Batch: 649607

Client Sample ID: BAC-17-F-20250318-01
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	4000		1000	5140		ug/L		116	75 - 125	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-649339/1-A
Matrix: Water
Analysis Batch: 649793

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/25/25 05:00	03/26/25 13:30	1
Arsenic	ND		5.0	0.75	ug/L		03/25/25 05:00	03/26/25 13:30	1
Barium	ND		5.0	0.77	ug/L		03/25/25 05:00	03/26/25 13:30	1
Beryllium	ND		1.0	0.27	ug/L		03/25/25 05:00	03/26/25 13:30	1
Cadmium	0.121	J	1.0	0.077	ug/L		03/25/25 05:00	03/26/25 13:30	1
Calcium	ND		1000	250	ug/L		03/25/25 05:00	03/26/25 13:30	1
Chromium	ND		5.0	1.2	ug/L		03/25/25 05:00	03/26/25 13:30	1
Cobalt	ND		1.0	0.086	ug/L		03/25/25 05:00	03/26/25 13:30	1
Lead	ND		1.0	0.45	ug/L		03/25/25 05:00	03/26/25 13:30	1
Lithium	ND	^+	8.0	3.4	ug/L		03/25/25 05:00	03/26/25 13:30	1
Magnesium	ND		1000	61	ug/L		03/25/25 05:00	03/26/25 13:30	1
Molybdenum	ND		5.0	1.1	ug/L		03/25/25 05:00	03/26/25 13:30	1
Potassium	ND		1000	220	ug/L		03/25/25 05:00	03/26/25 13:30	1
Selenium	ND		5.0	0.89	ug/L		03/25/25 05:00	03/26/25 13:30	1
Sodium	ND		1000	880	ug/L		03/25/25 05:00	03/26/25 13:30	1
Thallium	0.511	J	1.0	0.51	ug/L		03/25/25 05:00	03/26/25 13:30	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-649339/1-A
Matrix: Water
Analysis Batch: 649905

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		8.0	3.4	ug/L		03/25/25 05:00	03/27/25 11:29	1

Lab Sample ID: LCS 240-649339/3-A
Matrix: Water
Analysis Batch: 649793

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	106		ug/L		106	80 - 120
Arsenic	1000	1040		ug/L		104	80 - 120
Barium	1000	1020		ug/L		102	80 - 120
Beryllium	500	501		ug/L		100	80 - 120
Cadmium	500	501		ug/L		100	80 - 120
Calcium	25000	25000		ug/L		100	80 - 120
Chromium	500	508		ug/L		102	80 - 120
Cobalt	500	533		ug/L		107	80 - 120
Lead	500	563		ug/L		113	80 - 120
Lithium	500	563	^+	ug/L		113	80 - 120
Magnesium	25000	24900		ug/L		100	80 - 120
Molybdenum	500	516		ug/L		103	80 - 120
Potassium	25000	25900		ug/L		104	80 - 120
Selenium	1000	1030		ug/L		103	80 - 120
Sodium	25000	24700		ug/L		99	80 - 120
Thallium	1000	1140		ug/L		114	80 - 120

Lab Sample ID: LCS 240-649339/3-A
Matrix: Water
Analysis Batch: 649905

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	500	536		ug/L		107	80 - 120

Lab Sample ID: 240-220875-2 MS
Matrix: Water
Analysis Batch: 649793

Client Sample ID: BAC-16-F-20250318-01
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND	F1	600	108	F1	ug/L		18	80 - 120
Arsenic	ND		1000	1040		ug/L		104	80 - 120
Barium	49		1000	1060		ug/L		101	80 - 120
Beryllium	ND		500	486		ug/L		97	80 - 120
Cadmium	ND		500	491		ug/L		98	80 - 120
Calcium	100000		25000	127000	4	ug/L		100	80 - 120
Chromium	ND		500	507		ug/L		101	80 - 120
Cobalt	0.86	J	500	512		ug/L		102	80 - 120
Lead	ND		500	537		ug/L		107	80 - 120
Lithium	6.4	J	500	566		ug/L		112	80 - 120
Magnesium	23000		25000	47200		ug/L		98	80 - 120
Molybdenum	ND		500	504		ug/L		101	80 - 120
Potassium	1600		25000	27700		ug/L		104	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-220875-2 MS
Matrix: Water
Analysis Batch: 649793

Client Sample ID: BAC-16-F-20250318-01
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Selenium	ND		1000	978		ug/L		98	80 - 120
Sodium	15000		25000	39700		ug/L		97	80 - 120
Thallium	ND		1000	1120		ug/L		112	80 - 120

Lab Sample ID: 240-220875-2 MSD
Matrix: Water
Analysis Batch: 649793

Client Sample ID: BAC-16-F-20250318-01
Prep Type: Total Recoverable
Prep Batch: 649339

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND	F1	600	103	F1	ug/L		17	80 - 120	4	20
Arsenic	ND		1000	1020		ug/L		102	80 - 120	1	20
Barium	49		1000	1040		ug/L		100	80 - 120	2	20
Beryllium	ND		500	481		ug/L		96	80 - 120	1	20
Cadmium	ND		500	489		ug/L		98	80 - 120	0	20
Calcium	100000		25000	124000	4	ug/L		90	80 - 120	2	20
Chromium	ND		500	502		ug/L		100	80 - 120	1	20
Cobalt	0.86	J	500	507		ug/L		101	80 - 120	1	20
Lead	ND		500	530		ug/L		106	80 - 120	1	20
Lithium	6.4	J	500	564		ug/L		112	80 - 120	0	20
Magnesium	23000		25000	46400		ug/L		95	80 - 120	2	20
Molybdenum	ND		500	499		ug/L		100	80 - 120	1	20
Potassium	1600		25000	27000		ug/L		102	80 - 120	2	20
Selenium	ND		1000	963		ug/L		96	80 - 120	2	20
Sodium	15000		25000	39200		ug/L		95	80 - 120	1	20
Thallium	ND		1000	1100		ug/L		110	80 - 120	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-649345/1-A
Matrix: Water
Analysis Batch: 649633

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 649345

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/24/25 14:00	03/25/25 15:50	1

Lab Sample ID: LCS 240-649345/2-A
Matrix: Water
Analysis Batch: 649633

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 649345

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.74		ug/L		95	80 - 120

Lab Sample ID: 240-220875-1 MS
Matrix: Water
Analysis Batch: 649633

Client Sample ID: BAC-17-F-20250318-01
Prep Type: Total/NA
Prep Batch: 649345

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		1.00	0.936		ug/L		94	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-220875-D-1-F MSD
Matrix: Water
Analysis Batch: 649633

Client Sample ID: 240-220875-D-1-F MSD
Prep Type: Total/NA
Prep Batch: 649345

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		1.00	0.944		ug/L		94	80 - 120	1	20

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-649462/30
Matrix: Water
Analysis Batch: 649462

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			03/24/25 16:59	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			03/24/25 16:59	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			03/24/25 16:59	1

Lab Sample ID: MB 240-649462/4
Matrix: Water
Analysis Batch: 649462

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	3.75	J	5.0	2.6	mg/L			03/24/25 14:51	1
Bicarbonate Alkalinity as CaCO3	3.75	J	5.0	2.6	mg/L			03/24/25 14:51	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			03/24/25 14:51	1

Lab Sample ID: LCS 240-649462/29
Matrix: Water
Analysis Batch: 649462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	268		mg/L		96	86 - 123

Lab Sample ID: LCS 240-649462/3
Matrix: Water
Analysis Batch: 649462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	268		mg/L		96	86 - 123

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-649375/1
Matrix: Water
Analysis Batch: 649375

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			03/24/25 12:16	1

Method: 2540 C-2020 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-649375/2
Matrix: Water
Analysis Batch: 649375

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			495	433		mg/L		87	80 - 120		

Lab Sample ID: 240-220875-2 DU
Matrix: Water
Analysis Batch: 649375

Client Sample ID: BAC-16-F-20250318-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	460			455		mg/L				1	20

Lab Sample ID: MB 240-649605/1
Matrix: Water
Analysis Batch: 649605

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			03/25/25 18:07	1

Lab Sample ID: LCS 240-649605/2
Matrix: Water
Analysis Batch: 649605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			495	430		mg/L		87	80 - 120		

Lab Sample ID: 240-220875-6 DU
Matrix: Water
Analysis Batch: 649605

Client Sample ID: BAC-12-F-20250319-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	460			461		mg/L				0.9	20

Lab Sample ID: MB 240-649752/1
Matrix: Water
Analysis Batch: 649752

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			03/26/25 13:58	1

Lab Sample ID: LCS 240-649752/2
Matrix: Water
Analysis Batch: 649752

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			495	433		mg/L		87	80 - 120		

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-649412/3
Matrix: Water
Analysis Batch: 649412

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			03/25/25 00:06	1
Fluoride	ND		0.050	0.024	mg/L			03/25/25 00:06	1
Sulfate	ND		1.0	0.35	mg/L			03/25/25 00:06	1

Lab Sample ID: LCS 240-649412/4
Matrix: Water
Analysis Batch: 649412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	48.5		mg/L		97	90 - 110		
Fluoride			2.50	2.50		mg/L		100	90 - 110		
Sulfate			50.0	49.3		mg/L		99	90 - 110		

Lab Sample ID: 240-220875-1 MS
Matrix: Water
Analysis Batch: 649412

Client Sample ID: BAC-17-F-20250318-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	28	F1 F2	50.0	139	F1	mg/L		222	80 - 120		
Fluoride	0.044	J F1 F2	2.50	0.215	F1	mg/L		7	80 - 120		

Lab Sample ID: 240-220875-1 MSD
Matrix: Water
Analysis Batch: 649412

Client Sample ID: BAC-17-F-20250318-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	28	F1 F2	50.0	80.2	F2	mg/L		104	80 - 120	54	15
Fluoride	0.044	J F1 F2	2.50	0.461	F1 F2	mg/L		17	80 - 120	73	15
Sulfate	68	F1 F2	50.0	192	F1 F2	mg/L		247	80 - 120	55	15

Lab Sample ID: MB 240-649555/3
Matrix: Water
Analysis Batch: 649555

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			03/25/25 21:46	1
Fluoride	ND		0.050	0.024	mg/L			03/25/25 21:46	1
Sulfate	ND		1.0	0.35	mg/L			03/25/25 21:46	1

Lab Sample ID: LCS 240-649555/4
Matrix: Water
Analysis Batch: 649555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	48.1		mg/L		96	90 - 110		
Fluoride			2.50	2.47		mg/L		99	90 - 110		
Sulfate			50.0	47.0		mg/L		94	90 - 110		

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-709342/1-A
Matrix: Water
Analysis Batch: 714268

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709342

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.2485	U	0.174	0.175	1.00	0.448	pCi/L	03/26/25 07:49	04/24/25 15:34	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.4*		*30 - 110*	*03/26/25 07:49*	*04/24/25 15:34*	*1*

Lab Sample ID: LCS 160-709342/2-A
Matrix: Water
Analysis Batch: 714268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709342

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	8.763		1.21	1.00	0.365	pCi/L	92	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.0*		*30 - 110*

Lab Sample ID: MB 160-709461/1-A
Matrix: Water
Analysis Batch: 713839

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709461

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.04020	U	0.142	0.142	1.00	0.315	pCi/L	03/27/25 07:51	04/22/25 21:25	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.3*		*30 - 110*	*03/27/25 07:51*	*04/22/25 21:25*	*1*

Lab Sample ID: LCS 160-709461/2-A
Matrix: Water
Analysis Batch: 713839

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709461

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	9.158		1.21	1.00	0.303	pCi/L	96	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.2*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-709343/1-A
Matrix: Water
Analysis Batch: 714268

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709343

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4410	U	0.337	0.340	1.00	0.520	pCi/L	03/26/25 07:52	04/24/25 11:38	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		30 - 110	03/26/25 07:52	04/24/25 11:38	1
Y Carrier	85.6		30 - 110	03/26/25 07:52	04/24/25 11:38	1

Lab Sample ID: LCS 160-709343/2-A
Matrix: Water
Analysis Batch: 714268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709343

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.51	10.31		1.36	1.00	0.529	pCi/L	108	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.0		30 - 110
Y Carrier	83.7		30 - 110

Lab Sample ID: MB 160-709471/1-A
Matrix: Water
Analysis Batch: 713839

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709471

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.3219	U	0.290	0.292	1.00	0.624	pCi/L	03/27/25 08:01	04/22/25 12:06	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		30 - 110	03/27/25 08:01	04/22/25 12:06	1
Y Carrier	83.4		30 - 110	03/27/25 08:01	04/22/25 12:06	1

Lab Sample ID: LCS 160-709471/2-A
Matrix: Water
Analysis Batch: 713839

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709471

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.52	9.766		1.33	1.00	0.529	pCi/L	103	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.2		30 - 110
Y Carrier	82.6		30 - 110

Metals

Prep Batch: 649339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total Recoverable	Water	3005A	
240-220875-2	BAC-16-F-20250318-01	Total Recoverable	Water	3005A	
240-220875-3	BAC-15-F-20250318-01	Total Recoverable	Water	3005A	
240-220875-4	BAC-10-F-20250319-01	Total Recoverable	Water	3005A	
240-220875-5	BAC-14-F-20250319-01	Total Recoverable	Water	3005A	
240-220875-6	BAC-12-F-20250319-01	Total Recoverable	Water	3005A	
240-220875-7	DUP_004-F-20250319-01	Total Recoverable	Water	3005A	
240-220875-8	MW-6-F-20250319-01	Total Recoverable	Water	3005A	
240-220875-9	BAC-01-F-20250320-01	Total Recoverable	Water	3005A	
240-220875-10	BAC-09-F-20250320-01	Total Recoverable	Water	3005A	
MB 240-649339/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-649339/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-649339/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-220875-1 MS	BAC-17-F-20250318-01	Total Recoverable	Water	3005A	
240-220875-1 MSD	BAC-17-F-20250318-01	Total Recoverable	Water	3005A	
240-220875-2 MS	BAC-16-F-20250318-01	Total Recoverable	Water	3005A	
240-220875-2 MSD	BAC-16-F-20250318-01	Total Recoverable	Water	3005A	

Prep Batch: 649345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total/NA	Water	7470A	
240-220875-2	BAC-16-F-20250318-01	Total/NA	Water	7470A	
240-220875-3	BAC-15-F-20250318-01	Total/NA	Water	7470A	
240-220875-4	BAC-10-F-20250319-01	Total/NA	Water	7470A	
240-220875-5	BAC-14-F-20250319-01	Total/NA	Water	7470A	
240-220875-6	BAC-12-F-20250319-01	Total/NA	Water	7470A	
240-220875-7	DUP_004-F-20250319-01	Total/NA	Water	7470A	
240-220875-8	MW-6-F-20250319-01	Total/NA	Water	7470A	
240-220875-9	BAC-01-F-20250320-01	Total/NA	Water	7470A	
240-220875-10	BAC-09-F-20250320-01	Total/NA	Water	7470A	
MB 240-649345/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-649345/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-220875-1 MS	BAC-17-F-20250318-01	Total/NA	Water	7470A	
240-220875-D-1-F MSD	240-220875-D-1-F MSD	Total/NA	Water	7470A	

Analysis Batch: 649607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total Recoverable	Water	6010D	649339
240-220875-2	BAC-16-F-20250318-01	Total Recoverable	Water	6010D	649339
240-220875-3	BAC-15-F-20250318-01	Total Recoverable	Water	6010D	649339
MB 240-649339/1-A	Method Blank	Total Recoverable	Water	6010D	649339
LCS 240-649339/2-A	Lab Control Sample	Total Recoverable	Water	6010D	649339
240-220875-1 MS	BAC-17-F-20250318-01	Total Recoverable	Water	6010D	649339
240-220875-1 MSD	BAC-17-F-20250318-01	Total Recoverable	Water	6010D	649339

Analysis Batch: 649633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total/NA	Water	7470A	649345
240-220875-2	BAC-16-F-20250318-01	Total/NA	Water	7470A	649345
240-220875-3	BAC-15-F-20250318-01	Total/NA	Water	7470A	649345
240-220875-4	BAC-10-F-20250319-01	Total/NA	Water	7470A	649345

Metals (Continued)

Analysis Batch: 649633 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-5	BAC-14-F-20250319-01	Total/NA	Water	7470A	649345
240-220875-6	BAC-12-F-20250319-01	Total/NA	Water	7470A	649345
240-220875-7	DUP_004-F-20250319-01	Total/NA	Water	7470A	649345
240-220875-8	MW-6-F-20250319-01	Total/NA	Water	7470A	649345
240-220875-9	BAC-01-F-20250320-01	Total/NA	Water	7470A	649345
240-220875-10	BAC-09-F-20250320-01	Total/NA	Water	7470A	649345
MB 240-649345/1-A	Method Blank	Total/NA	Water	7470A	649345
LCS 240-649345/2-A	Lab Control Sample	Total/NA	Water	7470A	649345
240-220875-1 MS	BAC-17-F-20250318-01	Total/NA	Water	7470A	649345
240-220875-D-1-F MSD	240-220875-D-1-F MSD	Total/NA	Water	7470A	649345

Analysis Batch: 649793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total Recoverable	Water	6020B	649339
240-220875-2	BAC-16-F-20250318-01	Total Recoverable	Water	6020B	649339
240-220875-3	BAC-15-F-20250318-01	Total Recoverable	Water	6020B	649339
240-220875-4	BAC-10-F-20250319-01	Total Recoverable	Water	6020B	649339
240-220875-5	BAC-14-F-20250319-01	Total Recoverable	Water	6020B	649339
240-220875-6	BAC-12-F-20250319-01	Total Recoverable	Water	6020B	649339
240-220875-7	DUP_004-F-20250319-01	Total Recoverable	Water	6020B	649339
240-220875-8	MW-6-F-20250319-01	Total Recoverable	Water	6020B	649339
240-220875-9	BAC-01-F-20250320-01	Total Recoverable	Water	6020B	649339
240-220875-10	BAC-09-F-20250320-01	Total Recoverable	Water	6020B	649339
MB 240-649339/1-A	Method Blank	Total Recoverable	Water	6020B	649339
LCS 240-649339/3-A	Lab Control Sample	Total Recoverable	Water	6020B	649339
240-220875-2 MS	BAC-16-F-20250318-01	Total Recoverable	Water	6020B	649339
240-220875-2 MSD	BAC-16-F-20250318-01	Total Recoverable	Water	6020B	649339

Analysis Batch: 649905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-10	BAC-09-F-20250320-01	Total Recoverable	Water	6020B	649339
MB 240-649339/1-A	Method Blank	Total Recoverable	Water	6020B	649339
LCS 240-649339/3-A	Lab Control Sample	Total Recoverable	Water	6020B	649339

Analysis Batch: 649947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-4	BAC-10-F-20250319-01	Total Recoverable	Water	6010D	649339
240-220875-5	BAC-14-F-20250319-01	Total Recoverable	Water	6010D	649339
240-220875-6	BAC-12-F-20250319-01	Total Recoverable	Water	6010D	649339
240-220875-7	DUP_004-F-20250319-01	Total Recoverable	Water	6010D	649339
240-220875-8	MW-6-F-20250319-01	Total Recoverable	Water	6010D	649339
240-220875-9	BAC-01-F-20250320-01	Total Recoverable	Water	6010D	649339
240-220875-10	BAC-09-F-20250320-01	Total Recoverable	Water	6010D	649339

General Chemistry

Analysis Batch: 649375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total/NA	Water	2540 C-2020	
240-220875-2	BAC-16-F-20250318-01	Total/NA	Water	2540 C-2020	
240-220875-3	BAC-15-F-20250318-01	Total/NA	Water	2540 C-2020	

General Chemistry (Continued)

Analysis Batch: 649375 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-649375/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-649375/2	Lab Control Sample	Total/NA	Water	2540 C-2020	
240-220875-2 DU	BAC-16-F-20250318-01	Total/NA	Water	2540 C-2020	

Analysis Batch: 649412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total/NA	Water	300.0	
240-220875-2	BAC-16-F-20250318-01	Total/NA	Water	300.0	
240-220875-3	BAC-15-F-20250318-01	Total/NA	Water	300.0	
240-220875-4	BAC-10-F-20250319-01	Total/NA	Water	300.0	
240-220875-5	BAC-14-F-20250319-01	Total/NA	Water	300.0	
240-220875-6	BAC-12-F-20250319-01	Total/NA	Water	300.0	
240-220875-7	DUP_004-F-20250319-01	Total/NA	Water	300.0	
240-220875-8	MW-6-F-20250319-01	Total/NA	Water	300.0	
240-220875-9	BAC-01-F-20250320-01	Total/NA	Water	300.0	
240-220875-10	BAC-09-F-20250320-01	Total/NA	Water	300.0	
240-220875-10	BAC-09-F-20250320-01	Total/NA	Water	300.0	
MB 240-649412/3	Method Blank	Total/NA	Water	300.0	
LCS 240-649412/4	Lab Control Sample	Total/NA	Water	300.0	
240-220875-1 MS	BAC-17-F-20250318-01	Total/NA	Water	300.0	
240-220875-1 MSD	BAC-17-F-20250318-01	Total/NA	Water	300.0	

Analysis Batch: 649462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total/NA	Water	2320 B-2021	
240-220875-2	BAC-16-F-20250318-01	Total/NA	Water	2320 B-2021	
240-220875-3	BAC-15-F-20250318-01	Total/NA	Water	2320 B-2021	
240-220875-4	BAC-10-F-20250319-01	Total/NA	Water	2320 B-2021	
240-220875-5	BAC-14-F-20250319-01	Total/NA	Water	2320 B-2021	
240-220875-6	BAC-12-F-20250319-01	Total/NA	Water	2320 B-2021	
240-220875-7	DUP_004-F-20250319-01	Total/NA	Water	2320 B-2021	
240-220875-8	MW-6-F-20250319-01	Total/NA	Water	2320 B-2021	
240-220875-9	BAC-01-F-20250320-01	Total/NA	Water	2320 B-2021	
240-220875-10	BAC-09-F-20250320-01	Total/NA	Water	2320 B-2021	
MB 240-649462/30	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-649462/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-649462/29	Lab Control Sample	Total/NA	Water	2320 B-2021	
LCS 240-649462/3	Lab Control Sample	Total/NA	Water	2320 B-2021	

Analysis Batch: 649555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-3	BAC-15-F-20250318-01	Total/NA	Water	300.0	
MB 240-649555/3	Method Blank	Total/NA	Water	300.0	
LCS 240-649555/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 649605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-4	BAC-10-F-20250319-01	Total/NA	Water	2540 C-2020	
240-220875-5	BAC-14-F-20250319-01	Total/NA	Water	2540 C-2020	
240-220875-6	BAC-12-F-20250319-01	Total/NA	Water	2540 C-2020	
240-220875-7	DUP_004-F-20250319-01	Total/NA	Water	2540 C-2020	

General Chemistry (Continued)

Analysis Batch: 649605 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-8	MW-6-F-20250319-01	Total/NA	Water	2540 C-2020	
MB 240-649605/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-649605/2	Lab Control Sample	Total/NA	Water	2540 C-2020	
240-220875-6 DU	BAC-12-F-20250319-01	Total/NA	Water	2540 C-2020	

Analysis Batch: 649752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-9	BAC-01-F-20250320-01	Total/NA	Water	2540 C-2020	
240-220875-10	BAC-09-F-20250320-01	Total/NA	Water	2540 C-2020	
MB 240-649752/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-649752/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Rad

Prep Batch: 709342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total/NA	Water	PrecSep-21	
240-220875-2	BAC-16-F-20250318-01	Total/NA	Water	PrecSep-21	
240-220875-3	BAC-15-F-20250318-01	Total/NA	Water	PrecSep-21	
240-220875-4	BAC-10-F-20250319-01	Total/NA	Water	PrecSep-21	
240-220875-5	BAC-14-F-20250319-01	Total/NA	Water	PrecSep-21	
240-220875-6	BAC-12-F-20250319-01	Total/NA	Water	PrecSep-21	
240-220875-7	DUP_004-F-20250319-01	Total/NA	Water	PrecSep-21	
MB 160-709342/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-709342/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 709343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-1	BAC-17-F-20250318-01	Total/NA	Water	PrecSep_0	
240-220875-2	BAC-16-F-20250318-01	Total/NA	Water	PrecSep_0	
240-220875-3	BAC-15-F-20250318-01	Total/NA	Water	PrecSep_0	
240-220875-4	BAC-10-F-20250319-01	Total/NA	Water	PrecSep_0	
240-220875-5	BAC-14-F-20250319-01	Total/NA	Water	PrecSep_0	
240-220875-6	BAC-12-F-20250319-01	Total/NA	Water	PrecSep_0	
240-220875-7	DUP_004-F-20250319-01	Total/NA	Water	PrecSep_0	
MB 160-709343/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-709343/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 709461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-8	MW-6-F-20250319-01	Total/NA	Water	PrecSep-21	
240-220875-9	BAC-01-F-20250320-01	Total/NA	Water	PrecSep-21	
240-220875-10	BAC-09-F-20250320-01	Total/NA	Water	PrecSep-21	
MB 160-709461/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-709461/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 709471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-220875-8	MW-6-F-20250319-01	Total/NA	Water	PrecSep_0	
240-220875-9	BAC-01-F-20250320-01	Total/NA	Water	PrecSep_0	
240-220875-10	BAC-09-F-20250320-01	Total/NA	Water	PrecSep_0	

Rad (Continued)

Prep Batch: 709471 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-709471/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-709471/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Client Sample ID: BAC-17-F-20250318-01
Lab Sample ID: 240-220875-1

Date Collected: 03/18/25 11:27
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649607	RKT	EET CLE	03/25/25 19:43
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 16:33
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 15:54
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 17:13
Total/NA	Analysis	2540 C-2020		1	649375	TAV2	EET CLE	03/24/25 12:16
Total/NA	Analysis	300.0		1	649412	JMR	EET CLE	03/25/25 04:27
Total/NA	Prep	PrecSep-21			709342	OGC	EET SL	03/26/25 07:49
Total/NA	Analysis	9315		1	714122	SCB	EET SL	04/24/25 15:47
Total/NA	Prep	PrecSep_0			709343	OGC	EET SL	03/26/25 07:52
Total/NA	Analysis	9320		1	714122	SCB	EET SL	04/24/25 11:50
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: BAC-16-F-20250318-01
Lab Sample ID: 240-220875-2

Date Collected: 03/18/25 12:58
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649607	RKT	EET CLE	03/25/25 20:12
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 16:35
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 15:59
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 17:17
Total/NA	Analysis	2540 C-2020		1	649375	TAV2	EET CLE	03/24/25 12:16
Total/NA	Analysis	300.0		1	649412	JMR	EET CLE	03/25/25 04:46
Total/NA	Prep	PrecSep-21			709342	OGC	EET SL	03/26/25 07:49
Total/NA	Analysis	9315		1	714122	SCB	EET SL	04/24/25 15:47
Total/NA	Prep	PrecSep_0			709343	OGC	EET SL	03/26/25 07:52
Total/NA	Analysis	9320		1	714122	SCB	EET SL	04/24/25 11:50
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: BAC-15-F-20250318-01
Lab Sample ID: 240-220875-3

Date Collected: 03/18/25 14:15
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649607	RKT	EET CLE	03/25/25 20:50
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 17:17

Client Sample ID: BAC-15-F-20250318-01
Lab Sample ID: 240-220875-3

Date Collected: 03/18/25 14:15
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 16:25
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 17:24
Total/NA	Analysis	2540 C-2020		1	649375	TAV2	EET CLE	03/24/25 12:16
Total/NA	Analysis	300.0		5	649555	JMR	EET CLE	03/25/25 23:09
Total/NA	Analysis	300.0		1	649412	JMR	EET CLE	03/25/25 04:56
Total/NA	Prep	PrecSep-21			709342	OGC	EET SL	03/26/25 07:49
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 15:40
Total/NA	Prep	PrecSep_0			709343	OGC	EET SL	03/26/25 07:52
Total/NA	Analysis	9320		1	714122	SCB	EET SL	04/24/25 11:50
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: BAC-10-F-20250319-01
Lab Sample ID: 240-220875-4

Date Collected: 03/19/25 10:28
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/28/25 02:52
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 17:20
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 16:27
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 17:28
Total/NA	Analysis	2540 C-2020		1	649605	TAV2	EET CLE	03/25/25 18:07
Total/NA	Analysis	300.0		5	649412	JMR	EET CLE	03/25/25 05:05
Total/NA	Prep	PrecSep-21			709342	OGC	EET SL	03/26/25 07:49
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 15:40
Total/NA	Prep	PrecSep_0			709343	OGC	EET SL	03/26/25 07:52
Total/NA	Analysis	9320		1	714122	SCB	EET SL	04/24/25 11:50
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: BAC-14-F-20250319-01
Lab Sample ID: 240-220875-5

Date Collected: 03/19/25 12:04
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/28/25 02:57
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 17:23
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 16:28
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 17:33

Client Sample ID: BAC-14-F-20250319-01
Lab Sample ID: 240-220875-5

Date Collected: 03/19/25 12:04
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2540 C-2020		1	649605	TAV2	EET CLE	03/25/25 18:07
Total/NA	Analysis	300.0		1	649412	JMR	EET CLE	03/25/25 05:24
Total/NA	Prep	PrecSep-21			709342	OGC	EET SL	03/26/25 07:49
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 15:41
Total/NA	Prep	PrecSep_0			709343	OGC	EET SL	03/26/25 07:52
Total/NA	Analysis	9320		1	714122	SCB	EET SL	04/24/25 11:50
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: BAC-12-F-20250319-01
Lab Sample ID: 240-220875-6

Date Collected: 03/19/25 13:50
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/28/25 03:01
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 17:26
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 16:30
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 17:38
Total/NA	Analysis	2540 C-2020		1	649605	TAV2	EET CLE	03/25/25 18:07
Total/NA	Analysis	300.0		1	649412	JMR	EET CLE	03/25/25 05:53
Total/NA	Prep	PrecSep-21			709342	OGC	EET SL	03/26/25 07:49
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 15:41
Total/NA	Prep	PrecSep_0			709343	OGC	EET SL	03/26/25 07:52
Total/NA	Analysis	9320		1	714122	SCB	EET SL	04/24/25 11:51
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: DUP_004-F-20250319-01
Lab Sample ID: 240-220875-7

Date Collected: 03/19/25 00:00
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/28/25 03:06
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 17:29
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 16:32
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 17:53
Total/NA	Analysis	2540 C-2020		1	649605	TAV2	EET CLE	03/25/25 18:07
Total/NA	Analysis	300.0		1	649412	JMR	EET CLE	03/25/25 06:03
Total/NA	Prep	PrecSep-21			709342	OGC	EET SL	03/26/25 07:49
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 15:41

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-220875-1
Project/Site: Federal CCR Wells

Client Sample ID: DUP_004-F-20250319-01
Lab Sample ID: 240-220875-7
Date Collected: 03/19/25 00:00
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep_0			709343	OGC	EET SL	03/26/25 07:52
Total/NA	Analysis	9320		1	714122	SCB	EET SL	04/24/25 11:51
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: MW-6-F-20250319-01
Lab Sample ID: 240-220875-8
Date Collected: 03/19/25 15:20
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/28/25 03:19
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 17:37
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 16:33
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 17:57
Total/NA	Analysis	2540 C-2020		1	649605	TAV2	EET CLE	03/25/25 18:07
Total/NA	Analysis	300.0		1	649412	JMR	EET CLE	03/25/25 06:13
Total/NA	Prep	PrecSep-21			709461	OGC	EET SL	03/27/25 07:51
Total/NA	Analysis	9315		1	713893	SWS	EET SL	04/23/25 05:53
Total/NA	Prep	PrecSep_0			709471	OGC	EET SL	03/27/25 08:01
Total/NA	Analysis	9320		1	713839	SWS	EET SL	04/22/25 12:07
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:36

Client Sample ID: BAC-01-F-20250320-01
Lab Sample ID: 240-220875-9
Date Collected: 03/20/25 13:19
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/28/25 03:24
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 17:40
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 16:35
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 18:04
Total/NA	Analysis	2540 C-2020		1	649752	TAV2	EET CLE	03/26/25 13:58
Total/NA	Analysis	300.0		1	649412	JMR	EET CLE	03/25/25 06:22
Total/NA	Prep	PrecSep-21			709461	OGC	EET SL	03/27/25 07:51
Total/NA	Analysis	9315		1	713893	SWS	EET SL	04/23/25 05:53
Total/NA	Prep	PrecSep_0			709471	OGC	EET SL	03/27/25 08:01
Total/NA	Analysis	9320		1	713839	SWS	EET SL	04/22/25 12:07
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:36

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-220875-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-09-F-20250320-01
Lab Sample ID: 240-220875-10

Date Collected: 03/20/25 15:09
Matrix: Water
Date Received: 03/22/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/28/25 03:29
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649793	S4FJ	EET CLE	03/26/25 17:43
Total Recoverable	Prep	3005A			649339	XWS6	EET CLE	03/25/25 05:00
Total Recoverable	Analysis	6020B		1	649905	S4FJ	EET CLE	03/27/25 11:37
Total/NA	Prep	7470A			649345	XWS6	EET CLE	03/24/25 14:00
Total/NA	Analysis	7470A		1	649633	TQ6W	EET CLE	03/25/25 16:37
Total/NA	Analysis	2320 B-2021		1	649462	PQD2	EET CLE	03/24/25 18:09
Total/NA	Analysis	2540 C-2020		1	649752	TAV2	EET CLE	03/26/25 13:58
Total/NA	Analysis	300.0		5	649412	JMR	EET CLE	03/25/25 06:32
Total/NA	Analysis	300.0		50	649412	JMR	EET CLE	03/25/25 06:42
Total/NA	Prep	PrecSep-21			709461	OGC	EET SL	03/27/25 07:51
Total/NA	Analysis	9315		1	713893	SWS	EET SL	04/23/25 05:53
Total/NA	Prep	PrecSep_0			709471	OGC	EET SL	03/27/25 08:01
Total/NA	Analysis	9320		1	713702	SWS	EET SL	04/22/25 12:11
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:36

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-220875-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	03-31-25
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-25 *
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-220875-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

Client Information	Sampler: Bobby Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:
Company: Lightstone Generation Gavin Power LLC	PWSID		
Address: 7397 OH-7	Due Date Requested:		
City: Cheshire	TAT Requested (days):		
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No		
Phone: 740-925-3171(Tel)	PO #: 2935505		
Email: taylor.huffman@lightstonegen.com	WO #:		
Project Name: Gavin CCR	Project #: 24019633		
Site: Gavin	SSOW#:		

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity
Preservation Code:							D	N	D	N	N
BAC-17-F-20250318-01	3-18-25	1127	G	Water			1	1	2	1	1
BAC-16-F-20250318-01	3-18-25	1258	G	Water			1	1	2	1	1
BAC-15-F-20250318-01	3-18-25	1415	G	Water			1	1	2	1	1
BAC-10-F-20250319-01	3-19-25	1028	G	Water			1	1	2	1	1
BAC-14-F-20250319-01	3-19-25	1204	G	Water			1	1	2	1	1
BAC-12-F-20250319-01	3-19-25	1350	G	Water			1	1	2	1	1
DUP-004-F-20250319-01	3-19-25	—	G	Water			1	1	2	1	1
MW-6-F-20250319-01	3-19-25	1520	G	Water			1	1	2	1	1
BAC-01-F-20250320-01	3-20-25	1319	G	Water			1	1	2	1	1
BAC-09-F-20250320-01	3-20-25	1509	G	Water			1	1	2	1	1
				Water							

240-220875 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are reta
☐ Return To Client ☐ Disposal By Lab ☐ A

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by: Date/Time: 3-21-25 / 09 Company Received by: Date/Time:

Relinquished by: Date/Time: Company Received by: Date/Time: 3/21/25

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 21 (CF +1.1 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	Yes (No)	
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No (NA)	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	
-Were tamper/custody seals intact and uncompromised?	Yes No (NA)	
3. Shippers' packing slip attached to the cooler(s)?	Yes (No)	
4. Did custody papers accompany the sample(s)?	(Yes) No	
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7. Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11. Sufficient quantity received to perform indicated analyses?	(Yes) No	
12. Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# HC4
14. Were VOAs on the COC?	Yes (No)	
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes No (NA)	
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes (No)	
17. Was a LL Hg or Me Hg trip blank present? _____	Yes (No)	

Tests that are n checked for pH Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laborator

Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099-123124 Cooler Receipt Form.doc

EC	Client	Box	Other	IR GUN #:			Wet Ice Blue Ice Water None
EC	Client	Box	Other	IR GUN #:	16.0	17.1	Wet Ice Blue Ice Water None
EC	Client	Box	Other	IR GUN #:	

BAC-17-F-20250318-01	240-220875-D-1	Plastic 500ml - with Nitric Acid	<2		
BAC-17-F-20250318-01	240-220875-E-1	Plastic 1 liter - Nitric Acid	<2		
BAC-17-F-20250318-01	240-220875-F-1	Plastic 1 liter - Nitric Acid	<2		
BAC-16-F-20250318-01	240-220875-A-2	Plastic 60 mL - unpreserved			
BAC-16-F-20250318-01	240-220875-B-2	Plastic 60 mL - unpreserved			
BAC-16-F-20250318-01	240-220875-C-2	Plastic 500ml - unpreserved			
BAC-16-F-20250318-01	240-220875-D-2	Plastic 500ml - with Nitric Acid	<2		
BAC-16-F-20250318-01	240-220875-E-2	Plastic 1 liter - Nitric Acid	<2		
BAC-16-F-20250318-01	240-220875-F-2	Plastic 1 liter - Nitric Acid	<2		
BAC-15-F-20250318-01	240-220875-A-3	Plastic 60 mL - unpreserved			
BAC-15-F-20250318-01	240-220875-B-3	Plastic 60 mL - unpreserved			
BAC-15-F-20250318-01	240-220875-C-3	Plastic 500ml - unpreserved			
BAC-15-F-20250318-01	240-220875-D-3	Plastic 500ml - with Nitric Acid	<2		
BAC-15-F-20250318-01	240-220875-E-3	Plastic 1 liter - Nitric Acid	<2		
BAC-15-F-20250318-01	240-220875-F-3	Plastic 1 liter - Nitric Acid	<2		
BAC-10-F-20250319-01	240-220875-A-4	Plastic 60 mL - unpreserved			
BAC-10-F-20250319-01	240-220875-B-4	Plastic 60 mL - unpreserved			
BAC-10-F-20250319-01	240-220875-C-4	Plastic 500ml - unpreserved			
BAC-10-F-20250319-01	240-220875-D-4	Plastic 500ml - with Nitric Acid	<2		
BAC-10-F-20250319-01	240-220875-E-4	Plastic 1 liter - Nitric Acid	<2		
BAC-10-F-20250319-01	240-220875-F-4	Plastic 1 liter - Nitric Acid	<2		
BAC-14-F-20250319-01	240-220875-A-5	Plastic 60 mL - unpreserved			
BAC-14-F-20250319-01	240-220875-B-5	Plastic 60 mL - unpreserved			
BAC-14-F-20250319-01	240-220875-C-5	Plastic 500ml - unpreserved			
BAC-14-F-20250319-01	240-220875-D-5	Plastic 500ml - with Nitric Acid	<2		
BAC-14-F-20250319-01	240-220875-E-5	Plastic 1 liter - Nitric Acid	<2		
BAC-14-F-20250319-01	240-220875-F-5	Plastic 1 liter - Nitric Acid	<2		
BAC-12-F-20250319-01	240-220875-A-6	Plastic 60 mL - unpreserved			
BAC-12-F-20250319-01	240-220875-B-6	Plastic 60 mL - unpreserved			
BAC-12-F-20250319-01	240-220875-C-6	Plastic 500ml - unpreserved			
BAC-12-F-20250319-01	240-220875-D-6	Plastic 500ml - with Nitric Acid	<2		
BAC-12-F-20250319-01	240-220875-E-6	Plastic 1 liter - Nitric Acid	<2		

DUP_004-F-20250319-01	240-220875-F-7	Plastic 1 liter - Nitric Acid	<2			
MW-6-F-20250319-01	240-220875-A-8	Plastic 60 mL - unpreserved				
MW-6-F-20250319-01	240-220875-B-8	Plastic 60 mL - unpreserved				
MW-6-F-20250319-01	240-220875-C-8	Plastic 500ml - unpreserved				
MW-6-F-20250319-01	240-220875-D-8	Plastic 500ml - with Nitric Acid	<2			
MW-6-F-20250319-01	240-220875-E-8	Plastic 1 liter - Nitric Acid	<2			
MW-6-F-20250319-01	240-220875-F-8	Plastic 1 liter - Nitric Acid	<2			
BAC-01-F-20250320-01	240-220875-A-9	Plastic 60 mL - unpreserved				
BAC-01-F-20250320-01	240-220875-B-9	Plastic 60 mL - unpreserved				
BAC-01-F-20250320-01	240-220875-C-9	Plastic 500ml - unpreserved				
BAC-01-F-20250320-01	240-220875-D-9	Plastic 500ml - with Nitric Acid	<2			
BAC-01-F-20250320-01	240-220875-E-9	Plastic 1 liter - Nitric Acid	<2			
BAC-01-F-20250320-01	240-220875-F-9	Plastic 1 liter - Nitric Acid	<2			
BAC-09-F-20250320-01	240-220875-A-10	Plastic 60 mL - unpreserved				
BAC-09-F-20250320-01	240-220875-B-10	Plastic 60 mL - unpreserved				
BAC-09-F-20250320-01	240-220875-C-10	Plastic 500ml - unpreserved				
BAC-09-F-20250320-01	240-220875-D-10	Plastic 500ml - with Nitric Acid	<2			
BAC-09-F-20250320-01	240-220875-E-10	Plastic 1 liter - Nitric Acid	<2			
BAC-09-F-20250320-01	240-220875-F-10	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-200202.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-220875-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/7/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal GWM Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-17-F-20250318-01 (240-220875-1)	3/18/25	11:27 Eastern	G	Water			X	X	X	2	
BAC-16-F-20250318-01 (240-220875-2)	3/18/25	12:58 Eastern	G	Water			X	X	X	2	
BAC-15-F-20250318-01 (240-220875-3)	3/18/25	14:15 Eastern	G	Water			X	X	X	2	
BAC-10-F-20250319-01 (240-220875-4)	3/19/25	10:28 Eastern	G	Water			X	X	X	2	
BAC-14-F-20250319-01 (240-220875-5)	3/19/25	12:04 Eastern	G	Water			X	X	X	2	
BAC-12-F-20250319-01 (240-220875-6)	3/19/25	13:50 Eastern	G	Water			X	X	X	2	
DUP_004-F-20250319-01 (240-220875-7)	3/19/25	Eastern	G	Water			X	X	X	2	
MW-6-F-20250319-01 (240-220875-8)	3/19/25	15:20 Eastern	G	Water			X	X	X	2	
BAC-01-F-20250320-01 (240-220875-9)	3/20/25	13:19 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	3/24/25 0830	EC	M. Pinetta	MAR 25 2025 0845	
Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-200202.2
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-220875-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/7/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal GWM Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-09-F-20250320-01 (240-220875-10)	3/20/25	15:09 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	3/24/25 0830	EC	M. Pinette	MAR 25 2025 0845	
Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-220875-1

Login Number: 220875
List Number: 2
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 03/25/25 09:52 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

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JOB DESCRIPTION

Gavin CCR Wells

JOB NUMBER

240-221003-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

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Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR Wells

Job ID: 240-221003-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-221003-1 Eurofins Cleveland

Job Narrative
240-221003-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/25/2025 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.7°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
Method 9315_Ra226: Radium-226 prep batch 160-709472:

The Ra-226 laboratory control sample (LCS) associated with the following samples recovered at 71%: (LCS 160-709472/2-A). The limits in our LIMS system at (75-125%) reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (64-129%). The LCS is within criteria and no further action is required.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-221003-1	BAC-03-F-20250321-01	Water	03/21/25 14:40	03/25/25 14:00
240-221003-2	BAC-08-F-20250324-01	Water	03/24/25 11:00	03/25/25 14:00
240-221003-3	BAC-07-F-20250324-01	Water	03/24/25 12:20	03/25/25 14:00
240-221003-4	BAC-19-F-20250324-01	Water	03/24/25 14:15	03/25/25 14:00
240-221003-5	BAC-18-F-20250324-01	Water	03/24/25 15:35	03/25/25 14:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR Wells

Job ID: 240-221003-1

Client Sample ID: BAC-03-F-20250321-01 — Lab Sample ID: 240-221003-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1900		100	57	ug/L	1		6010D	Total Recoverable
Barium	40		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.11	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	82000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.51	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	1.1		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	7.5	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	36000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	95	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	95	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	540		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	60		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.071		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	170		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-08-F-20250324-01 — Lab Sample ID: 240-221003-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	120		100	57	ug/L	1		6010D	Total Recoverable
Antimony	0.76	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Barium	83		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.15	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	86000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.73	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.4	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	61	ug/L	1		6020B	Total Recoverable
Molybdenum	1.2	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	1200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	14000		1000	880	ug/L	1		6020B	Total Recoverable
Thallium	0.51	J	1.0	0.51	ug/L	1		6020B	Total Recoverable
Total Alkalinity	180	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	180	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	330		10	7.8	mg/L	1		2540 C-2020	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample ID: BAC-08-F-20250324-01 (Continued) — Lab Sample ID: 240-221003-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.15		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	77		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-07-F-20250324-01 — Lab Sample ID: 240-221003-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1200		100	57	ug/L	1		6010D	Total Recoverable
Barium	38		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.086	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	87000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	1.2		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	7.2	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	18000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	130	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	130	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	430		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	25		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.091		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	160		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-19-F-20250324-01 — Lab Sample ID: 240-221003-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	250		100	57	ug/L	1		6010D	Total Recoverable
Barium	640		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	110000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.37	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	35		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	22000		1000	61	ug/L	1		6020B	Total Recoverable
Molybdenum	6.5		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	3000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	550000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	160	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	160	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	1700		40	31	mg/L	1		2540 C-2020	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Client Sample ID: BAC-19-F-20250324-01 (Continued)
Lab Sample ID: 240-221003-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	960		10	1.3	mg/L	10		300.0	Total/NA
Fluoride	0.56		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	9.2		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-18-F-20250324-01
Lab Sample ID: 240-221003-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1500		100	57	ug/L	1		6010D	Total Recoverable
Barium	24		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	80000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.58	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	7.2	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	17000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	96	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	96	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	410		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	23		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.071		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	170		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-03-F-20250321-01
Date Collected: 03/21/25 14:40
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1900**		100	57	ug/L		03/26/25 14:00	03/27/25 19:41	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/26/25 14:00	03/27/25 16:52	1
Arsenic	ND		5.0	0.75	ug/L		03/26/25 14:00	03/27/25 16:52	1
Barium	**40**		5.0	0.77	ug/L		03/26/25 14:00	03/27/25 16:52	1
Beryllium	ND		1.0	0.27	ug/L		03/26/25 14:00	03/27/25 16:52	1
Cadmium	**0.11**	**J**	1.0	0.077	ug/L		03/26/25 14:00	03/27/25 16:52	1
Calcium	**82000**		1000	250	ug/L		03/26/25 14:00	03/27/25 16:52	1
Chromium	ND		5.0	1.2	ug/L		03/26/25 14:00	03/27/25 16:52	1
Cobalt	**0.51**	**J**	1.0	0.086	ug/L		03/26/25 14:00	03/27/25 16:52	1
Lead	**1.1**		1.0	0.45	ug/L		03/26/25 14:00	03/27/25 16:52	1
Lithium	**7.5**	**J**	8.0	3.4	ug/L		03/26/25 14:00	03/28/25 18:51	1
Magnesium	**16000**		1000	61	ug/L		03/26/25 14:00	03/27/25 16:52	1
Molybdenum	ND		5.0	1.1	ug/L		03/26/25 14:00	03/27/25 16:52	1
Potassium	**2000**		1000	220	ug/L		03/26/25 14:00	03/27/25 16:52	1
Selenium	ND		5.0	0.89	ug/L		03/26/25 14:00	03/27/25 16:52	1
Sodium	**36000**		1000	880	ug/L		03/26/25 14:00	03/27/25 16:52	1
Thallium	ND		1.0	0.51	ug/L		03/26/25 14:00	03/27/25 16:52	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/26/25 14:00	03/27/25 10:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**95**	**B**	5.0	2.6	mg/L			04/02/25 10:11	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**95**	**B**	5.0	2.6	mg/L			04/02/25 10:11	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 10:11	1
Total Dissolved Solids (SM 2540 C-2020)	**540**		10	7.8	mg/L			03/26/25 13:58	1
Chloride (EPA 300.0)	**60**		1.0	0.13	mg/L			03/26/25 12:37	1
Fluoride (EPA 300.0)	**0.071**		0.050	0.024	mg/L			03/26/25 12:37	1
Sulfate (EPA 300.0)	**170**		1.0	0.35	mg/L			03/26/25 12:37	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.211	U	0.211	0.212	1.00	0.331	pCi/L	03/27/25 08:06	04/24/25 17:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.8*		*30 - 110*	*03/27/25 08:06*	*04/24/25 17:40*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.263	U	0.283	0.284	1.00	0.594	pCi/L	03/27/25 08:08	04/24/25 11:50	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR Wells

Job ID: 240-221003-1

Client Sample ID: BAC-03-F-20250321-01
Date Collected: 03/21/25 14:40
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-1
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		30 - 110	03/27/25 08:08	04/24/25 11:50	1
Y Carrier	82.2		30 - 110	03/27/25 08:08	04/24/25 11:50	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0517	U	0.353	0.354	5.00	0.594	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-08-F-20250324-01
Date Collected: 03/24/25 11:00
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-2
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**120**		100	57	ug/L		03/26/25 14:00	03/27/25 20:12	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.76**	**J**	2.0	0.57	ug/L		03/26/25 14:00	03/27/25 17:05	1
Arsenic	ND		5.0	0.75	ug/L		03/26/25 14:00	03/27/25 17:05	1
Barium	**83**		5.0	0.77	ug/L		03/26/25 14:00	03/27/25 17:05	1
Beryllium	ND		1.0	0.27	ug/L		03/26/25 14:00	03/27/25 17:05	1
Cadmium	**0.15**	**J**	1.0	0.077	ug/L		03/26/25 14:00	03/27/25 17:05	1
Calcium	**86000**		1000	250	ug/L		03/26/25 14:00	03/27/25 17:05	1
Chromium	ND		5.0	1.2	ug/L		03/26/25 14:00	03/27/25 17:05	1
Cobalt	**0.73**	**J**	1.0	0.086	ug/L		03/26/25 14:00	03/27/25 17:05	1
Lead	ND		1.0	0.45	ug/L		03/26/25 14:00	03/27/25 17:05	1
Lithium	**4.4**	**J**	8.0	3.4	ug/L		03/26/25 14:00	03/28/25 19:04	1
Magnesium	**13000**		1000	61	ug/L		03/26/25 14:00	03/27/25 17:05	1
Molybdenum	**1.2**	**J**	5.0	1.1	ug/L		03/26/25 14:00	03/27/25 17:05	1
Potassium	**1200**		1000	220	ug/L		03/26/25 14:00	03/27/25 17:05	1
Selenium	ND		5.0	0.89	ug/L		03/26/25 14:00	03/27/25 17:05	1
Sodium	**14000**		1000	880	ug/L		03/26/25 14:00	03/27/25 17:05	1
Thallium	**0.51**	**J**	1.0	0.51	ug/L		03/26/25 14:00	03/27/25 17:05	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/26/25 14:00	03/27/25 10:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**180**	**B**	5.0	2.6	mg/L			04/02/25 10:20	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**180**	**B**	5.0	2.6	mg/L			04/02/25 10:20	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 10:20	1
Total Dissolved Solids (SM 2540 C-2020)	**330**		10	7.8	mg/L			03/28/25 08:40	1
Chloride (EPA 300.0)	**15**		1.0	0.13	mg/L			03/26/25 12:46	1
Fluoride (EPA 300.0)	**0.15**		0.050	0.024	mg/L			03/26/25 12:46	1
Sulfate (EPA 300.0)	**77**		1.0	0.35	mg/L			03/26/25 12:46	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0303	U	0.152	0.152	1.00	0.328	pCi/L	03/27/25 08:06	04/24/25 17:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.9*		*30 - 110*	*03/27/25 08:06*	*04/24/25 17:40*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.264	U	0.320	0.321	1.00	0.528	pCi/L	03/27/25 08:08	04/24/25 11:50	1

Client Sample ID: BAC-08-F-20250324-01
Date Collected: 03/24/25 11:00
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-2
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.9*		*30 - 110*	*03/27/25 08:08*	*04/24/25 11:50*	*1*
Y Carrier	*82.6*		*30 - 110*	*03/27/25 08:08*	*04/24/25 11:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.234	U	0.354	0.355	5.00	0.528	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-07-F-20250324-01
Date Collected: 03/24/25 12:20
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-3
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1200**		100	57	ug/L		03/26/25 14:00	03/27/25 20:16	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/26/25 14:00	03/27/25 17:13	1
Arsenic	ND		5.0	0.75	ug/L		03/26/25 14:00	03/27/25 17:13	1
Barium	**38**		5.0	0.77	ug/L		03/26/25 14:00	03/27/25 17:13	1
Beryllium	ND		1.0	0.27	ug/L		03/26/25 14:00	03/27/25 17:13	1
Cadmium	**0.086**	**J**	1.0	0.077	ug/L		03/26/25 14:00	03/27/25 17:13	1
Calcium	**87000**		1000	250	ug/L		03/26/25 14:00	03/27/25 17:13	1
Chromium	ND		5.0	1.2	ug/L		03/26/25 14:00	03/27/25 17:13	1
Cobalt	**1.2**		1.0	0.086	ug/L		03/26/25 14:00	03/27/25 17:13	1
Lead	ND		1.0	0.45	ug/L		03/26/25 14:00	03/27/25 17:13	1
Lithium	**7.2**	**J**	8.0	3.4	ug/L		03/26/25 14:00	03/28/25 19:06	1
Magnesium	**21000**		1000	61	ug/L		03/26/25 14:00	03/27/25 17:13	1
Molybdenum	ND		5.0	1.1	ug/L		03/26/25 14:00	03/27/25 17:13	1
Potassium	**1400**		1000	220	ug/L		03/26/25 14:00	03/27/25 17:13	1
Selenium	ND		5.0	0.89	ug/L		03/26/25 14:00	03/27/25 17:13	1
Sodium	**18000**		1000	880	ug/L		03/26/25 14:00	03/27/25 17:13	1
Thallium	ND		1.0	0.51	ug/L		03/26/25 14:00	03/27/25 17:13	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/26/25 14:00	03/27/25 10:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**130**	**B**	5.0	2.6	mg/L			04/02/25 10:24	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**130**	**B**	5.0	2.6	mg/L			04/02/25 10:24	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 10:24	1
Total Dissolved Solids (SM 2540 C-2020)	**430**		10	7.8	mg/L			03/28/25 08:40	1
Chloride (EPA 300.0)	**25**		1.0	0.13	mg/L			03/26/25 12:55	1
Fluoride (EPA 300.0)	**0.091**		0.050	0.024	mg/L			03/26/25 12:55	1
Sulfate (EPA 300.0)	**160**		1.0	0.35	mg/L			03/26/25 12:55	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.171	U	0.241	0.241	1.00	0.407	pCi/L	03/27/25 08:06	04/24/25 17:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*30 - 110*	*03/27/25 08:06*	*04/24/25 17:41*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.219	U	0.274	0.274	1.00	0.571	pCi/L	03/27/25 08:08	04/24/25 11:50	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR Wells

Job ID: 240-221003-1

Client Sample ID: BAC-07-F-20250324-01
Date Collected: 03/24/25 12:20
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-3
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*30 - 110*	*03/27/25 08:08*	*04/24/25 11:50*	*1*
Y Carrier	*82.2*		*30 - 110*	*03/27/25 08:08*	*04/24/25 11:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0477	U	0.365	0.365	5.00	0.571	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-19-F-20250324-01
Date Collected: 03/24/25 14:15
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-4
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	250		100	57	ug/L		03/26/25 14:00	03/27/25 20:21	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/26/25 14:00	03/27/25 17:16	1
Arsenic	ND		5.0	0.75	ug/L		03/26/25 14:00	03/27/25 17:16	1
Barium	640		5.0	0.77	ug/L		03/26/25 14:00	03/27/25 17:16	1
Beryllium	ND		1.0	0.27	ug/L		03/26/25 14:00	03/27/25 17:16	1
Cadmium	ND		1.0	0.077	ug/L		03/26/25 14:00	03/27/25 17:16	1
Calcium	110000		1000	250	ug/L		03/26/25 14:00	03/27/25 17:16	1
Chromium	ND		5.0	1.2	ug/L		03/26/25 14:00	03/27/25 17:16	1
Cobalt	0.37	J	1.0	0.086	ug/L		03/26/25 14:00	03/27/25 17:16	1
Lead	ND		1.0	0.45	ug/L		03/26/25 14:00	03/27/25 17:16	1
Lithium	35		8.0	3.4	ug/L		03/26/25 14:00	03/28/25 19:09	1
Magnesium	22000		1000	61	ug/L		03/26/25 14:00	03/27/25 17:16	1
Molybdenum	6.5		5.0	1.1	ug/L		03/26/25 14:00	03/27/25 17:16	1
Potassium	3000		1000	220	ug/L		03/26/25 14:00	03/27/25 17:16	1
Selenium	ND		5.0	0.89	ug/L		03/26/25 14:00	03/27/25 17:16	1
Sodium	550000		1000	880	ug/L		03/26/25 14:00	03/27/25 17:16	1
Thallium	ND		1.0	0.51	ug/L		03/26/25 14:00	03/27/25 17:16	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/26/25 14:00	03/27/25 10:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	160	B	5.0	2.6	mg/L			04/02/25 10:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	160	B	5.0	2.6	mg/L			04/02/25 10:29	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 10:29	1
Total Dissolved Solids (SM 2540 C-2020)	1700		40	31	mg/L			03/28/25 08:40	1
Chloride (EPA 300.0)	960		10	1.3	mg/L			03/27/25 18:47	10
Fluoride (EPA 300.0)	0.56		0.050	0.024	mg/L			03/26/25 13:04	1
Sulfate (EPA 300.0)	9.2		1.0	0.35	mg/L			03/26/25 13:04	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.572		0.288	0.293	1.00	0.351	pCi/L	03/27/25 08:06	04/24/25 17:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.4*		*30 - 110*	*03/27/25 08:06*	*04/24/25 17:41*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.947		0.421	0.430	1.00	0.559	pCi/L	03/27/25 08:08	04/24/25 11:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR Wells

Job ID: 240-221003-1

Client Sample ID: BAC-19-F-20250324-01
Date Collected: 03/24/25 14:15
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-4
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	83.4		30 - 110	03/27/25 08:08	04/24/25 11:51	1
Y Carrier	80.7		30 - 110	03/27/25 08:08	04/24/25 11:51	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.52		0.510	0.520	5.00	0.559	pCi/L		04/24/25 21:35	1

Client Sample ID: BAC-18-F-20250324-01
Date Collected: 03/24/25 15:35
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-5
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1500**		100	57	ug/L		03/26/25 14:00	03/27/25 20:26	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/26/25 14:00	03/27/25 17:19	1
Arsenic	ND		5.0	0.75	ug/L		03/26/25 14:00	03/27/25 17:19	1
Barium	**24**		5.0	0.77	ug/L		03/26/25 14:00	03/27/25 17:19	1
Beryllium	ND		1.0	0.27	ug/L		03/26/25 14:00	03/27/25 17:19	1
Cadmium	ND		1.0	0.077	ug/L		03/26/25 14:00	03/27/25 17:19	1
Calcium	**80000**		1000	250	ug/L		03/26/25 14:00	03/27/25 17:19	1
Chromium	ND		5.0	1.2	ug/L		03/26/25 14:00	03/27/25 17:19	1
Cobalt	**0.58**	**J**	1.0	0.086	ug/L		03/26/25 14:00	03/27/25 17:19	1
Lead	ND		1.0	0.45	ug/L		03/26/25 14:00	03/27/25 17:19	1
Lithium	**7.2**	**J**	8.0	3.4	ug/L		03/26/25 14:00	03/28/25 19:16	1
Magnesium	**21000**		1000	61	ug/L		03/26/25 14:00	03/27/25 17:19	1
Molybdenum	ND		5.0	1.1	ug/L		03/26/25 14:00	03/27/25 17:19	1
Potassium	**1300**		1000	220	ug/L		03/26/25 14:00	03/27/25 17:19	1
Selenium	ND		5.0	0.89	ug/L		03/26/25 14:00	03/27/25 17:19	1
Sodium	**17000**		1000	880	ug/L		03/26/25 14:00	03/27/25 17:19	1
Thallium	ND		1.0	0.51	ug/L		03/26/25 14:00	03/27/25 17:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/26/25 14:00	03/27/25 10:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**96**	**B**	5.0	2.6	mg/L			04/02/25 10:34	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**96**	**B**	5.0	2.6	mg/L			04/02/25 10:34	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 10:34	1
Total Dissolved Solids (SM 2540 C-2020)	**410**		10	7.8	mg/L			03/28/25 08:40	1
Chloride (EPA 300.0)	**23**		1.0	0.13	mg/L			03/26/25 13:41	1
Fluoride (EPA 300.0)	**0.071**		0.050	0.024	mg/L			03/26/25 13:41	1
Sulfate (EPA 300.0)	**170**		1.0	0.35	mg/L			03/26/25 13:41	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0298	U	0.255	0.255	1.00	0.484	pCi/L	03/27/25 08:06	04/24/25 17:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.7*		*30 - 110*	*03/27/25 08:06*	*04/24/25 17:40*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.846**		0.429	0.436	1.00	0.598	pCi/L	03/27/25 08:08	04/24/25 11:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR Wells

Job ID: 240-221003-1

Client Sample ID: BAC-18-F-20250324-01
Date Collected: 03/24/25 15:35
Date Received: 03/25/25 14:00

Lab Sample ID: 240-221003-5
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.7		30 - 110	03/27/25 08:08	04/24/25 11:51	1
Y Carrier	84.5		30 - 110	03/27/25 08:08	04/24/25 11:51	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.875		0.499	0.505	5.00	0.598	pCi/L		04/24/25 21:35	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-221003-1	BAC-03-F-20250321-01	87.8
240-221003-1 DU	BAC-03-F-20250321-01	81.2
240-221003-2	BAC-08-F-20250324-01	91.9
240-221003-3	BAC-07-F-20250324-01	88.0
240-221003-4	BAC-19-F-20250324-01	83.4
240-221003-5	BAC-18-F-20250324-01	78.7
LCS 160-709472/2-A	Lab Control Sample	93.9
MB 160-709472/1-A	Method Blank	91.0

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-221003-1	BAC-03-F-20250321-01	87.8	82.2
240-221003-1 DU	BAC-03-F-20250321-01	81.2	81.1
240-221003-2	BAC-08-F-20250324-01	91.9	82.6
240-221003-3	BAC-07-F-20250324-01	88.0	82.2
240-221003-4	BAC-19-F-20250324-01	83.4	80.7
240-221003-5	BAC-18-F-20250324-01	78.7	84.5
LCS 160-709473/2-A	Lab Control Sample	93.9	84.5
MB 160-709473/1-A	Method Blank	91.0	83.7

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-649682/1-A
Matrix: Water
Analysis Batch: 649947

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		03/26/25 14:00	03/27/25 19:32	1

Lab Sample ID: LCS 240-649682/2-A
Matrix: Water
Analysis Batch: 649947

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			1000	1080		ug/L		108	80 - 120		

Lab Sample ID: 240-221003-1 MS
Matrix: Water
Analysis Batch: 649947

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron	1900		1000	2970		ug/L		105	75 - 125		

Lab Sample ID: 240-221003-1 MSD
Matrix: Water
Analysis Batch: 649947

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	1900		1000	2900		ug/L		98	75 - 125	3	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-649682/1-A
Matrix: Water
Analysis Batch: 649985

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/26/25 14:00	03/27/25 16:47	1
Arsenic	ND		5.0	0.75	ug/L		03/26/25 14:00	03/27/25 16:47	1
Barium	ND		5.0	0.77	ug/L		03/26/25 14:00	03/27/25 16:47	1
Beryllium	ND		1.0	0.27	ug/L		03/26/25 14:00	03/27/25 16:47	1
Cadmium	ND		1.0	0.077	ug/L		03/26/25 14:00	03/27/25 16:47	1
Calcium	ND		1000	250	ug/L		03/26/25 14:00	03/27/25 16:47	1
Chromium	ND		5.0	1.2	ug/L		03/26/25 14:00	03/27/25 16:47	1
Cobalt	ND		1.0	0.086	ug/L		03/26/25 14:00	03/27/25 16:47	1
Lead	ND		1.0	0.45	ug/L		03/26/25 14:00	03/27/25 16:47	1
Magnesium	ND		1000	61	ug/L		03/26/25 14:00	03/27/25 16:47	1
Molybdenum	ND		5.0	1.1	ug/L		03/26/25 14:00	03/27/25 16:47	1
Potassium	ND		1000	220	ug/L		03/26/25 14:00	03/27/25 16:47	1
Selenium	ND		5.0	0.89	ug/L		03/26/25 14:00	03/27/25 16:47	1
Sodium	ND		1000	880	ug/L		03/26/25 14:00	03/27/25 16:47	1
Thallium	ND		1.0	0.51	ug/L		03/26/25 14:00	03/27/25 16:47	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-649682/1-A
Matrix: Water
Analysis Batch: 650067

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		8.0	3.4	ug/L		03/26/25 14:00	03/28/25 18:46	1

Lab Sample ID: LCS 240-649682/3-A
Matrix: Water
Analysis Batch: 649985

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	101		ug/L		101	80 - 120
Arsenic	1000	957		ug/L		96	80 - 120
Barium	1000	976		ug/L		98	80 - 120
Beryllium	500	502		ug/L		100	80 - 120
Cadmium	500	475		ug/L		95	80 - 120
Calcium	25000	24900		ug/L		99	80 - 120
Chromium	500	485		ug/L		97	80 - 120
Cobalt	500	476		ug/L		95	80 - 120
Lead	500	447		ug/L		89	80 - 120
Magnesium	25000	25800		ug/L		103	80 - 120
Molybdenum	500	497		ug/L		99	80 - 120
Potassium	25000	24500		ug/L		98	80 - 120
Selenium	1000	901		ug/L		90	80 - 120
Sodium	25000	25400		ug/L		102	80 - 120
Thallium	1000	1050		ug/L		105	80 - 120

Lab Sample ID: LCS 240-649682/3-A
Matrix: Water
Analysis Batch: 650067

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	500	498		ug/L		100	80 - 120

Lab Sample ID: 240-221003-1 MS
Matrix: Water
Analysis Batch: 649985

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		100	102		ug/L		102	80 - 120
Arsenic	ND		1000	960		ug/L		96	80 - 120
Barium	40		1000	1000		ug/L		96	80 - 120
Beryllium	ND		500	496		ug/L		99	80 - 120
Cadmium	0.11	J	500	466		ug/L		93	80 - 120
Calcium	82000		25000	105000		ug/L		92	80 - 120
Chromium	ND		500	477		ug/L		95	80 - 120
Cobalt	0.51	J	500	467		ug/L		93	80 - 120
Lead	1.1		500	444		ug/L		89	80 - 120
Magnesium	16000		25000	41600		ug/L		101	80 - 120
Molybdenum	ND		500	499		ug/L		100	80 - 120
Potassium	2000		25000	26100		ug/L		97	80 - 120
Selenium	ND		1000	864		ug/L		86	80 - 120
Sodium	36000		25000	59200		ug/L		95	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-221003-1 MS
Matrix: Water
Analysis Batch: 649985

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	ND		1000	1050		ug/L		105	80 - 120

Lab Sample ID: 240-221003-1 MS
Matrix: Water
Analysis Batch: 650067

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	7.5	J	500	500		ug/L		98	80 - 120

Lab Sample ID: 240-221003-1 MSD
Matrix: Water
Analysis Batch: 649985

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		100	101		ug/L		101	80 - 120	1	20
Arsenic	ND		1000	966		ug/L		97	80 - 120	1	20
Barium	40		1000	1000		ug/L		96	80 - 120	0	20
Beryllium	ND		500	494		ug/L		99	80 - 120	0	20
Cadmium	0.11	J	500	470		ug/L		94	80 - 120	1	20
Calcium	82000		25000	104000		ug/L		92	80 - 120	0	20
Chromium	ND		500	486		ug/L		97	80 - 120	2	20
Cobalt	0.51	J	500	472		ug/L		94	80 - 120	1	20
Lead	1.1		500	444		ug/L		89	80 - 120	0	20
Magnesium	16000		25000	41800		ug/L		102	80 - 120	0	20
Molybdenum	ND		500	500		ug/L		100	80 - 120	0	20
Potassium	2000		25000	26200		ug/L		97	80 - 120	0	20
Selenium	ND		1000	865		ug/L		86	80 - 120	0	20
Sodium	36000		25000	61000		ug/L		102	80 - 120	3	20
Thallium	ND		1000	1050		ug/L		105	80 - 120	1	20

Lab Sample ID: 240-221003-1 MSD
Matrix: Water
Analysis Batch: 650067

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total Recoverable
Prep Batch: 649682

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lithium	7.5	J	500	504		ug/L		99	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-649688/1-A
Matrix: Water
Analysis Batch: 649908

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 649688

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/26/25 14:00	03/27/25 10:25	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-649688/2-A
Matrix: Water
Analysis Batch: 649908

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 649688

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	5.01		ug/L		100	80 - 120		

Lab Sample ID: 240-221003-1 MS
Matrix: Water
Analysis Batch: 649908

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total/NA
Prep Batch: 649688

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	ND		1.00	1.01		ug/L		101	80 - 120		

Lab Sample ID: 240-221003-1 MSD
Matrix: Water
Analysis Batch: 649908

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total/NA
Prep Batch: 649688

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		1.00	1.00		ug/L		100	80 - 120	1	20

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-650639/4
Matrix: Water
Analysis Batch: 650639

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	3.83	J	5.0	2.6	mg/L			04/02/25 10:07	1
Bicarbonate Alkalinity as CaCO3	3.83	J	5.0	2.6	mg/L			04/02/25 10:07	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/02/25 10:07	1

Lab Sample ID: LCS 240-650639/3
Matrix: Water
Analysis Batch: 650639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity			280	268		mg/L		96	86 - 123		

Lab Sample ID: 240-221003-1 DU
Matrix: Water
Analysis Batch: 650639

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	95	B	94.8		mg/L		0	20
Bicarbonate Alkalinity as CaCO3	95	B	94.8		mg/L		0	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	20

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-649752/1
Matrix: Water
Analysis Batch: 649752

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			03/26/25 13:58	1

Lab Sample ID: LCS 240-649752/2
Matrix: Water
Analysis Batch: 649752

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			495	433		mg/L		87	80 - 120		

Lab Sample ID: 240-221003-1 DU
Matrix: Water
Analysis Batch: 649752

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	540			567		mg/L				5	20

Lab Sample ID: MB 240-649984/1
Matrix: Water
Analysis Batch: 649984

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			03/28/25 08:40	1

Lab Sample ID: LCS 240-649984/2
Matrix: Water
Analysis Batch: 649984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			176	169		mg/L		96	80 - 120		

Lab Sample ID: 240-221003-2 DU
Matrix: Water
Analysis Batch: 649984

Client Sample ID: BAC-08-F-20250324-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	330			338		mg/L				2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-649700/3
Matrix: Water
Analysis Batch: 649700

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			03/26/25 11:51	1
Fluoride	ND		0.050	0.024	mg/L			03/26/25 11:51	1
Sulfate	ND		1.0	0.35	mg/L			03/26/25 11:51	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-649700/4
Matrix: Water
Analysis Batch: 649700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.2		mg/L		96	90 - 110
Fluoride	2.50	2.47		mg/L		99	90 - 110
Sulfate	50.0	47.0		mg/L		94	90 - 110

Lab Sample ID: MB 240-649895/3
Matrix: Water
Analysis Batch: 649895

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			03/27/25 13:08	1
Fluoride	ND		0.050	0.024	mg/L			03/27/25 13:08	1
Sulfate	ND		1.0	0.35	mg/L			03/27/25 13:08	1

Lab Sample ID: LCS 240-649895/4
Matrix: Water
Analysis Batch: 649895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.3		mg/L		97	90 - 110
Fluoride	2.50	2.48		mg/L		99	90 - 110
Sulfate	50.0	47.6		mg/L		95	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-709472/1-A
Matrix: Water
Analysis Batch: 714122

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709472

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02024	U	0.142	0.142	1.00	0.312	pCi/L	03/27/25 08:06	04/24/25 17:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.0*		*30 - 110*	*03/27/25 08:06*	*04/24/25 17:45*	*1*

Lab Sample ID: LCS 160-709472/2-A
Matrix: Water
Analysis Batch: 714122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709472

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.58	6.804		1.01	1.00	0.390	pCi/L	71	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*93.9*		*30 - 110*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: 240-221003-1 DU
Matrix: Water
Analysis Batch: 714282

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total/NA
Prep Batch: 709472

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.211	U		-0.01903	U	0.173	1.00	0.365	pCi/L			0.60	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*81.2*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-709473/1-A
Matrix: Water
Analysis Batch: 714122

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709473

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1443	U	0.310	0.310	1.00	0.539	pCi/L	03/27/25 08:08	04/24/25 11:54	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.0*		*30 - 110*	*03/27/25 08:08*	*04/24/25 11:54*	*1*
Y Carrier	*83.7*		*30 - 110*	*03/27/25 08:08*	*04/24/25 11:54*	*1*

Lab Sample ID: LCS 160-709473/2-A
Matrix: Water
Analysis Batch: 714122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709473

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.51	11.26		1.43	1.00	0.444	pCi/L	118	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*93.9*		*30 - 110*
Y Carrier	*84.5*		*30 - 110*

Lab Sample ID: 240-221003-1 DU
Matrix: Water
Analysis Batch: 714282

Client Sample ID: BAC-03-F-20250321-01
Prep Type: Total/NA
Prep Batch: 709473

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	-0.263	U		0.2306	U	0.335	1.00	0.565	pCi/L			0.80	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*81.2*		*30 - 110*
Y Carrier	*81.1*		*30 - 110*

Metals

Prep Batch: 649682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total Recoverable	Water	3005A	
240-221003-2	BAC-08-F-20250324-01	Total Recoverable	Water	3005A	
240-221003-3	BAC-07-F-20250324-01	Total Recoverable	Water	3005A	
240-221003-4	BAC-19-F-20250324-01	Total Recoverable	Water	3005A	
240-221003-5	BAC-18-F-20250324-01	Total Recoverable	Water	3005A	
MB 240-649682/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-649682/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-649682/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-221003-1 MS	BAC-03-F-20250321-01	Total Recoverable	Water	3005A	
240-221003-1 MS	BAC-03-F-20250321-01	Total Recoverable	Water	3005A	
240-221003-1 MSD	BAC-03-F-20250321-01	Total Recoverable	Water	3005A	
240-221003-1 MSD	BAC-03-F-20250321-01	Total Recoverable	Water	3005A	

Prep Batch: 649688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total/NA	Water	7470A	
240-221003-2	BAC-08-F-20250324-01	Total/NA	Water	7470A	
240-221003-3	BAC-07-F-20250324-01	Total/NA	Water	7470A	
240-221003-4	BAC-19-F-20250324-01	Total/NA	Water	7470A	
240-221003-5	BAC-18-F-20250324-01	Total/NA	Water	7470A	
MB 240-649688/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-649688/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-221003-1 MS	BAC-03-F-20250321-01	Total/NA	Water	7470A	
240-221003-1 MSD	BAC-03-F-20250321-01	Total/NA	Water	7470A	

Analysis Batch: 649908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total/NA	Water	7470A	649688
240-221003-2	BAC-08-F-20250324-01	Total/NA	Water	7470A	649688
240-221003-3	BAC-07-F-20250324-01	Total/NA	Water	7470A	649688
240-221003-4	BAC-19-F-20250324-01	Total/NA	Water	7470A	649688
240-221003-5	BAC-18-F-20250324-01	Total/NA	Water	7470A	649688
MB 240-649688/1-A	Method Blank	Total/NA	Water	7470A	649688
LCS 240-649688/2-A	Lab Control Sample	Total/NA	Water	7470A	649688
240-221003-1 MS	BAC-03-F-20250321-01	Total/NA	Water	7470A	649688
240-221003-1 MSD	BAC-03-F-20250321-01	Total/NA	Water	7470A	649688

Analysis Batch: 649947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total Recoverable	Water	6010D	649682
240-221003-2	BAC-08-F-20250324-01	Total Recoverable	Water	6010D	649682
240-221003-3	BAC-07-F-20250324-01	Total Recoverable	Water	6010D	649682
240-221003-4	BAC-19-F-20250324-01	Total Recoverable	Water	6010D	649682
240-221003-5	BAC-18-F-20250324-01	Total Recoverable	Water	6010D	649682
MB 240-649682/1-A	Method Blank	Total Recoverable	Water	6010D	649682
LCS 240-649682/2-A	Lab Control Sample	Total Recoverable	Water	6010D	649682
240-221003-1 MS	BAC-03-F-20250321-01	Total Recoverable	Water	6010D	649682
240-221003-1 MSD	BAC-03-F-20250321-01	Total Recoverable	Water	6010D	649682

Metals

Analysis Batch: 649985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total Recoverable	Water	6020B	649682
240-221003-2	BAC-08-F-20250324-01	Total Recoverable	Water	6020B	649682
240-221003-3	BAC-07-F-20250324-01	Total Recoverable	Water	6020B	649682
240-221003-4	BAC-19-F-20250324-01	Total Recoverable	Water	6020B	649682
240-221003-5	BAC-18-F-20250324-01	Total Recoverable	Water	6020B	649682
MB 240-649682/1-A	Method Blank	Total Recoverable	Water	6020B	649682
LCS 240-649682/3-A	Lab Control Sample	Total Recoverable	Water	6020B	649682
240-221003-1 MS	BAC-03-F-20250321-01	Total Recoverable	Water	6020B	649682
240-221003-1 MSD	BAC-03-F-20250321-01	Total Recoverable	Water	6020B	649682

Analysis Batch: 650067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total Recoverable	Water	6020B	649682
240-221003-2	BAC-08-F-20250324-01	Total Recoverable	Water	6020B	649682
240-221003-3	BAC-07-F-20250324-01	Total Recoverable	Water	6020B	649682
240-221003-4	BAC-19-F-20250324-01	Total Recoverable	Water	6020B	649682
240-221003-5	BAC-18-F-20250324-01	Total Recoverable	Water	6020B	649682
MB 240-649682/1-A	Method Blank	Total Recoverable	Water	6020B	649682
LCS 240-649682/3-A	Lab Control Sample	Total Recoverable	Water	6020B	649682
240-221003-1 MS	BAC-03-F-20250321-01	Total Recoverable	Water	6020B	649682
240-221003-1 MSD	BAC-03-F-20250321-01	Total Recoverable	Water	6020B	649682

General Chemistry

Analysis Batch: 649700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total/NA	Water	300.0	
240-221003-2	BAC-08-F-20250324-01	Total/NA	Water	300.0	
240-221003-3	BAC-07-F-20250324-01	Total/NA	Water	300.0	
240-221003-4	BAC-19-F-20250324-01	Total/NA	Water	300.0	
240-221003-5	BAC-18-F-20250324-01	Total/NA	Water	300.0	
MB 240-649700/3	Method Blank	Total/NA	Water	300.0	
LCS 240-649700/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 649752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total/NA	Water	2540 C-2020	
MB 240-649752/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-649752/2	Lab Control Sample	Total/NA	Water	2540 C-2020	
240-221003-1 DU	BAC-03-F-20250321-01	Total/NA	Water	2540 C-2020	

Analysis Batch: 649895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-4	BAC-19-F-20250324-01	Total/NA	Water	300.0	
MB 240-649895/3	Method Blank	Total/NA	Water	300.0	
LCS 240-649895/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 649984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-2	BAC-08-F-20250324-01	Total/NA	Water	2540 C-2020	
240-221003-3	BAC-07-F-20250324-01	Total/NA	Water	2540 C-2020	

General Chemistry (Continued)

Analysis Batch: 649984 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-4	BAC-19-F-20250324-01	Total/NA	Water	2540 C-2020	
240-221003-5	BAC-18-F-20250324-01	Total/NA	Water	2540 C-2020	
MB 240-649984/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-649984/2	Lab Control Sample	Total/NA	Water	2540 C-2020	
240-221003-2 DU	BAC-08-F-20250324-01	Total/NA	Water	2540 C-2020	

Analysis Batch: 650639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total/NA	Water	2320 B-2021	
240-221003-2	BAC-08-F-20250324-01	Total/NA	Water	2320 B-2021	
240-221003-3	BAC-07-F-20250324-01	Total/NA	Water	2320 B-2021	
240-221003-4	BAC-19-F-20250324-01	Total/NA	Water	2320 B-2021	
240-221003-5	BAC-18-F-20250324-01	Total/NA	Water	2320 B-2021	
MB 240-650639/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-650639/3	Lab Control Sample	Total/NA	Water	2320 B-2021	
240-221003-1 DU	BAC-03-F-20250321-01	Total/NA	Water	2320 B-2021	

Rad

Prep Batch: 709472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total/NA	Water	PrecSep-21	
240-221003-2	BAC-08-F-20250324-01	Total/NA	Water	PrecSep-21	
240-221003-3	BAC-07-F-20250324-01	Total/NA	Water	PrecSep-21	
240-221003-4	BAC-19-F-20250324-01	Total/NA	Water	PrecSep-21	
240-221003-5	BAC-18-F-20250324-01	Total/NA	Water	PrecSep-21	
MB 160-709472/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-709472/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-221003-1 DU	BAC-03-F-20250321-01	Total/NA	Water	PrecSep-21	

Prep Batch: 709473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221003-1	BAC-03-F-20250321-01	Total/NA	Water	PrecSep_0	
240-221003-2	BAC-08-F-20250324-01	Total/NA	Water	PrecSep_0	
240-221003-3	BAC-07-F-20250324-01	Total/NA	Water	PrecSep_0	
240-221003-4	BAC-19-F-20250324-01	Total/NA	Water	PrecSep_0	
240-221003-5	BAC-18-F-20250324-01	Total/NA	Water	PrecSep_0	
MB 160-709473/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-709473/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-221003-1 DU	BAC-03-F-20250321-01	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Client Sample ID: BAC-03-F-20250321-01
Lab Sample ID: 240-221003-1

Date Collected: 03/21/25 14:40
Matrix: Water
Date Received: 03/25/25 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/27/25 19:41
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	649985	RKT	EET CLE	03/27/25 16:52
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	650067	S4FJ	EET CLE	03/28/25 18:51
Total/NA	Prep	7470A			649688	BN	EET CLE	03/26/25 14:00
Total/NA	Analysis	7470A		1	649908	TQ6W	EET CLE	03/27/25 10:28
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 10:11
Total/NA	Analysis	2540 C-2020		1	649752	TAV2	EET CLE	03/26/25 13:58
Total/NA	Analysis	300.0		1	649700	JMR	EET CLE	03/26/25 12:37
Total/NA	Prep	PrecSep-21			709472	OGC	EET SL	03/27/25 08:06
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 17:40
Total/NA	Prep	PrecSep_0			709473	OGC	EET SL	03/27/25 08:08
Total/NA	Analysis	9320		1	714282	SCB	EET SL	04/24/25 11:50
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: BAC-08-F-20250324-01
Lab Sample ID: 240-221003-2

Date Collected: 03/24/25 11:00
Matrix: Water
Date Received: 03/25/25 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/27/25 20:12
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	649985	RKT	EET CLE	03/27/25 17:05
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	650067	S4FJ	EET CLE	03/28/25 19:04
Total/NA	Prep	7470A			649688	BN	EET CLE	03/26/25 14:00
Total/NA	Analysis	7470A		1	649908	TQ6W	EET CLE	03/27/25 10:33
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 10:20
Total/NA	Analysis	2540 C-2020		1	649984	C5SV	EET CLE	03/28/25 08:40
Total/NA	Analysis	300.0		1	649700	JMR	EET CLE	03/26/25 12:46
Total/NA	Prep	PrecSep-21			709472	OGC	EET SL	03/27/25 08:06
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 17:40
Total/NA	Prep	PrecSep_0			709473	OGC	EET SL	03/27/25 08:08
Total/NA	Analysis	9320		1	714282	SCB	EET SL	04/24/25 11:50
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Client Sample ID: BAC-07-F-20250324-01
Lab Sample ID: 240-221003-3

Date Collected: 03/24/25 12:20
Matrix: Water
Date Received: 03/25/25 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/27/25 20:16
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	649985	RKT	EET CLE	03/27/25 17:13
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	650067	S4FJ	EET CLE	03/28/25 19:06
Total/NA	Prep	7470A			649688	BN	EET CLE	03/26/25 14:00
Total/NA	Analysis	7470A		1	649908	TQ6W	EET CLE	03/27/25 10:35
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 10:24
Total/NA	Analysis	2540 C-2020		1	649984	C5SV	EET CLE	03/28/25 08:40
Total/NA	Analysis	300.0		1	649700	JMR	EET CLE	03/26/25 12:55
Total/NA	Prep	PrecSep-21			709472	OGC	EET SL	03/27/25 08:06
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 17:41
Total/NA	Prep	PrecSep_0			709473	OGC	EET SL	03/27/25 08:08
Total/NA	Analysis	9320		1	714282	SCB	EET SL	04/24/25 11:50
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Client Sample ID: BAC-19-F-20250324-01
Lab Sample ID: 240-221003-4

Date Collected: 03/24/25 14:15
Matrix: Water
Date Received: 03/25/25 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/27/25 20:21
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	649985	RKT	EET CLE	03/27/25 17:16
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	650067	S4FJ	EET CLE	03/28/25 19:09
Total/NA	Prep	7470A			649688	BN	EET CLE	03/26/25 14:00
Total/NA	Analysis	7470A		1	649908	TQ6W	EET CLE	03/27/25 10:36
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 10:29
Total/NA	Analysis	2540 C-2020		1	649984	C5SV	EET CLE	03/28/25 08:40
Total/NA	Analysis	300.0		1	649700	JMR	EET CLE	03/26/25 13:04
Total/NA	Analysis	300.0		10	649895	JMR	EET CLE	03/27/25 18:47
Total/NA	Prep	PrecSep-21			709472	OGC	EET SL	03/27/25 08:06
Total/NA	Analysis	9315		1	714282	SCB	EET SL	04/24/25 17:41
Total/NA	Prep	PrecSep_0			709473	OGC	EET SL	03/27/25 08:08
Total/NA	Analysis	9320		1	714282	SCB	EET SL	04/24/25 11:51
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Client Sample ID: BAC-18-F-20250324-01
Lab Sample ID: 240-221003-5
Date Collected: 03/24/25 15:35
Matrix: Water
Date Received: 03/25/25 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6010D		1	649947	AJC	EET CLE	03/27/25 20:26
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	649985	RKT	EET CLE	03/27/25 17:19
Total Recoverable	Prep	3005A			649682	BN	EET CLE	03/26/25 14:00
Total Recoverable	Analysis	6020B		1	650067	S4FJ	EET CLE	03/28/25 19:16
Total/NA	Prep	7470A			649688	BN	EET CLE	03/26/25 14:00
Total/NA	Analysis	7470A		1	649908	TQ6W	EET CLE	03/27/25 10:38
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 10:34
Total/NA	Analysis	2540 C-2020		1	649984	C5SV	EET CLE	03/28/25 08:40
Total/NA	Analysis	300.0		1	649700	JMR	EET CLE	03/26/25 13:41
Total/NA	Prep	PrecSep-21			709472	OGC	EET SL	03/27/25 08:06
Total/NA	Analysis	9315		1	714268	SCB	EET SL	04/24/25 17:40
Total/NA	Prep	PrecSep_0			709473	OGC	EET SL	03/27/25 08:08
Total/NA	Analysis	9320		1	714282	SCB	EET SL	04/24/25 11:51
Total/NA	Analysis	Ra226_Ra228		1	714320	EMH	EET SL	04/24/25 21:35

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-25 *
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221003-1
Project/Site: Gavin CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

07/07

Client Information	Sampler: Bobby Cosio	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:
Company: Lightstone Generation Gavin Power LLC	PWSID		
Address: 7397 OH-7	Due Date Requested:		
City: Cheshire	TAT Requested (days):		
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No		
Phone: 740-925-3171(Tel)	PO #: 2935505		
Email: taylor.huffman@lightstonegen.com	WO #		
Project Name: Gavin CCR	Project #: 24019633		
Site: Gavin	SSOW#		

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity
			Preservation Code:				D	N	D	N	N
BAC-03-F-20250321-01	3-21-25	1440	6	Water			1	1	2	1	1
BAC-08-F-20250324-01	3-24-25	1100	6	Water			1	1	2	1	1
BAC-07-F-20250324-01	3-24-25	1220	6	Water			1	1	2	1	1
BAC-19-F-20250324-01	3-24-25	1415	6	Water			1	1	2	1	1
BAC-18-F-20250324-01	3-24-25	535	6	Water			1	1	2	1	1
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

240-221003

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are ret
☐ Return To Client ☐ Disposal By Lab ☐ A

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by: Date/Time: 3-25-25 1000 Company Received by: Tom Edwards Date/Time: 13-25-2

Relinquished by: Tom Edwards Date/Time: Company Received by: Date/Time:

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 13 (CF +0.0 °C) Observed Cooler Temp. 0.7 °C Corrected Cooler Temp. 0.7

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC4'8
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099-123124 Cooler Receipt Form.doc

BAC-03-F-20250321-01	240-221003-E-1	Plastic 1 liter - Nitric Acid				
BAC-03-F-20250321-01	240-221003-F-1	Plastic 1 liter - Nitric Acid				
BAC-08-F-20250324-01	240-221003-A-2	Plastic 60 mL - unpreserved				
BAC-08-F-20250324-01	240-221003-B-2	Plastic 60 mL - unpreserved				
BAC-08-F-20250324-01	240-221003-C-2	Plastic 500ml - unpreserved				
BAC-08-F-20250324-01	240-221003-D-2	Plastic 500ml - with Nitric Acid	<2			
BAC-08-F-20250324-01	240-221003-E-2	Plastic 1 liter - Nitric Acid				
BAC-08-F-20250324-01	240-221003-F-2	Plastic 1 liter - Nitric Acid				
BAC-07-F-20250324-01	240-221003-A-3	Plastic 60 mL - unpreserved				
BAC-07-F-20250324-01	240-221003-B-3	Plastic 60 mL - unpreserved				
BAC-07-F-20250324-01	240-221003-C-3	Plastic 500ml - unpreserved				
BAC-07-F-20250324-01	240-221003-D-3	Plastic 500ml - with Nitric Acid	<2			
BAC-07-F-20250324-01	240-221003-E-3	Plastic 1 liter - Nitric Acid				
BAC-07-F-20250324-01	240-221003-F-3	Plastic 1 liter - Nitric Acid				
BAC-19-F-20250324-01	240-221003-A-4	Plastic 60 mL - unpreserved				
BAC-19-F-20250324-01	240-221003-B-4	Plastic 60 mL - unpreserved				
BAC-19-F-20250324-01	240-221003-C-4	Plastic 500ml - unpreserved				
BAC-19-F-20250324-01	240-221003-D-4	Plastic 500ml - with Nitric Acid	<2			
BAC-19-F-20250324-01	240-221003-E-4	Plastic 1 liter - Nitric Acid				
BAC-19-F-20250324-01	240-221003-F-4	Plastic 1 liter - Nitric Acid				
BAC-18-F-20250324-01	240-221003-A-5	Plastic 60 mL - unpreserved				
BAC-18-F-20250324-01	240-221003-B-5	Plastic 60 mL - unpreserved				
BAC-18-F-20250324-01	240-221003-C-5	Plastic 500ml - unpreserved				
BAC-18-F-20250324-01	240-221003-D-5	Plastic 500ml - with Nitric Acid	<2			
BAC-18-F-20250324-01	240-221003-E-5	Plastic 1 liter - Nitric Acid				
BAC-18-F-20250324-01	240-221003-F-5	Plastic 1 liter - Nitric Acid				

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-200316.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-221003-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/24/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal CCR Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-03-F-20250321-01 (240-221003-1)	3/21/25	14:40 Eastern	G	Water			X	X	X	2	
BAC-08-F-20250324-01 (240-221003-2)	3/24/25	11:00 Eastern	G	Water			X	X	X	2	
BAC-07-F-20250324-01 (240-221003-3)	3/24/25	12:20 Eastern	G	Water			X	X	X	2	
BAC-19-F-20250324-01 (240-221003-4)	3/24/25	14:15 Eastern	G	Water			X	X	X	2	
BAC-18-F-20250324-01 (240-221003-5)	3/24/25	15:35 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification Unconfirmed	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)* ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		3-25-25	EC		0825 MAR 26 2025	
2	Relinquished by:	Date/Time:	Company	Received by: Cheyenne Forrest	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-221003-1

Login Number: 221003
List Number: 2
Creator: Forrest, Cheyenne L

List Source: Eurofins St. Louis
List Creation: 03/26/25 11:12 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Generated 4/28/2025 2:24:25 PM

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-221259-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

Generated
4/28/2025 2:24:25 PM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-221259-1 — Eurofins Cleveland

Job Narrative
240-221259-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 3/29/2025 8:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221259-1
Project/Site: Federal CCR Wells

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221259-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-221259-1	BAC-06-F-20250327-01	Water	03/27/25 14:32	03/29/25 08:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221259-1

Client Sample ID: BAC-06-F-20250327-01

Lab Sample ID: 240-221259-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1900		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.89	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	110		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.13	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	120000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	3.3		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	7.3	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	27000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	17000		1000	880	ug/L	1		6020B	Total Recoverable
Thallium	0.56	J	1.0	0.51	ug/L	1		6020B	Total Recoverable
Total Alkalinity	200		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	200		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	550		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	26		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.097		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	190	F1	1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-06-F-20250327-01
Date Collected: 03/27/25 14:32
Date Received: 03/29/25 08:00

Lab Sample ID: 240-221259-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1900**		100	57	ug/L		03/31/25 14:00	04/02/25 07:49	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/31/25 14:00	04/02/25 15:11	1
Arsenic	**0.89**	**J**	5.0	0.75	ug/L		03/31/25 14:00	04/02/25 15:11	1
Barium	**110**		5.0	0.77	ug/L		03/31/25 14:00	04/02/25 15:11	1
Beryllium	ND		1.0	0.27	ug/L		03/31/25 14:00	04/02/25 15:11	1
Cadmium	**0.13**	**J**	1.0	0.077	ug/L		03/31/25 14:00	04/02/25 15:11	1
Calcium	**120000**		1000	250	ug/L		03/31/25 14:00	04/02/25 15:11	1
Chromium	ND		5.0	1.2	ug/L		03/31/25 14:00	04/02/25 15:11	1
Cobalt	**3.3**		1.0	0.086	ug/L		03/31/25 14:00	04/02/25 15:11	1
Lead	ND		1.0	0.45	ug/L		03/31/25 14:00	04/02/25 15:11	1
Lithium	**7.3**	**J**	8.0	3.4	ug/L		03/31/25 14:00	04/02/25 15:11	1
Magnesium	**27000**		1000	61	ug/L		03/31/25 14:00	04/02/25 15:11	1
Molybdenum	ND		5.0	1.1	ug/L		03/31/25 14:00	04/02/25 15:11	1
Potassium	**1500**		1000	220	ug/L		03/31/25 14:00	04/02/25 15:11	1
Selenium	ND		5.0	0.89	ug/L		03/31/25 14:00	04/02/25 15:11	1
Sodium	**17000**		1000	880	ug/L		03/31/25 14:00	04/02/25 15:11	1
Thallium	**0.56**	**J**	1.0	0.51	ug/L		03/31/25 14:00	04/02/25 15:11	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/31/25 14:00	04/01/25 10:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**200**		5.0	2.6	mg/L			04/01/25 14:37	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**200**		5.0	2.6	mg/L			04/01/25 14:37	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/01/25 14:37	1
Total Dissolved Solids (SM 2540 C-2020)	**550**		10	7.8	mg/L			04/02/25 14:50	1
Chloride (EPA 300.0)	**26**		1.0	0.13	mg/L			04/01/25 02:53	1
Fluoride (EPA 300.0)	**0.097**		0.050	0.024	mg/L			04/01/25 02:53	1
Sulfate (EPA 300.0)	**190**	**F1**	1.0	0.35	mg/L			04/01/25 02:53	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.238	U	0.209	0.210	1.00	0.307	pCi/L	04/02/25 08:58	04/27/25 14:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.8*		*30 - 110*	*04/02/25 08:58*	*04/27/25 14:02*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.445	U	0.373	0.375	1.00	0.583	pCi/L	04/02/25 09:19	04/27/25 11:38	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221259-1

Client Sample ID: BAC-06-F-20250327-01
Date Collected: 03/27/25 14:32
Date Received: 03/29/25 08:00

Lab Sample ID: 240-221259-1
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		30 - 110	04/02/25 09:19	04/27/25 11:38	1
Y Carrier	80.4		30 - 110	04/02/25 09:19	04/27/25 11:38	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.683		0.428	0.430	5.00	0.583	pCi/L		04/28/25 13:12	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221259-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-221259-1	BAC-06-F-20250327-01	86.8
240-221259-1 MS	BAC-06-F-20250327-01	89.5
240-221259-1 MSD	BAC-06-F-20250327-01	88.8
LCS 160-710458/2-A	Lab Control Sample	85.8
MB 160-710458/1-A	Method Blank	78.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-221259-1	BAC-06-F-20250327-01	86.8	80.4
240-221259-1 MS	BAC-06-F-20250327-01	89.5	78.9
240-221259-1 MSD	BAC-06-F-20250327-01	88.8	80.7
LCS 160-710459/2-A	Lab Control Sample	85.8	78.9
MB 160-710459/1-A	Method Blank	78.2	77.0

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-650182/1-A
Matrix: Water
Analysis Batch: 650532

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		03/31/25 14:00	04/02/25 07:41	1

Lab Sample ID: LCS 240-650182/2-A
Matrix: Water
Analysis Batch: 650532

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			1000	1090		ug/L		109	80 - 120		

Lab Sample ID: 240-221259-1 MS
Matrix: Water
Analysis Batch: 650532

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron	1900		1000	2930		ug/L		108	75 - 125		

Lab Sample ID: 240-221259-1 MSD
Matrix: Water
Analysis Batch: 650532

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	1900		1000	2930		ug/L		107	75 - 125	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-650182/1-A
Matrix: Water
Analysis Batch: 650678

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		03/31/25 14:00	04/02/25 15:06	1
Arsenic	ND		5.0	0.75	ug/L		03/31/25 14:00	04/02/25 15:06	1
Barium	ND		5.0	0.77	ug/L		03/31/25 14:00	04/02/25 15:06	1
Beryllium	ND		1.0	0.27	ug/L		03/31/25 14:00	04/02/25 15:06	1
Cadmium	ND		1.0	0.077	ug/L		03/31/25 14:00	04/02/25 15:06	1
Calcium	ND		1000	250	ug/L		03/31/25 14:00	04/02/25 15:06	1
Chromium	ND		5.0	1.2	ug/L		03/31/25 14:00	04/02/25 15:06	1
Cobalt	ND		1.0	0.086	ug/L		03/31/25 14:00	04/02/25 15:06	1
Lead	ND		1.0	0.45	ug/L		03/31/25 14:00	04/02/25 15:06	1
Lithium	ND		8.0	3.4	ug/L		03/31/25 14:00	04/02/25 15:06	1
Magnesium	ND		1000	61	ug/L		03/31/25 14:00	04/02/25 15:06	1
Molybdenum	ND		5.0	1.1	ug/L		03/31/25 14:00	04/02/25 15:06	1
Potassium	ND		1000	220	ug/L		03/31/25 14:00	04/02/25 15:06	1
Selenium	ND		5.0	0.89	ug/L		03/31/25 14:00	04/02/25 15:06	1
Sodium	ND		1000	880	ug/L		03/31/25 14:00	04/02/25 15:06	1
Thallium	ND		1.0	0.51	ug/L		03/31/25 14:00	04/02/25 15:06	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-650182/3-A
Matrix: Water
Analysis Batch: 650678

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony			100	106		ug/L		106	80 - 120		
Arsenic			1000	1030		ug/L		103	80 - 120		
Barium			1000	1030		ug/L		103	80 - 120		
Beryllium			500	525		ug/L		105	80 - 120		
Cadmium			500	510		ug/L		102	80 - 120		
Calcium			25000	26300		ug/L		105	80 - 120		
Chromium			500	516		ug/L		103	80 - 120		
Cobalt			500	526		ug/L		105	80 - 120		
Lead			500	568		ug/L		114	80 - 120		
Lithium			500	560		ug/L		112	80 - 120		
Magnesium			25000	26300		ug/L		105	80 - 120		
Molybdenum			500	512		ug/L		102	80 - 120		
Potassium			25000	27000		ug/L		108	80 - 120		
Selenium			1000	1040		ug/L		104	80 - 120		
Sodium			25000	26100		ug/L		104	80 - 120		
Thallium			1000	1180		ug/L		118	80 - 120		

Lab Sample ID: 240-221259-1 MS
Matrix: Water
Analysis Batch: 650678

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony	ND		100	110		ug/L		110	80 - 120		
Arsenic	0.89	J	1000	1040		ug/L		104	80 - 120		
Barium	110		1000	1150		ug/L		104	80 - 120		
Beryllium	ND		500	520		ug/L		104	80 - 120		
Cadmium	0.13	J	500	511		ug/L		102	80 - 120		
Calcium	120000		25000	142000	4	ug/L		94	80 - 120		
Chromium	ND		500	516		ug/L		103	80 - 120		
Cobalt	3.3		500	525		ug/L		104	80 - 120		
Lead	ND		500	570		ug/L		114	80 - 120		
Lithium	7.3	J	500	568		ug/L		112	80 - 120		
Magnesium	27000		25000	51100		ug/L		97	80 - 120		
Molybdenum	ND		500	513		ug/L		103	80 - 120		
Potassium	1500		25000	28200		ug/L		107	80 - 120		
Selenium	ND		1000	1030		ug/L		103	80 - 120		
Sodium	17000		25000	41900		ug/L		100	80 - 120		
Thallium	0.56	J	1000	1170		ug/L		117	80 - 120		

Lab Sample ID: 240-221259-1 MSD
Matrix: Water
Analysis Batch: 650678

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		100	106		ug/L		106	80 - 120	4	20
Arsenic	0.89	J	1000	1060		ug/L		106	80 - 120	2	20
Barium	110		1000	1160		ug/L		105	80 - 120	0	20
Beryllium	ND		500	526		ug/L		105	80 - 120	1	20
Cadmium	0.13	J	500	517		ug/L		103	80 - 120	1	20

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-221259-1 MSD
Matrix: Water
Analysis Batch: 650678

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total Recoverable
Prep Batch: 650182

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	120000		25000	141000	4	ug/L		92	80 - 120	0	20
Chromium	ND		500	524		ug/L		105	80 - 120	2	20
Cobalt	3.3		500	528		ug/L		105	80 - 120	1	20
Lead	ND		500	577		ug/L		115	80 - 120	1	20
Lithium	7.3	J	500	580		ug/L		115	80 - 120	2	20
Magnesium	27000		25000	51500		ug/L		99	80 - 120	1	20
Molybdenum	ND		500	523		ug/L		105	80 - 120	2	20
Potassium	1500		25000	29000		ug/L		110	80 - 120	3	20
Selenium	ND		1000	1050		ug/L		105	80 - 120	2	20
Sodium	17000		25000	42400		ug/L		102	80 - 120	1	20
Thallium	0.56	J	1000	1200		ug/L		120	80 - 120	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-650184/1-A
Matrix: Water
Analysis Batch: 650462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 650184

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		03/31/25 14:00	04/01/25 10:55	1

Lab Sample ID: LCS 240-650184/2-A
Matrix: Water
Analysis Batch: 650462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 650184

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.99		ug/L		100	80 - 120

Lab Sample ID: 240-221259-1 MS
Matrix: Water
Analysis Batch: 650462

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA
Prep Batch: 650184

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		1.00	1.02		ug/L		102	80 - 120

Lab Sample ID: 240-221259-1 MSD
Matrix: Water
Analysis Batch: 650462

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA
Prep Batch: 650184

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		1.00	1.03		ug/L		103	80 - 120	1	20

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-650466/4
Matrix: Water
Analysis Batch: 650466

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			04/01/25 12:02	1

Method: 2320 B-2021 - Alkalinity (Continued)

Lab Sample ID: MB 240-650466/4
Matrix: Water
Analysis Batch: 650466

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/01/25 12:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/01/25 12:02	1

Lab Sample ID: LCS 240-650466/3
Matrix: Water
Analysis Batch: 650466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity			280	273		mg/L		97	86 - 123		

Lab Sample ID: 240-221259-1 DU
Matrix: Water
Analysis Batch: 650466

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	200			198		mg/L				1	20
Bicarbonate Alkalinity as CaCO3	200			198		mg/L				1	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-650624/1
Matrix: Water
Analysis Batch: 650624

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			04/02/25 14:50	1

Lab Sample ID: LCS 240-650624/2
Matrix: Water
Analysis Batch: 650624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			176	166		mg/L		94	80 - 120		

Lab Sample ID: 240-221259-1 DU
Matrix: Water
Analysis Batch: 650624

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	550			552		mg/L				1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-650271/3
Matrix: Water
Analysis Batch: 650271

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			03/31/25 22:54	1
Fluoride	ND		0.050	0.024	mg/L			03/31/25 22:54	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-650271/3
Matrix: Water
Analysis Batch: 650271

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.0	0.35	mg/L			03/31/25 22:54	1

Lab Sample ID: LCS 240-650271/4
Matrix: Water
Analysis Batch: 650271

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	48.9		mg/L		98	90 - 110		
Fluoride			2.50	2.55		mg/L		102	90 - 110		
Sulfate			50.0	48.9		mg/L		98	90 - 110		

Lab Sample ID: 240-221259-1 MS
Matrix: Water
Analysis Batch: 650271

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	26		50.0	75.8		mg/L		100	80 - 120		
Fluoride	0.097		2.50	2.69		mg/L		102	80 - 120		
Sulfate	190	F1	50.0	232	E F1	mg/L		79	80 - 120		

Lab Sample ID: 240-221259-1 MSD
Matrix: Water
Analysis Batch: 650271

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	26		50.0	75.5		mg/L		100	80 - 120	0	15
Fluoride	0.097		2.50	2.67		mg/L		102	80 - 120	1	15
Sulfate	190	F1	50.0	231	E F1	mg/L		77	80 - 120	0	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-710458/1-A
Matrix: Water
Analysis Batch: 714821

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 710458

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.08636	U	0.287	0.287	1.00	0.526	pCi/L	04/02/25 08:58	04/27/25 13:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.2*		*30 - 110*	*04/02/25 08:58*	*04/27/25 13:45*	*1*

Lab Sample ID: LCS 160-710458/2-A
Matrix: Water
Analysis Batch: 714821

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710458

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	8.695		1.23	1.00	0.392	pCi/L	91	75 - 125		

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-710458/2-A
Matrix: Water
Analysis Batch: 714821

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710458

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	85.8		30 - 110

Lab Sample ID: 240-221259-1 MS
Matrix: Water
Analysis Batch: 714822

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA
Prep Batch: 710458

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.238	U	9.57	9.784		1.32	1.00	0.370	pCi/L	100	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	89.5		30 - 110

Lab Sample ID: 240-221259-1 MSD
Matrix: Water
Analysis Batch: 714822

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA
Prep Batch: 710458

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.238	U	9.56	8.799		1.27	1.00	0.483	pCi/L	90	60 - 140	0.38	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	88.8		30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-710459/1-A
Matrix: Water
Analysis Batch: 714822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 710459

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.3219	U	0.339	0.340	1.00	0.719	pCi/L	04/02/25 09:19	04/27/25 11:42	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		30 - 110	04/02/25 09:19	04/27/25 11:42	1
Y Carrier	77.0		30 - 110	04/02/25 09:19	04/27/25 11:42	1

Lab Sample ID: LCS 160-710459/2-A
Matrix: Water
Analysis Batch: 714822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710459

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.50	10.69		1.47	1.00	0.631	pCi/L	113	75 - 125		

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-710459/2-A
Matrix: Water
Analysis Batch: 714822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710459

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	85.8		30 - 110
Y Carrier	78.9		30 - 110

Lab Sample ID: 240-221259-1 MS
Matrix: Water
Analysis Batch: 714823

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA
Prep Batch: 710459

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	0.445	U	9.49	11.32		1.50	1.00	0.509	pCi/L	115	60 - 140

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	89.5		30 - 110
Y Carrier	78.9		30 - 110

Lab Sample ID: 240-221259-1 MSD
Matrix: Water
Analysis Batch: 714823

Client Sample ID: BAC-06-F-20250327-01
Prep Type: Total/NA
Prep Batch: 710459

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.445	U	9.49	10.63		1.42	1.00	0.513	pCi/L	107	60 - 140	0.23	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	88.8		30 - 110
Y Carrier	80.7		30 - 110

Metals

Prep Batch: 650182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total Recoverable	Water	3005A	
MB 240-650182/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-650182/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-650182/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-221259-1 MS	BAC-06-F-20250327-01	Total Recoverable	Water	3005A	
240-221259-1 MS	BAC-06-F-20250327-01	Total Recoverable	Water	3005A	
240-221259-1 MSD	BAC-06-F-20250327-01	Total Recoverable	Water	3005A	
240-221259-1 MSD	BAC-06-F-20250327-01	Total Recoverable	Water	3005A	

Prep Batch: 650184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total/NA	Water	7470A	
MB 240-650184/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-650184/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-221259-1 MS	BAC-06-F-20250327-01	Total/NA	Water	7470A	
240-221259-1 MSD	BAC-06-F-20250327-01	Total/NA	Water	7470A	

Analysis Batch: 650462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total/NA	Water	7470A	650184
MB 240-650184/1-A	Method Blank	Total/NA	Water	7470A	650184
LCS 240-650184/2-A	Lab Control Sample	Total/NA	Water	7470A	650184
240-221259-1 MS	BAC-06-F-20250327-01	Total/NA	Water	7470A	650184
240-221259-1 MSD	BAC-06-F-20250327-01	Total/NA	Water	7470A	650184

Analysis Batch: 650532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total Recoverable	Water	6010D	650182
MB 240-650182/1-A	Method Blank	Total Recoverable	Water	6010D	650182
LCS 240-650182/2-A	Lab Control Sample	Total Recoverable	Water	6010D	650182
240-221259-1 MS	BAC-06-F-20250327-01	Total Recoverable	Water	6010D	650182
240-221259-1 MSD	BAC-06-F-20250327-01	Total Recoverable	Water	6010D	650182

Analysis Batch: 650678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total Recoverable	Water	6020B	650182
MB 240-650182/1-A	Method Blank	Total Recoverable	Water	6020B	650182
LCS 240-650182/3-A	Lab Control Sample	Total Recoverable	Water	6020B	650182
240-221259-1 MS	BAC-06-F-20250327-01	Total Recoverable	Water	6020B	650182
240-221259-1 MSD	BAC-06-F-20250327-01	Total Recoverable	Water	6020B	650182

General Chemistry

Analysis Batch: 650271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total/NA	Water	300.0	
MB 240-650271/3	Method Blank	Total/NA	Water	300.0	
LCS 240-650271/4	Lab Control Sample	Total/NA	Water	300.0	
240-221259-1 MS	BAC-06-F-20250327-01	Total/NA	Water	300.0	
240-221259-1 MSD	BAC-06-F-20250327-01	Total/NA	Water	300.0	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221259-1

General Chemistry

Analysis Batch: 650466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total/NA	Water	2320 B-2021	
MB 240-650466/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-650466/3	Lab Control Sample	Total/NA	Water	2320 B-2021	
240-221259-1 DU	BAC-06-F-20250327-01	Total/NA	Water	2320 B-2021	

Analysis Batch: 650624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total/NA	Water	2540 C-2020	
MB 240-650624/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-650624/2	Lab Control Sample	Total/NA	Water	2540 C-2020	
240-221259-1 DU	BAC-06-F-20250327-01	Total/NA	Water	2540 C-2020	

Rad

Prep Batch: 710458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total/NA	Water	PrecSep-21	
MB 160-710458/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-710458/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-221259-1 MS	BAC-06-F-20250327-01	Total/NA	Water	PrecSep-21	
240-221259-1 MSD	BAC-06-F-20250327-01	Total/NA	Water	PrecSep-21	

Prep Batch: 710459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221259-1	BAC-06-F-20250327-01	Total/NA	Water	PrecSep_0	
MB 160-710459/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-710459/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-221259-1 MS	BAC-06-F-20250327-01	Total/NA	Water	PrecSep_0	
240-221259-1 MSD	BAC-06-F-20250327-01	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221259-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-06-F-20250327-01
Lab Sample ID: 240-221259-1

Date Collected: 03/27/25 14:32
Matrix: Water
Date Received: 03/29/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			650182	BN	EET CLE	03/31/25 14:00
Total Recoverable	Analysis	6010D		1	650532	AJC	EET CLE	04/02/25 07:49
Total Recoverable	Prep	3005A			650182	BN	EET CLE	03/31/25 14:00
Total Recoverable	Analysis	6020B		1	650678	S4FJ	EET CLE	04/02/25 15:11
Total/NA	Prep	7470A			650184	BN	EET CLE	03/31/25 14:00
Total/NA	Analysis	7470A		1	650462	TQ6W	EET CLE	04/01/25 10:59
Total/NA	Analysis	2320 B-2021		1	650466	JMR	EET CLE	04/01/25 14:37
Total/NA	Analysis	2540 C-2020		1	650624	TAV2	EET CLE	04/02/25 14:50
Total/NA	Analysis	300.0		1	650271	JMR	EET CLE	04/01/25 02:53
Total/NA	Prep	PrecSep-21			710458	BMW	EET SL	04/02/25 08:58
Total/NA	Analysis	9315		1	714822	FLC	EET SL	04/27/25 14:02
Total/NA	Prep	PrecSep_0			710459	OGC	EET SL	04/02/25 09:19
Total/NA	Analysis	9320		1	714823	FLC	EET SL	04/27/25 11:38
Total/NA	Analysis	Ra226_Ra228		1	715010	FLC	EET SL	04/28/25 13:12

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221259-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-25 *
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221259-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

4.5/5.6

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins
Environment Testing

Client Information	Sampler: Bobby Custo	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No.: 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-06-F-20250327-01	3-27-25	1432	G	Water			1	1	2	1	1		
BAC-06-F-20250327-MS-01	3-27-25	1432	G	Water		Y	1	1	2	1	1		
BAC-06-F-20250327-MSD-01	3-27-25	1432	G	Water		Y	1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									

240-221259 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Bobby Custo	3-28-25/0930	KEMRON		3/28/25 4:10p	WP
	3/28/25 8:10		Martin	3/29/25 800	EUR

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :**
Barberton Facility

Client Gavin Site Name

Cooler Received on 3/29/25 Opened on 3/29/25

Cooler unpacked by: ICMartin

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used. Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 21 (CF +1.1 °C) Observed Cooler Temp 4.5 °C Corrected Cooler Temp 5.6 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity	Yes (No)	**Tests that are not checked for pH by Receiving:** VOAs, Oil and Grease, TOC
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No (NA)	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	
-Were tamper/custody seals intact and uncompromised?	Yes No (NA)	
3 Shippers' packing slip attached to the cooler(s)?	Yes (No)	
4 Did custody papers accompany the sample(s)?	(Yes) No	
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7 Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?	(Y) (Y) (Y)	
10 Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11 Sufficient quantity received to perform indicated analyses?	(Yes) No	
12 Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# HC448976
14 Were VOAs on the COC?	Yes (No)	
15 Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes No (NA)	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes (No)	
17 Was a LL Hg or Me Hg trip blank present?	Yes (No)	

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ *additional next page* — *Samples processed by:*

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen.

3/29/2025

Login Container Summary Report

240-221259

4/28/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-06-F-20250327-01	240-221259-A-1	Plastic 60 mL - unpreserved				
BAC-06-F-20250327-01	240-221259-A-1 DU	Plastic 60 mL - unpreserved				
BAC-06-F-20250327-MS-01	240-221259-A-1 MS	Plastic 60 mL - unpreserved				
BAC-06-F-20250327-MSD-01	240-221259-A-1 MSD	Plastic 60 mL - unpreserved				
BAC-06-F-20250327-01	240-221259-B-1	Plastic 60 mL - unpreserved				
BAC-06-F-20250327-01	240-221259-B-1 DU	Plastic 500ml - unpreserved				
BAC-06-F-20250327-MS-01	240-221259-B-1 MS	Plastic 500ml - unpreserved				
BAC-06-F-20250327-MSD-01	240-221259-B-1 MSD	Plastic 60 mL - unpreserved				
BAC-06-F-20250327-01	240-221259-C-1	Plastic 500ml - unpreserved				
BAC-06-F-20250327-MS-01	240-221259-C-1 MS	Plastic 500ml - with Nitric Acid	<2			
BAC-06-F-20250327-MSD-01	240-221259-C-1 MSD	Plastic 500ml - with Nitric Acid	<2			
BAC-06-F-20250327-01	240-221259-D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-06-F-20250327-MS-01	240-221259-D-1 MS	Plastic 1 liter - Nitric Acid	<2			
BAC-06-F-20250327-MSD-01	240-221259-D-1 MSD	Plastic 1 liter - Nitric Acid	<2			
BAC-06-F-20250327-01	240-221259-E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-06-F-20250327-MS-01	240-221259-E-1 MS	Plastic 1 liter - Nitric Acid	<2			
BAC-06-F-20250327-MSD-01	240-221259-E-1 MSD	Plastic 1 liter - Nitric Acid	<2			
BAC-06-F-20250327-01	240-221259-F-1	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-200538.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-221259-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/14/2025			
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal GWM Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-06-F-20250327-01 (240-221259-1)	3/27/25	14:32 Eastern	G	Water			X	X	X	2	
BAC-06-F-20250327-MS-01 (240-221259-1MS)	3/27/25	14:32 Eastern	G	Water			X	X	X	2	
BAC-06-F-20250327-MSD-01 (240-221259-1MSD)	3/27/25	14:32 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: MALISSA LOAR	Date/Time: 3/31/25 8am	Company	Received by: M. Pinette	Date/Time: APR 01 2025 0840	Company
Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

4/28/2025

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-221259-1

Login Number: 221259
List Number: 2
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 04/01/25 11:22 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Generated 4/30/2025 1:44:26 PM

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-221384-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

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4/30/2025 1:44:26 PM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
240-221384-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/1/2025 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 3.4°C, 4.4°C and 18.9°C.

Metals
Method 6020B - Total Recoverable: The following samples were diluted due to the nature of the sample matrix: BAC-11-F-20250328-01 (240-221384-1) and DUP-005-F-20250328-01 (240-221384-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 300.0_28D: The following samples were diluted due to the nature of the sample matrix: BAC-11-F-20250328-01 (240-221384-1), DUP-005-F-20250328-01 (240-221384-2) and BAC-13-F-20250331-01 (240-221384-7). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
Method 9320_Ra228: Radium 228 Batch 710740

The MDC for the following sample(s) is flagged as failing; The laboratory considers the detection goal (requested limit) met when rounding to the appropriate place value. BAC-11-F-20250328-01 (240-221384-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221384-1
Project/Site: Federal CCR Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-221384-1	BAC-11-F-20250328-01	Water	03/28/25 13:20	04/01/25 15:00
240-221384-2	DUP-005-F-20250328-01	Water	03/28/25 00:00	04/01/25 15:00
240-221384-3	BAC-02-F-20250328-01	Water	03/28/25 15:10	04/01/25 15:00
240-221384-4	BAC-05-F-20250331-01	Water	03/31/25 12:22	04/01/25 15:00
240-221384-5	DUP-006-F-20250331-01	Water	03/31/25 00:00	04/01/25 15:00
240-221384-6	BAC-04-F-20250331-01	Water	03/31/25 13:55	04/01/25 15:00
240-221384-7	BAC-13-F-20250331-01	Water	03/31/25 15:19	04/01/25 15:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Client Sample ID: BAC-11-F-20250328-01 — Lab Sample ID: 240-221384-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	370		100	57	ug/L	1		6010D	Total Recoverable
Barium	140000		250	39	ug/L	50		6020B	Total Recoverable
Calcium	2600000		50000	13000	ug/L	50		6020B	Total Recoverable
Chromium	2.4	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	1.4		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	290	J B	400	170	ug/L	50		6020B	Total Recoverable
Magnesium	810000		50000	3100	ug/L	50		6020B	Total Recoverable
Molybdenum	4.3	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	25000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	10000000		50000	44000	ug/L	50		6020B	Total Recoverable
Total Alkalinity	29		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	29		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	31000		1000	780	mg/L	1		2540 C-2020	Total/NA
Chloride	27000		1000	130	mg/L	1000		300.0	Total/NA

Client Sample ID: DUP-005-F-20250328-01 — Lab Sample ID: 240-221384-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	370		100	57	ug/L	1		6010D	Total Recoverable
Barium	130000		250	39	ug/L	50		6020B	Total Recoverable
Calcium	2500000		50000	13000	ug/L	50		6020B	Total Recoverable
Chromium	2.1	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	1.1		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	270	J B	400	170	ug/L	50		6020B	Total Recoverable
Magnesium	790000		50000	3100	ug/L	50		6020B	Total Recoverable
Molybdenum	4.2	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	24000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	10000000		50000	44000	ug/L	50		6020B	Total Recoverable
Total Alkalinity	33		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	33		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	32000		1000	780	mg/L	1		2540 C-2020	Total/NA
Chloride	28000		1000	130	mg/L	1000		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Client Sample ID: BAC-02-F-20250328-01 — Lab Sample ID: 240-221384-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1700		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.4	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	61		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.31	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	150000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	3.0	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	2.2		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	1.9		1.0	0.45	ug/L	1		6020B	Total Recoverable
Magnesium	43000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	3800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	80000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	290		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	290		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	800		40	31	mg/L	1		2540 C-2020	Total/NA
Chloride	75		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.21		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	330		10	3.5	mg/L	10		300.0	Total/NA

Client Sample ID: BAC-05-F-20250331-01 — Lab Sample ID: 240-221384-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2700		100	57	ug/L	1		6010D	Total Recoverable
Barium	33		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.28	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	100000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	4.3		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	6.5	J B	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	25000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	130		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	130		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	540		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	26		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.17		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	250		5.0	1.7	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Client Sample ID: DUP-006-F-20250331-01 — Lab Sample ID: 240-221384-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2600		100	57	ug/L	1		6010D	Total Recoverable
Barium	30		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.20	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	100000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	4.0		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	6.2	J B	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	24000		1000	880	ug/L	1		6020B	Total Recoverable
Mercury	0.14	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	130		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	130		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	550		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	26		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.17		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	250		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: BAC-04-F-20250331-01 — Lab Sample ID: 240-221384-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2400		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.78	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	44		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	100000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	1.2		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	6.2	J B	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	29000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	110		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	530		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	42		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.090		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	240		5.0	1.7	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Client Sample ID: BAC-13-F-20250331-01

Lab Sample ID: 240-221384-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	400		100	57	ug/L	1		6010D	Total Recoverable
Barium	3000		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	210000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.24	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	50	B	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	42000		1000	61	ug/L	1		6020B	Total Recoverable
Molybdenum	11		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	6200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	970000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	90		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	90		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	3100		50	39	mg/L	1		2540 C-2020	Total/NA
Chloride	2000		20	2.6	mg/L	20		300.0	Total/NA
Fluoride	1.0		0.25	0.12	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-11-F-20250328-01
Date Collected: 03/28/25 13:20
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**370**		100	57	ug/L		04/02/25 14:00	04/04/25 18:51	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/02/25 14:00	04/04/25 14:39	1
Arsenic	ND		5.0	0.75	ug/L		04/02/25 14:00	04/04/25 14:39	1
Barium	**140000**		250	39	ug/L		04/02/25 14:00	04/07/25 18:13	50
Beryllium	ND		1.0	0.27	ug/L		04/02/25 14:00	04/04/25 14:39	1
Cadmium	ND		1.0	0.077	ug/L		04/02/25 14:00	04/04/25 14:39	1
Calcium	**2600000**		50000	13000	ug/L		04/02/25 14:00	04/07/25 18:13	50
Chromium	**2.4**	**J**	5.0	1.2	ug/L		04/02/25 14:00	04/04/25 14:39	1
Cobalt	**1.4**		1.0	0.086	ug/L		04/02/25 14:00	04/04/25 14:39	1
Lead	ND		50	23	ug/L		04/02/25 14:00	04/07/25 18:13	50
Lithium	**290**	**J B**	400	170	ug/L		04/02/25 14:00	04/08/25 15:33	50
Magnesium	**810000**		50000	3100	ug/L		04/02/25 14:00	04/07/25 18:13	50
Molybdenum	**4.3**	**J**	5.0	1.1	ug/L		04/02/25 14:00	04/04/25 14:39	1
Potassium	**25000**		1000	220	ug/L		04/02/25 14:00	04/04/25 14:39	1
Selenium	ND		5.0	0.89	ug/L		04/02/25 14:00	04/04/25 14:39	1
Sodium	**10000000**		50000	44000	ug/L		04/02/25 14:00	04/08/25 15:33	50
Thallium	ND		1.0	0.51	ug/L		04/02/25 14:00	04/04/25 14:39	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/02/25 14:00	04/03/25 11:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**29**		5.0	2.6	mg/L			04/02/25 12:55	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**29**		5.0	2.6	mg/L			04/02/25 12:55	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 12:55	1
Total Dissolved Solids (SM 2540 C-2020)	**31000**		1000	780	mg/L			04/02/25 14:50	1
Chloride (EPA 300.0)	**27000**		1000	130	mg/L			04/02/25 22:02	1000
Fluoride (EPA 300.0)	ND		5.0	2.4	mg/L			04/02/25 21:53	100
Sulfate (EPA 300.0)	ND		100	35	mg/L			04/02/25 21:53	100

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.452	U	0.349	0.352	1.00	0.520	pCi/L	04/04/25 07:31	04/30/25 08:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*48.4*		*30 - 110*	*04/04/25 07:31*	*04/30/25 08:16*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.641	U G	0.632	0.635	1.00	1.02	pCi/L	04/04/25 07:34	04/29/25 09:41	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Client Sample ID: BAC-11-F-20250328-01
Date Collected: 03/28/25 13:20
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-1
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	48.4		30 - 110	04/04/25 07:34	04/29/25 09:41	1
Y Carrier	82.2		30 - 110	04/04/25 07:34	04/29/25 09:41	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.09		0.722	0.726	5.00	1.02	pCi/L		04/30/25 12:31	1

Client Sample ID: DUP-005-F-20250328-01
Date Collected: 03/28/25 00:00
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-2
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**370**		100	57	ug/L		04/02/25 14:00	04/04/25 18:56	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/02/25 14:00	04/04/25 14:42	1
Arsenic	ND		5.0	0.75	ug/L		04/02/25 14:00	04/04/25 14:42	1
Barium	**130000**		250	39	ug/L		04/02/25 14:00	04/07/25 18:16	50
Beryllium	ND		1.0	0.27	ug/L		04/02/25 14:00	04/04/25 14:42	1
Cadmium	ND		1.0	0.077	ug/L		04/02/25 14:00	04/04/25 14:42	1
Calcium	**2500000**		50000	13000	ug/L		04/02/25 14:00	04/07/25 18:16	50
Chromium	**2.1**	**J**	5.0	1.2	ug/L		04/02/25 14:00	04/04/25 14:42	1
Cobalt	**1.1**		1.0	0.086	ug/L		04/02/25 14:00	04/04/25 14:42	1
Lead	ND		50	23	ug/L		04/02/25 14:00	04/07/25 18:16	50
Lithium	**270**	**J B**	400	170	ug/L		04/02/25 14:00	04/08/25 15:40	50
Magnesium	**790000**		50000	3100	ug/L		04/02/25 14:00	04/07/25 18:16	50
Molybdenum	**4.2**	**J**	5.0	1.1	ug/L		04/02/25 14:00	04/04/25 14:42	1
Potassium	**24000**		1000	220	ug/L		04/02/25 14:00	04/04/25 14:42	1
Selenium	ND		5.0	0.89	ug/L		04/02/25 14:00	04/04/25 14:42	1
Sodium	**10000000**		50000	44000	ug/L		04/02/25 14:00	04/08/25 15:40	50
Thallium	ND		1.0	0.51	ug/L		04/02/25 14:00	04/04/25 14:42	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/02/25 14:00	04/03/25 11:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**33**		5.0	2.6	mg/L			04/02/25 12:59	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**33**		5.0	2.6	mg/L			04/02/25 12:59	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 12:59	1
Total Dissolved Solids (SM 2540 C-2020)	**32000**		1000	780	mg/L			04/02/25 14:50	1
Chloride (EPA 300.0)	**28000**		1000	130	mg/L			04/02/25 22:20	1000
Fluoride (EPA 300.0)	ND		5.0	2.4	mg/L			04/02/25 22:11	100
Sulfate (EPA 300.0)	ND		100	35	mg/L			04/02/25 22:11	100

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.274	U	0.300	0.301	1.00	0.481	pCi/L	04/04/25 07:25	04/29/25 18:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*53.3*		*30 - 110*	*04/04/25 07:25*	*04/29/25 18:24*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.211	U	0.487	0.488	1.00	0.861	pCi/L	04/04/25 07:29	04/29/25 09:42	1

Client Sample ID: DUP-005-F-20250328-01
Date Collected: 03/28/25 00:00
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-2
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*53.3*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:42*	*1*
Y Carrier	*78.9*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.485	U	0.572	0.573	5.00	0.861	pCi/L		04/30/25 12:31	1

Client Sample ID: BAC-02-F-20250328-01
Date Collected: 03/28/25 15:10
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-3
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1700**		100	57	ug/L		04/02/25 14:00	04/04/25 19:00	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/02/25 14:00	04/04/25 14:45	1
Arsenic	**2.4**	**J**	5.0	0.75	ug/L		04/02/25 14:00	04/04/25 14:45	1
Barium	**61**		5.0	0.77	ug/L		04/02/25 14:00	04/07/25 18:18	1
Beryllium	ND		1.0	0.27	ug/L		04/02/25 14:00	04/04/25 14:45	1
Cadmium	**0.31**	**J**	1.0	0.077	ug/L		04/02/25 14:00	04/04/25 14:45	1
Calcium	**150000**		1000	250	ug/L		04/02/25 14:00	04/04/25 14:45	1
Chromium	**3.0**	**J**	5.0	1.2	ug/L		04/02/25 14:00	04/04/25 14:45	1
Cobalt	**2.2**		1.0	0.086	ug/L		04/02/25 14:00	04/04/25 14:45	1
Lead	**1.9**		1.0	0.45	ug/L		04/02/25 14:00	04/07/25 18:18	1
Lithium	ND		8.0	3.4	ug/L		04/02/25 14:00	04/08/25 15:43	1
Magnesium	**43000**		1000	61	ug/L		04/02/25 14:00	04/04/25 14:45	1
Molybdenum	ND		5.0	1.1	ug/L		04/02/25 14:00	04/04/25 14:45	1
Potassium	**3800**		1000	220	ug/L		04/02/25 14:00	04/04/25 14:45	1
Selenium	ND		5.0	0.89	ug/L		04/02/25 14:00	04/04/25 14:45	1
Sodium	**80000**		1000	880	ug/L		04/02/25 14:00	04/08/25 15:43	1
Thallium	ND		1.0	0.51	ug/L		04/02/25 14:00	04/04/25 14:45	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/02/25 14:00	04/03/25 11:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**290**		5.0	2.6	mg/L			04/02/25 13:03	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**290**		5.0	2.6	mg/L			04/02/25 13:03	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 13:03	1
Total Dissolved Solids (SM 2540 C-2020)	**800**		40	31	mg/L			04/02/25 14:50	1
Chloride (EPA 300.0)	**75**		1.0	0.13	mg/L			04/02/25 22:30	1
Fluoride (EPA 300.0)	**0.21**		0.050	0.024	mg/L			04/02/25 22:30	1
Sulfate (EPA 300.0)	**330**		10	3.5	mg/L			04/02/25 22:39	10

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0293	U	0.201	0.201	1.00	0.397	pCi/L	04/04/25 07:25	04/29/25 20:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*30 - 110*	*04/04/25 07:25*	*04/29/25 20:05*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.272	U	0.393	0.394	1.00	0.664	pCi/L	04/04/25 07:29	04/29/25 09:43	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Client Sample ID: BAC-02-F-20250328-01
Date Collected: 03/28/25 15:10
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-3
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:43*	*1*
Y Carrier	*76.6*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:43*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.301	U	0.441	0.442	5.00	0.664	pCi/L		04/30/25 12:31	1

Client Sample ID: BAC-05-F-20250331-01

Date Collected: 03/31/25 12:22
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-4

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2700**		100	57	ug/L		04/02/25 14:00	04/04/25 19:04	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/02/25 14:00	04/04/25 14:58	1
Arsenic	ND		5.0	0.75	ug/L		04/02/25 14:00	04/04/25 14:58	1
Barium	**33**		5.0	0.77	ug/L		04/02/25 14:00	04/04/25 14:58	1
Beryllium	ND		1.0	0.27	ug/L		04/02/25 14:00	04/21/25 12:12	1
Cadmium	**0.28**	**J**	1.0	0.077	ug/L		04/02/25 14:00	04/04/25 14:58	1
Calcium	**100000**		1000	250	ug/L		04/02/25 14:00	04/04/25 14:58	1
Chromium	ND		5.0	1.2	ug/L		04/02/25 14:00	04/04/25 14:58	1
Cobalt	**4.3**		1.0	0.086	ug/L		04/02/25 14:00	04/04/25 14:58	1
Lead	ND		1.0	0.45	ug/L		04/02/25 14:00	04/04/25 14:58	1
Lithium	**6.5**	**J B**	8.0	3.4	ug/L		04/02/25 14:00	04/21/25 12:12	1
Magnesium	**23000**		1000	61	ug/L		04/02/25 14:00	04/04/25 14:58	1
Molybdenum	ND		5.0	1.1	ug/L		04/02/25 14:00	04/04/25 14:58	1
Potassium	**1600**		1000	220	ug/L		04/02/25 14:00	04/04/25 14:58	1
Selenium	ND		5.0	0.89	ug/L		04/02/25 14:00	04/04/25 14:58	1
Sodium	**25000**		1000	880	ug/L		04/02/25 14:00	04/04/25 14:58	1
Thallium	ND		1.0	0.51	ug/L		04/02/25 14:00	04/04/25 14:58	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/02/25 14:00	04/03/25 11:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**130**		5.0	2.6	mg/L			04/02/25 13:08	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**130**		5.0	2.6	mg/L			04/02/25 13:08	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 13:08	1
Total Dissolved Solids (SM 2540 C-2020)	**540**		10	7.8	mg/L			04/03/25 08:38	1
Chloride (EPA 300.0)	**26**		1.0	0.13	mg/L			04/02/25 22:48	1
Fluoride (EPA 300.0)	**0.17**		0.050	0.024	mg/L			04/02/25 22:48	1
Sulfate (EPA 300.0)	**250**		5.0	1.7	mg/L			04/02/25 22:57	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.137	U	0.174	0.174	1.00	0.288	pCi/L	04/04/25 07:25	04/29/25 20:05	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.5*		*30 - 110*	*04/04/25 07:25*	*04/29/25 20:05*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.138	U	0.315	0.315	1.00	0.555	pCi/L	04/04/25 07:29	04/29/25 09:43	1

Client Sample ID: BAC-05-F-20250331-01
Date Collected: 03/31/25 12:22
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-4
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.5*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:43*	*1*
Y Carrier	*76.6*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:43*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.275	U	0.360	0.360	5.00	0.555	pCi/L		04/30/25 12:31	1

Client Sample ID: DUP-006-F-20250331-01
Date Collected: 03/31/25 00:00
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-5
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2600		100	57	ug/L		04/02/25 14:00	04/04/25 19:09	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/02/25 14:00	04/04/25 15:01	1
Arsenic	ND		5.0	0.75	ug/L		04/02/25 14:00	04/04/25 15:01	1
Barium	30		5.0	0.77	ug/L		04/02/25 14:00	04/04/25 15:01	1
Beryllium	ND		1.0	0.27	ug/L		04/02/25 14:00	04/21/25 12:15	1
Cadmium	0.20	J	1.0	0.077	ug/L		04/02/25 14:00	04/04/25 15:01	1
Calcium	100000		1000	250	ug/L		04/02/25 14:00	04/04/25 15:01	1
Chromium	ND		5.0	1.2	ug/L		04/02/25 14:00	04/04/25 15:01	1
Cobalt	4.0		1.0	0.086	ug/L		04/02/25 14:00	04/04/25 15:01	1
Lead	ND		1.0	0.45	ug/L		04/02/25 14:00	04/04/25 15:01	1
Lithium	6.2	J B	8.0	3.4	ug/L		04/02/25 14:00	04/21/25 12:15	1
Magnesium	23000		1000	61	ug/L		04/02/25 14:00	04/04/25 15:01	1
Molybdenum	ND		5.0	1.1	ug/L		04/02/25 14:00	04/04/25 15:01	1
Potassium	1600		1000	220	ug/L		04/02/25 14:00	04/04/25 15:01	1
Selenium	ND		5.0	0.89	ug/L		04/02/25 14:00	04/04/25 15:01	1
Sodium	24000		1000	880	ug/L		04/02/25 14:00	04/04/25 15:01	1
Thallium	ND		1.0	0.51	ug/L		04/02/25 14:00	04/04/25 15:01	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.14	J	0.20	0.13	ug/L		04/02/25 14:00	04/03/25 12:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	130		5.0	2.6	mg/L			04/02/25 13:13	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	130		5.0	2.6	mg/L			04/02/25 13:13	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 13:13	1
Total Dissolved Solids (SM 2540 C-2020)	550		10	7.8	mg/L			04/03/25 08:38	1
Chloride (EPA 300.0)	26		1.0	0.13	mg/L			04/02/25 23:06	1
Fluoride (EPA 300.0)	0.17		0.050	0.024	mg/L			04/02/25 23:06	1
Sulfate (EPA 300.0)	250		5.0	1.7	mg/L			04/08/25 09:15	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.192	U	0.193	0.193	1.00	0.302	pCi/L	04/04/25 07:25	04/29/25 20:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.2*		*30 - 110*	*04/04/25 07:25*	*04/29/25 20:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.473	U	0.344	0.347	1.00	0.519	pCi/L	04/04/25 07:29	04/29/25 09:43	1

Client Sample ID: DUP-006-F-20250331-01
Date Collected: 03/31/25 00:00
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-5
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.2*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:43*	*1*
Y Carrier	*77.8*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:43*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.665**		0.394	0.397	5.00	0.519	pCi/L		04/30/25 12:31	1

Client Sample ID: BAC-04-F-20250331-01
Date Collected: 03/31/25 13:55
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-6
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2400**		100	57	ug/L		04/02/25 14:00	04/04/25 19:22	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/02/25 14:00	04/04/25 15:03	1
Arsenic	**0.78**	**J**	5.0	0.75	ug/L		04/02/25 14:00	04/04/25 15:03	1
Barium	**44**		5.0	0.77	ug/L		04/02/25 14:00	04/04/25 15:03	1
Beryllium	ND		1.0	0.27	ug/L		04/02/25 14:00	04/21/25 12:17	1
Cadmium	ND		1.0	0.077	ug/L		04/02/25 14:00	04/04/25 15:03	1
Calcium	**100000**		1000	250	ug/L		04/02/25 14:00	04/04/25 15:03	1
Chromium	ND		5.0	1.2	ug/L		04/02/25 14:00	04/04/25 15:03	1
Cobalt	**1.2**		1.0	0.086	ug/L		04/02/25 14:00	04/04/25 15:03	1
Lead	ND		1.0	0.45	ug/L		04/02/25 14:00	04/04/25 15:03	1
Lithium	**6.2**	**J B**	8.0	3.4	ug/L		04/02/25 14:00	04/21/25 12:17	1
Magnesium	**21000**		1000	61	ug/L		04/02/25 14:00	04/04/25 15:03	1
Molybdenum	ND		5.0	1.1	ug/L		04/02/25 14:00	04/04/25 15:03	1
Potassium	**2000**		1000	220	ug/L		04/02/25 14:00	04/04/25 15:03	1
Selenium	ND		5.0	0.89	ug/L		04/02/25 14:00	04/04/25 15:03	1
Sodium	**29000**		1000	880	ug/L		04/02/25 14:00	04/04/25 15:03	1
Thallium	ND		1.0	0.51	ug/L		04/02/25 14:00	04/04/25 15:03	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/02/25 14:00	04/03/25 12:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**110**		5.0	2.6	mg/L			04/02/25 13:18	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**110**		5.0	2.6	mg/L			04/02/25 13:18	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 13:18	1
Total Dissolved Solids (SM 2540 C-2020)	**530**		10	7.8	mg/L			04/03/25 08:38	1
Chloride (EPA 300.0)	**42**		1.0	0.13	mg/L			04/02/25 23:34	1
Fluoride (EPA 300.0)	**0.090**		0.050	0.024	mg/L			04/02/25 23:34	1
Sulfate (EPA 300.0)	**240**		5.0	1.7	mg/L			04/08/25 09:24	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.204	U	0.195	0.195	1.00	0.301	pCi/L	04/04/25 07:25	04/29/25 21:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.0*		*30 - 110*	*04/04/25 07:25*	*04/29/25 21:47*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.254	U	0.317	0.318	1.00	0.526	pCi/L	04/04/25 07:29	04/29/25 09:43	1

Client Sample ID: BAC-04-F-20250331-01
Date Collected: 03/31/25 13:55
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-6
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.0*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:43*	*1*
Y Carrier	*75.1*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:43*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.458	U	0.372	0.373	5.00	0.526	pCi/L		04/30/25 12:31	1

Client Sample ID: BAC-13-F-20250331-01

Lab Sample ID: 240-221384-7

Date Collected: 03/31/25 15:19

Matrix: Water

Date Received: 04/01/25 15:00

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**400**		100	57	ug/L		04/02/25 14:00	04/04/25 19:26	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/02/25 14:00	04/04/25 15:06	1
Arsenic	ND		5.0	0.75	ug/L		04/02/25 14:00	04/04/25 15:06	1
Barium	**3000**		5.0	0.77	ug/L		04/02/25 14:00	04/04/25 15:06	1
Beryllium	ND		1.0	0.27	ug/L		04/02/25 14:00	04/21/25 12:20	1
Cadmium	ND		1.0	0.077	ug/L		04/02/25 14:00	04/04/25 15:06	1
Calcium	**210000**		1000	250	ug/L		04/02/25 14:00	04/04/25 15:06	1
Chromium	ND		5.0	1.2	ug/L		04/02/25 14:00	04/04/25 15:06	1
Cobalt	**0.24**	**J**	1.0	0.086	ug/L		04/02/25 14:00	04/04/25 15:06	1
Lead	ND		1.0	0.45	ug/L		04/02/25 14:00	04/04/25 15:06	1
Lithium	**50**	**B**	8.0	3.4	ug/L		04/02/25 14:00	04/21/25 12:20	1
Magnesium	**42000**		1000	61	ug/L		04/02/25 14:00	04/04/25 15:06	1
Molybdenum	**11**		5.0	1.1	ug/L		04/02/25 14:00	04/04/25 15:06	1
Potassium	**6200**		1000	220	ug/L		04/02/25 14:00	04/04/25 15:06	1
Selenium	ND		5.0	0.89	ug/L		04/02/25 14:00	04/04/25 15:06	1
Sodium	**970000**		1000	880	ug/L		04/02/25 14:00	04/04/25 15:06	1
Thallium	ND		1.0	0.51	ug/L		04/02/25 14:00	04/04/25 15:06	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/02/25 14:00	04/03/25 12:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**90**		5.0	2.6	mg/L			04/02/25 13:22	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**90**		5.0	2.6	mg/L			04/02/25 13:22	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/02/25 13:22	1
Total Dissolved Solids (SM 2540 C-2020)	**3100**		50	39	mg/L			04/03/25 08:38	1
Chloride (EPA 300.0)	**2000**		20	2.6	mg/L			04/02/25 23:52	20
Fluoride (EPA 300.0)	**1.0**		0.25	0.12	mg/L			04/02/25 23:43	5
Sulfate (EPA 300.0)	ND		5.0	1.7	mg/L			04/02/25 23:43	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.73**		0.376	0.407	1.00	0.257	pCi/L	04/04/25 07:25	04/29/25 21:47	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*30 - 110*	*04/04/25 07:25*	*04/29/25 21:47*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.03**		0.493	0.528	1.00	0.493	pCi/L	04/04/25 07:29	04/29/25 09:43	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Client Sample ID: BAC-13-F-20250331-01
Date Collected: 03/31/25 15:19
Date Received: 04/01/25 15:00

Lab Sample ID: 240-221384-7
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	99.0		30 - 110	04/04/25 07:29	04/29/25 09:43	1
Y Carrier	77.0		30 - 110	04/04/25 07:29	04/29/25 09:43	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.76		0.620	0.667	5.00	0.493	pCi/L		04/30/25 12:31	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221384-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-221384-1	BAC-11-F-20250328-01	48.4
240-221384-2	DUP-005-F-20250328-01	53.3
240-221384-3	BAC-02-F-20250328-01	93.6
240-221384-4	BAC-05-F-20250331-01	88.5
240-221384-5	DUP-006-F-20250331-01	90.2
240-221384-6	BAC-04-F-20250331-01	89.0
240-221384-7	BAC-13-F-20250331-01	99.0
LCS 160-710737/2-A	Lab Control Sample	90.2
LCS 160-710739/2-A	Lab Control Sample	87.0
MB 160-710737/1-A	Method Blank	88.5
MB 160-710739/1-A	Method Blank	87.5

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-221384-1	BAC-11-F-20250328-01	48.4	82.2
240-221384-2	DUP-005-F-20250328-01	53.3	78.9
240-221384-3	BAC-02-F-20250328-01	93.6	76.6
240-221384-4	BAC-05-F-20250331-01	88.5	76.6
240-221384-5	DUP-006-F-20250331-01	90.2	77.8
240-221384-6	BAC-04-F-20250331-01	89.0	75.1
240-221384-7	BAC-13-F-20250331-01	99.0	77.0
LCS 160-710738/2-A	Lab Control Sample	90.2	80.7
LCS 160-710740/2-A	Lab Control Sample	87.0	80.7
MB 160-710738/1-A	Method Blank	88.5	76.6
MB 160-710740/1-A	Method Blank	87.5	83.4

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-650548/1-A
Matrix: Water
Analysis Batch: 651012

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 650548

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		04/02/25 14:00	04/04/25 17:17	1

Lab Sample ID: LCS 240-650548/2-A
Matrix: Water
Analysis Batch: 651012

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 650548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1060		ug/L		106	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-650548/1-A
Matrix: Water
Analysis Batch: 651071

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 650548

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/02/25 14:00	04/04/25 13:32	1
Arsenic	ND		5.0	0.75	ug/L		04/02/25 14:00	04/04/25 13:32	1
Barium	ND		5.0	0.77	ug/L		04/02/25 14:00	04/04/25 13:32	1
Beryllium	ND	^+	1.0	0.27	ug/L		04/02/25 14:00	04/04/25 13:32	1
Cadmium	ND		1.0	0.077	ug/L		04/02/25 14:00	04/04/25 13:32	1
Calcium	ND		1000	250	ug/L		04/02/25 14:00	04/04/25 13:32	1
Chromium	ND		5.0	1.2	ug/L		04/02/25 14:00	04/04/25 13:32	1
Cobalt	ND		1.0	0.086	ug/L		04/02/25 14:00	04/04/25 13:32	1
Lead	ND		1.0	0.45	ug/L		04/02/25 14:00	04/04/25 13:32	1
Lithium	4.19	J ^+	8.0	3.4	ug/L		04/02/25 14:00	04/04/25 13:32	1
Magnesium	ND		1000	61	ug/L		04/02/25 14:00	04/04/25 13:32	1
Molybdenum	ND		5.0	1.1	ug/L		04/02/25 14:00	04/04/25 13:32	1
Potassium	ND		1000	220	ug/L		04/02/25 14:00	04/04/25 13:32	1
Selenium	ND		5.0	0.89	ug/L		04/02/25 14:00	04/04/25 13:32	1
Sodium	ND		1000	880	ug/L		04/02/25 14:00	04/04/25 13:32	1
Thallium	ND		1.0	0.51	ug/L		04/02/25 14:00	04/04/25 13:32	1

Lab Sample ID: LCS 240-650548/3-A
Matrix: Water
Analysis Batch: 651071

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 650548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	102		ug/L		102	80 - 120
Arsenic	1000	1060		ug/L		106	80 - 120
Barium	1000	984		ug/L		98	80 - 120
Beryllium	500	553	^+	ug/L		111	80 - 120
Cadmium	500	484		ug/L		97	80 - 120
Calcium	25000	26500		ug/L		106	80 - 120
Chromium	500	497		ug/L		99	80 - 120
Cobalt	500	510		ug/L		102	80 - 120
Lead	500	487		ug/L		97	80 - 120
Lithium	500	557	^+	ug/L		111	80 - 120
Magnesium	25000	25900		ug/L		104	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-650548/3-A
Matrix: Water
Analysis Batch: 651071

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 650548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	500	511		ug/L		102	80 - 120
Potassium	25000	27400		ug/L		110	80 - 120
Selenium	1000	995		ug/L		99	80 - 120
Sodium	25000	25900		ug/L		104	80 - 120
Thallium	1000	1140		ug/L		114	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-650551/1-A
Matrix: Water
Analysis Batch: 650789

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 650551

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/02/25 14:00	04/03/25 11:19	1

Lab Sample ID: LCS 240-650551/2-A
Matrix: Water
Analysis Batch: 650789

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 650551

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.05		ug/L		101	80 - 120

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-650639/30
Matrix: Water
Analysis Batch: 650639

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			04/02/25 12:27	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/02/25 12:27	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/02/25 12:27	1

Lab Sample ID: MB 240-650639/4
Matrix: Water
Analysis Batch: 650639

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	3.83	J	5.0	2.6	mg/L			04/02/25 10:07	1
Bicarbonate Alkalinity as CaCO3	3.83	J	5.0	2.6	mg/L			04/02/25 10:07	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/02/25 10:07	1

Lab Sample ID: LCS 240-650639/29
Matrix: Water
Analysis Batch: 650639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	268		mg/L		96	86 - 123

Method: 2320 B-2021 - Alkalinity (Continued)

Lab Sample ID: 240-221384-7 DU
Matrix: Water
Analysis Batch: 650639

Client Sample ID: BAC-13-F-20250331-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	90		90.0		mg/L		0.5	20
Bicarbonate Alkalinity as CaCO3	90		90.0		mg/L		0.5	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	20

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-650624/1
Matrix: Water
Analysis Batch: 650624

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			04/02/25 14:50	1

Lab Sample ID: LCS 240-650624/2
Matrix: Water
Analysis Batch: 650624

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	166		mg/L		94	80 - 120

Lab Sample ID: MB 240-650689/1
Matrix: Water
Analysis Batch: 650689

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			04/03/25 08:38	1

Lab Sample ID: LCS 240-650689/2
Matrix: Water
Analysis Batch: 650689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	153		mg/L		87	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-650626/4
Matrix: Water
Analysis Batch: 650626

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			04/02/25 16:14	1
Fluoride	ND		0.050	0.024	mg/L			04/02/25 16:14	1
Sulfate	ND		1.0	0.35	mg/L			04/02/25 16:14	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-650626/5
Matrix: Water
Analysis Batch: 650626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	47.3		mg/L		95	90 - 110		
Fluoride			2.50	2.44		mg/L		98	90 - 110		
Sulfate			50.0	46.6		mg/L		93	90 - 110		

Lab Sample ID: MB 240-651194/3
Matrix: Water
Analysis Batch: 651194

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			04/08/25 04:22	1
Fluoride	ND		0.050	0.024	mg/L			04/08/25 04:22	1
Sulfate	ND		1.0	0.35	mg/L			04/08/25 04:22	1

Lab Sample ID: LCS 240-651194/4
Matrix: Water
Analysis Batch: 651194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	47.5		mg/L		95	90 - 110		
Fluoride			2.50	2.44		mg/L		98	90 - 110		
Sulfate			50.0	47.3		mg/L		95	90 - 110		

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-710737/1-A
Matrix: Water
Analysis Batch: 715232

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 710737

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04516	U	0.168	0.168	1.00	0.321	pCi/L	04/04/25 07:25	04/29/25 18:23	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.5*		*30 - 110*	*04/04/25 07:25*	*04/29/25 18:23*	*1*

Lab Sample ID: LCS 160-710737/2-A
Matrix: Water
Analysis Batch: 715232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710737

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	9.159		1.21	1.00	0.293	pCi/L	96	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.2*		*30 - 110*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: MB 160-710739/1-A
Matrix: Water
Analysis Batch: 715231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 710739

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.09241	U	0.142	0.142	1.00	0.338	pCi/L	04/04/25 07:31	04/29/25 22:02	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.5*		*30 - 110*	*04/04/25 07:31*	*04/29/25 22:02*	*1*

Lab Sample ID: LCS 160-710739/2-A
Matrix: Water
Analysis Batch: 715231

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710739

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	8.225		1.13	1.00	0.355	pCi/L	86	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*87.0*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-710738/1-A
Matrix: Water
Analysis Batch: 715230

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 710738

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.05041	U	0.322	0.322	1.00	0.589	pCi/L	04/04/25 07:29	04/29/25 09:42	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.5*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:42*	*1*
Y Carrier	*76.6*		*30 - 110*	*04/04/25 07:29*	*04/29/25 09:42*	*1*

Lab Sample ID: LCS 160-710738/2-A
Matrix: Water
Analysis Batch: 715230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710738

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.49	10.73		1.42	1.00	0.537	pCi/L	113	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*90.2*		*30 - 110*
Y Carrier	*80.7*		*30 - 110*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-710740/1-A
Matrix: Water
Analysis Batch: 715232

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 710740

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2722	U	0.310	0.311	1.00	0.508	pCi/L	04/04/25 07:34	04/29/25 09:39	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.5*		*30 - 110*	*04/04/25 07:34*	*04/29/25 09:39*	*1*
Y Carrier	*83.4*		*30 - 110*	*04/04/25 07:34*	*04/29/25 09:39*	*1*

Lab Sample ID: LCS 160-710740/2-A
Matrix: Water
Analysis Batch: 715232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710740

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.49	10.34		1.39	1.00	0.568	pCi/L	109	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*87.0*		*30 - 110*
Y Carrier	*80.7*		*30 - 110*

Metals

Prep Batch: 650548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total Recoverable	Water	3005A	
240-221384-2	DUP-005-F-20250328-01	Total Recoverable	Water	3005A	
240-221384-3	BAC-02-F-20250328-01	Total Recoverable	Water	3005A	
240-221384-4	BAC-05-F-20250331-01	Total Recoverable	Water	3005A	
240-221384-5	DUP-006-F-20250331-01	Total Recoverable	Water	3005A	
240-221384-6	BAC-04-F-20250331-01	Total Recoverable	Water	3005A	
240-221384-7	BAC-13-F-20250331-01	Total Recoverable	Water	3005A	
MB 240-650548/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-650548/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-650548/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 650551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total/NA	Water	7470A	
240-221384-2	DUP-005-F-20250328-01	Total/NA	Water	7470A	
240-221384-3	BAC-02-F-20250328-01	Total/NA	Water	7470A	
240-221384-4	BAC-05-F-20250331-01	Total/NA	Water	7470A	
240-221384-5	DUP-006-F-20250331-01	Total/NA	Water	7470A	
240-221384-6	BAC-04-F-20250331-01	Total/NA	Water	7470A	
240-221384-7	BAC-13-F-20250331-01	Total/NA	Water	7470A	
MB 240-650551/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-650551/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 650789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total/NA	Water	7470A	650551
240-221384-2	DUP-005-F-20250328-01	Total/NA	Water	7470A	650551
240-221384-3	BAC-02-F-20250328-01	Total/NA	Water	7470A	650551
240-221384-4	BAC-05-F-20250331-01	Total/NA	Water	7470A	650551
240-221384-5	DUP-006-F-20250331-01	Total/NA	Water	7470A	650551
240-221384-6	BAC-04-F-20250331-01	Total/NA	Water	7470A	650551
240-221384-7	BAC-13-F-20250331-01	Total/NA	Water	7470A	650551
MB 240-650551/1-A	Method Blank	Total/NA	Water	7470A	650551
LCS 240-650551/2-A	Lab Control Sample	Total/NA	Water	7470A	650551

Analysis Batch: 651012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total Recoverable	Water	6010D	650548
240-221384-2	DUP-005-F-20250328-01	Total Recoverable	Water	6010D	650548
240-221384-3	BAC-02-F-20250328-01	Total Recoverable	Water	6010D	650548
240-221384-4	BAC-05-F-20250331-01	Total Recoverable	Water	6010D	650548
240-221384-5	DUP-006-F-20250331-01	Total Recoverable	Water	6010D	650548
240-221384-6	BAC-04-F-20250331-01	Total Recoverable	Water	6010D	650548
240-221384-7	BAC-13-F-20250331-01	Total Recoverable	Water	6010D	650548
MB 240-650548/1-A	Method Blank	Total Recoverable	Water	6010D	650548
LCS 240-650548/2-A	Lab Control Sample	Total Recoverable	Water	6010D	650548

Analysis Batch: 651071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total Recoverable	Water	6020B	650548
240-221384-2	DUP-005-F-20250328-01	Total Recoverable	Water	6020B	650548

Metals (Continued)

Analysis Batch: 651071 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-3	BAC-02-F-20250328-01	Total Recoverable	Water	6020B	650548
240-221384-4	BAC-05-F-20250331-01	Total Recoverable	Water	6020B	650548
240-221384-5	DUP-006-F-20250331-01	Total Recoverable	Water	6020B	650548
240-221384-6	BAC-04-F-20250331-01	Total Recoverable	Water	6020B	650548
240-221384-7	BAC-13-F-20250331-01	Total Recoverable	Water	6020B	650548
MB 240-650548/1-A	Method Blank	Total Recoverable	Water	6020B	650548
LCS 240-650548/3-A	Lab Control Sample	Total Recoverable	Water	6020B	650548

Analysis Batch: 651247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total Recoverable	Water	6020B	650548
240-221384-2	DUP-005-F-20250328-01	Total Recoverable	Water	6020B	650548
240-221384-3	BAC-02-F-20250328-01	Total Recoverable	Water	6020B	650548

Analysis Batch: 651337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total Recoverable	Water	6020B	650548
240-221384-2	DUP-005-F-20250328-01	Total Recoverable	Water	6020B	650548
240-221384-3	BAC-02-F-20250328-01	Total Recoverable	Water	6020B	650548

Analysis Batch: 653065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-4	BAC-05-F-20250331-01	Total Recoverable	Water	6020B	650548
240-221384-5	DUP-006-F-20250331-01	Total Recoverable	Water	6020B	650548
240-221384-6	BAC-04-F-20250331-01	Total Recoverable	Water	6020B	650548
240-221384-7	BAC-13-F-20250331-01	Total Recoverable	Water	6020B	650548

General Chemistry

Analysis Batch: 650624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total/NA	Water	2540 C-2020	
240-221384-2	DUP-005-F-20250328-01	Total/NA	Water	2540 C-2020	
240-221384-3	BAC-02-F-20250328-01	Total/NA	Water	2540 C-2020	
MB 240-650624/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-650624/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 650626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total/NA	Water	300.0	
240-221384-1	BAC-11-F-20250328-01	Total/NA	Water	300.0	
240-221384-2	DUP-005-F-20250328-01	Total/NA	Water	300.0	
240-221384-2	DUP-005-F-20250328-01	Total/NA	Water	300.0	
240-221384-3	BAC-02-F-20250328-01	Total/NA	Water	300.0	
240-221384-3	BAC-02-F-20250328-01	Total/NA	Water	300.0	
240-221384-4	BAC-05-F-20250331-01	Total/NA	Water	300.0	
240-221384-4	BAC-05-F-20250331-01	Total/NA	Water	300.0	
240-221384-5	DUP-006-F-20250331-01	Total/NA	Water	300.0	
240-221384-6	BAC-04-F-20250331-01	Total/NA	Water	300.0	
240-221384-7	BAC-13-F-20250331-01	Total/NA	Water	300.0	
240-221384-7	BAC-13-F-20250331-01	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 650626 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-650626/4	Method Blank	Total/NA	Water	300.0	
LCS 240-650626/5	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 650639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total/NA	Water	2320 B-2021	
240-221384-2	DUP-005-F-20250328-01	Total/NA	Water	2320 B-2021	
240-221384-3	BAC-02-F-20250328-01	Total/NA	Water	2320 B-2021	
240-221384-4	BAC-05-F-20250331-01	Total/NA	Water	2320 B-2021	
240-221384-5	DUP-006-F-20250331-01	Total/NA	Water	2320 B-2021	
240-221384-6	BAC-04-F-20250331-01	Total/NA	Water	2320 B-2021	
240-221384-7	BAC-13-F-20250331-01	Total/NA	Water	2320 B-2021	
MB 240-650639/30	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-650639/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-650639/29	Lab Control Sample	Total/NA	Water	2320 B-2021	
240-221384-7 DU	BAC-13-F-20250331-01	Total/NA	Water	2320 B-2021	

Analysis Batch: 650689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-4	BAC-05-F-20250331-01	Total/NA	Water	2540 C-2020	
240-221384-5	DUP-006-F-20250331-01	Total/NA	Water	2540 C-2020	
240-221384-6	BAC-04-F-20250331-01	Total/NA	Water	2540 C-2020	
240-221384-7	BAC-13-F-20250331-01	Total/NA	Water	2540 C-2020	
MB 240-650689/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-650689/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 651194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-5	DUP-006-F-20250331-01	Total/NA	Water	300.0	
240-221384-6	BAC-04-F-20250331-01	Total/NA	Water	300.0	
MB 240-651194/3	Method Blank	Total/NA	Water	300.0	
LCS 240-651194/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 710737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-2	DUP-005-F-20250328-01	Total/NA	Water	PrecSep-21	
240-221384-3	BAC-02-F-20250328-01	Total/NA	Water	PrecSep-21	
240-221384-4	BAC-05-F-20250331-01	Total/NA	Water	PrecSep-21	
240-221384-5	DUP-006-F-20250331-01	Total/NA	Water	PrecSep-21	
240-221384-6	BAC-04-F-20250331-01	Total/NA	Water	PrecSep-21	
240-221384-7	BAC-13-F-20250331-01	Total/NA	Water	PrecSep-21	
MB 160-710737/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-710737/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 710738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-2	DUP-005-F-20250328-01	Total/NA	Water	PrecSep_0	
240-221384-3	BAC-02-F-20250328-01	Total/NA	Water	PrecSep_0	
240-221384-4	BAC-05-F-20250331-01	Total/NA	Water	PrecSep_0	

Rad (Continued)

Prep Batch: 710738 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-5	DUP-006-F-20250331-01	Total/NA	Water	PrecSep_0	
240-221384-6	BAC-04-F-20250331-01	Total/NA	Water	PrecSep_0	
240-221384-7	BAC-13-F-20250331-01	Total/NA	Water	PrecSep_0	
MB 160-710738/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-710738/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 710739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total/NA	Water	PrecSep-21	
MB 160-710739/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-710739/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 710740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221384-1	BAC-11-F-20250328-01	Total/NA	Water	PrecSep_0	
MB 160-710740/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-710740/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221384-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-11-F-20250328-01
Lab Sample ID: 240-221384-1

Date Collected: 03/28/25 13:20
Matrix: Water
Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6010D		1	651012	AJC	EET CLE	04/04/25 18:51
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651071	S4FJ	EET CLE	04/04/25 14:39
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		50	651247	S4FJ	EET CLE	04/07/25 18:13
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		50	651337	S4FJ	EET CLE	04/08/25 15:33
Total/NA	Prep	7470A			650551	XWS6	EET CLE	04/02/25 14:00
Total/NA	Analysis	7470A		1	650789	TQ6W	EET CLE	04/03/25 11:53
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 12:55
Total/NA	Analysis	2540 C-2020		1	650624	TAV2	EET CLE	04/02/25 14:50
Total/NA	Analysis	300.0		100	650626	JWW	EET CLE	04/02/25 21:53
Total/NA	Analysis	300.0		1000	650626	JWW	EET CLE	04/02/25 22:02
Total/NA	Prep	PrecSep-21			710739	OGC	EET SL	04/04/25 07:31
Total/NA	Analysis	9315		1	715288	SWS	EET SL	04/30/25 08:16
Total/NA	Prep	PrecSep_0			710740	OGC	EET SL	04/04/25 07:34
Total/NA	Analysis	9320		1	715230	SWS	EET SL	04/29/25 09:41
Total/NA	Analysis	Ra226_Ra228		1	715010	FLC	EET SL	04/30/25 12:31

Client Sample ID: DUP-005-F-20250328-01
Lab Sample ID: 240-221384-2

Date Collected: 03/28/25 00:00
Matrix: Water
Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6010D		1	651012	AJC	EET CLE	04/04/25 18:56
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651071	S4FJ	EET CLE	04/04/25 14:42
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		50	651247	S4FJ	EET CLE	04/07/25 18:16
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		50	651337	S4FJ	EET CLE	04/08/25 15:40
Total/NA	Prep	7470A			650551	XWS6	EET CLE	04/02/25 14:00
Total/NA	Analysis	7470A		1	650789	TQ6W	EET CLE	04/03/25 11:55
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 12:59
Total/NA	Analysis	2540 C-2020		1	650624	TAV2	EET CLE	04/02/25 14:50
Total/NA	Analysis	300.0		100	650626	JWW	EET CLE	04/02/25 22:11
Total/NA	Analysis	300.0		1000	650626	JWW	EET CLE	04/02/25 22:20
Total/NA	Prep	PrecSep-21			710737	OGC	EET SL	04/04/25 07:25
Total/NA	Analysis	9315		1	715232	SWS	EET SL	04/29/25 18:24
Total/NA	Prep	PrecSep_0			710738	OGC	EET SL	04/04/25 07:29
Total/NA	Analysis	9320		1	715230	SWS	EET SL	04/29/25 09:42

Client Sample ID: DUP-005-F-20250328-01

Lab Sample ID: 240-221384-2

Date Collected: 03/28/25 00:00

Matrix: Water

Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Ra226_Ra228		1	715010	FLC	EET SL	04/30/25 12:31

Client Sample ID: BAC-02-F-20250328-01

Lab Sample ID: 240-221384-3

Date Collected: 03/28/25 15:10

Matrix: Water

Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6010D		1	651012	AJC	EET CLE	04/04/25 19:00
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651071	S4FJ	EET CLE	04/04/25 14:45
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651247	S4FJ	EET CLE	04/07/25 18:18
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651337	S4FJ	EET CLE	04/08/25 15:43
Total/NA	Prep	7470A			650551	XWS6	EET CLE	04/02/25 14:00
Total/NA	Analysis	7470A		1	650789	TQ6W	EET CLE	04/03/25 11:57
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 13:03
Total/NA	Analysis	2540 C-2020		1	650624	TAV2	EET CLE	04/02/25 14:50
Total/NA	Analysis	300.0		1	650626	JWW	EET CLE	04/02/25 22:30
Total/NA	Analysis	300.0		10	650626	JWW	EET CLE	04/02/25 22:39
Total/NA	Prep	PrecSep-21			710737	OGC	EET SL	04/04/25 07:25
Total/NA	Analysis	9315		1	715232	SWS	EET SL	04/29/25 20:05
Total/NA	Prep	PrecSep_0			710738	OGC	EET SL	04/04/25 07:29
Total/NA	Analysis	9320		1	715230	SWS	EET SL	04/29/25 09:43
Total/NA	Analysis	Ra226_Ra228		1	715010	FLC	EET SL	04/30/25 12:31

Client Sample ID: BAC-05-F-20250331-01

Lab Sample ID: 240-221384-4

Date Collected: 03/31/25 12:22

Matrix: Water

Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6010D		1	651012	AJC	EET CLE	04/04/25 19:04
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651071	S4FJ	EET CLE	04/04/25 14:58
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	653065	S4FJ	EET CLE	04/21/25 12:12
Total/NA	Prep	7470A			650551	XWS6	EET CLE	04/02/25 14:00
Total/NA	Analysis	7470A		1	650789	TQ6W	EET CLE	04/03/25 11:58
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 13:08
Total/NA	Analysis	2540 C-2020		1	650689	C5SV	EET CLE	04/03/25 08:38
Total/NA	Analysis	300.0		1	650626	JWW	EET CLE	04/02/25 22:48
Total/NA	Analysis	300.0		5	650626	JWW	EET CLE	04/02/25 22:57

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221384-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-05-F-20250331-01
Lab Sample ID: 240-221384-4
Date Collected: 03/31/25 12:22
Matrix: Water
Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			710737	OGC	EET SL	04/04/25 07:25
Total/NA	Analysis	9315		1	715232	SWS	EET SL	04/29/25 20:05
Total/NA	Prep	PrecSep_0			710738	OGC	EET SL	04/04/25 07:29
Total/NA	Analysis	9320		1	715230	SWS	EET SL	04/29/25 09:43
Total/NA	Analysis	Ra226_Ra228		1	715010	FLC	EET SL	04/30/25 12:31

Client Sample ID: DUP-006-F-20250331-01
Lab Sample ID: 240-221384-5
Date Collected: 03/31/25 00:00
Matrix: Water
Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6010D		1	651012	AJC	EET CLE	04/04/25 19:09
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651071	S4FJ	EET CLE	04/04/25 15:01
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	653065	S4FJ	EET CLE	04/21/25 12:15
Total/NA	Prep	7470A			650551	XWS6	EET CLE	04/02/25 14:00
Total/NA	Analysis	7470A		1	650789	TQ6W	EET CLE	04/03/25 12:00
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 13:13
Total/NA	Analysis	2540 C-2020		1	650689	C5SV	EET CLE	04/03/25 08:38
Total/NA	Analysis	300.0		1	650626	JWW	EET CLE	04/02/25 23:06
Total/NA	Analysis	300.0		5	651194	JMR	EET CLE	04/08/25 09:15
Total/NA	Prep	PrecSep-21			710737	OGC	EET SL	04/04/25 07:25
Total/NA	Analysis	9315		1	715232	SWS	EET SL	04/29/25 20:06
Total/NA	Prep	PrecSep_0			710738	OGC	EET SL	04/04/25 07:29
Total/NA	Analysis	9320		1	715230	SWS	EET SL	04/29/25 09:43
Total/NA	Analysis	Ra226_Ra228		1	715010	FLC	EET SL	04/30/25 12:31

Client Sample ID: BAC-04-F-20250331-01
Lab Sample ID: 240-221384-6
Date Collected: 03/31/25 13:55
Matrix: Water
Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6010D		1	651012	AJC	EET CLE	04/04/25 19:22
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651071	S4FJ	EET CLE	04/04/25 15:03
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	653065	S4FJ	EET CLE	04/21/25 12:17
Total/NA	Prep	7470A			650551	XWS6	EET CLE	04/02/25 14:00
Total/NA	Analysis	7470A		1	650789	TQ6W	EET CLE	04/03/25 12:02
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 13:18
Total/NA	Analysis	2540 C-2020		1	650689	C5SV	EET CLE	04/03/25 08:38

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221384-1

Client Sample ID: BAC-04-F-20250331-01

Lab Sample ID: 240-221384-6

Date Collected: 03/31/25 13:55
Matrix: Water
Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	650626	JWW	EET CLE	04/02/25 23:34
Total/NA	Analysis	300.0		5	651194	JMR	EET CLE	04/08/25 09:24
Total/NA	Prep	PrecSep-21			710737	OGC	EET SL	04/04/25 07:25
Total/NA	Analysis	9315		1	715232	SWS	EET SL	04/29/25 21:47
Total/NA	Prep	PrecSep_0			710738	OGC	EET SL	04/04/25 07:29
Total/NA	Analysis	9320		1	715230	SWS	EET SL	04/29/25 09:43
Total/NA	Analysis	Ra226_Ra228		1	715010	FLC	EET SL	04/30/25 12:31

Client Sample ID: BAC-13-F-20250331-01

Lab Sample ID: 240-221384-7

Date Collected: 03/31/25 15:19
Matrix: Water
Date Received: 04/01/25 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6010D		1	651012	AJC	EET CLE	04/04/25 19:26
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	651071	S4FJ	EET CLE	04/04/25 15:06
Total Recoverable	Prep	3005A			650548	XWS6	EET CLE	04/02/25 14:00
Total Recoverable	Analysis	6020B		1	653065	S4FJ	EET CLE	04/21/25 12:20
Total/NA	Prep	7470A			650551	XWS6	EET CLE	04/02/25 14:00
Total/NA	Analysis	7470A		1	650789	TQ6W	EET CLE	04/03/25 12:03
Total/NA	Analysis	2320 B-2021		1	650639	JMR	EET CLE	04/02/25 13:22
Total/NA	Analysis	2540 C-2020		1	650689	C5SV	EET CLE	04/03/25 08:38
Total/NA	Analysis	300.0		5	650626	JWW	EET CLE	04/02/25 23:43
Total/NA	Analysis	300.0		20	650626	JWW	EET CLE	04/02/25 23:52
Total/NA	Prep	PrecSep-21			710737	OGC	EET SL	04/04/25 07:25
Total/NA	Analysis	9315		1	715232	SWS	EET SL	04/29/25 21:47
Total/NA	Prep	PrecSep_0			710738	OGC	EET SL	04/04/25 07:29
Total/NA	Analysis	9320		1	715230	SWS	EET SL	04/29/25 09:43
Total/NA	Analysis	Ra226_Ra228		1	715010	FLC	EET SL	04/30/25 12:31

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221384-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221384-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins
Environment Testing

Client Information	Sampler: Bobby Caste	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No.: 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-11-F-20250328-01	3-28-25	1320	G	Water			1	1	2	1	1		
DUP-005-F-20250328-01	3-28-25	—	G	Water			1	1	2	1	1		
BAC-02-F-20250328-01	3-28-25	1510	G	Water			1	1	2	1	1		
BAC-05-F-20250331-01	3-31-25	1222	G	Water			1	1	2	1	1		
DUP-006-F-20250331-01	3-31-25	—	G	Water			1	1	2	1	1		
BAC-04-F-20250331-01	3-31-25	1355	G	Water			1	1	2	1	1		
BAC-13-F-20250331-01	3-31-25	1519	G	Water			1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									

240-221384 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Bobby Caste	4-1-25 / 0930	KEMRON	Marlon Von	4/1/25	Waypoint
Relinquished by:	Date/Time:	Company	Received by: KATHARINE MARTIN	Date/Time: 4/1/25 1500	Company: EUR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative — **Login #**
Barberton Facility

Client Gavin — Site Name ____ — Cooler unpacked by: VMartin

Cooler Received on 4/1/25 — Opened on 4/1/25

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other ____

Receipt After-hours Drop-off Date/Time ____ Storage Location ____

Eurofins Cooler # EC — Foam Box Client Cooler Box Other ____

Packing material used. Bubble Wrap Foam Plastic Bag None Other ____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 13 (CF +0.0 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp ____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity ____	Yes (No)	
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No (NA)	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	
-Were tamper/custody seals intact and uncompromised?	Yes No (NA)	
3 Shippers' packing slip attached to the cooler(s)?	Yes (No)	
4 Did custody papers accompany the sample(s)?	(Yes) No	
5 Were the custody papers relinquished & signed in the appropriate place?	Yes (No)	
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7 Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11 Sufficient quantity received to perform indicated analyses?	(Yes) No	
12 Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# HC448976
14 Were VOAs on the COC?	Yes (No)	
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes No (NA)	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # ____	Yes (No)	
17 Was a LL Hg or Me Hg trip blank present? ____	Yes (No)	

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page — Samples processed by:

19 SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired

Sample(s) ____ were received in a broken container

Sample(s) ____ were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory

Time preserved. ____ Preservative(s) added/Lot number(s) ____

VOA Sample Preservation - Date/Time VOAs Frozen. ____

Login # . _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 13	4.4	4.4	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #: 1	3.4	3.4	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #: 1	18.9	18.9	Wet Ice Blue Ice Dry Ice Water (None)
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

4/1/2025

Login Container Summary Report

240-221384

4/30/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-11-F-20250328-01	240-221384-A-1	Plastic 60 mL - unpreserved				
BAC-11-F-20250328-01	240-221384-B-1	Plastic 60 mL - unpreserved				
BAC-11-F-20250328-01	240-221384-C-1	Plastic 500ml - unpreserved				
BAC-11-F-20250328-01	240-221384-D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-11-F-20250328-01	240-221384-E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-11-F-20250328-01	240-221384-F-1	Plastic 1 liter - Nitric Acid	<2			
DUP-005-F-20250328-01	240-221384-A-2	Plastic 60 mL - unpreserved				
DUP-005-F-20250328-01	240-221384-B-2	Plastic 60 mL - unpreserved				
DUP-005-F-20250328-01	240-221384-C-2	Plastic 500ml - unpreserved				
DUP-005-F-20250328-01	240-221384-D-2	Plastic 500ml - with Nitric Acid	<2			
DUP-005-F-20250328-01	240-221384-E-2	Plastic 1 liter - Nitric Acid	<2			
DUP-005-F-20250328-01	240-221384-F-2	Plastic 1 liter - Nitric Acid	<2			
BAC-02-F-20250328-01	240-221384-A-3	Plastic 60 mL - unpreserved				
BAC-02-F-20250328-01	240-221384-B-3	Plastic 60 mL - unpreserved				
BAC-02-F-20250328-01	240-221384-C-3	Plastic 500ml - unpreserved				
BAC-02 F-20250328-01	240-221384-D-3	Plastic 500ml - with Nitric Acid	<2			
BAC-02-F-20250328-01	240-221384-E-3	Plastic 1 liter - Nitric Acid	<2			
BAC-02-F-20250328-01	240-221384-F-3	Plastic 1 liter - Nitric Acid	<2			
BAC-05-F-20250331-01	240-221384-A-4	Plastic 60 mL - unpreserved				
BAC-05-F-20250331-01	240-221384-B-4	Plastic 60 mL - unpreserved				
BAC-05-F-20250331-01	240-221384-C-4	Plastic 500ml - unpreserved				
BAC-05-F-20250331-01	240-221384-D-4	Plastic 500ml - with Nitric Acid	<2			
BAC-05-F-20250331-01	240-221384 E-4	Plastic 1 liter - Nitric Acid	<2			
BAC-05-F-20250331-01	240-221384-F-4	Plastic 1 liter - Nitric Acid	<2			
DUP-006-F-20250331-01	240-221384-A-5	Plastic 60 mL - unpreserved				
DUP-006-F-20250331-01	240-221384-B-5	Plastic 60 mL - unpreserved				
DUP-006-F-20250331-01	240-221384-C-5	Plastic 500ml - unpreserved				
DUP-006-F-20250331-01	240-221384-D-5	Plastic 500ml - with Nitric Acid	<2			
DUP-006-F-20250331-01	240-221384-E-5	Plastic 1 liter - Nitric Acid	<2			
DUP-006-F-20250331-01	240-221384-F-5	Plastic 1 liter - Nitric Acid	<2			
BAC-04-F-20250331-01	240-221384-A-6	Plastic 60 mL - unpreserved				
BAC-04-F-20250331-01	240-221384-B-6	Plastic 60 mL - unpreserved				
BAC-04-F-20250331-01	240-221384-C-6	Plastic 500ml - unpreserved				
BAC-04-F-20250331-01	240-221384-D-6	Plastic 500ml - with Nitric Acid	<2			
BAC-04-F-20250331-01	240-221384-E-6	Plastic 1 liter - Nitric Acid	<2			

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-04-F 20250331-01	240-221384-F-6	Plastic 1 liter - Nitric Acid	<2			
BAC-13-F-20250331-01	240-221384-A-7	Plastic 60 mL - unpreserved				
BAC-13-F-20250331-01	240-221384-B-7	Plastic 60 mL - unpreserved				
BAC-13-F-20250331-01	240-221384-C-7	Plastic 500ml - unpreserved				
BAC-13-F-20250331-01	240-221384-D-7	Plastic 500ml - with Nitric Acid	<2			
BAC-13-F-20250331-01	240-221384-E-7	Plastic 1 liter - Nitric Acid	<2			
BAC-13-F-20250331-01	240-221384-F-7	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins
Environment Testing

Client Information	Sampler: Bobby Castle	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No.: 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:

Address: 7397 OH-7	Due Date Requested:
City: Cheshire	TAT Requested (days):
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No
Phone: 740-925-3171(Tel)	PO #: 2935505
Email: taylor.huffman@lightstonegen.com	WO #:
Project Name: Gavin CCR	Project #: 24019633
Site: Gavin	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-11-F-20250328-01	3-28-25	1320	6	Water			1	1	2	1	1		
DUP-005-F-20250328-01	3-28-25	—	6	Water			1	1	2	1	1		
BAC-02-F-20250328-01	3-28-25	1510	6	Water			1	1	2	1	1		
BAC-05-F-20250331-01	3-31-25	1222	6	Water			1	1	2	1	1		
DUP-006-F-20250331-01	3-31-25	—	6	Water			1	1	2	1	1		
BAC-04-F-20250331-01	3-31-25	1355	6	Water			1	1	2	1	1		
BAC-13-F-20250331-01	3-31-25	1519	6	Water			1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									

240-221384 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	4-1-25 / 0930	KEMRON	[signature]	4/1/25	Waypoint
Relinquished by: [signature]	Date/Time: 4-1-25 / 0930	Company Waypoint	Received by: KATHARINE MARTIN	Date/Time: 4/1/25 1500	Company EVL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative Login # :
Barberton Facility

Client Gavin Site Name

Cooler unpacked by VMartin

Cooler Received on 4/1/25 Opened on 4/1/25

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used. Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 13 (CF +0.0 °C) Observed Cooler Temp °C Corrected Cooler Temp °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity	Yes (No)	
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No (NA)	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	
-Were tamper/custody seals intact and uncompromised?	Yes No (NA)	
3 Shippers' packing slip attached to the cooler(s)?	Yes (No)	
4. Did custody papers accompany the sample(s)?	(Yes) No	
5 Were the custody papers relinquished & signed in the appropriate place?	Yes (No)	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7 Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11 Sufficient quantity received to perform indicated analyses?	(Yes) No	
12 Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# HC448976
14 Were VOAs on the COC?	Yes (No)	
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes No (NA)	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes (No)	
17 Was a LL Hg or Me Hg trip blank present?	Yes (No)	

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved. Preservative(s) added/Lot number(s)

VOA Sample Preservation - Date/Time VOAs Frozen

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 13	4.4	4.1	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #: 1	3.4	3.4	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #: 1	18.9	18.9	Wet Ice Blue Ice Dry Ice Water (None)
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

4/1/2025

Login Container Summary Report

240-221384

4/30/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-11-F-20250328-01	240-221384-A-1	Plastic 60 mL - unpreserved				
BAC-11-F-20250328-01	240-221384-B-1	Plastic 60 mL - unpreserved				
BAC-11-F-20250328-01	240-221384-C-1	Plastic 500ml - unpreserved				
BAC-11-F-20250328-01	240-221384-D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-11-F-20250328-01	240-221384-E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-11-F-20250328-01	240-221384-F-1	Plastic 1 liter Nitric Acid	<2			
DUP-005-F-20250328-01	240-221384-A 2	Plastic 60 mL - unpreserved				
DUP-005-F-20250328-01	240-221384-B-2	Plastic 60 mL - unpreserved				
DUP-005-F-20250328-01	240-221384-C-2	Plastic 500ml - unpreserved				
DUP-005-F-20250328-01	240-221384-D-2	Plastic 500ml - with Nitric Acid	<2			
DUP-005-F-20250328-01	240-221384-E-2	Plastic 1 liter - Nitric Acid	<2			
DUP-005-F-20250328-01	240-221384-F-2	Plastic 1 liter - Nitric Acid	<2			
BAC-02-F-20250328-01	240-221384-A-3	Plastic 60 mL - unpreserved				
BAC-02-F-20250328-01	240-221384-B-3	Plastic 60 mL - unpreserved				
BAC-02-F-20250328-01	240-221384-C-3	Plastic 500ml - unpreserved				
BAC-02-F-20250328-01	240-221384-D-3	Plastic 500ml - with Nitric Acid	<2			
BAC-02-F-20250328-01	240-221384-E-3	Plastic 1 liter - Nitric Acid	<2			
BAC-02-F-20250328-01	240-221384-F-3	Plastic 1 liter - Nitric Acid	<2			
BAC-05-F-20250331-01	240-221384-A-4	Plastic 60 mL - unpreserved				
BAC-05-F-20250331-01	240-221384-B-4	Plastic 60 mL - unpreserved				
BAC-05-F-20250331-01	240-221384-C-4	Plastic 500ml - unpreserved				
BAC-05-F-20250331-01	240-221384-D-4	Plastic 500ml - with Nitric Acid	<2			
BAC-05-F-20250331-01	240-221384-E-4	Plastic 1 liter - Nitric Acid	<2			
BAC-05-F-20250331-01	240-221384-F-4	Plastic 1 liter - Nitric Acid	<2			
DUP-006-F-20250331-01	240-221384-A-5	Plastic 60 mL - unpreserved				
DUP-006-F-20250331-01	240-221384-B-5	Plastic 60 mL - unpreserved				
DUP-006-F-20250331-01	240-221384-C-5	Plastic 500ml - unpreserved				
DUP-006-F-20250331-01	240-221384-D-5	Plastic 500ml - with Nitric Acid	<2			
DUP-006-F-20250331-01	240-221384-E-5	Plastic 1 liter - Nitric Acid	<2			
DUP-006-F-20250331-01	240-221384-F-5	Plastic 1 liter - Nitric Acid	<2			
BAC-04-F-20250331-01	240-221384-A-6	Plastic 60 mL - unpreserved				
BAC-04-F-20250331-01	240-221384-B-6	Plastic 60 mL - unpreserved				
BAC-04-F-20250331-01	240-221384-C-6	Plastic 500ml - unpreserved				
BAC-04-F-20250331-01	240-221384-D-6	Plastic 500ml - with Nitric Acid	<2			
BAC-04-F-20250331-01	240-221384 E-6	Plastic 1 liter - Nitric Acid	<2			

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-04-F 20250331-01	240-221384-F-6	Plastic 1 liter - Nitric Acid	<2			
BAC-13-F-20250331-01	240-221384-A-7	Plastic 60 mL - unpreserved				
BAC-13-F-20250331-01	240-221384-B-7	Plastic 60 mL - unpreserved				
BAC-13-F-20250331-01	240-221384-C-7	Plastic 500ml - unpreserved				
BAC-13-F-20250331-01	240-221384-D-7	Plastic 500ml - with Nitric Acid	<2			
BAC-13-F-20250331-01	240-221384-E-7	Plastic 1 liter - Nitric Acid	<2			
BAC-13-F-20250331-01	240-221384-F-7	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-200654.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-221384-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/14/2025			
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal GWM Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-11-F-20250328-01 (240-221384-1)	3/28/25	13:20 Eastern	G	Water			X	X	X	2	
DUP-005-F-20250328-01 (240-221384-2)	3/28/25	Eastern	G	Water			X	X	X	2	
BAC-02-F-20250328-01 (240-221384-3)	3/28/25	15:10 Eastern	G	Water			X	X	X	2	
BAC-05-F-20250331-01 (240-221384-4)	3/31/25	12:22 Eastern	G	Water			X	X	X	2	
DUP-006-F-20250331-01 (240-221384-5)	3/31/25	Eastern	G	Water			X	X	X	2	
BAC-04-F-20250331-01 (240-221384-6)	3/31/25	13:55 Eastern	G	Water			X	X	X	2	
BAC-13-F-20250331-01 (240-221384-7)	3/31/25	15:19 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by: JCollins	Date/Time: 4-1-25	Company: ECW	Received by:	Date/Time: 0830 APR 02 2025	Company: EUASTL
	Relinquished by:	Date/Time:	Company	Received by: Cheyenne Forrest	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-221384-1

Login Number: 221384
List Number: 2
Creator: Forrest, Cheyenne L

List Source: Eurofins St. Louis
List Creation: 04/02/25 11:01 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Generated 5/8/2025 9:13:36 AM

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-221673-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

myEOL

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

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Authorized for release by
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Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221673-1
Project/Site: Federal CCR Wells

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-221673-1 — Eurofins Cleveland

Job Narrative
240-221673-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/4/2025 3:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.0°C and 0.0°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221673-1
Project/Site: Federal CCR Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-221673-1	MW-1-F-20250401-01	Water	04/01/25 13:55	04/04/25 15:45
240-221673-2	BAC-22-F-20250402-01	Water	04/02/25 11:22	04/04/25 15:45
240-221673-3	BAC-23-F-20250402-01	Water	04/02/25 13:12	04/04/25 15:45
240-221673-4	DUP-007-F-20250402-01	Water	04/02/25 00:00	04/04/25 15:45

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

Client Sample ID: MW-1-F-20250401-01 — Lab Sample ID: 240-221673-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	63	J	100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.95	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	110		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.21	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	130000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.85	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	0.68	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	5.4	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	14000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	18000		1000	880	ug/L	1		6020B	Total Recoverable
Thallium	0.71	J	1.0	0.51	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	230	B	5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	480		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	32		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.11		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	130		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-22-F-20250402-01 — Lab Sample ID: 240-221673-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	200		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.2	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	130		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	160000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.70	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	5.0	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	19000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	18000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	590		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	38		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.096		0.050	0.024	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

Client Sample ID: BAC-22-F-20250402-01 (Continued)

Lab Sample ID: 240-221673-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	220		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: BAC-23-F-20250402-01

Lab Sample ID: 240-221673-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	230		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	1.3	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	110		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	120000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.74	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	16000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	470		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	33		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.13		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	130		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: DUP-007-F-20250402-01

Lab Sample ID: 240-221673-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	220		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.97	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	110		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	120000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.74	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Magnesium	14000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	18000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	460		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	33		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.14		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	130		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1-F-20250401-01
Date Collected: 04/01/25 13:55
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221673-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**63**	**J**	100	57	ug/L		04/07/25 14:00	04/08/25 23:49	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/07/25 14:00	04/09/25 11:08	1
Arsenic	**0.95**	**J**	5.0	0.75	ug/L		04/07/25 14:00	04/09/25 11:08	1
Barium	**110**		5.0	0.77	ug/L		04/07/25 14:00	04/09/25 11:08	1
Beryllium	ND		1.0	0.27	ug/L		04/07/25 14:00	04/09/25 11:08	1
Cadmium	**0.21**	**J**	1.0	0.077	ug/L		04/07/25 14:00	04/09/25 11:08	1
Calcium	**130000**		1000	250	ug/L		04/07/25 14:00	04/10/25 13:01	1
Chromium	ND		5.0	1.2	ug/L		04/07/25 14:00	04/09/25 11:08	1
Cobalt	**0.85**	**J**	1.0	0.086	ug/L		04/07/25 14:00	04/09/25 11:08	1
Lead	**0.68**	**J**	1.0	0.45	ug/L		04/07/25 14:00	04/09/25 11:08	1
Lithium	**5.4**	**J**	8.0	3.4	ug/L		04/07/25 14:00	04/09/25 11:08	1
Magnesium	**14000**		1000	61	ug/L		04/07/25 14:00	04/09/25 11:08	1
Molybdenum	ND		5.0	1.1	ug/L		04/07/25 14:00	04/09/25 11:08	1
Potassium	**1600**		1000	220	ug/L		04/07/25 14:00	04/09/25 11:08	1
Selenium	ND		5.0	0.89	ug/L		04/07/25 14:00	04/09/25 11:08	1
Sodium	**18000**		1000	880	ug/L		04/07/25 14:00	04/09/25 11:08	1
Thallium	**0.71**	**J**	1.0	0.51	ug/L		04/07/25 14:00	04/09/25 11:08	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/07/25 14:00	04/08/25 11:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**230**	**B**	5.0	2.6	mg/L			04/10/25 18:25	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**230**	**B**	5.0	2.6	mg/L			04/10/25 18:25	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/10/25 18:25	1
Total Dissolved Solids (SM 2540 C-2020)	**480**		10	7.8	mg/L			04/07/25 09:29	1
Chloride (EPA 300.0)	**32**		1.0	0.13	mg/L			04/08/25 08:11	1
Fluoride (EPA 300.0)	**0.11**		0.050	0.024	mg/L			04/08/25 08:11	1
Sulfate (EPA 300.0)	**130**		1.0	0.35	mg/L			04/08/25 08:11	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0859	U	0.140	0.140	1.00	0.246	pCi/L	04/10/25 07:39	05/07/25 14:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.1*		*30 - 110*	*04/10/25 07:39*	*05/07/25 14:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.622**		0.354	0.359	1.00	0.495	pCi/L	04/10/25 07:43	05/07/25 09:43	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

Client Sample ID: MW-1-F-20250401-01
Date Collected: 04/01/25 13:55
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221673-1
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.1		30 - 110	04/10/25 07:43	05/07/25 09:43	1
Y Carrier	80.4		30 - 110	04/10/25 07:43	05/07/25 09:43	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.708		0.381	0.385	5.00	0.495	pCi/L		05/06/25 19:33	1

Client Sample ID: BAC-22-F-20250402-01
Date Collected: 04/02/25 11:22
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221673-2
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**200**		100	57	ug/L		04/07/25 14:00	04/08/25 23:27	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/07/25 14:00	04/09/25 10:56	1
Arsenic	**2.2**	**J**	5.0	0.75	ug/L		04/07/25 14:00	04/09/25 10:56	1
Barium	**130**		5.0	0.77	ug/L		04/07/25 14:00	04/09/25 10:56	1
Beryllium	ND		1.0	0.27	ug/L		04/07/25 14:00	04/09/25 10:56	1
Cadmium	ND		1.0	0.077	ug/L		04/07/25 14:00	04/09/25 10:56	1
Calcium	**160000**		1000	250	ug/L		04/07/25 14:00	04/10/25 12:37	1
Chromium	ND		5.0	1.2	ug/L		04/07/25 14:00	04/09/25 10:56	1
Cobalt	**0.70**	**J**	1.0	0.086	ug/L		04/07/25 14:00	04/09/25 10:56	1
Lead	ND		1.0	0.45	ug/L		04/07/25 14:00	04/09/25 10:56	1
Lithium	**5.0**	**J**	8.0	3.4	ug/L		04/07/25 14:00	04/09/25 10:56	1
Magnesium	**19000**		1000	61	ug/L		04/07/25 14:00	04/09/25 10:56	1
Molybdenum	ND		5.0	1.1	ug/L		04/07/25 14:00	04/09/25 10:56	1
Potassium	**2600**		1000	220	ug/L		04/07/25 14:00	04/09/25 10:56	1
Selenium	ND		5.0	0.89	ug/L		04/07/25 14:00	04/09/25 10:56	1
Sodium	**18000**		1000	880	ug/L		04/07/25 14:00	04/09/25 10:56	1
Thallium	ND		1.0	0.51	ug/L		04/07/25 14:00	04/09/25 10:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/07/25 14:00	04/08/25 11:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**230**		5.0	2.6	mg/L			04/11/25 19:11	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**230**		5.0	2.6	mg/L			04/11/25 19:11	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/11/25 19:11	1
Total Dissolved Solids (SM 2540 C-2020)	**590**		10	7.8	mg/L			04/09/25 10:12	1
Chloride (EPA 300.0)	**38**		1.0	0.13	mg/L			04/08/25 06:58	1
Fluoride (EPA 300.0)	**0.096**		0.050	0.024	mg/L			04/08/25 06:58	1
Sulfate (EPA 300.0)	**220**		5.0	1.7	mg/L			04/08/25 07:25	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.362**		0.243	0.245	1.00	0.333	pCi/L	04/10/25 07:39	05/07/25 14:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*30 - 110*	*04/10/25 07:39*	*05/07/25 14:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.441	U	0.342	0.344	1.00	0.522	pCi/L	04/10/25 07:43	05/07/25 09:43	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

Client Sample ID: BAC-22-F-20250402-01
Date Collected: 04/02/25 11:22
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221673-2
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*30 - 110*	*04/10/25 07:43*	*05/07/25 09:43*	*1*
Y Carrier	*77.4*		*30 - 110*	*04/10/25 07:43*	*05/07/25 09:43*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.802**		0.420	0.422	5.00	0.522	pCi/L		05/06/25 19:33	1

Client Sample ID: BAC-23-F-20250402-01

Lab Sample ID: 240-221673-3

Date Collected: 04/02/25 13:12

Matrix: Water

Date Received: 04/04/25 15:45

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**230**		100	57	ug/L		04/07/25 14:00	04/08/25 23:54	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/07/25 14:00	04/09/25 11:11	1
Arsenic	**1.3**	**J**	5.0	0.75	ug/L		04/07/25 14:00	04/09/25 11:11	1
Barium	**110**		5.0	0.77	ug/L		04/07/25 14:00	04/09/25 11:11	1
Beryllium	ND		1.0	0.27	ug/L		04/07/25 14:00	04/09/25 11:11	1
Cadmium	ND		1.0	0.077	ug/L		04/07/25 14:00	04/09/25 11:11	1
Calcium	**120000**		1000	250	ug/L		04/07/25 14:00	04/10/25 13:03	1
Chromium	ND		5.0	1.2	ug/L		04/07/25 14:00	04/09/25 11:11	1
Cobalt	**0.74**	**J**	1.0	0.086	ug/L		04/07/25 14:00	04/09/25 11:11	1
Lead	ND		1.0	0.45	ug/L		04/07/25 14:00	04/09/25 11:11	1
Lithium	ND		8.0	3.4	ug/L		04/07/25 14:00	04/09/25 11:11	1
Magnesium	**13000**		1000	61	ug/L		04/07/25 14:00	04/09/25 11:11	1
Molybdenum	ND		5.0	1.1	ug/L		04/07/25 14:00	04/09/25 11:11	1
Potassium	**1800**		1000	220	ug/L		04/07/25 14:00	04/09/25 11:11	1
Selenium	ND		5.0	0.89	ug/L		04/07/25 14:00	04/09/25 11:11	1
Sodium	**16000**		1000	880	ug/L		04/07/25 14:00	04/09/25 11:11	1
Thallium	ND		1.0	0.51	ug/L		04/07/25 14:00	04/09/25 11:11	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/07/25 14:00	04/08/25 11:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			04/11/25 19:17	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			04/11/25 19:17	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/11/25 19:17	1
Total Dissolved Solids (SM 2540 C-2020)	**470**		10	7.8	mg/L			04/09/25 10:12	1
Chloride (EPA 300.0)	**33**		1.0	0.13	mg/L			04/08/25 08:30	1
Fluoride (EPA 300.0)	**0.13**		0.050	0.024	mg/L			04/08/25 08:30	1
Sulfate (EPA 300.0)	**130**		1.0	0.35	mg/L			04/08/25 08:30	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0572	U	0.227	0.227	1.00	0.432	pCi/L	04/10/25 07:39	05/07/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.2*		*30 - 110*	*04/10/25 07:39*	*05/07/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.45**		0.601	0.615	1.00	0.779	pCi/L	04/10/25 07:43	05/07/25 09:42	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

Client Sample ID: BAC-23-F-20250402-01
Date Collected: 04/02/25 13:12
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221673-3
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.2*		*30 - 110*	*04/10/25 07:43*	*05/07/25 09:42*	*1*
Y Carrier	*68.4*		*30 - 110*	*04/10/25 07:43*	*05/07/25 09:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.50**		0.642	0.656	5.00	0.779	pCi/L		05/07/25 17:02	1

Client Sample ID: DUP-007-F-20250402-01
Date Collected: 04/02/25 00:00
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221673-4
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**220**		100	57	ug/L		04/07/25 14:00	04/08/25 23:58	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/07/25 14:00	04/09/25 11:40	1
Arsenic	**0.97**	**J**	5.0	0.75	ug/L		04/07/25 14:00	04/09/25 11:40	1
Barium	**110**		5.0	0.77	ug/L		04/07/25 14:00	04/09/25 11:40	1
Beryllium	ND		1.0	0.27	ug/L		04/07/25 14:00	04/09/25 11:40	1
Cadmium	ND		1.0	0.077	ug/L		04/07/25 14:00	04/09/25 11:40	1
Calcium	**120000**		1000	250	ug/L		04/07/25 14:00	04/10/25 13:06	1
Chromium	ND		5.0	1.2	ug/L		04/07/25 14:00	04/09/25 11:40	1
Cobalt	**0.74**	**J**	1.0	0.086	ug/L		04/07/25 14:00	04/09/25 11:40	1
Lead	ND		1.0	0.45	ug/L		04/07/25 14:00	04/09/25 11:40	1
Lithium	ND		8.0	3.4	ug/L		04/07/25 14:00	04/09/25 11:40	1
Magnesium	**14000**		1000	61	ug/L		04/07/25 14:00	04/09/25 11:40	1
Molybdenum	ND		5.0	1.1	ug/L		04/07/25 14:00	04/09/25 11:40	1
Potassium	**1800**		1000	220	ug/L		04/07/25 14:00	04/09/25 11:40	1
Selenium	ND		5.0	0.89	ug/L		04/07/25 14:00	04/09/25 11:40	1
Sodium	**18000**		1000	880	ug/L		04/07/25 14:00	04/10/25 13:06	1
Thallium	ND		1.0	0.51	ug/L		04/07/25 14:00	04/09/25 11:40	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/07/25 14:00	04/08/25 11:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			04/11/25 19:22	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			04/11/25 19:22	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/11/25 19:22	1
Total Dissolved Solids (SM 2540 C-2020)	**460**		10	7.8	mg/L			04/09/25 10:12	1
Chloride (EPA 300.0)	**33**		1.0	0.13	mg/L			04/08/25 08:39	1
Fluoride (EPA 300.0)	**0.14**		0.050	0.024	mg/L			04/08/25 08:39	1
Sulfate (EPA 300.0)	**130**		1.0	0.35	mg/L			04/08/25 08:39	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.140	U	0.177	0.178	1.00	0.293	pCi/L	04/10/25 07:39	05/07/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*30 - 110*	*04/10/25 07:39*	*05/07/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.420	U	0.342	0.344	1.00	0.529	pCi/L	04/10/25 07:43	05/07/25 09:42	1

Client Sample ID: DUP-007-F-20250402-01
Date Collected: 04/02/25 00:00
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221673-4
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.2*		*30 - 110*	*04/10/25 07:43*	*05/07/25 09:42*	*1*
Y Carrier	*77.4*		*30 - 110*	*04/10/25 07:43*	*05/07/25 09:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.560**		0.385	0.387	5.00	0.529	pCi/L		05/07/25 17:02	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-221673-1	MW-1-F-20250401-01	88.1
240-221673-2	BAC-22-F-20250402-01	88.9
240-221673-2 MS	BAC-22-F-20250402-01	90.4
240-221673-2 MSD	BAC-22-F-20250402-01	84.3
240-221673-3	BAC-23-F-20250402-01	72.2
240-221673-4	DUP-007-F-20250402-01	91.2
LCS 160-711789/2-A	Lab Control Sample	87.4
MB 160-711789/1-A	Method Blank	81.1

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-221673-1	MW-1-F-20250401-01	88.1	80.4
240-221673-2	BAC-22-F-20250402-01	88.9	77.4
240-221673-2 MS	BAC-22-F-20250402-01	90.4	75.1
240-221673-2 MSD	BAC-22-F-20250402-01	84.3	77.0
240-221673-3	BAC-23-F-20250402-01	72.2	68.4
240-221673-4	DUP-007-F-20250402-01	91.2	77.4
LCS 160-711790/2-A	Lab Control Sample	87.4	77.0
MB 160-711790/1-A	Method Blank	81.1	75.9

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-651163/1-A
Matrix: Water
Analysis Batch: 651433

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		04/07/25 14:00	04/08/25 23:18	1

Lab Sample ID: LCS 240-651163/2-A
Matrix: Water
Analysis Batch: 651433

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			1000	1050		ug/L		105	80 - 120		

Lab Sample ID: 240-221673-2 MS
Matrix: Water
Analysis Batch: 651433

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron	200		1000	1270		ug/L		108	75 - 125		

Lab Sample ID: 240-221673-2 MSD
Matrix: Water
Analysis Batch: 651433

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	200		1000	1320		ug/L		112	75 - 125	4	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-651163/1-A
Matrix: Water
Analysis Batch: 651537

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/07/25 14:00	04/09/25 10:51	1
Arsenic	ND		5.0	0.75	ug/L		04/07/25 14:00	04/09/25 10:51	1
Barium	ND		5.0	0.77	ug/L		04/07/25 14:00	04/09/25 10:51	1
Beryllium	ND		1.0	0.27	ug/L		04/07/25 14:00	04/09/25 10:51	1
Cadmium	ND		1.0	0.077	ug/L		04/07/25 14:00	04/09/25 10:51	1
Calcium	ND		1000	250	ug/L		04/07/25 14:00	04/09/25 10:51	1
Chromium	ND		5.0	1.2	ug/L		04/07/25 14:00	04/09/25 10:51	1
Cobalt	ND		1.0	0.086	ug/L		04/07/25 14:00	04/09/25 10:51	1
Lead	ND		1.0	0.45	ug/L		04/07/25 14:00	04/09/25 10:51	1
Lithium	ND		8.0	3.4	ug/L		04/07/25 14:00	04/09/25 10:51	1
Magnesium	ND		1000	61	ug/L		04/07/25 14:00	04/09/25 10:51	1
Molybdenum	ND		5.0	1.1	ug/L		04/07/25 14:00	04/09/25 10:51	1
Potassium	ND		1000	220	ug/L		04/07/25 14:00	04/09/25 10:51	1
Selenium	ND		5.0	0.89	ug/L		04/07/25 14:00	04/09/25 10:51	1
Sodium	ND		1000	880	ug/L		04/07/25 14:00	04/09/25 10:51	1
Thallium	ND		1.0	0.51	ug/L		04/07/25 14:00	04/09/25 10:51	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-651163/3-A
Matrix: Water
Analysis Batch: 651537

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony			100	91.3		ug/L		91	80 - 120		
Arsenic			1000	929		ug/L		93	80 - 120		
Barium			1000	881		ug/L		88	80 - 120		
Beryllium			500	477		ug/L		95	80 - 120		
Cadmium			500	438		ug/L		88	80 - 120		
Calcium			25000	22800		ug/L		91	80 - 120		
Chromium			500	460		ug/L		92	80 - 120		
Cobalt			500	433		ug/L		87	80 - 120		
Lead			500	479		ug/L		96	80 - 120		
Lithium			500	444		ug/L		89	80 - 120		
Magnesium			25000	22800		ug/L		91	80 - 120		
Molybdenum			500	450		ug/L		90	80 - 120		
Potassium			25000	23300		ug/L		93	80 - 120		
Selenium			1000	901		ug/L		90	80 - 120		
Sodium			25000	23200		ug/L		93	80 - 120		
Thallium			1000	1000		ug/L		100	80 - 120		

Lab Sample ID: 240-221673-2 MS
Matrix: Water
Analysis Batch: 651537

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony	ND		100	94.7		ug/L		95	80 - 120		
Arsenic	2.2	J	1000	973		ug/L		97	80 - 120		
Barium	130		1000	1040		ug/L		91	80 - 120		
Beryllium	ND		500	503		ug/L		101	80 - 120		
Cadmium	ND		500	454		ug/L		91	80 - 120		
Chromium	ND		500	477		ug/L		95	80 - 120		
Cobalt	0.70	J	500	450		ug/L		90	80 - 120		
Lead	ND		500	499		ug/L		100	80 - 120		
Lithium	5.0	J	500	453		ug/L		90	80 - 120		
Magnesium	19000		25000	41400		ug/L		90	80 - 120		
Molybdenum	ND		500	480		ug/L		96	80 - 120		
Potassium	2600		25000	26200		ug/L		94	80 - 120		
Selenium	ND		1000	929		ug/L		93	80 - 120		
Sodium	18000		25000	41500		ug/L		92	80 - 120		
Thallium	ND		1000	1050		ug/L		105	80 - 120		

Lab Sample ID: 240-221673-2 MS
Matrix: Water
Analysis Batch: 651731

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Calcium	160000		25000	180000	4	ug/L		96	80 - 120		

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-221673-2 MSD
Matrix: Water
Analysis Batch: 651537

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		100	91.4		ug/L		91	80 - 120	4	20
Arsenic	2.2	J	1000	926		ug/L		92	80 - 120	5	20
Barium	130		1000	996		ug/L		87	80 - 120	4	20
Beryllium	ND		500	470		ug/L		94	80 - 120	7	20
Cadmium	ND		500	434		ug/L		87	80 - 120	4	20
Chromium	ND		500	452		ug/L		90	80 - 120	5	20
Cobalt	0.70	J	500	432		ug/L		86	80 - 120	4	20
Lead	ND		500	476		ug/L		95	80 - 120	5	20
Lithium	5.0	J	500	433		ug/L		86	80 - 120	5	20
Magnesium	19000		25000	39700		ug/L		83	80 - 120	4	20
Molybdenum	ND		500	459		ug/L		92	80 - 120	5	20
Potassium	2600		25000	25100		ug/L		90	80 - 120	4	20
Selenium	ND		1000	885		ug/L		89	80 - 120	5	20
Sodium	18000		25000	39500		ug/L		84	80 - 120	5	20
Thallium	ND		1000	1000		ug/L		100	80 - 120	5	20

Lab Sample ID: 240-221673-2 MSD
Matrix: Water
Analysis Batch: 651731

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	160000		25000	175000	4	ug/L		75	80 - 120	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-651164/1-A
Matrix: Water
Analysis Batch: 651334

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 651164

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/07/25 14:00	04/08/25 11:12	1

Lab Sample ID: LCS 240-651164/2-A
Matrix: Water
Analysis Batch: 651334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 651164

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.03		ug/L		101	80 - 120

Lab Sample ID: 240-221673-2 MS
Matrix: Water
Analysis Batch: 651334

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA
Prep Batch: 651164

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		1.00	1.01		ug/L		101	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-221673-2 MSD
Matrix: Water
Analysis Batch: 651334

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA
Prep Batch: 651164

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		1.00	1.00		ug/L		100	80 - 120	1	20

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-651805/4
Matrix: Water
Analysis Batch: 651805

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	3.52	J	5.0	2.6	mg/L			04/10/25 16:08	1
Bicarbonate Alkalinity as CaCO3	3.52	J	5.0	2.6	mg/L			04/10/25 16:08	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/10/25 16:08	1

Lab Sample ID: LCS 240-651805/3
Matrix: Water
Analysis Batch: 651805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	256		mg/L		91	86 - 123

Lab Sample ID: MB 240-652101/30
Matrix: Water
Analysis Batch: 652101

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			04/11/25 20:36	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/11/25 20:36	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/11/25 20:36	1

Lab Sample ID: MB 240-652101/4
Matrix: Water
Analysis Batch: 652101

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			04/11/25 18:18	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/11/25 18:18	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/11/25 18:18	1

Lab Sample ID: MB 240-652101/57
Matrix: Water
Analysis Batch: 652101

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			04/11/25 23:02	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/11/25 23:02	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/11/25 23:02	1

Method: 2320 B-2021 - Alkalinity (Continued)

Lab Sample ID: LCS 240-652101/3
Matrix: Water
Analysis Batch: 652101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	268		mg/L		96	86 - 123

Lab Sample ID: LCS 240-652101/56
Matrix: Water
Analysis Batch: 652101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	270		mg/L		96	86 - 123

Lab Sample ID: 240-221673-2 DU
Matrix: Water
Analysis Batch: 652101

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	230		229		mg/L		0.7	20
Bicarbonate Alkalinity as CaCO3	230		229		mg/L		0.7	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	20

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-651102/1
Matrix: Water
Analysis Batch: 651102

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			04/07/25 09:29	1

Lab Sample ID: LCS 240-651102/2
Matrix: Water
Analysis Batch: 651102

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	164		mg/L		93	80 - 120

Lab Sample ID: MB 240-651469/1
Matrix: Water
Analysis Batch: 651469

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			04/09/25 10:12	1

Lab Sample ID: LCS 240-651469/2
Matrix: Water
Analysis Batch: 651469

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	169		mg/L		96	80 - 120

Method: 2540 C-2020 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 240-221673-2 DU
Matrix: Water
Analysis Batch: 651469

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	590		576		mg/L		2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-651194/3
Matrix: Water
Analysis Batch: 651194

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			04/08/25 04:22	1
Fluoride	ND		0.050	0.024	mg/L			04/08/25 04:22	1
Sulfate	ND		1.0	0.35	mg/L			04/08/25 04:22	1

Lab Sample ID: LCS 240-651194/4
Matrix: Water
Analysis Batch: 651194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	47.5		mg/L		95	90 - 110
Fluoride	2.50	2.44		mg/L		98	90 - 110
Sulfate	50.0	47.3		mg/L		95	90 - 110

Lab Sample ID: 240-221673-2 MS
Matrix: Water
Analysis Batch: 651194

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	38		50.0	87.9		mg/L		99	80 - 120
Fluoride	0.096		2.50	2.65		mg/L		102	80 - 120

Lab Sample ID: 240-221673-2 MS
Matrix: Water
Analysis Batch: 651194

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	220		250	449		mg/L		92	80 - 120

Lab Sample ID: 240-221673-2 MSD
Matrix: Water
Analysis Batch: 651194

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	38		50.0	88.2		mg/L		100	80 - 120	0	15
Fluoride	0.096		2.50	2.67		mg/L		103	80 - 120	1	15

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-221673-2 MSD
Matrix: Water
Analysis Batch: 651194

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	220		250	447		mg/L		91	80 - 120	1	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-711789/1-A
Matrix: Water
Analysis Batch: 716365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 711789

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2519	U	0.244	0.245	1.00	0.381	pCi/L	04/10/25 07:39	05/07/25 13:25	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.1*		*30 - 110*	*04/10/25 07:39*	*05/07/25 13:25*	*1*

Lab Sample ID: LCS 160-711789/2-A
Matrix: Water
Analysis Batch: 716365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 711789

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	9.450		1.29	1.00	0.424	pCi/L	99	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*87.4*		*30 - 110*

Lab Sample ID: 240-221673-2 MS
Matrix: Water
Analysis Batch: 716362

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA
Prep Batch: 711789

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.362		9.54	9.595		1.28	1.00	0.330	pCi/L	97	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*90.4*		*30 - 110*

Lab Sample ID: 240-221673-2 MSD
Matrix: Water
Analysis Batch: 716362

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA
Prep Batch: 711789

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.362		9.57	9.255		1.27	1.00	0.368	pCi/L	93	60 - 140	0.13	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*84.3*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-711790/1-A
Matrix: Water
Analysis Batch: 716365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 711790

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3322	U	0.418	0.419	1.00	0.694	pCi/L	04/10/25 07:43	05/07/25 09:42	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.1*		*30 - 110*	*04/10/25 07:43*	*05/07/25 09:42*	*1*
Y Carrier	*75.9*		*30 - 110*	*04/10/25 07:43*	*05/07/25 09:42*	*1*

Lab Sample ID: LCS 160-711790/2-A
Matrix: Water
Analysis Batch: 716365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 711790

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.47	10.19		1.39	1.00	0.551	pCi/L	108	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*87.4*		*30 - 110*
Y Carrier	*77.0*		*30 - 110*

Lab Sample ID: 240-221673-2 MS
Matrix: Water
Analysis Batch: 716365

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA
Prep Batch: 711790

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.441	U	9.43	12.20		1.59	1.00	0.615	pCi/L	125	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*90.4*		*30 - 110*
Y Carrier	*75.1*		*30 - 110*

Lab Sample ID: 240-221673-2 MSD
Matrix: Water
Analysis Batch: 716365

Client Sample ID: BAC-22-F-20250402-01
Prep Type: Total/NA
Prep Batch: 711790

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.441	U	9.46	11.64		1.54	1.00	0.588	pCi/L	118	60 - 140	0.18	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*84.3*		*30 - 110*
Y Carrier	*77.0*		*30 - 110*

Metals

Prep Batch: 651163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total Recoverable	Water	3005A	
240-221673-2	BAC-22-F-20250402-01	Total Recoverable	Water	3005A	
240-221673-3	BAC-23-F-20250402-01	Total Recoverable	Water	3005A	
240-221673-4	DUP-007-F-20250402-01	Total Recoverable	Water	3005A	
MB 240-651163/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-651163/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-651163/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-221673-2 MS	BAC-22-F-20250402-01	Total Recoverable	Water	3005A	
240-221673-2 MS	BAC-22-F-20250402-01	Total Recoverable	Water	3005A	
240-221673-2 MSD	BAC-22-F-20250402-01	Total Recoverable	Water	3005A	
240-221673-2 MSD	BAC-22-F-20250402-01	Total Recoverable	Water	3005A	

Prep Batch: 651164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total/NA	Water	7470A	
240-221673-2	BAC-22-F-20250402-01	Total/NA	Water	7470A	
240-221673-3	BAC-23-F-20250402-01	Total/NA	Water	7470A	
240-221673-4	DUP-007-F-20250402-01	Total/NA	Water	7470A	
MB 240-651164/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-651164/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-221673-2 MS	BAC-22-F-20250402-01	Total/NA	Water	7470A	
240-221673-2 MSD	BAC-22-F-20250402-01	Total/NA	Water	7470A	

Analysis Batch: 651334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total/NA	Water	7470A	651164
240-221673-2	BAC-22-F-20250402-01	Total/NA	Water	7470A	651164
240-221673-3	BAC-23-F-20250402-01	Total/NA	Water	7470A	651164
240-221673-4	DUP-007-F-20250402-01	Total/NA	Water	7470A	651164
MB 240-651164/1-A	Method Blank	Total/NA	Water	7470A	651164
LCS 240-651164/2-A	Lab Control Sample	Total/NA	Water	7470A	651164
240-221673-2 MS	BAC-22-F-20250402-01	Total/NA	Water	7470A	651164
240-221673-2 MSD	BAC-22-F-20250402-01	Total/NA	Water	7470A	651164

Analysis Batch: 651433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total Recoverable	Water	6010D	651163
240-221673-2	BAC-22-F-20250402-01	Total Recoverable	Water	6010D	651163
240-221673-3	BAC-23-F-20250402-01	Total Recoverable	Water	6010D	651163
240-221673-4	DUP-007-F-20250402-01	Total Recoverable	Water	6010D	651163
MB 240-651163/1-A	Method Blank	Total Recoverable	Water	6010D	651163
LCS 240-651163/2-A	Lab Control Sample	Total Recoverable	Water	6010D	651163
240-221673-2 MS	BAC-22-F-20250402-01	Total Recoverable	Water	6010D	651163
240-221673-2 MSD	BAC-22-F-20250402-01	Total Recoverable	Water	6010D	651163

Analysis Batch: 651537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total Recoverable	Water	6020B	651163
240-221673-2	BAC-22-F-20250402-01	Total Recoverable	Water	6020B	651163
240-221673-3	BAC-23-F-20250402-01	Total Recoverable	Water	6020B	651163
240-221673-4	DUP-007-F-20250402-01	Total Recoverable	Water	6020B	651163

Metals (Continued)

Analysis Batch: 651537 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-651163/1-A	Method Blank	Total Recoverable	Water	6020B	651163
LCS 240-651163/3-A	Lab Control Sample	Total Recoverable	Water	6020B	651163
240-221673-2 MS	BAC-22-F-20250402-01	Total Recoverable	Water	6020B	651163
240-221673-2 MSD	BAC-22-F-20250402-01	Total Recoverable	Water	6020B	651163

Analysis Batch: 651731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total Recoverable	Water	6020B	651163
240-221673-2	BAC-22-F-20250402-01	Total Recoverable	Water	6020B	651163
240-221673-3	BAC-23-F-20250402-01	Total Recoverable	Water	6020B	651163
240-221673-4	DUP-007-F-20250402-01	Total Recoverable	Water	6020B	651163
240-221673-2 MS	BAC-22-F-20250402-01	Total Recoverable	Water	6020B	651163
240-221673-2 MSD	BAC-22-F-20250402-01	Total Recoverable	Water	6020B	651163

General Chemistry

Analysis Batch: 651102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total/NA	Water	2540 C-2020	
MB 240-651102/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-651102/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 651194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total/NA	Water	300.0	
240-221673-2	BAC-22-F-20250402-01	Total/NA	Water	300.0	
240-221673-2	BAC-22-F-20250402-01	Total/NA	Water	300.0	
240-221673-3	BAC-23-F-20250402-01	Total/NA	Water	300.0	
240-221673-4	DUP-007-F-20250402-01	Total/NA	Water	300.0	
MB 240-651194/3	Method Blank	Total/NA	Water	300.0	
LCS 240-651194/4	Lab Control Sample	Total/NA	Water	300.0	
240-221673-2 MS	BAC-22-F-20250402-01	Total/NA	Water	300.0	
240-221673-2 MS	BAC-22-F-20250402-01	Total/NA	Water	300.0	
240-221673-2 MSD	BAC-22-F-20250402-01	Total/NA	Water	300.0	
240-221673-2 MSD	BAC-22-F-20250402-01	Total/NA	Water	300.0	

Analysis Batch: 651469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-2	BAC-22-F-20250402-01	Total/NA	Water	2540 C-2020	
240-221673-3	BAC-23-F-20250402-01	Total/NA	Water	2540 C-2020	
240-221673-4	DUP-007-F-20250402-01	Total/NA	Water	2540 C-2020	
MB 240-651469/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-651469/2	Lab Control Sample	Total/NA	Water	2540 C-2020	
240-221673-2 DU	BAC-22-F-20250402-01	Total/NA	Water	2540 C-2020	

Analysis Batch: 651805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total/NA	Water	2320 B-2021	
MB 240-651805/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-651805/3	Lab Control Sample	Total/NA	Water	2320 B-2021	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

General Chemistry

Analysis Batch: 652101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-2	BAC-22-F-20250402-01	Total/NA	Water	2320 B-2021	
240-221673-3	BAC-23-F-20250402-01	Total/NA	Water	2320 B-2021	
240-221673-4	DUP-007-F-20250402-01	Total/NA	Water	2320 B-2021	
MB 240-652101/30	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-652101/4	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-652101/57	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-652101/3	Lab Control Sample	Total/NA	Water	2320 B-2021	
LCS 240-652101/56	Lab Control Sample	Total/NA	Water	2320 B-2021	
240-221673-2 DU	BAC-22-F-20250402-01	Total/NA	Water	2320 B-2021	

Rad

Prep Batch: 711789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total/NA	Water	PrecSep-21	
240-221673-2	BAC-22-F-20250402-01	Total/NA	Water	PrecSep-21	
240-221673-3	BAC-23-F-20250402-01	Total/NA	Water	PrecSep-21	
240-221673-4	DUP-007-F-20250402-01	Total/NA	Water	PrecSep-21	
MB 160-711789/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-711789/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-221673-2 MS	BAC-22-F-20250402-01	Total/NA	Water	PrecSep-21	
240-221673-2 MSD	BAC-22-F-20250402-01	Total/NA	Water	PrecSep-21	

Prep Batch: 711790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221673-1	MW-1-F-20250401-01	Total/NA	Water	PrecSep_0	
240-221673-2	BAC-22-F-20250402-01	Total/NA	Water	PrecSep_0	
240-221673-3	BAC-23-F-20250402-01	Total/NA	Water	PrecSep_0	
240-221673-4	DUP-007-F-20250402-01	Total/NA	Water	PrecSep_0	
MB 160-711790/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-711790/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-221673-2 MS	BAC-22-F-20250402-01	Total/NA	Water	PrecSep_0	
240-221673-2 MSD	BAC-22-F-20250402-01	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221673-1

Client Sample ID: MW-1-F-20250401-01

Lab Sample ID: 240-221673-1

Date Collected: 04/01/25 13:55
Matrix: Water
Date Received: 04/04/25 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6010D		1	651433	AJC	EET CLE	04/08/25 23:49
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651731	S4FJ	EET CLE	04/10/25 13:01
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651537	S4FJ	EET CLE	04/09/25 11:08
Total/NA	Prep	7470A			651164	XWS6	EET CLE	04/07/25 14:00
Total/NA	Analysis	7470A		1	651334	BN	EET CLE	04/08/25 11:20
Total/NA	Analysis	2320 B-2021		1	651805	PQD2	EET CLE	04/10/25 18:25
Total/NA	Analysis	2540 C-2020		1	651102	C5SV	EET CLE	04/07/25 09:29
Total/NA	Analysis	300.0		1	651194	JMR	EET CLE	04/08/25 08:11
Total/NA	Prep	PrecSep-21			711789	OGC	EET SL	04/10/25 07:39
Total/NA	Analysis	9315		1	716362	SWS	EET SL	05/07/25 14:14
Total/NA	Prep	PrecSep_0			711790	OGC	EET SL	04/10/25 07:43
Total/NA	Analysis	9320		1	716365	SWS	EET SL	05/07/25 09:43
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/06/25 19:33

Client Sample ID: BAC-22-F-20250402-01

Lab Sample ID: 240-221673-2

Date Collected: 04/02/25 11:22
Matrix: Water
Date Received: 04/04/25 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6010D		1	651433	AJC	EET CLE	04/08/25 23:27
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651731	S4FJ	EET CLE	04/10/25 12:37
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651537	S4FJ	EET CLE	04/09/25 10:56
Total/NA	Prep	7470A			651164	XWS6	EET CLE	04/07/25 14:00
Total/NA	Analysis	7470A		1	651334	BN	EET CLE	04/08/25 11:15
Total/NA	Analysis	2320 B-2021		1	652101	JWW	EET CLE	04/11/25 19:11
Total/NA	Analysis	2540 C-2020		1	651469	AAP	EET CLE	04/09/25 10:12
Total/NA	Analysis	300.0		1	651194	JMR	EET CLE	04/08/25 06:58
Total/NA	Analysis	300.0		5	651194	JMR	EET CLE	04/08/25 07:25
Total/NA	Prep	PrecSep-21			711789	OGC	EET SL	04/10/25 07:39
Total/NA	Analysis	9315		1	716362	SWS	EET SL	05/07/25 14:14
Total/NA	Prep	PrecSep_0			711790	OGC	EET SL	04/10/25 07:43
Total/NA	Analysis	9320		1	716365	SWS	EET SL	05/07/25 09:43
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/06/25 19:33

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221673-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-23-F-20250402-01
Lab Sample ID: 240-221673-3

Date Collected: 04/02/25 13:12
Matrix: Water
Date Received: 04/04/25 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6010D		1	651433	AJC	EET CLE	04/08/25 23:54
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651731	S4FJ	EET CLE	04/10/25 13:03
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651537	S4FJ	EET CLE	04/09/25 11:11
Total/NA	Prep	7470A			651164	XWS6	EET CLE	04/07/25 14:00
Total/NA	Analysis	7470A		1	651334	BN	EET CLE	04/08/25 11:22
Total/NA	Analysis	2320 B-2021		1	652101	JWW	EET CLE	04/11/25 19:17
Total/NA	Analysis	2540 C-2020		1	651469	AAP	EET CLE	04/09/25 10:12
Total/NA	Analysis	300.0		1	651194	JMR	EET CLE	04/08/25 08:30
Total/NA	Prep	PrecSep-21			711789	OGC	EET SL	04/10/25 07:39
Total/NA	Analysis	9315		1	716362	SWS	EET SL	05/07/25 14:15
Total/NA	Prep	PrecSep_0			711790	OGC	EET SL	04/10/25 07:43
Total/NA	Analysis	9320		1	716362	SWS	EET SL	05/07/25 09:42
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/07/25 17:02

Client Sample ID: DUP-007-F-20250402-01
Lab Sample ID: 240-221673-4

Date Collected: 04/02/25 00:00
Matrix: Water
Date Received: 04/04/25 15:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6010D		1	651433	AJC	EET CLE	04/08/25 23:58
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651731	S4FJ	EET CLE	04/10/25 13:06
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651537	S4FJ	EET CLE	04/09/25 11:40
Total/NA	Prep	7470A			651164	XWS6	EET CLE	04/07/25 14:00
Total/NA	Analysis	7470A		1	651334	BN	EET CLE	04/08/25 11:24
Total/NA	Analysis	2320 B-2021		1	652101	JWW	EET CLE	04/11/25 19:22
Total/NA	Analysis	2540 C-2020		1	651469	AAP	EET CLE	04/09/25 10:12
Total/NA	Analysis	300.0		1	651194	JMR	EET CLE	04/08/25 08:39
Total/NA	Prep	PrecSep-21			711789	OGC	EET SL	04/10/25 07:39
Total/NA	Analysis	9315		1	716362	SWS	EET SL	05/07/25 14:15
Total/NA	Prep	PrecSep_0			711790	OGC	EET SL	04/10/25 07:43
Total/NA	Analysis	9320		1	716362	SWS	EET SL	05/07/25 09:42
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/07/25 17:02

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221673-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221673-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

0.0 / 0.0 | 0.0 / 0.0 | 0.0 | VM 4/5/25

eurofins Environment Testing

Client Information	Sampler: Robbi Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No.: 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
MW-1-F-20250401-01	4-1-25	1355	G	Water			1	1	2	1	1		
BAC-22-F-20250402-01	4-2-25	1122	G	Water			1	1	2	1	1		
BAC-22-F-20250402-MS-01	4-2-25	1122	G	Water			1	1	2	1	1		
BAC-22-F-20250402-MSD-01	4-2-25	1122	G	Water			1	1	2	1	1		
BAC-23-F-20250402-01	4-2-25	1312	G	Water			1	1	2	1	1		
DUP-007-F-20250402-01	4-2-25	—	G	Water			1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									
				Water									

240-221673 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	4-3-25 / 1330	Kemron			
Relinquished by:	Date/Time: 4/4/25 3:45	Company Waypoint	Received by: Martin	Date/Time: 4/4/25 1545	Company EUR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :**
Barberton Facility

Client Gavin Site Name

Cooler Received on 4/4/25 Opened on 4/4/25

Cooler unpacked by: KMartin

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used. Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt [X] See Multiple Cooler Form

IR GUN # 13 (CF +0.0 °C) Observed Cooler Temp °C Corrected Cooler Temp °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity	Yes (No)	
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No (NA)	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	
-Were tamper/custody seals intact and uncompromised?	Yes No (NA)	
3 Shippers' packing slip attached to the cooler(s)?	Yes (No)	
4. Did custody papers accompany the sample(s)?	(Yes) No	
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7 Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11 Sufficient quantity received to perform indicated analyses?	(Yes) No	
12 Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# HC448976
14 Were VOAs on the COC?	Yes (No)	
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes No (NA)	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes (No)	
17 Was a LL Hg or Me Hg trip blank present?	Yes (No)	

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container
Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory
Time preserved. Preservative(s) added/Lot number(s)

VOA Sample Preservation - Date/Time VOAs Frozen

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: 13	0.0	0.0	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: 13	0.0	0.0	Wet Ice Blue Ice Dry Ice Water None
~~EC~~ Client Box Other	IR GUN #: 13	0.0	0.0	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

4/5/2025

Login Container Summary Report

240-221673

5/8/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
MW-1-F-20250401-01	240-221673-A-1	Plastic 60 mL unpreserved				
MW-1-F-20250401-01	240-221673-B-1	Plastic 60 mL - unpreserved				
MW-1-F-20250401-01	240-221673-C-1	Plastic 500ml - unpreserved				
MW-1-F-20250401-01	240-221673-D-1	Plastic 500ml - with Nitric Acid	<2			
MW 1-F-20250401-01	240-221673-E-1	Plastic 1 liter - Nitric Acid	<2			
MW-1-F-20250401-01	240-221673-F-1	Plastic 1 liter - Nitric Acid	<2			
BAC-22-F-20250402-01	240-221673-A-2	Plastic 60 mL - unpreserved				
BAC-22-F-20250402-01	240-221673-A-2 DU	Plastic 60 mL - unpreserved				
BAC-22-F-20250402-MS-01	240-221673-A 2 MS	Plastic 60 mL - unpreserved				
BAC-22-F-20250402-MSD-01	240-221673-A-2 MSD	Plastic 60 mL - unpreserved				
BAC-22-F-20250402-01	240-221673-B-2	Plastic 60 mL - unpreserved				
BAC-22-F-20250402-01	240-221673-B-2 DU	Plastic 500ml - unpreserved				
BAC-22-F-20250402-MS-01	240-221673-B-2 MS	Plastic 500ml - unpreserved				
BAC-22-F-20250402-MSD-01	240-221673-B-2 MSD	Plastic 60 mL - unpreserved				
BAC-22-F-20250402-01	240-221673-C-2	Plastic 500ml - unpreserved				
BAC-22-F-20250402-MS-01	240-221673-C-2 MS	Plastic 500ml - with Nitric Acid	<2			
BAC-22-F-20250402-MSD-01	240-221673-C-2 MSD	Plastic 500ml - with Nitric Acid	<2			
BAC-22-F-20250402-01	240-221673-D-2	Plastic 500ml - with Nitric Acid	<2			
BAC-22-F-20250402-MS-01	240-221673-D-2 MS	Plastic 1 liter - Nitric Acid	<2			
BAC-22-F-20250402-MSD-01	240-221673-D-2 MSD	Plastic 1 liter - Nitric Acid	<2			
BAC-22-F-20250402-01	240-221673-E-2	Plastic 1 liter - Nitric Acid	<2			
BAC-22-F-20250402-MS-01	240-221673-E-2 MS	Plastic 1 liter - Nitric Acid	<2			
BAC-22-F-20250402-MSD-01	240-221673-E-2 MSD	Plastic 1 liter - Nitric Acid	<2			
BAC-22-F-20250402-01	240-221673-F-2	Plastic 1 liter - Nitric Acid	<2			
BAC-23-F-20250402-01	240-221673-A-3	Plastic 60 mL - unpreserved				
BAC-23-F-20250402-01	240-221673-B-3	Plastic 60 mL - unpreserved				
BAC-23-F-20250402-01	240-221673-C-3	Plastic 500ml - unpreserved				
BAC-23-F-20250402-01	240-221673-D-3	Plastic 500ml - with Nitric Acid	<2			
BAC-23-F-20250402-01	240-221673-E-3	Plastic 1 liter - Nitric Acid	<2			
BAC-23-F-20250402-01	240-221673-F-3	Plastic 1 liter - Nitric Acid	<2			
DUP-007-F-20250402-01	240-221673-A-4	Plastic 60 mL - unpreserved				
DUP-007-F-20250402-01	240-221673-B-4	Plastic 60 mL - unpreserved				

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
DUP-007-F-20250402-01	240-221673-C-4	Plastic 500ml - unpreserved				
DUP-007-F-20250402-01	240-221673-D-4	Plastic 500ml - with Nitric Acid	<2			
DUP-007-F-20250402-01	240-221673-E-4	Plastic 1 liter - Nitric Acid	<2			
DUP-007-F-20250402-01	240-221673-F-4	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-200891.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-221673-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 5/6/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal GWM Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-1-F-20250401-01 (240-221673-1)	4/1/25	13:55 Eastern	G	Water			X	X	X	2	
BAC-22-F-20250402-01 (240-221673-2)	4/2/25	11:22 Eastern	G	Water			X	X	X	2	
BAC-22-F-20250402-MS-01 (240-221673-2MS)	4/2/25	11:22 Eastern	G	Water			X	X	X	2	
BAC-22-F-20250402-MSD-01 (240-221673-2MSD)	4/2/25	11:22 Eastern	G	Water			X	X	X	2	
BAC-23-F-20250402-01 (240-221673-3)	4/2/25	13:12 Eastern	G	Water			X	X	X	2	
DUP-007-F-20250402-01 (240-221673-4)	4/2/25	Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	4/2/25 0900	ESC	Dena Worthington	4/8/25 0825	EDASL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

5/8/2025

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-221673-1

Login Number: 221673
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 04/08/25 12:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

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JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-222227-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

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Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-222227-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-222227-1 — Eurofins Cleveland

Job Narrative
240-222227-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 4/12/2025 8:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-222227-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-222227-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-222227-1	BAC-21-F-20250409-01	Water	04/09/25 10:26	04/12/25 08:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-222227-1

Client Sample ID: BAC-21-F-20250409-01

Lab Sample ID: 240-222227-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	210		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.9	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	140		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.084	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	92000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	1.4	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	1.8		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	0.98	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	4.2	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	25000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	400		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	32		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.18		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	76		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-21-F-20250409-01
Date Collected: 04/09/25 10:26
Date Received: 04/12/25 08:00

Lab Sample ID: 240-222227-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**210**		100	57	ug/L		04/14/25 14:00	04/19/25 02:03	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/14/25 14:00	04/16/25 16:47	1
Arsenic	**2.9**	**J**	5.0	0.75	ug/L		04/14/25 14:00	04/16/25 16:47	1
Barium	**140**		5.0	0.77	ug/L		04/14/25 14:00	04/16/25 16:47	1
Beryllium	ND		1.0	0.27	ug/L		04/14/25 14:00	04/16/25 16:47	1
Cadmium	**0.084**	**J**	1.0	0.077	ug/L		04/14/25 14:00	04/16/25 16:47	1
Calcium	**92000**		1000	250	ug/L		04/14/25 14:00	04/16/25 16:47	1
Chromium	**1.4**	**J**	5.0	1.2	ug/L		04/14/25 14:00	04/16/25 16:47	1
Cobalt	**1.8**		1.0	0.086	ug/L		04/14/25 14:00	04/16/25 16:47	1
Lead	**0.98**	**J**	1.0	0.45	ug/L		04/14/25 14:00	04/16/25 16:47	1
Lithium	**4.2**	**J**	8.0	3.4	ug/L		04/14/25 14:00	04/16/25 16:47	1
Magnesium	**13000**		1000	61	ug/L		04/14/25 14:00	04/16/25 16:47	1
Molybdenum	ND		5.0	1.1	ug/L		04/14/25 14:00	04/16/25 16:47	1
Potassium	**1600**		1000	220	ug/L		04/14/25 14:00	04/16/25 16:47	1
Selenium	ND		5.0	0.89	ug/L		04/14/25 14:00	04/16/25 16:47	1
Sodium	**25000**		1000	880	ug/L		04/14/25 14:00	04/16/25 16:47	1
Thallium	ND		1.0	0.51	ug/L		04/14/25 14:00	04/16/25 16:47	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/14/25 14:00	04/15/25 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			04/15/25 18:21	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			04/15/25 18:21	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/15/25 18:21	1
Total Dissolved Solids (SM 2540 C-2020)	**400**		10	7.8	mg/L			04/16/25 10:03	1
Chloride (EPA 300.0)	**32**		1.0	0.13	mg/L			04/22/25 15:51	1
Fluoride (EPA 300.0)	**0.18**		0.050	0.024	mg/L			04/22/25 15:51	1
Sulfate (EPA 300.0)	**76**		1.0	0.35	mg/L			04/22/25 15:51	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.387**		0.232	0.235	1.00	0.289	pCi/L	04/17/25 07:46	05/15/25 16:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.9*		*30 - 110*	*04/17/25 07:46*	*05/15/25 16:43*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.584**		0.367	0.370	1.00	0.537	pCi/L	04/17/25 07:49	05/15/25 11:54	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-222227-1

Client Sample ID: BAC-21-F-20250409-01
Date Collected: 04/09/25 10:26
Date Received: 04/12/25 08:00

Lab Sample ID: 240-222227-1
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		30 - 110	04/17/25 07:49	05/15/25 11:54	1
Y Carrier	81.1		30 - 110	04/17/25 07:49	05/15/25 11:54	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.971		0.434	0.438	5.00	0.537	pCi/L		05/15/25 17:39	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-222227-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-222227-1	BAC-21-F-20250409-01	86.9
LCS 160-712849/2-A	Lab Control Sample	87.1
MB 160-712849/1-A	Method Blank	87.4

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-222227-1	BAC-21-F-20250409-01	86.9	81.1
LCS 160-712850/2-A	Lab Control Sample	87.1	84.1
MB 160-712850/1-A	Method Blank	87.4	83.0

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-222227-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-652041/1-A
Matrix: Water
Analysis Batch: 652471

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 652041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		04/14/25 14:00	04/16/25 19:43	1

Lab Sample ID: LCS 240-652041/2-A
Matrix: Water
Analysis Batch: 652471

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 652041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1100		ug/L		110	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-652041/1-A
Matrix: Water
Analysis Batch: 652412

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 652041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/14/25 14:00	04/16/25 15:42	1
Arsenic	ND		5.0	0.75	ug/L		04/14/25 14:00	04/16/25 15:42	1
Barium	ND		5.0	0.77	ug/L		04/14/25 14:00	04/16/25 15:42	1
Beryllium	ND		1.0	0.27	ug/L		04/14/25 14:00	04/16/25 15:42	1
Cadmium	ND		1.0	0.077	ug/L		04/14/25 14:00	04/16/25 15:42	1
Calcium	ND		1000	250	ug/L		04/14/25 14:00	04/16/25 15:42	1
Chromium	ND		5.0	1.2	ug/L		04/14/25 14:00	04/16/25 15:42	1
Cobalt	ND		1.0	0.086	ug/L		04/14/25 14:00	04/16/25 15:42	1
Lead	ND		1.0	0.45	ug/L		04/14/25 14:00	04/16/25 15:42	1
Lithium	ND		8.0	3.4	ug/L		04/14/25 14:00	04/16/25 15:42	1
Magnesium	ND		1000	61	ug/L		04/14/25 14:00	04/16/25 15:42	1
Molybdenum	ND		5.0	1.1	ug/L		04/14/25 14:00	04/16/25 15:42	1
Potassium	ND		1000	220	ug/L		04/14/25 14:00	04/16/25 15:42	1
Selenium	ND		5.0	0.89	ug/L		04/14/25 14:00	04/16/25 15:42	1
Sodium	ND		1000	880	ug/L		04/14/25 14:00	04/16/25 15:42	1
Thallium	ND		1.0	0.51	ug/L		04/14/25 14:00	04/16/25 15:42	1

Lab Sample ID: LCS 240-652041/3-A
Matrix: Water
Analysis Batch: 652412

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 652041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	94.9		ug/L		95	80 - 120
Arsenic	1000	938		ug/L		94	80 - 120
Barium	1000	929		ug/L		93	80 - 120
Beryllium	500	493		ug/L		99	80 - 120
Cadmium	500	465		ug/L		93	80 - 120
Calcium	25000	24100		ug/L		96	80 - 120
Chromium	500	481		ug/L		96	80 - 120
Cobalt	500	495		ug/L		99	80 - 120
Lead	500	511		ug/L		102	80 - 120
Lithium	500	496		ug/L		99	80 - 120
Magnesium	25000	24800		ug/L		99	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-652041/3-A
Matrix: Water
Analysis Batch: 652412

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 652041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	500	470		ug/L		94	80 - 120
Potassium	25000	24500		ug/L		98	80 - 120
Selenium	1000	912		ug/L		91	80 - 120
Sodium	25000	24200		ug/L		97	80 - 120
Thallium	1000	1090		ug/L		109	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-652045/1-A
Matrix: Water
Analysis Batch: 652241

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 652045

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/14/25 14:00	04/15/25 13:10	1

Lab Sample ID: LCS 240-652045/2-A
Matrix: Water
Analysis Batch: 652241

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 652045

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.07		ug/L		101	80 - 120

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-652418/4
Matrix: Water
Analysis Batch: 652418

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			04/15/25 16:49	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/15/25 16:49	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/15/25 16:49	1

Lab Sample ID: LCS 240-652418/3
Matrix: Water
Analysis Batch: 652418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	269		mg/L		96	86 - 123

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-652362/1
Matrix: Water
Analysis Batch: 652362

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			04/16/25 10:03	1

Method: 2540 C-2020 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-652362/2
Matrix: Water
Analysis Batch: 652362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	169		mg/L		96	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-653129/3
Matrix: Water
Analysis Batch: 653129

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			04/22/25 15:33	1
Fluoride	ND		0.050	0.024	mg/L			04/22/25 15:33	1
Sulfate	ND		1.0	0.35	mg/L			04/22/25 15:33	1

Lab Sample ID: LCS 240-653129/4
Matrix: Water
Analysis Batch: 653129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	47.3		mg/L		95	90 - 110
Fluoride	2.50	2.41		mg/L		96	90 - 110
Sulfate	50.0	46.9		mg/L		94	90 - 110

Lab Sample ID: 240-222227-1 MS
Matrix: Water
Analysis Batch: 653129

Client Sample ID: BAC-21-F-20250409-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	32		50.0	82.4		mg/L		100	80 - 120
Fluoride	0.18		2.50	2.71		mg/L		101	80 - 120
Sulfate	76		50.0	123		mg/L		94	80 - 120

Lab Sample ID: 240-222227-1 MSD
Matrix: Water
Analysis Batch: 653129

Client Sample ID: BAC-21-F-20250409-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	32		50.0	83.4		mg/L		102	80 - 120	1	15
Fluoride	0.18		2.50	2.76		mg/L		103	80 - 120	2	15
Sulfate	76		50.0	124		mg/L		96	80 - 120	1	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-712849/1-A
Matrix: Water
Analysis Batch: 717687

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 712849

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1921	U	0.174	0.175	1.00	0.252	pCi/L	04/17/25 07:46	05/15/25 16:29	1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: MB 160-712849/1-A
Matrix: Water
Analysis Batch: 717687

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 712849

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.4		30 - 110	04/17/25 07:46	05/15/25 16:29	1

Lab Sample ID: LCS 160-712849/2-A
Matrix: Water
Analysis Batch: 717682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 712849

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	8.939		1.22	1.00	0.308	pCi/L	93	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	87.1		30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-712850/1-A
Matrix: Water
Analysis Batch: 717682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 712850

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.02966	U	0.295	0.295	1.00	0.562	pCi/L	04/17/25 07:49	05/15/25 11:58	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.4		30 - 110	04/17/25 07:49	05/15/25 11:58	1
Y Carrier	83.0		30 - 110	04/17/25 07:49	05/15/25 11:58	1

Lab Sample ID: LCS 160-712850/2-A
Matrix: Water
Analysis Batch: 717682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 712850

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.44	10.97		1.45	1.00	0.556	pCi/L	116	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	87.1		30 - 110
Y Carrier	84.1		30 - 110

Metals

Prep Batch: 652041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total Recoverable	Water	3005A	
MB 240-652041/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-652041/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-652041/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 652045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total/NA	Water	7470A	
MB 240-652045/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-652045/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 652241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total/NA	Water	7470A	652045
MB 240-652045/1-A	Method Blank	Total/NA	Water	7470A	652045
LCS 240-652045/2-A	Lab Control Sample	Total/NA	Water	7470A	652045

Analysis Batch: 652412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total Recoverable	Water	6020B	652041
MB 240-652041/1-A	Method Blank	Total Recoverable	Water	6020B	652041
LCS 240-652041/3-A	Lab Control Sample	Total Recoverable	Water	6020B	652041

Analysis Batch: 652471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-652041/1-A	Method Blank	Total Recoverable	Water	6010D	652041
LCS 240-652041/2-A	Lab Control Sample	Total Recoverable	Water	6010D	652041

Analysis Batch: 652748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total Recoverable	Water	6010D	652041

General Chemistry

Analysis Batch: 652362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total/NA	Water	2540 C-2020	
MB 240-652362/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-652362/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 652418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total/NA	Water	2320 B-2021	
MB 240-652418/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-652418/3	Lab Control Sample	Total/NA	Water	2320 B-2021	

Analysis Batch: 653129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total/NA	Water	300.0	
MB 240-653129/3	Method Blank	Total/NA	Water	300.0	
LCS 240-653129/4	Lab Control Sample	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 653129 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1 MS	BAC-21-F-20250409-01	Total/NA	Water	300.0	
240-222227-1 MSD	BAC-21-F-20250409-01	Total/NA	Water	300.0	

Rad

Prep Batch: 712849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total/NA	Water	PrecSep-21	
MB 160-712849/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-712849/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 712850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-222227-1	BAC-21-F-20250409-01	Total/NA	Water	PrecSep_0	
MB 160-712850/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-712850/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-222227-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-21-F-20250409-01
Lab Sample ID: 240-222227-1

Date Collected: 04/09/25 10:26
Matrix: Water
Date Received: 04/12/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			652041	BN	EET CLE	04/14/25 14:00
Total Recoverable	Analysis	6010D		1	652748	AJC	EET CLE	04/19/25 02:03
Total Recoverable	Prep	3005A			652041	BN	EET CLE	04/14/25 14:00
Total Recoverable	Analysis	6020B		1	652412	S4FJ	EET CLE	04/16/25 16:47
Total/NA	Prep	7470A			652045	BN	EET CLE	04/14/25 14:00
Total/NA	Analysis	7470A		1	652241	GEV	EET CLE	04/15/25 13:52
Total/NA	Analysis	2320 B-2021		1	652418	PQD2	EET CLE	04/15/25 18:21
Total/NA	Analysis	2540 C-2020		1	652362	C5SV	EET CLE	04/16/25 10:03
Total/NA	Analysis	300.0		1	653129	JMR	EET CLE	04/22/25 15:51
Total/NA	Prep	PrecSep-21			712849	OGC	EET SL	04/17/25 07:46
Total/NA	Analysis	9315		1	717682	SWS	EET SL	05/15/25 16:43
Total/NA	Prep	PrecSep_0			712850	OGC	EET SL	04/17/25 07:49
Total/NA	Analysis	9320		1	717690	SWS	EET SL	05/15/25 11:54
Total/NA	Analysis	Ra226_Ra228		1	717733	SCB	EET SL	05/15/25 17:39

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-222227-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-222227-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

4-2/4-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins
Environment Testing

Client Information	Sampler: Bobby Coste	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No. 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-323-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-21-F-20250409-01	4-9-25	1026	G	Water			1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									

240-222227 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Ryan Smith	4-10-25/0940	Kemron	B Smith	4-11-25 1115	WP
B Smith	4-11-25 1450	WP	KATHARINE MARTIN	4/12/25 800	EUR

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative Login # :
Barberton Facility

Client Gavin Site Name

Cooler unpacked by: KMartin

Cooler Received on 4/12/25 Opened on 4/12/25

FedEx. 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used. Bubble Wrap Foam Plastic Bag None Other

COOLANT Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 18 (CF -0.1 °C) Observed Cooler Temp 4.2 °C Corrected Cooler Temp. 4.1 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4 Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12 Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC457151
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
17 Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved. Preservative(s) added/Lot number(s)

VOA Sample Preservation - Date/Time VOAs Frozen.

4/12/2025

Login Container Summary Report

240-222227

5/16/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-21-F-20250409-01	240-222227-A-1	Plastic 60 mL - unpreserved				
BAC-21-F-20250409-01	240-222227-B-1	Plastic 60 mL - unpreserved				
BAC-21-F-20250409-01	240-222227-C-1	Plastic 500ml - unpreserved				
BAC-21-F-20250409-01	240-222227-D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-21-F-20250409-01	240-222227-E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-21 F-20250409-01	240-222227-F-1	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-201201.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-222227-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/28/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal GWM Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-21-F-20250409-01 (240-222227-1)	4/9/25	10:26 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: MALISSA LOAR	Date/Time: 4/14/25 8pm	Company	Received by:	Date/Time: 0830 APR 16 2025	Company
Relinquished by:	Date/Time:	Company	Received by: Cheyenne Forrest	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-222227-1

Login Number: 222227
List Number: 2
Creator: Forrest, Cheyenne L

List Source: Eurofins St. Louis
List Creation: 04/16/25 11:02 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Generated 10/30/2025 6:20:47 PM

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-234011-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

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Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-234011-1 — Eurofins Cleveland

Job Narrative
240-234011-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 9/27/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 12 coolers at receipt time were 0.4°C, 0.4°C, 0.7°C, 0.8°C, 1.0°C, 1.1°C, 1.4°C, 1.5°C, 1.5°C, 1.6°C, 1.7°C and 12.3°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
Method 9320_Ra228: Radium 228 Batch 738970

The detection goal was not met for the following samples due to the presence of matrix interferences: BAC-15-F-20250924-01 (240-234011-7) and BAC-17-F-20250924-01 (240-234011-8). Analytical results are reported with the detection limit achieved.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234011-1
Project/Site: Federal CCR Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
240-234011-1	BAC-08-F-20250924-01	Water	09/24/25 10:06	09/27/25 08:00	Ohio
240-234011-2	BAC-07-F-20250924-01	Water	09/24/25 11:29	09/27/25 08:00	Ohio
240-234011-3	DUP-005-F-20250924-01	Water	09/24/25 00:00	09/27/25 08:00	Ohio
240-234011-4	BAC-19-F-20250924-01	Water	09/24/25 13:10	09/27/25 08:00	Ohio
240-234011-5	BAC-18-F-20250924-01	Water	09/24/25 13:53	09/27/25 08:00	Ohio
240-234011-6	BAC-06-F-20250924-01	Water	09/24/25 15:07	09/27/25 08:00	Ohio
240-234011-7	BAC-15-F-20250924-01	Water	09/25/25 10:15	09/27/25 08:00	Ohio
240-234011-8	BAC-17-F-20250924-01	Water	09/25/25 11:20	09/27/25 08:00	Ohio
240-234011-9	BAC-16-F-20250925-01	Water	09/25/25 12:26	09/27/25 08:00	Ohio
240-234011-10	BAC-14-F-20250925-01	Water	09/25/25 13:44	09/27/25 08:00	Ohio
240-234011-11	BAC-12-F-20250925-01	Water	09/25/25 15:07	09/27/25 08:00	Ohio

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-08-F-20250924-01 — Lab Sample ID: 240-234011-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	110		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.80	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	84		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.11	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	87000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.63	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	13000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	190		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	350		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	19		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.13		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	73		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-07-F-20250924-01 — Lab Sample ID: 240-234011-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1300		100	57	ug/L	1		6010D	Total Recoverable
Barium	35		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.084	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	85000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	1.3		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	5.0	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	22000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	17000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	110		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	430		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	25		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.088		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	180		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: DUP-005-F-20250924-01 — Lab Sample ID: 240-234011-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1300		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.84	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	34		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	83000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	1.2		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.5	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	16000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	120		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	120		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	450		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	25		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.090		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	180		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-19-F-20250924-01 — Lab Sample ID: 240-234011-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	260		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	1.1	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	620		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	110000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.37	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	30		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Molybdenum	5.7		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	2800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	550000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	150		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	150		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	1700		40	31	mg/L	1		2540 C-2020	Total/NA
Chloride	1000		10	1.3	mg/L	10		300.0	Total/NA
Fluoride	0.57		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	10		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-18-F-20250924-01 — Lab Sample ID: 240-234011-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1500		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.78	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	26		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	77000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.86	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	0.54	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	4.5	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	16000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	94		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	94		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	400		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	24		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.067		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	180		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-06-F-20250924-01 — Lab Sample ID: 240-234011-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1900		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.77	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	93		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	110000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	3.4		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.7	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	26000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	16000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	190		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	540		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	26		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.11		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	190		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-15-F-20250924-01

Lab Sample ID: 240-234011-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	420		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.4	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	54		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.29	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	26000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	4.3	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	2.9		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	4.1		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	3.9	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	9700		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1100		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	12000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	45		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	45		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	190		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	0.81	J	1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.066		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	82		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-17-F-20250924-01

Lab Sample ID: 240-234011-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3800		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	3.5	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	51		5.0	0.77	ug/L	1		6020B	Total Recoverable
Beryllium	0.51	J	1.0	0.27	ug/L	1		6020B	Total Recoverable
Cadmium	0.42	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	49000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	7.1		5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	16		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	5.0		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	6.6	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	27000		1000	61	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-17-F-20250924-01 (Continued) — Lab Sample ID: 240-234011-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	20000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	62		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	62		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	380		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	20		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.090		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	170		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-16-F-20250925-01 — Lab Sample ID: 240-234011-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1600		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	1.0	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	40		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.085	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	96000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.57	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.2	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	150		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	150		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	460		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	24		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.067		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	180		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-14-F-20250925-01 — Lab Sample ID: 240-234011-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3000		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	1.8	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	95		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	77000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	1.8		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.7	J	8.0	3.4	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-14-F-20250925-01 (Continued)
Lab Sample ID: 240-234011-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	23000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	75		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	75		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	480		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	32		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.072		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	230		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: BAC-12-F-20250925-01
Lab Sample ID: 240-234011-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2100		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	4.6	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	84		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.40	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	82000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	1.4	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	3.5		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	1.4		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	6.8	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	31000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	86		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	86		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	490		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	62		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.084		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	210		5.0	1.7	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-08-F-20250924-01
Date Collected: 09/24/25 10:06
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**110**		100	57	ug/L		09/29/25 14:00	09/30/25 17:20	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 17:30	1
Arsenic	**0.80**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 17:30	1
Barium	**84**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 17:30	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 17:30	1
Cadmium	**0.11**	**J**	1.0	0.077	ug/L		09/29/25 14:00	09/30/25 17:30	1
Calcium	**87000**		1000	250	ug/L		09/29/25 14:00	09/30/25 17:30	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 17:30	1
Cobalt	**0.63**	**J**	1.0	0.086	ug/L		09/29/25 14:00	09/30/25 17:30	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 17:30	1
Lithium	ND		8.0	3.4	ug/L		09/29/25 14:00	09/30/25 17:30	1
Magnesium	**13000**		1000	61	ug/L		09/29/25 14:00	09/30/25 17:30	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 17:30	1
Potassium	**1200**		1000	220	ug/L		09/29/25 14:00	09/30/25 17:30	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 17:30	1
Sodium	**13000**		1000	880	ug/L		09/29/25 14:00	09/30/25 17:30	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 17:30	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**190**		5.0	2.6	mg/L			09/29/25 19:50	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**190**		5.0	2.6	mg/L			09/29/25 19:50	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			09/29/25 19:50	1
Total Dissolved Solids (SM 2540 C-2020)	**350**		10	7.8	mg/L			09/30/25 16:41	1
Chloride (EPA 300.0)	**19**		1.0	0.13	mg/L			10/02/25 02:09	1
Fluoride (EPA 300.0)	**0.13**		0.050	0.024	mg/L			10/02/25 02:09	1
Sulfate (EPA 300.0)	**73**		1.0	0.35	mg/L			10/02/25 02:09	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00808	U	0.160	0.160	1.00	0.349	pCi/L	10/03/25 07:59	10/30/25 14:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.9*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.503	U	0.574	0.575	1.00	0.943	pCi/L	10/03/25 08:10	10/30/25 09:53	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-08-F-20250924-01
Date Collected: 09/24/25 10:06
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-1
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.9*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:53*	*1*
Y Carrier	*72.5*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:53*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.495	U	0.596	0.597	5.00	0.943	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-07-F-20250924-01
Date Collected: 09/24/25 11:29
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-2
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1300**		100	57	ug/L		09/29/25 14:00	09/30/25 17:58	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 17:48	1
Arsenic	ND		5.0	0.75	ug/L		09/29/25 14:00	09/30/25 17:48	1
Barium	**35**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 17:48	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 17:48	1
Cadmium	**0.084**	**J**	1.0	0.077	ug/L		09/29/25 14:00	09/30/25 17:48	1
Calcium	**85000**		1000	250	ug/L		09/29/25 14:00	09/30/25 17:48	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 17:48	1
Cobalt	**1.3**		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 17:48	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 17:48	1
Lithium	**5.0**	**J**	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 17:48	1
Magnesium	**22000**		1000	61	ug/L		09/29/25 14:00	09/30/25 17:48	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 17:48	1
Potassium	**1200**		1000	220	ug/L		09/29/25 14:00	09/30/25 17:48	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 17:48	1
Sodium	**17000**		1000	880	ug/L		09/29/25 14:00	09/30/25 17:48	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 17:48	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**110**		5.0	2.6	mg/L			10/06/25 16:56	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**110**		5.0	2.6	mg/L			10/06/25 16:56	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 16:56	1
Total Dissolved Solids (SM 2540 C-2020)	**430**		10	7.8	mg/L			09/30/25 16:41	1
Chloride (EPA 300.0)	**25**		1.0	0.13	mg/L			10/02/25 02:53	1
Fluoride (EPA 300.0)	**0.088**		0.050	0.024	mg/L			10/02/25 02:53	1
Sulfate (EPA 300.0)	**180**		1.0	0.35	mg/L			10/02/25 02:53	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0282	U	0.141	0.141	1.00	0.292	pCi/L	10/03/25 07:59	10/30/25 14:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.1*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:07*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.354	U	0.475	0.476	1.00	0.794	pCi/L	10/03/25 08:10	10/30/25 09:50	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-07-F-20250924-01
Date Collected: 09/24/25 11:29
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-2
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.1*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:50*	*1*
Y Carrier	*67.3*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.382	U	0.495	0.496	5.00	0.794	pCi/L		10/30/25 17:10	1

Client Sample ID: DUP-005-F-20250924-01
Date Collected: 09/24/25 00:00
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-3
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1300**		100	57	ug/L		09/29/25 14:00	09/30/25 18:02	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 17:56	1
Arsenic	**0.84**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 17:56	1
Barium	**34**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 17:56	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 17:56	1
Cadmium	ND		1.0	0.077	ug/L		09/29/25 14:00	09/30/25 17:56	1
Calcium	**83000**		1000	250	ug/L		09/29/25 14:00	09/30/25 17:56	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 17:56	1
Cobalt	**1.2**		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 17:56	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 17:56	1
Lithium	**4.5**	**J**	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 17:56	1
Magnesium	**21000**		1000	61	ug/L		09/29/25 14:00	09/30/25 17:56	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 17:56	1
Potassium	**1200**		1000	220	ug/L		09/29/25 14:00	09/30/25 17:56	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 17:56	1
Sodium	**16000**		1000	880	ug/L		09/29/25 14:00	09/30/25 17:56	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 17:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**120**		5.0	2.6	mg/L			10/06/25 17:01	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**120**		5.0	2.6	mg/L			10/06/25 17:01	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 17:01	1
Total Dissolved Solids (SM 2540 C-2020)	**450**		10	7.8	mg/L			09/30/25 16:41	1
Chloride (EPA 300.0)	**25**		1.0	0.13	mg/L			10/02/25 03:02	1
Fluoride (EPA 300.0)	**0.090**		0.050	0.024	mg/L			10/02/25 03:02	1
Sulfate (EPA 300.0)	**180**		1.0	0.35	mg/L			10/02/25 03:02	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.157	U	0.209	0.209	1.00	0.350	pCi/L	10/03/25 07:59	10/30/25 14:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.6*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.549	U	0.441	0.443	1.00	0.685	pCi/L	10/03/25 08:10	10/30/25 09:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: DUP-005-F-20250924-01
Date Collected: 09/24/25 00:00
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-3
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.6*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*
Y Carrier	*71.0*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.706**		0.488	0.490	5.00	0.685	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-19-F-20250924-01
Date Collected: 09/24/25 13:10
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-4
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**260**		100	57	ug/L		09/29/25 14:00	09/30/25 18:07	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 17:59	1
Arsenic	**1.1**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 17:59	1
Barium	**620**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 17:59	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 17:59	1
Cadmium	ND		1.0	0.077	ug/L		09/29/25 14:00	09/30/25 17:59	1
Calcium	**110000**		1000	250	ug/L		09/29/25 14:00	09/30/25 17:59	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 17:59	1
Cobalt	**0.37**	**J**	1.0	0.086	ug/L		09/29/25 14:00	09/30/25 17:59	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 17:59	1
Lithium	**30**		8.0	3.4	ug/L		09/29/25 14:00	09/30/25 17:59	1
Magnesium	**23000**		1000	61	ug/L		09/29/25 14:00	09/30/25 17:59	1
Molybdenum	**5.7**		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 17:59	1
Potassium	**2800**		1000	220	ug/L		09/29/25 14:00	09/30/25 17:59	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 17:59	1
Sodium	**550000**		1000	880	ug/L		09/29/25 14:00	09/30/25 17:59	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 17:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**150**		5.0	2.6	mg/L			10/06/25 17:07	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**150**		5.0	2.6	mg/L			10/06/25 17:07	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 17:07	1
Total Dissolved Solids (SM 2540 C-2020)	**1700**		40	31	mg/L			09/30/25 16:41	1
Chloride (EPA 300.0)	**1000**		10	1.3	mg/L			10/02/25 03:19	10
Fluoride (EPA 300.0)	**0.57**		0.050	0.024	mg/L			10/02/25 03:10	1
Sulfate (EPA 300.0)	**10**		1.0	0.35	mg/L			10/02/25 03:10	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.732**		0.333	0.339	1.00	0.388	pCi/L	10/03/25 07:59	10/30/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.1*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.50**		0.531	0.549	1.00	0.641	pCi/L	10/03/25 08:10	10/30/25 09:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-19-F-20250924-01
Date Collected: 09/24/25 13:10
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-4
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.1*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*
Y Carrier	*71.8*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**2.23**		0.627	0.645	5.00	0.641	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-18-F-20250924-01
Date Collected: 09/24/25 13:53
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-5
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1500**		100	57	ug/L		09/29/25 14:00	09/30/25 18:11	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 18:01	1
Arsenic	**0.78**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 18:01	1
Barium	**26**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 18:01	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 18:01	1
Cadmium	ND		1.0	0.077	ug/L		09/29/25 14:00	09/30/25 18:01	1
Calcium	**77000**		1000	250	ug/L		09/29/25 14:00	09/30/25 18:01	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 18:01	1
Cobalt	**0.86**	**J**	1.0	0.086	ug/L		09/29/25 14:00	09/30/25 18:01	1
Lead	**0.54**	**J**	1.0	0.45	ug/L		09/29/25 14:00	09/30/25 18:01	1
Lithium	**4.5**	**J**	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 18:01	1
Magnesium	**21000**		1000	61	ug/L		09/29/25 14:00	09/30/25 18:01	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 18:01	1
Potassium	**1200**		1000	220	ug/L		09/29/25 14:00	09/30/25 18:01	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 18:01	1
Sodium	**16000**		1000	880	ug/L		09/29/25 14:00	09/30/25 18:01	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 18:01	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**94**		5.0	2.6	mg/L			10/06/25 17:13	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**94**		5.0	2.6	mg/L			10/06/25 17:13	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 17:13	1
Total Dissolved Solids (SM 2540 C-2020)	**400**		10	7.8	mg/L			09/30/25 16:41	1
Chloride (EPA 300.0)	**24**		1.0	0.13	mg/L			10/02/25 03:28	1
Fluoride (EPA 300.0)	**0.067**		0.050	0.024	mg/L			10/02/25 03:28	1
Sulfate (EPA 300.0)	**180**		1.0	0.35	mg/L			10/02/25 03:28	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142	U	0.212	0.212	1.00	0.363	pCi/L	10/03/25 07:59	10/30/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.1*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.415	U	0.395	0.397	1.00	0.630	pCi/L	10/03/25 08:10	10/30/25 09:51	1

Client Sample ID: BAC-18-F-20250924-01
Date Collected: 09/24/25 13:53
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-5
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.1*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*
Y Carrier	*74.0*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.557	U	0.448	0.450	5.00	0.630	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-06-F-20250924-01
Date Collected: 09/24/25 15:07
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-6
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1900**		100	57	ug/L		09/29/25 14:00	09/30/25 18:15	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 18:04	1
Arsenic	**0.77**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 18:04	1
Barium	**93**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 18:04	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 18:04	1
Cadmium	ND		1.0	0.077	ug/L		09/29/25 14:00	09/30/25 18:04	1
Calcium	**110000**		1000	250	ug/L		09/29/25 14:00	09/30/25 18:04	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 18:04	1
Cobalt	**3.4**		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 18:04	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 18:04	1
Lithium	**4.7**	**J**	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 18:04	1
Magnesium	**26000**		1000	61	ug/L		09/29/25 14:00	09/30/25 18:04	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 18:04	1
Potassium	**1300**		1000	220	ug/L		09/29/25 14:00	09/30/25 18:04	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 18:04	1
Sodium	**16000**		1000	880	ug/L		09/29/25 14:00	09/30/25 18:04	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 18:04	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**190**		5.0	2.6	mg/L			10/06/25 17:27	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**190**		5.0	2.6	mg/L			10/06/25 17:27	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 17:27	1
Total Dissolved Solids (SM 2540 C-2020)	**540**		10	7.8	mg/L			09/30/25 16:41	1
Chloride (EPA 300.0)	**26**		1.0	0.13	mg/L			10/02/25 03:37	1
Fluoride (EPA 300.0)	**0.11**		0.050	0.024	mg/L			10/02/25 03:37	1
Sulfate (EPA 300.0)	**190**		1.0	0.35	mg/L			10/02/25 03:37	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0521	U	0.264	0.264	1.00	0.501	pCi/L	10/03/25 07:59	10/30/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.6*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.415	U	0.479	0.480	1.00	0.786	pCi/L	10/03/25 08:10	10/30/25 09:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-06-F-20250924-01
Date Collected: 09/24/25 15:07
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-6
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.6*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*
Y Carrier	*71.8*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.468	U	0.547	0.548	5.00	0.786	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-15-F-20250924-01
Date Collected: 09/25/25 10:15
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-7
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**420**		100	57	ug/L		09/29/25 14:00	09/30/25 18:20	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 18:06	1
Arsenic	**2.4**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 18:06	1
Barium	**54**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 18:06	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 18:06	1
Cadmium	**0.29**	**J**	1.0	0.077	ug/L		09/29/25 14:00	09/30/25 18:06	1
Calcium	**26000**		1000	250	ug/L		09/29/25 14:00	09/30/25 18:06	1
Chromium	**4.3**	**J**	5.0	1.2	ug/L		09/29/25 14:00	09/30/25 18:06	1
Cobalt	**2.9**		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 18:06	1
Lead	**4.1**		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 18:06	1
Lithium	**3.9**	**J**	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 18:06	1
Magnesium	**9700**		1000	61	ug/L		09/29/25 14:00	09/30/25 18:06	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 18:06	1
Potassium	**1100**		1000	220	ug/L		09/29/25 14:00	09/30/25 18:06	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 18:06	1
Sodium	**12000**		1000	880	ug/L		09/29/25 14:00	09/30/25 18:06	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 18:06	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**45**		5.0	2.6	mg/L			10/01/25 15:07	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**45**		5.0	2.6	mg/L			10/01/25 15:07	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/01/25 15:07	1
Total Dissolved Solids (SM 2540 C-2020)	**190**		10	7.8	mg/L			10/02/25 15:28	1
Chloride (EPA 300.0)	**0.81**	**J**	1.0	0.13	mg/L			10/02/25 03:45	1
Fluoride (EPA 300.0)	**0.066**		0.050	0.024	mg/L			10/02/25 03:45	1
Sulfate (EPA 300.0)	**82**		1.0	0.35	mg/L			10/02/25 03:45	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0202	U	0.424	0.424	1.00	0.842	pCi/L	10/03/25 07:59	10/30/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.1*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.817	U G	0.721	0.725	1.00	1.13	pCi/L	10/03/25 08:10	10/30/25 09:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-15-F-20250924-01
Date Collected: 09/25/25 10:15
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-7
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.1*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*
Y Carrier	*78.5*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.837	U	0.836	0.840	5.00	1.13	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-17-F-20250924-01
Date Collected: 09/25/25 11:20
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-8
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3800		100	57	ug/L		09/29/25 14:00	09/30/25 18:24	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 18:09	1
Arsenic	3.5	J	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 18:09	1
Barium	51		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 18:09	1
Beryllium	0.51	J	1.0	0.27	ug/L		09/29/25 14:00	09/30/25 18:09	1
Cadmium	0.42	J	1.0	0.077	ug/L		09/29/25 14:00	09/30/25 18:09	1
Calcium	49000		1000	250	ug/L		09/29/25 14:00	09/30/25 18:09	1
Chromium	7.1		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 18:09	1
Cobalt	16		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 18:09	1
Lead	5.0		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 18:09	1
Lithium	6.6	J	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 18:09	1
Magnesium	27000		1000	61	ug/L		09/29/25 14:00	09/30/25 18:09	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 18:09	1
Potassium	1500		1000	220	ug/L		09/29/25 14:00	09/30/25 18:09	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 18:09	1
Sodium	20000		1000	880	ug/L		09/29/25 14:00	09/30/25 18:09	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 18:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	62		5.0	2.6	mg/L			10/01/25 15:13	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	62		5.0	2.6	mg/L			10/01/25 15:13	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/01/25 15:13	1
Total Dissolved Solids (SM 2540 C-2020)	380		10	7.8	mg/L			10/02/25 15:28	1
Chloride (EPA 300.0)	20		1.0	0.13	mg/L			10/02/25 03:54	1
Fluoride (EPA 300.0)	0.090		0.050	0.024	mg/L			10/02/25 03:54	1
Sulfate (EPA 300.0)	170		1.0	0.35	mg/L			10/02/25 03:54	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.306	U	0.534	0.535	1.00	0.932	pCi/L	10/03/25 07:59	10/30/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*75.6*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.609	U G	0.859	0.860	1.00	1.44	pCi/L	10/03/25 08:10	10/30/25 09:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-17-F-20250924-01
Date Collected: 09/25/25 11:20
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-8
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*75.6*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*
Y Carrier	*71.4*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:51*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.915	U	1.01	1.01	5.00	1.44	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-16-F-20250925-01

Date Collected: 09/25/25 12:26
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-9

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1600**		100	57	ug/L		09/29/25 14:00	09/30/25 18:28	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 18:12	1
Arsenic	**1.0**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 18:12	1
Barium	**40**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 18:12	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 18:12	1
Cadmium	**0.085**	**J**	1.0	0.077	ug/L		09/29/25 14:00	09/30/25 18:12	1
Calcium	**96000**		1000	250	ug/L		09/29/25 14:00	09/30/25 18:12	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 18:12	1
Cobalt	**0.57**	**J**	1.0	0.086	ug/L		09/29/25 14:00	09/30/25 18:12	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 18:12	1
Lithium	**4.2**	**J**	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 18:12	1
Magnesium	**23000**		1000	61	ug/L		09/29/25 14:00	09/30/25 18:12	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 18:12	1
Potassium	**1400**		1000	220	ug/L		09/29/25 14:00	09/30/25 18:12	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 18:12	1
Sodium	**15000**		1000	880	ug/L		09/29/25 14:00	09/30/25 18:12	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 18:12	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**150**		5.0	2.6	mg/L			10/01/25 15:23	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**150**		5.0	2.6	mg/L			10/01/25 15:23	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/01/25 15:23	1
Total Dissolved Solids (SM 2540 C-2020)	**460**		10	7.8	mg/L			10/02/25 10:09	1
Chloride (EPA 300.0)	**24**		1.0	0.13	mg/L			10/02/25 04:03	1
Fluoride (EPA 300.0)	**0.067**		0.050	0.024	mg/L			10/02/25 04:03	1
Sulfate (EPA 300.0)	**180**		1.0	0.35	mg/L			10/02/25 04:03	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.156	U	0.292	0.293	1.00	0.515	pCi/L	10/03/25 07:59	10/30/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*66.2*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.977**		0.610	0.617	1.00	0.905	pCi/L	10/03/25 08:10	10/30/25 09:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-16-F-20250925-01
Date Collected: 09/25/25 12:26
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-9
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	66.2		30 - 110	10/03/25 08:10	10/30/25 09:51	1
Y Carrier	70.7		30 - 110	10/03/25 08:10	10/30/25 09:51	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.13		0.676	0.683	5.00	0.905	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-14-F-20250925-01
Date Collected: 09/25/25 13:44
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-10
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3000**		100	57	ug/L		09/29/25 14:00	09/30/25 18:32	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 18:14	1
Arsenic	**1.8**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 18:14	1
Barium	**95**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 18:14	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 18:14	1
Cadmium	ND		1.0	0.077	ug/L		09/29/25 14:00	09/30/25 18:14	1
Calcium	**77000**		1000	250	ug/L		09/29/25 14:00	09/30/25 18:14	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 18:14	1
Cobalt	**1.8**		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 18:14	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 18:14	1
Lithium	**4.7**	**J**	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 18:14	1
Magnesium	**23000**		1000	61	ug/L		09/29/25 14:00	09/30/25 18:14	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 18:14	1
Potassium	**1300**		1000	220	ug/L		09/29/25 14:00	09/30/25 18:14	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 18:14	1
Sodium	**23000**		1000	880	ug/L		09/29/25 14:00	09/30/25 18:14	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 18:14	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**75**		5.0	2.6	mg/L			10/01/25 15:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**75**		5.0	2.6	mg/L			10/01/25 15:29	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/01/25 15:29	1
Total Dissolved Solids (SM 2540 C-2020)	**480**		10	7.8	mg/L			10/02/25 10:09	1
Chloride (EPA 300.0)	**32**		1.0	0.13	mg/L			10/02/25 04:11	1
Fluoride (EPA 300.0)	**0.072**		0.050	0.024	mg/L			10/02/25 04:11	1
Sulfate (EPA 300.0)	**230**		5.0	1.7	mg/L			10/03/25 03:24	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.875**		0.356	0.365	1.00	0.383	pCi/L	10/03/25 07:59	10/30/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*76.1*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.325	U	0.421	0.422	1.00	0.702	pCi/L	10/03/25 08:10	10/30/25 09:51	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-14-F-20250925-01
Date Collected: 09/25/25 13:44
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-10
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	76.1		30 - 110	10/03/25 08:10	10/30/25 09:51	1
Y Carrier	71.8		30 - 110	10/03/25 08:10	10/30/25 09:51	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.20		0.551	0.558	5.00	0.702	pCi/L		10/30/25 17:10	1

Client Sample ID: BAC-12-F-20250925-01
Date Collected: 09/25/25 15:07
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-11
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2100		100	57	ug/L		09/29/25 14:00	09/30/25 18:54	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 18:17	1
Arsenic	4.6	J	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 18:17	1
Barium	84		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 18:17	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 18:17	1
Cadmium	0.40	J	1.0	0.077	ug/L		09/29/25 14:00	09/30/25 18:17	1
Calcium	82000		1000	250	ug/L		09/29/25 14:00	09/30/25 18:17	1
Chromium	1.4	J	5.0	1.2	ug/L		09/29/25 14:00	09/30/25 18:17	1
Cobalt	3.5		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 18:17	1
Lead	1.4		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 18:17	1
Lithium	6.8	J	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 18:17	1
Magnesium	21000		1000	61	ug/L		09/29/25 14:00	09/30/25 18:17	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 18:17	1
Potassium	2500		1000	220	ug/L		09/29/25 14:00	09/30/25 18:17	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 18:17	1
Sodium	31000		1000	880	ug/L		09/29/25 14:00	09/30/25 18:17	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 18:17	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	86		5.0	2.6	mg/L			10/01/25 15:34	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	86		5.0	2.6	mg/L			10/01/25 15:34	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/01/25 15:34	1
Total Dissolved Solids (SM 2540 C-2020)	490		10	7.8	mg/L			10/02/25 10:09	1
Chloride (EPA 300.0)	62		1.0	0.13	mg/L			10/02/25 05:39	1
Fluoride (EPA 300.0)	0.084		0.050	0.024	mg/L			10/02/25 05:39	1
Sulfate (EPA 300.0)	210		5.0	1.7	mg/L			10/04/25 14:08	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.700		0.331	0.337	1.00	0.388	pCi/L	10/03/25 07:59	10/30/25 14:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*77.1*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:15*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.591	U	0.439	0.442	1.00	0.664	pCi/L	10/03/25 08:10	10/30/25 09:52	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-12-F-20250925-01
Date Collected: 09/25/25 15:07
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234011-11
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*77.1*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:52*	*1*
Y Carrier	*68.8*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:52*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.29**		0.550	0.556	5.00	0.664	pCi/L		10/30/25 17:10	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)						
		Ba						
Lab Sample ID	Client Sample ID	(30-110)						
240-234011-1	BAC-08-F-20250924-01	72.9						
240-234011-1 MS	BAC-08-F-20250924-01	66.7						
240-234011-1 MSD	BAC-08-F-20250924-01	82.6						
240-234011-2	BAC-07-F-20250924-01	80.1						
240-234011-3	DUP-005-F-20250924-01	82.6						
240-234011-4	BAC-19-F-20250924-01	79.1						
240-234011-5	BAC-18-F-20250924-01	82.1						
240-234011-6	BAC-06-F-20250924-01	70.6						
240-234011-7	BAC-15-F-20250924-01	81.1						
240-234011-8	BAC-17-F-20250924-01	75.6						
240-234011-9	BAC-16-F-20250925-01	66.2						
240-234011-10	BAC-14-F-20250925-01	76.1						
240-234011-11	BAC-12-F-20250925-01	77.1						
LCS 160-738969/2-A	Lab Control Sample	90.8						
MB 160-738969/1-A	Method Blank	89.8						

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)						
		Ba	Y					
Lab Sample ID	Client Sample ID	(30-110)	(30-110)					
240-234011-1	BAC-08-F-20250924-01	72.9	72.5					
240-234011-1 MS	BAC-08-F-20250924-01	66.7	63.9					
240-234011-1 MSD	BAC-08-F-20250924-01	82.6	76.3					
240-234011-2	BAC-07-F-20250924-01	80.1	67.3					
240-234011-3	DUP-005-F-20250924-01	82.6	71.0					
240-234011-4	BAC-19-F-20250924-01	79.1	71.8					
240-234011-5	BAC-18-F-20250924-01	82.1	74.0					
240-234011-6	BAC-06-F-20250924-01	70.6	71.8					
240-234011-7	BAC-15-F-20250924-01	81.1	78.5					
240-234011-8	BAC-17-F-20250924-01	75.6	71.4					
240-234011-9	BAC-16-F-20250925-01	66.2	70.7					
240-234011-10	BAC-14-F-20250925-01	76.1	71.8					
240-234011-11	BAC-12-F-20250925-01	77.1	68.8					
LCS 160-738970/2-A	Lab Control Sample	90.8	81.1					
MB 160-738970/1-A	Method Blank	89.8	77.4					

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-673738/1-A
Matrix: Water
Analysis Batch: 673881

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		09/29/25 14:00	09/30/25 11:03	1

Lab Sample ID: LCS 240-673738/2-A
Matrix: Water
Analysis Batch: 673881

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			1000	1130		ug/L		113	80 - 120		

Lab Sample ID: 240-234011-1 MS
Matrix: Water
Analysis Batch: 673881

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron	110		1000	1250		ug/L		113	75 - 125		

Lab Sample ID: 240-234011-1 MSD
Matrix: Water
Analysis Batch: 673881

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	110		1000	1220		ug/L		110	75 - 125	3	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-673738/1-A
Matrix: Water
Analysis Batch: 674025

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 17:25	1
Arsenic	ND		5.0	0.75	ug/L		09/29/25 14:00	09/30/25 17:25	1
Barium	ND		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 17:25	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 17:25	1
Cadmium	ND		1.0	0.077	ug/L		09/29/25 14:00	09/30/25 17:25	1
Calcium	ND		1000	250	ug/L		09/29/25 14:00	09/30/25 17:25	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 17:25	1
Cobalt	ND		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 17:25	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 17:25	1
Lithium	ND		8.0	3.4	ug/L		09/29/25 14:00	09/30/25 17:25	1
Magnesium	ND		1000	61	ug/L		09/29/25 14:00	09/30/25 17:25	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 17:25	1
Potassium	ND		1000	220	ug/L		09/29/25 14:00	09/30/25 17:25	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 17:25	1
Sodium	ND		1000	880	ug/L		09/29/25 14:00	09/30/25 17:25	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 17:25	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-673738/3-A
Matrix: Water
Analysis Batch: 674025

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	101		ug/L		101	80 - 120
Arsenic	1000	953		ug/L		95	80 - 120
Barium	1000	982		ug/L		98	80 - 120
Beryllium	500	462		ug/L		92	80 - 120
Cadmium	500	484		ug/L		97	80 - 120
Calcium	25000	24800		ug/L		99	80 - 120
Chromium	500	499		ug/L		100	80 - 120
Cobalt	500	509		ug/L		102	80 - 120
Lead	500	518		ug/L		104	80 - 120
Lithium	500	500		ug/L		100	80 - 120
Magnesium	25000	26300		ug/L		105	80 - 120
Molybdenum	500	493		ug/L		99	80 - 120
Potassium	25000	25600		ug/L		103	80 - 120
Selenium	1000	935		ug/L		94	80 - 120
Sodium	25000	25800		ug/L		103	80 - 120
Thallium	1000	1040		ug/L		104	80 - 120

Lab Sample ID: 240-234011-1 MS
Matrix: Water
Analysis Batch: 674025

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		100	105		ug/L		105	80 - 120
Arsenic	0.80	J	1000	956		ug/L		96	80 - 120
Barium	84		1000	1070		ug/L		99	80 - 120
Beryllium	ND		500	464		ug/L		93	80 - 120
Cadmium	0.11	J	500	483		ug/L		97	80 - 120
Calcium	87000		25000	108000		ug/L		82	80 - 120
Chromium	ND		500	503		ug/L		101	80 - 120
Cobalt	0.63	J	500	501		ug/L		100	80 - 120
Lead	ND		500	517		ug/L		103	80 - 120
Lithium	ND		500	502		ug/L		100	80 - 120
Magnesium	13000		25000	37300		ug/L		98	80 - 120
Molybdenum	ND		500	499		ug/L		100	80 - 120
Potassium	1200		25000	26600		ug/L		102	80 - 120
Selenium	ND		1000	933		ug/L		93	80 - 120
Sodium	13000		25000	38200		ug/L		100	80 - 120
Thallium	ND		1000	1040		ug/L		104	80 - 120

Lab Sample ID: 240-234011-1 MSD
Matrix: Water
Analysis Batch: 674025

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		100	104		ug/L		104	80 - 120	1	20
Arsenic	0.80	J	1000	985		ug/L		98	80 - 120	3	20
Barium	84		1000	1090		ug/L		101	80 - 120	2	20
Beryllium	ND		500	481		ug/L		96	80 - 120	4	20
Cadmium	0.11	J	500	490		ug/L		98	80 - 120	1	20

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-234011-1 MSD — **Client Sample ID: BAC-08-F-20250924-01**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 674025 — **Prep Batch: 673738**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	87000		25000	112000		ug/L		98	80 - 120	4	20
Chromium	ND		500	507		ug/L		101	80 - 120	1	20
Cobalt	0.63	J	500	513		ug/L		103	80 - 120	3	20
Lead	ND		500	527		ug/L		105	80 - 120	2	20
Lithium	ND		500	521		ug/L		104	80 - 120	4	20
Magnesium	13000		25000	38400		ug/L		103	80 - 120	3	20
Molybdenum	ND		500	511		ug/L		102	80 - 120	2	20
Potassium	1200		25000	27200		ug/L		104	80 - 120	2	20
Selenium	ND		1000	957		ug/L		96	80 - 120	3	20
Sodium	13000		25000	39200		ug/L		104	80 - 120	2	20
Thallium	ND		1000	1060		ug/L		106	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-673740/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 673948 — **Prep Batch: 673740**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:01	1

Lab Sample ID: LCS 240-673740/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 673948 — **Prep Batch: 673740**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.12		ug/L		102	80 - 120

Lab Sample ID: 240-234011-1 MS — **Client Sample ID: BAC-08-F-20250924-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 673948 — **Prep Batch: 673740**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		1.00	1.10		ug/L		110	80 - 120

Lab Sample ID: 240-234011-1 MSD — **Client Sample ID: BAC-08-F-20250924-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 673948 — **Prep Batch: 673740**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		1.00	0.945		ug/L		94	80 - 120	16	20

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-673868/30 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 673868

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			09/29/25 19:29	1

Method: 2320 B-2021 - Alkalinity (Continued)

Lab Sample ID: MB 240-673868/30
Matrix: Water
Analysis Batch: 673868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			09/29/25 19:29	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			09/29/25 19:29	1

Lab Sample ID: MB 240-673868/4
Matrix: Water
Analysis Batch: 673868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			09/29/25 17:01	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			09/29/25 17:01	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			09/29/25 17:01	1

Lab Sample ID: LCS 240-673868/29
Matrix: Water
Analysis Batch: 673868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity			280	258		mg/L		92	86 - 123		

Lab Sample ID: MB 240-674175/3
Matrix: Water
Analysis Batch: 674175

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/01/25 14:08	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/01/25 14:08	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/01/25 14:08	1

Lab Sample ID: LCS 240-674175/2
Matrix: Water
Analysis Batch: 674175

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity			280	255		mg/L		91	86 - 123		

Lab Sample ID: 240-234011-8 DU
Matrix: Water
Analysis Batch: 674175

Client Sample ID: BAC-17-F-20250924-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	62			62.5		mg/L				0.6	20
Bicarbonate Alkalinity as CaCO3	62			62.5		mg/L				0.6	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20

Lab Sample ID: MB 240-674800/31
Matrix: Water
Analysis Batch: 674800

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/06/25 15:58	1

Method: 2320 B-2021 - Alkalinity (Continued)

Lab Sample ID: MB 240-674800/31
Matrix: Water
Analysis Batch: 674800

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 15:58	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 15:58	1

Lab Sample ID: MB 240-674800/4
Matrix: Water
Analysis Batch: 674800

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/06/25 13:13	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 13:13	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 13:13	1

Lab Sample ID: LCS 240-674800/30
Matrix: Water
Analysis Batch: 674800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	259		mg/L		93	86 - 123

Lab Sample ID: 240-234011-5 DU
Matrix: Water
Analysis Batch: 674800

Client Sample ID: BAC-18-F-20250924-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	94		93.9		mg/L		0.3	20
Bicarbonate Alkalinity as CaCO3	94		93.9		mg/L		0.3	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	20

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-673999/1
Matrix: Water
Analysis Batch: 673999

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			09/30/25 16:41	1

Lab Sample ID: LCS 240-673999/2
Matrix: Water
Analysis Batch: 673999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	162		mg/L		92	80 - 120

Lab Sample ID: MB 240-674267/1
Matrix: Water
Analysis Batch: 674267

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/02/25 10:09	1

Method: 2540 C-2020 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-674267/2
Matrix: Water
Analysis Batch: 674267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	157		mg/L		89	80 - 120

Lab Sample ID: MB 240-674342/1
Matrix: Water
Analysis Batch: 674342

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/02/25 15:28	1

Lab Sample ID: LCS 240-674342/2
Matrix: Water
Analysis Batch: 674342

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	151		mg/L		86	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-674174/4
Matrix: Water
Analysis Batch: 674174

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/01/25 23:24	1
Fluoride	ND		0.050	0.024	mg/L			10/01/25 23:24	1
Sulfate	ND		1.0	0.35	mg/L			10/01/25 23:24	1

Lab Sample ID: LCS 240-674174/5
Matrix: Water
Analysis Batch: 674174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.6		mg/L		99	90 - 110
Fluoride	2.50	2.56		mg/L		102	90 - 110
Sulfate	50.0	50.5		mg/L		101	90 - 110

Lab Sample ID: 240-234011-1 MS
Matrix: Water
Analysis Batch: 674174

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	19		50.0	68.9		mg/L		99	80 - 120
Fluoride	0.13		2.50	2.71		mg/L		103	80 - 120
Sulfate	73		50.0	125		mg/L		104	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-234011-1 MSD
Matrix: Water
Analysis Batch: 674174

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	19		50.0	69.1		mg/L		99	80 - 120	0	15
Fluoride	0.13		2.50	2.70		mg/L		103	80 - 120	0	15
Sulfate	73		50.0	125		mg/L		104	80 - 120	0	15

Lab Sample ID: MB 240-674178/3
Matrix: Water
Analysis Batch: 674178

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/02/25 05:21	1
Fluoride	ND		0.050	0.024	mg/L			10/02/25 05:21	1
Sulfate	ND		1.0	0.35	mg/L			10/02/25 05:21	1

Lab Sample ID: LCS 240-674178/4
Matrix: Water
Analysis Batch: 674178

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.6		mg/L		99	90 - 110
Fluoride	2.50	2.56		mg/L		102	90 - 110
Sulfate	50.0	50.7		mg/L		101	90 - 110

Lab Sample ID: 240-234011-11 MS
Matrix: Water
Analysis Batch: 674178

Client Sample ID: BAC-12-F-20250925-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	62		50.0	109		mg/L		94	80 - 120
Fluoride	0.084		2.50	2.63		mg/L		102	80 - 120

Lab Sample ID: 240-234011-11 MSD
Matrix: Water
Analysis Batch: 674178

Client Sample ID: BAC-12-F-20250925-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	62		50.0	110		mg/L		96	80 - 120	1	15
Fluoride	0.084		2.50	2.67		mg/L		103	80 - 120	1	15

Lab Sample ID: MB 240-674352/3
Matrix: Water
Analysis Batch: 674352

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/03/25 03:07	1
Fluoride	ND		0.050	0.024	mg/L			10/03/25 03:07	1
Sulfate	ND		1.0	0.35	mg/L			10/03/25 03:07	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-674352/4
Matrix: Water
Analysis Batch: 674352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	50.0		mg/L		100	90 - 110		
Fluoride			2.50	2.57		mg/L		103	90 - 110		
Sulfate			50.0	51.2		mg/L		102	90 - 110		

Lab Sample ID: 240-234011-10 MS
Matrix: Water
Analysis Batch: 674352

Client Sample ID: BAC-14-F-20250925-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	33		250	277		mg/L		98	80 - 120		
Fluoride	ND		12.5	12.6		mg/L		101	80 - 120		
Sulfate	230		250	464		mg/L		94	80 - 120		

Lab Sample ID: 240-234011-10 MSD
Matrix: Water
Analysis Batch: 674352

Client Sample ID: BAC-14-F-20250925-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	33		250	278		mg/L		98	80 - 120	0	15
Fluoride	ND		12.5	12.7		mg/L		102	80 - 120	1	15
Sulfate	230		250	467		mg/L		95	80 - 120	1	15

Lab Sample ID: MB 240-674527/3
Matrix: Water
Analysis Batch: 674527

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/04/25 00:02	1
Fluoride	ND		0.050	0.024	mg/L			10/04/25 00:02	1
Sulfate	ND		1.0	0.35	mg/L			10/04/25 00:02	1

Lab Sample ID: LCS 240-674527/4
Matrix: Water
Analysis Batch: 674527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	50.1		mg/L		100	90 - 110		
Fluoride			2.50	2.57		mg/L		103	90 - 110		
Sulfate			50.0	51.2		mg/L		102	90 - 110		

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-738969/1-A
Matrix: Water
Analysis Batch: 742990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 738969

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.009226	U	0.227	0.227	1.00	0.446	pCi/L	10/03/25 07:59	10/30/25 14:03	1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: MB 160-738969/1-A
Matrix: Water
Analysis Batch: 742990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 738969

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110	10/03/25 07:59	10/30/25 14:03	1

Lab Sample ID: LCS 160-738969/2-A
Matrix: Water
Analysis Batch: 742990

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 738969

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.57	8.419		1.17	1.00	0.366	pCi/L	88	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.8		30 - 110

Lab Sample ID: 240-234011-1 MS
Matrix: Water
Analysis Batch: 742990

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total/NA
Prep Batch: 738969

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	-0.00808	U	9.54	8.785		1.31	1.00	0.455	pCi/L	92	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	66.7		30 - 110

Lab Sample ID: 240-234011-1 MSD
Matrix: Water
Analysis Batch: 742990

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total/NA
Prep Batch: 738969

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	-0.00808	U	9.57	8.501		1.21	1.00	0.366	pCi/L	89	60 - 140	0.11	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	82.6		30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-738970/1-A
Matrix: Water
Analysis Batch: 743002

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 738970

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4017	U	0.335	0.337	1.00	0.521	pCi/L	10/03/25 08:10	10/30/25 09:52	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110	10/03/25 08:10	10/30/25 09:52	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-738970/1-A
Matrix: Water
Analysis Batch: 743002

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 738970

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	77.4		30 - 110	10/03/25 08:10	10/30/25 09:52	1

Lab Sample ID: LCS 160-738970/2-A
Matrix: Water
Analysis Batch: 743002

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 738970

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.97	8.382		1.19	1.00	0.541	pCi/L	105	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.8		30 - 110
Y Carrier	81.1		30 - 110

Lab Sample ID: 240-234011-1 MS
Matrix: Water
Analysis Batch: 743018

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total/NA
Prep Batch: 738970

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.503	U	7.95	9.981		1.61	1.00	0.977	pCi/L	119	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	66.7		30 - 110
Y Carrier	63.9		30 - 110

Lab Sample ID: 240-234011-1 MSD
Matrix: Water
Analysis Batch: 743018

Client Sample ID: BAC-08-F-20250924-01
Prep Type: Total/NA
Prep Batch: 738970

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.503	U	7.97	8.883		1.29	1.00	0.605	pCi/L	105	60 - 140	0.38	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	82.6		30 - 110
Y Carrier	76.3		30 - 110

Metals

Prep Batch: 673738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-2	BAC-07-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-3	DUP-005-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-4	BAC-19-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-5	BAC-18-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-6	BAC-06-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-7	BAC-15-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-8	BAC-17-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-9	BAC-16-F-20250925-01	Total Recoverable	Water	3005A	
240-234011-10	BAC-14-F-20250925-01	Total Recoverable	Water	3005A	
240-234011-11	BAC-12-F-20250925-01	Total Recoverable	Water	3005A	
MB 240-673738/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-673738/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-673738/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-234011-1 MS	BAC-08-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-1 MS	BAC-08-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-1 MSD	BAC-08-F-20250924-01	Total Recoverable	Water	3005A	
240-234011-1 MSD	BAC-08-F-20250924-01	Total Recoverable	Water	3005A	

Prep Batch: 673740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total/NA	Water	7470A	
240-234011-2	BAC-07-F-20250924-01	Total/NA	Water	7470A	
240-234011-3	DUP-005-F-20250924-01	Total/NA	Water	7470A	
240-234011-4	BAC-19-F-20250924-01	Total/NA	Water	7470A	
240-234011-5	BAC-18-F-20250924-01	Total/NA	Water	7470A	
240-234011-6	BAC-06-F-20250924-01	Total/NA	Water	7470A	
240-234011-7	BAC-15-F-20250924-01	Total/NA	Water	7470A	
240-234011-8	BAC-17-F-20250924-01	Total/NA	Water	7470A	
240-234011-9	BAC-16-F-20250925-01	Total/NA	Water	7470A	
240-234011-10	BAC-14-F-20250925-01	Total/NA	Water	7470A	
240-234011-11	BAC-12-F-20250925-01	Total/NA	Water	7470A	
MB 240-673740/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-673740/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-234011-1 MS	BAC-08-F-20250924-01	Total/NA	Water	7470A	
240-234011-1 MSD	BAC-08-F-20250924-01	Total/NA	Water	7470A	

Analysis Batch: 673881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-2	BAC-07-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-3	DUP-005-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-4	BAC-19-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-5	BAC-18-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-6	BAC-06-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-7	BAC-15-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-8	BAC-17-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-9	BAC-16-F-20250925-01	Total Recoverable	Water	6010D	673738
240-234011-10	BAC-14-F-20250925-01	Total Recoverable	Water	6010D	673738
240-234011-11	BAC-12-F-20250925-01	Total Recoverable	Water	6010D	673738
MB 240-673738/1-A	Method Blank	Total Recoverable	Water	6010D	673738

Metals (Continued)

Analysis Batch: 673881 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-673738/2-A	Lab Control Sample	Total Recoverable	Water	6010D	673738
240-234011-1 MS	BAC-08-F-20250924-01	Total Recoverable	Water	6010D	673738
240-234011-1 MSD	BAC-08-F-20250924-01	Total Recoverable	Water	6010D	673738

Analysis Batch: 673948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-2	BAC-07-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-3	DUP-005-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-4	BAC-19-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-5	BAC-18-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-6	BAC-06-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-7	BAC-15-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-8	BAC-17-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-9	BAC-16-F-20250925-01	Total/NA	Water	7470A	673740
240-234011-10	BAC-14-F-20250925-01	Total/NA	Water	7470A	673740
240-234011-11	BAC-12-F-20250925-01	Total/NA	Water	7470A	673740
MB 240-673740/1-A	Method Blank	Total/NA	Water	7470A	673740
LCS 240-673740/2-A	Lab Control Sample	Total/NA	Water	7470A	673740
240-234011-1 MS	BAC-08-F-20250924-01	Total/NA	Water	7470A	673740
240-234011-1 MSD	BAC-08-F-20250924-01	Total/NA	Water	7470A	673740

Analysis Batch: 674025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-2	BAC-07-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-3	DUP-005-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-4	BAC-19-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-5	BAC-18-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-6	BAC-06-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-7	BAC-15-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-8	BAC-17-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-9	BAC-16-F-20250925-01	Total Recoverable	Water	6020B	673738
240-234011-10	BAC-14-F-20250925-01	Total Recoverable	Water	6020B	673738
240-234011-11	BAC-12-F-20250925-01	Total Recoverable	Water	6020B	673738
MB 240-673738/1-A	Method Blank	Total Recoverable	Water	6020B	673738
LCS 240-673738/3-A	Lab Control Sample	Total Recoverable	Water	6020B	673738
240-234011-1 MS	BAC-08-F-20250924-01	Total Recoverable	Water	6020B	673738
240-234011-1 MSD	BAC-08-F-20250924-01	Total Recoverable	Water	6020B	673738

General Chemistry

Analysis Batch: 673868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total/NA	Water	2320 B-2021	
MB 240-673868/30	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-673868/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-673868/29	Lab Control Sample	Total/NA	Water	2320 B-2021	

General Chemistry

Analysis Batch: 673999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total/NA	Water	2540 C-2020	
240-234011-2	BAC-07-F-20250924-01	Total/NA	Water	2540 C-2020	
240-234011-3	DUP-005-F-20250924-01	Total/NA	Water	2540 C-2020	
240-234011-4	BAC-19-F-20250924-01	Total/NA	Water	2540 C-2020	
240-234011-5	BAC-18-F-20250924-01	Total/NA	Water	2540 C-2020	
240-234011-6	BAC-06-F-20250924-01	Total/NA	Water	2540 C-2020	
MB 240-673999/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-673999/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 674174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total/NA	Water	300.0	
240-234011-2	BAC-07-F-20250924-01	Total/NA	Water	300.0	
240-234011-3	DUP-005-F-20250924-01	Total/NA	Water	300.0	
240-234011-4	BAC-19-F-20250924-01	Total/NA	Water	300.0	
240-234011-4	BAC-19-F-20250924-01	Total/NA	Water	300.0	
240-234011-5	BAC-18-F-20250924-01	Total/NA	Water	300.0	
240-234011-6	BAC-06-F-20250924-01	Total/NA	Water	300.0	
240-234011-7	BAC-15-F-20250924-01	Total/NA	Water	300.0	
240-234011-8	BAC-17-F-20250924-01	Total/NA	Water	300.0	
240-234011-9	BAC-16-F-20250925-01	Total/NA	Water	300.0	
240-234011-10	BAC-14-F-20250925-01	Total/NA	Water	300.0	
MB 240-674174/4	Method Blank	Total/NA	Water	300.0	
LCS 240-674174/5	Lab Control Sample	Total/NA	Water	300.0	
240-234011-1 MS	BAC-08-F-20250924-01	Total/NA	Water	300.0	
240-234011-1 MSD	BAC-08-F-20250924-01	Total/NA	Water	300.0	

Analysis Batch: 674175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-7	BAC-15-F-20250924-01	Total/NA	Water	2320 B-2021	
240-234011-8	BAC-17-F-20250924-01	Total/NA	Water	2320 B-2021	
240-234011-9	BAC-16-F-20250925-01	Total/NA	Water	2320 B-2021	
240-234011-10	BAC-14-F-20250925-01	Total/NA	Water	2320 B-2021	
240-234011-11	BAC-12-F-20250925-01	Total/NA	Water	2320 B-2021	
MB 240-674175/3	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-674175/2	Lab Control Sample	Total/NA	Water	2320 B-2021	
240-234011-8 DU	BAC-17-F-20250924-01	Total/NA	Water	2320 B-2021	

Analysis Batch: 674178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-11	BAC-12-F-20250925-01	Total/NA	Water	300.0	
MB 240-674178/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674178/4	Lab Control Sample	Total/NA	Water	300.0	
240-234011-11 MS	BAC-12-F-20250925-01	Total/NA	Water	300.0	
240-234011-11 MSD	BAC-12-F-20250925-01	Total/NA	Water	300.0	

Analysis Batch: 674267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-9	BAC-16-F-20250925-01	Total/NA	Water	2540 C-2020	
240-234011-10	BAC-14-F-20250925-01	Total/NA	Water	2540 C-2020	
240-234011-11	BAC-12-F-20250925-01	Total/NA	Water	2540 C-2020	

General Chemistry (Continued)

Analysis Batch: 674267 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-674267/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-674267/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 674342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-7	BAC-15-F-20250924-01	Total/NA	Water	2540 C-2020	
240-234011-8	BAC-17-F-20250924-01	Total/NA	Water	2540 C-2020	
MB 240-674342/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-674342/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 674352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-10	BAC-14-F-20250925-01	Total/NA	Water	300.0	
MB 240-674352/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674352/4	Lab Control Sample	Total/NA	Water	300.0	
240-234011-10 MS	BAC-14-F-20250925-01	Total/NA	Water	300.0	
240-234011-10 MSD	BAC-14-F-20250925-01	Total/NA	Water	300.0	

Analysis Batch: 674527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-11	BAC-12-F-20250925-01	Total/NA	Water	300.0	
MB 240-674527/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674527/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 674800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-2	BAC-07-F-20250924-01	Total/NA	Water	2320 B-2021	
240-234011-3	DUP-005-F-20250924-01	Total/NA	Water	2320 B-2021	
240-234011-4	BAC-19-F-20250924-01	Total/NA	Water	2320 B-2021	
240-234011-5	BAC-18-F-20250924-01	Total/NA	Water	2320 B-2021	
240-234011-6	BAC-06-F-20250924-01	Total/NA	Water	2320 B-2021	
MB 240-674800/31	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-674800/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-674800/30	Lab Control Sample	Total/NA	Water	2320 B-2021	
240-234011-5 DU	BAC-18-F-20250924-01	Total/NA	Water	2320 B-2021	

Rad

Prep Batch: 738969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-2	BAC-07-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-3	DUP-005-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-4	BAC-19-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-5	BAC-18-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-6	BAC-06-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-7	BAC-15-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-8	BAC-17-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-9	BAC-16-F-20250925-01	Total/NA	Water	PrecSep-21	
240-234011-10	BAC-14-F-20250925-01	Total/NA	Water	PrecSep-21	
240-234011-11	BAC-12-F-20250925-01	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 738969 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-738969/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-738969/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-234011-1 MS	BAC-08-F-20250924-01	Total/NA	Water	PrecSep-21	
240-234011-1 MSD	BAC-08-F-20250924-01	Total/NA	Water	PrecSep-21	

Prep Batch: 738970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234011-1	BAC-08-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-2	BAC-07-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-3	DUP-005-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-4	BAC-19-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-5	BAC-18-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-6	BAC-06-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-7	BAC-15-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-8	BAC-17-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-9	BAC-16-F-20250925-01	Total/NA	Water	PrecSep_0	
240-234011-10	BAC-14-F-20250925-01	Total/NA	Water	PrecSep_0	
240-234011-11	BAC-12-F-20250925-01	Total/NA	Water	PrecSep_0	
MB 160-738970/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-738970/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-234011-1 MS	BAC-08-F-20250924-01	Total/NA	Water	PrecSep_0	
240-234011-1 MSD	BAC-08-F-20250924-01	Total/NA	Water	PrecSep_0	

Client Sample ID: BAC-08-F-20250924-01
Lab Sample ID: 240-234011-1

Date Collected: 09/24/25 10:06
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 17:20
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 17:30
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:05
Total/NA	Analysis	2320 B-2021		1	673868	PQD2	EET CLE	09/29/25 19:50
Total/NA	Analysis	2540 C-2020		1	673999	TAV2	EET CLE	09/30/25 16:41
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 02:09
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	742990	SWS	EET SL	10/30/25 14:06
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743002	SWS	EET SL	10/30/25 09:53
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: BAC-07-F-20250924-01
Lab Sample ID: 240-234011-2

Date Collected: 09/24/25 11:29
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 17:58
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 17:48
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:13
Total/NA	Analysis	2320 B-2021		1	674800	PQD2	EET CLE	10/06/25 16:56
Total/NA	Analysis	2540 C-2020		1	673999	TAV2	EET CLE	09/30/25 16:41
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 02:53
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	742990	SWS	EET SL	10/30/25 14:07
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:50
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: DUP-005-F-20250924-01
Lab Sample ID: 240-234011-3

Date Collected: 09/24/25 00:00
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:02
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 17:56

Client Sample ID: DUP-005-F-20250924-01
Lab Sample ID: 240-234011-3

Date Collected: 09/24/25 00:00
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:15
Total/NA	Analysis	2320 B-2021		1	674800	PQD2	EET CLE	10/06/25 17:01
Total/NA	Analysis	2540 C-2020		1	673999	TAV2	EET CLE	09/30/25 16:41
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 03:02
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:14
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:51
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: BAC-19-F-20250924-01
Lab Sample ID: 240-234011-4

Date Collected: 09/24/25 13:10
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:07
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 17:59
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:20
Total/NA	Analysis	2320 B-2021		1	674800	PQD2	EET CLE	10/06/25 17:07
Total/NA	Analysis	2540 C-2020		1	673999	TAV2	EET CLE	09/30/25 16:41
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 03:10
Total/NA	Analysis	300.0		10	674174	JMR	EET CLE	10/02/25 03:19
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:15
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:51
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: BAC-18-F-20250924-01
Lab Sample ID: 240-234011-5

Date Collected: 09/24/25 13:53
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:11
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 18:01
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:22
Total/NA	Analysis	2320 B-2021		1	674800	PQD2	EET CLE	10/06/25 17:13

Client Sample ID: BAC-18-F-20250924-01
Lab Sample ID: 240-234011-5

Date Collected: 09/24/25 13:53
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2540 C-2020		1	673999	TAV2	EET CLE	09/30/25 16:41
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 03:28
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:15
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:51
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: BAC-06-F-20250924-01
Lab Sample ID: 240-234011-6

Date Collected: 09/24/25 15:07
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:15
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 18:04
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:24
Total/NA	Analysis	2320 B-2021		1	674800	PQD2	EET CLE	10/06/25 17:27
Total/NA	Analysis	2540 C-2020		1	673999	TAV2	EET CLE	09/30/25 16:41
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 03:37
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:15
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:51
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: BAC-15-F-20250924-01
Lab Sample ID: 240-234011-7

Date Collected: 09/25/25 10:15
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:20
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 18:06
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:25
Total/NA	Analysis	2320 B-2021		1	674175	JWW	EET CLE	10/01/25 15:07
Total/NA	Analysis	2540 C-2020		1	674342	TAV2	EET CLE	10/02/25 15:28
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 03:45
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:15

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234011-1

Client Sample ID: BAC-15-F-20250924-01

Lab Sample ID: 240-234011-7

Date Collected: 09/25/25 10:15
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:51
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: BAC-17-F-20250924-01

Lab Sample ID: 240-234011-8

Date Collected: 09/25/25 11:20
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:24
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 18:09
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:27
Total/NA	Analysis	2320 B-2021		1	674175	JWW	EET CLE	10/01/25 15:13
Total/NA	Analysis	2540 C-2020		1	674342	TAV2	EET CLE	10/02/25 15:28
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 03:54
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:15
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:51
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: BAC-16-F-20250925-01

Lab Sample ID: 240-234011-9

Date Collected: 09/25/25 12:26
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:28
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 18:12
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:29
Total/NA	Analysis	2320 B-2021		1	674175	JWW	EET CLE	10/01/25 15:23
Total/NA	Analysis	2540 C-2020		1	674267	TAV2	EET CLE	10/02/25 10:09
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 04:03
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:15
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:51
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234011-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-14-F-20250925-01
Lab Sample ID: 240-234011-10

Date Collected: 09/25/25 13:44
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:32
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 18:14
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:30
Total/NA	Analysis	2320 B-2021		1	674175	JWW	EET CLE	10/01/25 15:29
Total/NA	Analysis	2540 C-2020		1	674267	TAV2	EET CLE	10/02/25 10:09
Total/NA	Analysis	300.0		1	674174	JMR	EET CLE	10/02/25 04:11
Total/NA	Analysis	300.0		5	674352	JMR	EET CLE	10/03/25 03:24
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:15
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:51
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Client Sample ID: BAC-12-F-20250925-01
Lab Sample ID: 240-234011-11

Date Collected: 09/25/25 15:07
Matrix: Water
Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 18:54
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 18:17
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:32
Total/NA	Analysis	2320 B-2021		1	674175	JWW	EET CLE	10/01/25 15:34
Total/NA	Analysis	2540 C-2020		1	674267	TAV2	EET CLE	10/02/25 10:09
Total/NA	Analysis	300.0		1	674178	JMR	EET CLE	10/02/25 05:39
Total/NA	Analysis	300.0		5	674527	JMR	EET CLE	10/04/25 14:08
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	743002	SWS	EET SL	10/30/25 14:15
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743018	SWS	EET SL	10/30/25 09:52
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234011-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-26
Iowa	State	421	06-01-27
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	2250	09-30-26
New Jersey	NELAP	OH001	06-30-26
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	10-28-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	10-15-25
Pennsylvania	NELAP	68-00340	08-31-26
Texas	NELAP	T104704517	08-31-26
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-26
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-26

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-26
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-26
HI - RadChem Recognition	State	n/a	06-30-26
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-26
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	10-01-26
Massachusetts	State	M-MO054	06-30-26
MI - RadChem Recognition	State	9005	06-30-26
Missouri	State	780	06-30-28
Nevada	State	MO00054	07-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234011-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-26
New Mexico	State	MO00054	06-30-26
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	06-30-26
North Dakota	State	R-207	06-30-25 *
Oklahoma	NELAP	9997	12-31-25
Oregon	NELAP	4157	09-01-26
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-26
Texas	NELAP	T104704193	07-31-26
US Fish & Wildlife	US Federal Programs	058448	07-31-26
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-26
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-31-26
West Virginia DEP	State	381	10-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

COLUMBUS 209

eurofins Environment Testing

Client Information	Sampler: Bobby Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No.: 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-573-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: ~~Page 1 of 8~~ Pg 1 of 2
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

240-234011 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastekd, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-08-F-20250924-01	9-24-25	1006	G	Water			1	1	Z	1	1		
BAC-08-F-20250924-MS-01	9-24-25	1006	G	Water		Y	1	1	Z	1	1		
BAC-08-F-20250924-MSD-01	9-24-25	1006	G	Water		Y	1	1	Z	1	1		
BAC-07-F-20250924-01	9-24-25	1129	G	Water			1	1	Z	1	1		
DUP-005-F-20250924-01	9-24-25	—	G	Water			1	1	Z	1	1		
BAC-19-F-20250924-01	9-24-25	1310	G	Water			1	1	Z	1	1		
BAC-18-F-20250924-01	9-24-25	1353	G	Water			1	1	Z	1	1		
BAC-06-F-20250924-01	9-24-25	1507	G	Water			1	1	Z	1	1		
BAC-15-F-20250925-01	9-25-25	1015	G	Water			1	1	Z	1	1		
BAC-17-F-20250925-01	9-25-25	1120	G	Water			1	1	Z	1	1		
BAC-16-F-20250925-01	9-25-25	1226	G	Water			1	1	Z	1	1		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9-26-25/0920	KEMRON	Ashley McCloskey	9-26-25 1320	Euro
Ashley McCloskey	9-26-25 1700	Euro	Scollins	9-27-25 800	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

COLUMBUS
209

eurofins
Environment Testing

Client Information	Sampler: Bobby Cisto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No. 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8 Pg 2 of 2
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra226, Ra228Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-14-F-20250925-01	9-25-25	1344	G	Water			1	1	2	1	1		
BAC-17-F-20250925-01	9-25-25	1507	G	Water			1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9-26-25/0920	KEMRON	Ashley Mccluskey	9-26-25 1320	EURO
Ashley Mccluskey	9-26-25 1700	EURO	[signature]	9-27-25 800	EURO
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative Login # _____
Barberton Facility

Client Lighthouse Gavin Site Name _____ Cooler unpacked by JC
Cooler Received on 9-27-25 Opened on 9-27-25
FedEx. 1st Grd Exp UPS FAS (Waypoint) Client Drop Off Eurofins Courier Other
Receipt After-hours Drop-off Date/Time Storage Location
Eurofins Cooler # EC Foam Box Client Cooler Box Other _____
Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____
COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☑ See Multiple Cooler Form
IR GUN # 13 (CF +0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3 Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7 Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Y)	(Y)
10 Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11 Sufficient quantity received to perform indicated analyses?	(Yes)	No
12 Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# HC567196
14 Were VOAs on the COC?	Yes	(No)
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No (NA)
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	(No)
17 Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by

Labels Verified by:

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired
Sample(s) _____ were received in a broken container
Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory
Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation Date/Time VOAs Frozen _____

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: 13	1.5	1.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.3	1.5	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.6	0.8	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.5	0.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.8	1.0	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.2	0.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.2	1.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	12.1	12.3	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.3	1.5	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.4	1.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.9	1.1	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.2	0.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

9/27/2025

Login Container Summary Report

240-234011

10/30/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-08-F-20250924-01	240 234011 A-1	Plastic 60 mL - unpreserved				
BAC-08-F-20250924-MS-01	240-234011-A-1 MS	Plastic 60 mL - unpreserved				
BAC-08-F-20250924-MSD-01	240-234011 A 1 MSD	Plastic 60 mL - unpreserved				
BAC-08 F-20250924-01	240-234011-B-1	Plastic 60 mL unpreserved				
BAC-08-F-20250924-MS-01	240 234011-B-1 MS	Plastic 60 mL - unpreserved				
BAC-08-F-20250924-MSD-01	240-234011-B-1 MSD	Plastic 60 mL - unpreserved				
BAC-08-F-20250924-01	240-234011-C-1	Plastic 500ml - unpreserved				
BAC-08 F 20250924-MS-01	240-234011-C-1 MS	Plastic 500ml unpreserved				
BAC-08-F-20250924-MSD-01	240-234011-C-1 MSD	Plastic 500ml - unpreserved				
BAC-08-F-20250924-01	240-234011 D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-08-F 20250924 MS-01	240-234011-D-1 MS	Plastic 500ml with Nitric Acid	<2			
BAC-08-F-20250924-MSD-01	240-234011-D-1 MSD	Plastic 500ml - with Nitric Acid	<2			
BAC-08-F-20250924-01	240-234011-E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-08-F-20250924-MS-01	240-234011-E-1 MS	Plastic 1 liter Nitric Acid	<2			
BAC-08-F 20250924 MSD-01	240-234011-E-1 MSD	Plastic 1 liter - Nitric Acid	<2			
BAC-08-F-20250924-01	240-234011-F-1	Plastic 1 liter Nitric Acid	<2			
BAC-08 F 20250924-MS-01	240-234011 F 1 MS	Plastic 1 liter - Nitric Acid	<2			
BAC-08-F-20250924-MSD-01	240 234011-F-1 MSD	Plastic 1 liter - Nitric Acid	<2			
BAC-07 F 20250924-01	240-234011 A 2	Plastic 60 mL - unpreserved				
BAC-07-F-20250924-01	240-234011-B-2	Plastic 60 mL - unpreserved				
BAC-07-F 20250924-01	240-234011-C-2	Plastic 500ml - unpreserved				
BAC-07-F-20250924-01	240-234011-D-2	Plastic 500ml - with Nitric Acid	<2			
BAC-07 F 20250924-01	240-234011 E-2	Plastic 1 liter - Nitric Acid	<2			
BAC-07 F 20250924-01	240-234011-F-2	Plastic 1 liter Nitric Acid	<2			
DUP-005-F-20250924-01	240-234011 A 3	Plastic 60 mL - unpreserved				
DUP-005 F-20250924-01	240-234011-B-3	Plastic 60 mL - unpreserved				
DUP-005-F-20250924-01	240-234011-C-3	Plastic 500ml unpreserved				
DUP-005-F-20250924-01	240-234011-D-3	Plastic 500ml - with Nitric Acid	<2			
DUP-005-F 20250924-01	240 234011-E-3	Plastic 1 liter - Nitric Acid	<2			
DUP-005 F 20250924-01	240-234011-F-3	Plastic 1 liter - Nitric Acid	<2			
BAC-19 F 20250924-01	240-234011-A-4	Plastic 60 mL - unpreserved				
BAC-19-F-20250924-01	240-234011 B-4	Plastic 60 mL unpreserved				
BAC-19-F 20250924-01	240-234011-C-4	Plastic 500ml - unpreserved				

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-19-F-20250924-01	240-234011 D-4	Plastic 500ml - with Nitric Acid	<2			
BAC-19-F-20250924-01	240-234011-E-4	Plastic 1 liter - Nitric Acid	<2			
BAC-19 F 20250924-01	240-234011-F-4	Plastic 1 liter - Nitric Acid	<2			
BAC-18 F-20250924-01	240-234011-A 5	Plastic 60 mL - unpreserved				
BAC-18-F 20250924-01	240-234011-B-5	Plastic 60 mL - unpreserved				
BAC-18-F-20250924-01	240 234011-C-5	Plastic 500ml - unpreserved				
BAC-18-F-20250924-01	240-234011-D-5	Plastic 500ml - with Nitric Acid	<2			
BAC-18-F-20250924-01	240-234011-E-5	Plastic 1 liter - Nitric Acid	<2			
BAC-18-F-20250924-01	240-234011-F-5	Plastic 1 liter - Nitric Acid	<2			
BAC-06 F-20250924-01	240-234011-A-6	Plastic 60 mL unpreserved				
BAC-06-F-20250924-01	240-234011-B-6	Plastic 60 mL - unpreserved				
BAC-06-F 20250924-01	240-234011-C-6	Plastic 500ml unpreserved				
BAC-06-F-20250924-01	240-234011-D-6	Plastic 500ml - with Nitric Acid	<2			
BAC-06-F-20250924-01	240-234011 E-6	Plastic 1 liter - Nitric Acid	<2			
BAC-06-F-20250924-01	240-234011-F-6	Plastic 1 liter - Nitric Acid	<2			
BAC-15-F 20250924-01	240-234011 A 7	Plastic 60 mL unpreserved				
BAC-15-F-20250924-01	240-234011-B 7	Plastic 60 mL - unpreserved				
BAC-15 F-20250924-01	240-234011-C-7	Plastic 500ml unpreserved				
BAC-15-F-20250924-01	240-234011-D-7	Plastic 500ml - with Nitric Acid	<2			
BAC-15 F 20250924-01	240-234011-E-7	Plastic 1 liter - Nitric Acid	<2			
BAC-15-F-20250924-01	240-234011 F 7	Plastic 1 liter - Nitric Acid	<2			
BAC-17 F 20250924-01	240-234011-A-8	Plastic 60 mL unpreserved				
BAC-17-F-20250924-01	240-234011 B 8	Plastic 60 mL - unpreserved				
BAC-17 F 20250924-01	240-234011-C-8	Plastic 500ml unpreserved				
BAC-17-F-20250924-01	240-234011 D-8	Plastic 500ml - with Nitric Acid	<2			
BAC-17-F 20250924-01	240-234011-E-8	Plastic 1 liter Nitric Acid	<2			
BAC-17-F-20250924-01	240 234011-F-8	Plastic 1 liter - Nitric Acid	<2			
BAC-16-F-20250925-01	240 234011-A-9	Plastic 60 mL - unpreserved				
BAC-16 F-20250925-01	240-234011 B-9	Plastic 60 mL - unpreserved				
BAC-16-F-20250925-01	240-234011-C-9	Plastic 500ml unpreserved				
BAC-16 F 20250925-01	240-234011 D-9	Plastic 500ml - with Nitric Acid	<2			
BAC-16-F-20250925-01	240-234011-E-9	Plastic 1 liter Nitric Acid	<2			
BAC-16 F-20250925-01	240-234011-F-9	Plastic 1 liter - Nitric Acid	<2			
BAC-14-F-20250925-01	240-234011 A 10	Plastic 60 mL unpreserved				
BAC-14 F 20250925-01	240-234011-B-10	Plastic 60 mL unpreserved				
BAC-14 F 20250925-01	240 234011-C-10	Plastic 500ml - unpreserved				
BAC-14 F-20250925-01	240 234011-D-10	Plastic 500ml with Nitric Acid	<2			
BAC-14 F 20250925-01	240 234011-E-10	Plastic 1 liter - Nitric Acid	<2			

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-14-F 20250925-01	240-234011-F-10	Plastic 1 liter - Nitric Acid	<2			
BAC-12-F 20250925-01	240 234011-A-11	Plastic 60 mL unpreserved				
BAC-12-F-20250925-01	240-234011 B-11	Plastic 60 mL - unpreserved				
BAC-12-F 20250925-01	240-234011-C-11	Plastic 500ml - unpreserved				
BAC-12-F-20250925-01	240-234011 D-11	Plastic 500ml with Nitric Acid	<2			
BAC-12-F-20250925-01	240 234011-E-11	Plastic 1 liter - Nitric Acid	<2			
BAC-12-F-20250925-01	240-234011-F-11	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-208627.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-234011-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 10/29/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal CCR Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0Radium-228 (GFPC)	9315_Ra226/PrecSep_21Radium-226 (GFPC)	Ra226Ra228_GFPCCombined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-08-F-20250924-01 (240-234011-1)	9/24/25	10:06 Eastern	G	Water			X	X	X	2	
BAC-08-F-20250924-01 (240-234011-1MS)	9/24/25	10:06 Eastern	G	Water			X	X		2	
BAC-08-F-20250924-01 (240-234011-1MSD)	9/24/25	10:06 Eastern	G	Water			X	X		2	
BAC-07-F-20250924-01 (240-234011-2)	9/24/25	11:29 Eastern	G	Water			X	X	X	2	
DUP-005-F-20250924-01 (240-234011-3)	9/24/25	Eastern	G	Water			X	X	X	2	
BAC-19-F-20250924-01 (240-234011-4)	9/24/25	13:10 Eastern	G	Water			X	X	X	2	
BAC-18-F-20250924-01 (240-234011-5)	9/24/25	13:53 Eastern	G	Water			X	X	X	2	
BAC-06-F-20250924-01 (240-234011-6)	9/24/25	15:07 Eastern	G	Water			X	X	X	2	
BAC-15-F-20250924-01 (240-234011-7)	9/25/25	10:15 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	KMartin	9/29/25 1400	EUR		0830 SEP 30 2025	
2	Relinquished by:	Date/Time:	Company	Received by: Cheyenne Forrest	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

10/30/2025

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-234011-1

Login Number: 234011
List Number: 2
Creator: Forrest, Cheyenne L

List Source: Eurofins St. Louis
List Creation: 09/30/25 12:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

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JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-234201-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

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Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
X	Carrier is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-234201-1 — Eurofins Cleveland

Job Narrative
240-234201-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 10/1/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.2°C, 1.7°C and 13.9°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
Method 9315_Ra226: Radium 226 prep batch 160-739219

The barium carrier recovery is outside the upper control limit (110%) for the following sample: BAC-11-F-20250926-01 (240-234201-1). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

Method 9315_Ra226: Radium 226 Batch 739219

The Ba Carrier recovery is outside the upper control limit (110%) for the following sample: BAC-11-F-20250926-01 (240-234201-1). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference. Samples have had native applied and have been truncated to minimize any potential bias a high carrier recovery may have on the results.

Method 9320_Ra228: Radium 228 prep batch 160-739220

The barium carrier recovery is outside the upper control limit (110%) for the following sample: BAC-11-F-20250926-01 (240-234201-1). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

Method 9320_Ra228: Radium 228 Batch 739220

The Ba Carrier recovery is outside the upper control limit (110%) for the following sample: BAC-11-F-20250926-01 (240-234201-1). There was physical evidence of matrix interference apparent during the initial preparation of the sample. The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference. Samples have had native applied and have been truncated to minimize any potential bias a high carrier recovery may have on the results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234201-1
Project/Site: Federal CCR Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
240-234201-1	BAC-11-F-20250926-01	Water	09/26/25 10:43	10/01/25 08:00	Ohio
240-234201-2	BAC-02-F-20250926-01	Water	09/26/25 12:03	10/01/25 08:00	Ohio
240-234201-3	BAC-05-F-20250926-01	Water	09/26/25 13:15	10/01/25 08:00	Ohio
240-234201-4	DUP-006-F-20250926-01	Water	09/26/25 00:00	10/01/25 08:00	Ohio
240-234201-5	BAC-04-F-20250926-01	Water	09/26/25 14:20	10/01/25 08:00	Ohio
240-234201-6	BAC-13-F-20250926-01	Water	09/26/25 15:02	10/01/25 08:00	Ohio
240-234201-7	BAC-10-F-20250929-01	Water	09/29/25 15:04	10/01/25 08:00	Ohio

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Client Sample ID: BAC-11-F-20250926-01 — Lab Sample ID: 240-234201-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	410		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.1	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	150000		500	77	ug/L	100		6020B	Total Recoverable
Cadmium	0.39	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	2900000		100000	25000	ug/L	100		6020B	Total Recoverable
Chromium	3.4	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	1.4		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	0.93	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	330		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	850000		100000	6100	ug/L	100		6020B	Total Recoverable
Molybdenum	4.2	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	25000		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	1.3	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	11000000		100000	88000	ug/L	100		6020B	Total Recoverable
Thallium	0.99	J	1.0	0.51	ug/L	1		6020B	Total Recoverable
Total Alkalinity	15		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	15		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	36000		1000	780	mg/L	1		2540 C-2020	Total/NA
Chloride	29000		1000	130	mg/L	1000		300.0	Total/NA
Sulfate	87	J	100	35	mg/L	100		300.0	Total/NA

Client Sample ID: BAC-02-F-20250926-01 — Lab Sample ID: 240-234201-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1200		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	2.4	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	44		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.40	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	120000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	2.1	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	1.6		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	1.9		1.0	0.45	ug/L	1		6020B	Total Recoverable
Magnesium	34000		1000	61	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample ID: BAC-02-F-20250926-01 (Continued)
Lab Sample ID: 240-234201-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	1.1	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	2900		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	70000		1000	880	ug/L	1		6020B	Total Recoverable
Thallium	0.60	J	1.0	0.51	ug/L	1		6020B	Total Recoverable
Total Alkalinity	240		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	240		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	720		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	59		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.28		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	290		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: BAC-05-F-20250926-01
Lab Sample ID: 240-234201-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2100		100	57	ug/L	1		6010D	Total Recoverable
Barium	29		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.43	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	76000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	2.0	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	5.1		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	8.7		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	22000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	86		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	86		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	480		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	36		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.12		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	260		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: DUP-006-F-20250926-01
Lab Sample ID: 240-234201-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2100		100	57	ug/L	1		6010D	Total Recoverable
Barium	30		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.43	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	80000		1000	250	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: DUP-006-F-20250926-01 (Continued)

Lab Sample ID: 240-234201-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	2.0	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	5.3		1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	8.8		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	24000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	23000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	86		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	86		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	510		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	36		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.14		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	260		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: BAC-04-F-20250926-01

Lab Sample ID: 240-234201-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2300		100	57	ug/L	1		6010D	Total Recoverable
Barium	37		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	100000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.99	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	5.8	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	26000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	120		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	120		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	520		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	38		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.12		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	240		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: BAC-13-F-20250926-01

Lab Sample ID: 240-234201-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	390		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	1.8	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	3400		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	210000		1000	250	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-13-F-20250926-01 (Continued)

Lab Sample ID: 240-234201-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.28	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	48		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	43000		1000	61	ug/L	1		6020B	Total Recoverable
Molybdenum	8.0		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	5700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	980000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	80		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	80		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	3500		50	39	mg/L	1		2540 C-2020	Total/NA
Chloride	2400		50	6.4	mg/L	50		300.0	Total/NA
Fluoride	1.1		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	6.3		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: BAC-10-F-20250929-01

Lab Sample ID: 240-234201-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	340		100	57	ug/L	1		6010D	Total Recoverable
Barium	30		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.084	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	110000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.54	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Magnesium	27000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	38000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	200		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	200		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	580		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	64		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.19		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	210		5.0	1.7	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-11-F-20250926-01
Date Collected: 09/26/25 10:43
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**410**		100	57	ug/L		10/02/25 14:00	10/04/25 00:20	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	F2 F1	2.0	0.57	ug/L		10/02/25 14:00	10/03/25 16:35	1
Arsenic	**2.1**	**J**	5.0	0.75	ug/L		10/02/25 14:00	10/03/25 16:35	1
Barium	**150000**		500	77	ug/L		10/02/25 14:00	10/06/25 11:50	100
Beryllium	ND		1.0	0.27	ug/L		10/02/25 14:00	10/03/25 16:35	1
Cadmium	**0.39**	**J**	1.0	0.077	ug/L		10/02/25 14:00	10/03/25 16:35	1
Calcium	**2900000**		100000	25000	ug/L		10/02/25 14:00	10/06/25 11:50	100
Chromium	**3.4**	**J**	5.0	1.2	ug/L		10/02/25 14:00	10/03/25 16:35	1
Cobalt	**1.4**		1.0	0.086	ug/L		10/02/25 14:00	10/03/25 16:35	1
Lead	**0.93**	**J**	1.0	0.45	ug/L		10/02/25 14:00	10/03/25 16:35	1
Lithium	**330**		8.0	3.4	ug/L		10/02/25 14:00	10/03/25 16:35	1
Magnesium	**850000**		100000	6100	ug/L		10/02/25 14:00	10/06/25 11:50	100
Molybdenum	**4.2**	**J**	5.0	1.1	ug/L		10/02/25 14:00	10/03/25 16:35	1
Potassium	**25000**		1000	220	ug/L		10/02/25 14:00	10/03/25 16:35	1
Selenium	**1.3**	**J**	5.0	0.89	ug/L		10/02/25 14:00	10/03/25 16:35	1
Sodium	**11000000**		100000	88000	ug/L		10/02/25 14:00	10/06/25 11:50	100
Thallium	**0.99**	**J**	1.0	0.51	ug/L		10/02/25 14:00	10/03/25 16:35	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/02/25 14:00	10/03/25 12:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**15**		5.0	2.6	mg/L			10/06/25 17:58	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**15**		5.0	2.6	mg/L			10/06/25 17:58	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 17:58	1
Total Dissolved Solids (SM 2540 C-2020)	**36000**		1000	780	mg/L			10/03/25 10:14	1
Chloride (EPA 300.0)	**29000**		1000	130	mg/L			10/03/25 04:08	1000
Fluoride (EPA 300.0)	ND		5.0	2.4	mg/L			10/03/25 03:59	100
Sulfate (EPA 300.0)	**87**	**J**	100	35	mg/L			10/03/25 03:59	100

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**18.0**		0.879	1.84	1.00	0.159	pCi/L	10/06/25 07:44	11/03/25 08:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*168*	*X*	*30 - 110*	*10/06/25 07:44*	*11/03/25 08:11*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**125**		3.07	11.9	1.00	0.445	pCi/L	10/06/25 07:47	11/02/25 10:47	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Client Sample ID: BAC-11-F-20250926-01
Date Collected: 09/26/25 10:43
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-1
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*168*	*X*	*30 - 110*	*10/06/25 07:47*	*11/02/25 10:47*	*1*
Y Carrier	*87.1*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:47*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**143**		3.19	12.0	5.00	0.445	pCi/L		11/03/25 12:34	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Client Sample ID: BAC-02-F-20250926-01

Date Collected: 09/26/25 12:03
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-2

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1200**		100	57	ug/L		10/02/25 14:00	10/04/25 00:51	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/02/25 14:00	10/03/25 16:53	1
Arsenic	**2.4**	**J**	5.0	0.75	ug/L		10/02/25 14:00	10/03/25 16:53	1
Barium	**44**		5.0	0.77	ug/L		10/02/25 14:00	10/06/25 12:05	1
Beryllium	ND		1.0	0.27	ug/L		10/02/25 14:00	10/03/25 16:53	1
Cadmium	**0.40**	**J**	1.0	0.077	ug/L		10/02/25 14:00	10/03/25 16:53	1
Calcium	**120000**		1000	250	ug/L		10/02/25 14:00	10/03/25 16:53	1
Chromium	**2.1**	**J**	5.0	1.2	ug/L		10/02/25 14:00	10/03/25 16:53	1
Cobalt	**1.6**		1.0	0.086	ug/L		10/02/25 14:00	10/03/25 16:53	1
Lead	**1.9**		1.0	0.45	ug/L		10/02/25 14:00	10/03/25 16:53	1
Lithium	ND		8.0	3.4	ug/L		10/02/25 14:00	10/03/25 16:53	1
Magnesium	**34000**		1000	61	ug/L		10/02/25 14:00	10/03/25 16:53	1
Molybdenum	**1.1**	**J**	5.0	1.1	ug/L		10/02/25 14:00	10/03/25 16:53	1
Potassium	**2900**		1000	220	ug/L		10/02/25 14:00	10/03/25 16:53	1
Selenium	ND		5.0	0.89	ug/L		10/02/25 14:00	10/03/25 16:53	1
Sodium	**70000**		1000	880	ug/L		10/02/25 14:00	10/06/25 12:05	1
Thallium	**0.60**	**J**	1.0	0.51	ug/L		10/02/25 14:00	10/03/25 16:53	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/02/25 14:00	10/03/25 12:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**240**		5.0	2.6	mg/L			10/06/25 18:03	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**240**		5.0	2.6	mg/L			10/06/25 18:03	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 18:03	1
Total Dissolved Solids (SM 2540 C-2020)	**720**		10	7.8	mg/L			10/03/25 10:14	1
Chloride (EPA 300.0)	**59**		1.0	0.13	mg/L			10/03/25 04:17	1
Fluoride (EPA 300.0)	**0.28**		0.050	0.024	mg/L			10/03/25 04:17	1
Sulfate (EPA 300.0)	**290**		5.0	1.7	mg/L			10/03/25 04:25	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.150	U	0.222	0.222	1.00	0.379	pCi/L	10/06/25 07:44	11/03/25 08:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.1*		*30 - 110*	*10/06/25 07:44*	*11/03/25 08:11*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.24**		0.571	0.582	1.00	0.771	pCi/L	10/06/25 07:47	11/02/25 10:47	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Client Sample ID: BAC-02-F-20250926-01
Date Collected: 09/26/25 12:03
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-2
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.1*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:47*	*1*
Y Carrier	*83.4*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:47*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.39**		0.613	0.623	5.00	0.771	pCi/L		11/03/25 12:34	1

Client Sample ID: BAC-05-F-20250926-01
Date Collected: 09/26/25 13:15
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-3
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2100**		100	57	ug/L		10/02/25 14:00	10/04/25 00:55	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/02/25 14:00	10/03/25 16:56	1
Arsenic	ND		5.0	0.75	ug/L		10/02/25 14:00	10/03/25 16:56	1
Barium	**29**		5.0	0.77	ug/L		10/02/25 14:00	10/06/25 12:08	1
Beryllium	ND		1.0	0.27	ug/L		10/02/25 14:00	10/03/25 16:56	1
Cadmium	**0.43**	**J**	1.0	0.077	ug/L		10/02/25 14:00	10/03/25 16:56	1
Calcium	**76000**		1000	250	ug/L		10/02/25 14:00	10/03/25 16:56	1
Chromium	**2.0**	**J**	5.0	1.2	ug/L		10/02/25 14:00	10/03/25 16:56	1
Cobalt	**5.1**		1.0	0.086	ug/L		10/02/25 14:00	10/03/25 16:56	1
Lead	ND		1.0	0.45	ug/L		10/02/25 14:00	10/03/25 16:56	1
Lithium	**8.7**		8.0	3.4	ug/L		10/02/25 14:00	10/03/25 16:56	1
Magnesium	**23000**		1000	61	ug/L		10/02/25 14:00	10/03/25 16:56	1
Molybdenum	ND		5.0	1.1	ug/L		10/02/25 14:00	10/03/25 16:56	1
Potassium	**1400**		1000	220	ug/L		10/02/25 14:00	10/03/25 16:56	1
Selenium	ND		5.0	0.89	ug/L		10/02/25 14:00	10/03/25 16:56	1
Sodium	**22000**		1000	880	ug/L		10/02/25 14:00	10/06/25 12:08	1
Thallium	ND		1.0	0.51	ug/L		10/02/25 14:00	10/03/25 16:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/02/25 14:00	10/03/25 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**86**		5.0	2.6	mg/L			10/06/25 20:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**86**		5.0	2.6	mg/L			10/06/25 20:29	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 20:29	1
Total Dissolved Solids (SM 2540 C-2020)	**480**		10	7.8	mg/L			10/03/25 10:14	1
Chloride (EPA 300.0)	**36**		1.0	0.13	mg/L			10/03/25 04:51	1
Fluoride (EPA 300.0)	**0.12**		0.050	0.024	mg/L			10/03/25 04:51	1
Sulfate (EPA 300.0)	**260**		5.0	1.7	mg/L			10/03/25 21:35	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.169	U	0.179	0.180	1.00	0.287	pCi/L	10/06/25 07:44	11/03/25 08:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*10/06/25 07:44*	*11/03/25 08:11*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.19**		0.487	0.499	1.00	0.669	pCi/L	10/06/25 07:47	11/02/25 10:48	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Client Sample ID: BAC-05-F-20250926-01
Date Collected: 09/26/25 13:15
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-3
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:48*	*1*
Y Carrier	*83.4*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:48*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.36**		0.519	0.530	5.00	0.669	pCi/L		11/03/25 12:34	1

Client Sample ID: DUP-006-F-20250926-01

Lab Sample ID: 240-234201-4

Date Collected: 09/26/25 00:00

Matrix: Water

Date Received: 10/01/25 08:00

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2100**		100	57	ug/L		10/02/25 14:00	10/04/25 00:59	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/02/25 14:00	10/03/25 16:59	1
Arsenic	ND		5.0	0.75	ug/L		10/02/25 14:00	10/03/25 16:59	1
Barium	**30**		5.0	0.77	ug/L		10/02/25 14:00	10/06/25 12:10	1
Beryllium	ND		1.0	0.27	ug/L		10/02/25 14:00	10/03/25 16:59	1
Cadmium	**0.43**	**J**	1.0	0.077	ug/L		10/02/25 14:00	10/03/25 16:59	1
Calcium	**80000**		1000	250	ug/L		10/02/25 14:00	10/03/25 16:59	1
Chromium	**2.0**	**J**	5.0	1.2	ug/L		10/02/25 14:00	10/03/25 16:59	1
Cobalt	**5.3**		1.0	0.086	ug/L		10/02/25 14:00	10/03/25 16:59	1
Lead	ND		1.0	0.45	ug/L		10/02/25 14:00	10/03/25 16:59	1
Lithium	**8.8**		8.0	3.4	ug/L		10/02/25 14:00	10/03/25 16:59	1
Magnesium	**24000**		1000	61	ug/L		10/02/25 14:00	10/03/25 16:59	1
Molybdenum	ND		5.0	1.1	ug/L		10/02/25 14:00	10/03/25 16:59	1
Potassium	**1500**		1000	220	ug/L		10/02/25 14:00	10/03/25 16:59	1
Selenium	ND		5.0	0.89	ug/L		10/02/25 14:00	10/03/25 16:59	1
Sodium	**23000**		1000	880	ug/L		10/02/25 14:00	10/06/25 12:10	1
Thallium	ND		1.0	0.51	ug/L		10/02/25 14:00	10/03/25 16:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/02/25 14:00	10/03/25 12:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**86**		5.0	2.6	mg/L			10/06/25 20:34	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**86**		5.0	2.6	mg/L			10/06/25 20:34	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 20:34	1
Total Dissolved Solids (SM 2540 C-2020)	**510**		10	7.8	mg/L			10/03/25 10:14	1
Chloride (EPA 300.0)	**36**		1.0	0.13	mg/L			10/03/25 05:00	1
Fluoride (EPA 300.0)	**0.14**		0.050	0.024	mg/L			10/03/25 05:00	1
Sulfate (EPA 300.0)	**260**		5.0	1.7	mg/L			10/03/25 21:44	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.120	U	0.119	0.119	1.00	0.177	pCi/L	10/06/25 07:44	11/03/25 08:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*30 - 110*	*10/06/25 07:44*	*11/03/25 08:11*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.49**		0.478	0.498	1.00	0.564	pCi/L	10/06/25 07:47	11/02/25 10:48	1

Client Sample ID: DUP-006-F-20250926-01
Date Collected: 09/26/25 00:00
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-4
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:48*	*1*
Y Carrier	*80.0*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:48*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.61**		0.493	0.512	5.00	0.564	pCi/L		11/03/25 12:34	1

Client Sample ID: BAC-04-F-20250926-01

Lab Sample ID: 240-234201-5

Date Collected: 09/26/25 14:20

Matrix: Water

Date Received: 10/01/25 08:00

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2300**		100	57	ug/L		10/02/25 14:00	10/04/25 01:04	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/02/25 14:00	10/03/25 17:01	1
Arsenic	ND		5.0	0.75	ug/L		10/02/25 14:00	10/03/25 17:01	1
Barium	**37**		5.0	0.77	ug/L		10/02/25 14:00	10/06/25 12:13	1
Beryllium	ND		1.0	0.27	ug/L		10/02/25 14:00	10/03/25 17:01	1
Cadmium	ND		1.0	0.077	ug/L		10/02/25 14:00	10/03/25 17:01	1
Calcium	**100000**		1000	250	ug/L		10/02/25 14:00	10/03/25 17:01	1
Chromium	ND		5.0	1.2	ug/L		10/02/25 14:00	10/03/25 17:01	1
Cobalt	**0.99**	**J**	1.0	0.086	ug/L		10/02/25 14:00	10/03/25 17:01	1
Lead	ND		1.0	0.45	ug/L		10/02/25 14:00	10/03/25 17:01	1
Lithium	**5.8**	**J**	8.0	3.4	ug/L		10/02/25 14:00	10/03/25 17:01	1
Magnesium	**20000**		1000	61	ug/L		10/02/25 14:00	10/03/25 17:01	1
Molybdenum	ND		5.0	1.1	ug/L		10/02/25 14:00	10/03/25 17:01	1
Potassium	**1700**		1000	220	ug/L		10/02/25 14:00	10/03/25 17:01	1
Selenium	ND		5.0	0.89	ug/L		10/02/25 14:00	10/03/25 17:01	1
Sodium	**26000**		1000	880	ug/L		10/02/25 14:00	10/06/25 12:13	1
Thallium	ND		1.0	0.51	ug/L		10/02/25 14:00	10/03/25 17:01	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/02/25 14:00	10/03/25 12:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**120**		5.0	2.6	mg/L			10/06/25 20:40	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**120**		5.0	2.6	mg/L			10/06/25 20:40	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 20:40	1
Total Dissolved Solids (SM 2540 C-2020)	**520**		10	7.8	mg/L			10/03/25 10:14	1
Chloride (EPA 300.0)	**38**		1.0	0.13	mg/L			10/03/25 05:09	1
Fluoride (EPA 300.0)	**0.12**		0.050	0.024	mg/L			10/03/25 05:09	1
Sulfate (EPA 300.0)	**240**		5.0	1.7	mg/L			10/03/25 22:10	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.339**		0.203	0.206	1.00	0.269	pCi/L	10/06/25 07:44	11/03/25 08:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.8*		*30 - 110*	*10/06/25 07:44*	*11/03/25 08:12*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.741**		0.386	0.392	1.00	0.531	pCi/L	10/06/25 07:47	11/02/25 10:49	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Client Sample ID: BAC-04-F-20250926-01
Date Collected: 09/26/25 14:20
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-5
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.8*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:49*	*1*
Y Carrier	*80.4*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:49*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.08**		0.436	0.443	5.00	0.531	pCi/L		11/03/25 12:34	1

Client Sample ID: BAC-13-F-20250926-01
Date Collected: 09/26/25 15:02
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-6
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**390**		100	57	ug/L		10/02/25 14:00	10/04/25 01:08	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/02/25 14:00	10/03/25 17:04	1
Arsenic	**1.8**	**J**	5.0	0.75	ug/L		10/02/25 14:00	10/03/25 17:04	1
Barium	**3400**		5.0	0.77	ug/L		10/02/25 14:00	10/06/25 12:16	1
Beryllium	ND		1.0	0.27	ug/L		10/02/25 14:00	10/03/25 17:04	1
Cadmium	ND		1.0	0.077	ug/L		10/02/25 14:00	10/03/25 17:04	1
Calcium	**210000**		1000	250	ug/L		10/02/25 14:00	10/03/25 17:04	1
Chromium	ND		5.0	1.2	ug/L		10/02/25 14:00	10/03/25 17:04	1
Cobalt	**0.28**	**J**	1.0	0.086	ug/L		10/02/25 14:00	10/03/25 17:04	1
Lead	ND		1.0	0.45	ug/L		10/02/25 14:00	10/03/25 17:04	1
Lithium	**48**		8.0	3.4	ug/L		10/02/25 14:00	10/03/25 17:04	1
Magnesium	**43000**		1000	61	ug/L		10/02/25 14:00	10/03/25 17:04	1
Molybdenum	**8.0**		5.0	1.1	ug/L		10/02/25 14:00	10/03/25 17:04	1
Potassium	**5700**		1000	220	ug/L		10/02/25 14:00	10/03/25 17:04	1
Selenium	ND		5.0	0.89	ug/L		10/02/25 14:00	10/03/25 17:04	1
Sodium	**980000**		1000	880	ug/L		10/02/25 14:00	10/06/25 12:16	1
Thallium	ND		1.0	0.51	ug/L		10/02/25 14:00	10/03/25 17:04	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/02/25 14:00	10/03/25 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**80**		5.0	2.6	mg/L			10/06/25 20:45	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**80**		5.0	2.6	mg/L			10/06/25 20:45	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 20:45	1
Total Dissolved Solids (SM 2540 C-2020)	**3500**		50	39	mg/L			10/03/25 10:14	1
Chloride (EPA 300.0)	**2400**		50	6.4	mg/L			10/03/25 05:26	50
Fluoride (EPA 300.0)	**1.1**		0.25	0.12	mg/L			10/03/25 05:18	5
Sulfate (EPA 300.0)	**6.3**		5.0	1.7	mg/L			10/03/25 05:18	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.91**		0.379	0.416	1.00	0.260	pCi/L	10/06/25 07:44	11/03/25 08:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.0*		*30 - 110*	*10/06/25 07:44*	*11/03/25 08:12*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**4.90**		0.711	0.841	1.00	0.543	pCi/L	10/06/25 07:47	11/02/25 10:50	1

Client Sample ID: BAC-13-F-20250926-01
Date Collected: 09/26/25 15:02
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-6
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.0*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:50*	*1*
Y Carrier	*80.7*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**6.81**		0.806	0.938	5.00	0.543	pCi/L		11/03/25 12:34	1

Client Sample ID: BAC-10-F-20250929-01
Date Collected: 09/29/25 15:04
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-7
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**340**		100	57	ug/L		10/02/25 14:00	10/04/25 01:13	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/02/25 14:00	10/03/25 17:07	1
Arsenic	ND		5.0	0.75	ug/L		10/02/25 14:00	10/03/25 17:07	1
Barium	**30**		5.0	0.77	ug/L		10/02/25 14:00	10/06/25 12:18	1
Beryllium	ND		1.0	0.27	ug/L		10/02/25 14:00	10/03/25 17:07	1
Cadmium	**0.084**	**J**	1.0	0.077	ug/L		10/02/25 14:00	10/03/25 17:07	1
Calcium	**110000**		1000	250	ug/L		10/02/25 14:00	10/03/25 17:07	1
Chromium	ND		5.0	1.2	ug/L		10/02/25 14:00	10/03/25 17:07	1
Cobalt	**0.54**	**J**	1.0	0.086	ug/L		10/02/25 14:00	10/03/25 17:07	1
Lead	ND		1.0	0.45	ug/L		10/02/25 14:00	10/03/25 17:07	1
Lithium	ND		8.0	3.4	ug/L		10/02/25 14:00	10/03/25 17:07	1
Magnesium	**27000**		1000	61	ug/L		10/02/25 14:00	10/03/25 17:07	1
Molybdenum	ND		5.0	1.1	ug/L		10/02/25 14:00	10/03/25 17:07	1
Potassium	**1400**		1000	220	ug/L		10/02/25 14:00	10/03/25 17:07	1
Selenium	ND		5.0	0.89	ug/L		10/02/25 14:00	10/03/25 17:07	1
Sodium	**38000**		1000	880	ug/L		10/02/25 14:00	10/06/25 12:18	1
Thallium	ND		1.0	0.51	ug/L		10/02/25 14:00	10/03/25 17:07	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/02/25 14:00	10/03/25 13:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**200**		5.0	2.6	mg/L			10/06/25 20:50	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**200**		5.0	2.6	mg/L			10/06/25 20:50	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/06/25 20:50	1
Total Dissolved Solids (SM 2540 C-2020)	**580**		10	7.8	mg/L			10/03/25 14:16	1
Chloride (EPA 300.0)	**64**		1.0	0.13	mg/L			10/03/25 05:35	1
Fluoride (EPA 300.0)	**0.19**		0.050	0.024	mg/L			10/03/25 05:35	1
Sulfate (EPA 300.0)	**210**		5.0	1.7	mg/L			10/03/25 05:44	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.163	U	0.202	0.202	1.00	0.334	pCi/L	10/06/25 07:44	11/03/25 08:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*30 - 110*	*10/06/25 07:44*	*11/03/25 08:12*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.67**		0.519	0.541	1.00	0.633	pCi/L	10/06/25 07:47	11/02/25 10:50	1

Client Sample ID: BAC-10-F-20250929-01
Date Collected: 09/29/25 15:04
Date Received: 10/01/25 08:00

Lab Sample ID: 240-234201-7
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.0*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:50*	*1*
Y Carrier	*80.4*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:50*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.83**		0.557	0.577	5.00	0.633	pCi/L		11/03/25 12:34	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-234201-1	BAC-11-F-20250926-01	168 X
240-234201-2	BAC-02-F-20250926-01	82.1
240-234201-3	BAC-05-F-20250926-01	92.8
240-234201-4	DUP-006-F-20250926-01	88.3
240-234201-5	BAC-04-F-20250926-01	85.8
240-234201-6	BAC-13-F-20250926-01	94.0
240-234201-7	BAC-10-F-20250929-01	90.0
LCS 160-739219/2-A	Lab Control Sample	80.6
MB 160-739219/1-A	Method Blank	88.1

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-234201-1	BAC-11-F-20250926-01	168 X	87.1
240-234201-2	BAC-02-F-20250926-01	82.1	83.4
240-234201-3	BAC-05-F-20250926-01	92.8	83.4
240-234201-4	DUP-006-F-20250926-01	88.3	80.0
240-234201-5	BAC-04-F-20250926-01	85.8	80.4
240-234201-6	BAC-13-F-20250926-01	94.0	80.7
240-234201-7	BAC-10-F-20250929-01	90.0	80.4
LCS 160-739220/2-A	Lab Control Sample	80.6	80.4
MB 160-739220/1-A	Method Blank	88.1	81.9

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-674282/1-A
Matrix: Water
Analysis Batch: 674593

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		10/02/25 14:00	10/04/25 00:11	1

Lab Sample ID: LCS 240-674282/2-A
Matrix: Water
Analysis Batch: 674593

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			1000	1030		ug/L		103	80 - 120		

Lab Sample ID: 240-234201-1 MS
Matrix: Water
Analysis Batch: 674593

Client Sample ID: BAC-11-F-20250926-01
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron	410		1000	1500		ug/L		109	75 - 125		

Lab Sample ID: 240-234201-1 MSD
Matrix: Water
Analysis Batch: 674593

Client Sample ID: BAC-11-F-20250926-01
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	410		1000	1520		ug/L		111	75 - 125	1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-674282/1-A
Matrix: Water
Analysis Batch: 674429

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/02/25 14:00	10/03/25 16:30	1
Arsenic	ND		5.0	0.75	ug/L		10/02/25 14:00	10/03/25 16:30	1
Beryllium	ND		1.0	0.27	ug/L		10/02/25 14:00	10/03/25 16:30	1
Cadmium	ND		1.0	0.077	ug/L		10/02/25 14:00	10/03/25 16:30	1
Calcium	ND		1000	250	ug/L		10/02/25 14:00	10/03/25 16:30	1
Chromium	ND		5.0	1.2	ug/L		10/02/25 14:00	10/03/25 16:30	1
Cobalt	ND		1.0	0.086	ug/L		10/02/25 14:00	10/03/25 16:30	1
Lead	ND		1.0	0.45	ug/L		10/02/25 14:00	10/03/25 16:30	1
Lithium	ND		8.0	3.4	ug/L		10/02/25 14:00	10/03/25 16:30	1
Magnesium	ND		1000	61	ug/L		10/02/25 14:00	10/03/25 16:30	1
Molybdenum	ND		5.0	1.1	ug/L		10/02/25 14:00	10/03/25 16:30	1
Potassium	ND		1000	220	ug/L		10/02/25 14:00	10/03/25 16:30	1
Selenium	ND		5.0	0.89	ug/L		10/02/25 14:00	10/03/25 16:30	1
Thallium	ND		1.0	0.51	ug/L		10/02/25 14:00	10/03/25 16:30	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-674282/1-A
Matrix: Water
Analysis Batch: 674708

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		5.0	0.77	ug/L		10/02/25 14:00	10/06/25 11:44	1
Sodium	ND		1000	880	ug/L		10/02/25 14:00	10/06/25 11:44	1

Lab Sample ID: LCS 240-674282/26-A
Matrix: Water
Analysis Batch: 674429

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	100		ug/L		100	80 - 120
Arsenic	1000	967		ug/L		97	80 - 120
Beryllium	500	502		ug/L		100	80 - 120
Cadmium	500	486		ug/L		97	80 - 120
Calcium	25000	25700		ug/L		103	80 - 120
Chromium	500	502		ug/L		100	80 - 120
Cobalt	500	490		ug/L		98	80 - 120
Lead	500	502		ug/L		100	80 - 120
Lithium	500	523		ug/L		105	80 - 120
Magnesium	25000	26300		ug/L		105	80 - 120
Molybdenum	500	489		ug/L		98	80 - 120
Potassium	25000	25900		ug/L		104	80 - 120
Selenium	1000	978		ug/L		98	80 - 120
Thallium	1000	993		ug/L		99	80 - 120

Lab Sample ID: LCS 240-674282/26-A
Matrix: Water
Analysis Batch: 674708

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	1000	985		ug/L		98	80 - 120
Sodium	25000	26100		ug/L		105	80 - 120

Lab Sample ID: 240-234201-1 MS
Matrix: Water
Analysis Batch: 674429

Client Sample ID: BAC-11-F-20250926-01
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND	F2 F1	100	64.1	F1	ug/L		64	80 - 120
Arsenic	2.1	J	1000	1090		ug/L		109	80 - 120
Beryllium	ND		500	429		ug/L		86	80 - 120
Cadmium	0.39	J	500	406		ug/L		81	80 - 120
Chromium	3.4	J	500	412		ug/L		82	80 - 120
Cobalt	1.4		500	526		ug/L		105	80 - 120
Lead	0.93	J	500	405		ug/L		81	80 - 120
Lithium	330		500	834		ug/L		101	80 - 120
Molybdenum	4.2	J	500	523		ug/L		104	80 - 120
Potassium	25000		25000	46800		ug/L		87	80 - 120
Selenium	1.3	J	1000	903		ug/L		90	80 - 120
Thallium	0.99	J	1000	827		ug/L		83	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-234201-1 MS
Matrix: Water
Analysis Batch: 674708

Client Sample ID: BAC-11-F-20250926-01
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	150000		1000	146000	4	ug/L		-720	80 - 120
Calcium	2900000		25000	2760000	4	ug/L		-356	80 - 120
Magnesium	850000		25000	845000	4	ug/L		-0.1	80 - 120
Sodium	11000000		25000	10900000	4	ug/L		-1612	80 - 120

Lab Sample ID: 240-234201-1 MSD
Matrix: Water
Analysis Batch: 674429

Client Sample ID: BAC-11-F-20250926-01
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND	F2 F1	100	92.7	F2	ug/L		93	80 - 120	36	20
Arsenic	2.1	J	1000	1130		ug/L		113	80 - 120	4	20
Beryllium	ND		500	440		ug/L		88	80 - 120	2	20
Cadmium	0.39	J	500	413		ug/L		83	80 - 120	2	20
Chromium	3.4	J	500	422		ug/L		84	80 - 120	2	20
Cobalt	1.4		500	552		ug/L		110	80 - 120	5	20
Lead	0.93	J	500	412		ug/L		82	80 - 120	2	20
Lithium	330		500	857		ug/L		106	80 - 120	3	20
Molybdenum	4.2	J	500	540		ug/L		107	80 - 120	3	20
Potassium	25000		25000	47900		ug/L		91	80 - 120	2	20
Selenium	1.3	J	1000	933		ug/L		93	80 - 120	3	20
Thallium	0.99	J	1000	838		ug/L		84	80 - 120	1	20

Lab Sample ID: 240-234201-1 MSD
Matrix: Water
Analysis Batch: 674708

Client Sample ID: BAC-11-F-20250926-01
Prep Type: Total Recoverable
Prep Batch: 674282

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Barium	150000		1000	148000	4	ug/L		-566	80 - 120	1	20
Calcium	2900000		25000	2790000	4	ug/L		-244	80 - 120	1	20
Magnesium	850000		25000	839000	4	ug/L		-26	80 - 120	1	20
Sodium	11000000		25000	11100000	4	ug/L		-929	80 - 120	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-674290/1-A
Matrix: Water
Analysis Batch: 674509

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 674290

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/02/25 14:00	10/03/25 12:46	1

Lab Sample ID: LCS 240-674290/2-A
Matrix: Water
Analysis Batch: 674509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 674290

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.65		ug/L		93	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-234201-1 MS
Matrix: Water
Analysis Batch: 674509

Client Sample ID: BAC-11-F-20250926-01
Prep Type: Total/NA
Prep Batch: 674290

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		1.00	0.931		ug/L		93	80 - 120

Lab Sample ID: 240-234201-1 MSD
Matrix: Water
Analysis Batch: 674509

Client Sample ID: BAC-11-F-20250926-01
Prep Type: Total/NA
Prep Batch: 674290

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		1.00	0.843		ug/L		84	80 - 120	10	20

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-674800/31
Matrix: Water
Analysis Batch: 674800

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/06/25 15:58	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 15:58	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 15:58	1

Lab Sample ID: MB 240-674800/4
Matrix: Water
Analysis Batch: 674800

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/06/25 13:13	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 13:13	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 13:13	1

Lab Sample ID: LCS 240-674800/30
Matrix: Water
Analysis Batch: 674800

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	259		mg/L		93	85 - 115

Lab Sample ID: MB 240-674959/3
Matrix: Water
Analysis Batch: 674959

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/06/25 20:09	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 20:09	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/06/25 20:09	1

Method: 2320 B-2021 - Alkalinity (Continued)

Lab Sample ID: LCS 240-674959/2
Matrix: Water
Analysis Batch: 674959

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	257		mg/L		92	85 - 115

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-674444/1
Matrix: Water
Analysis Batch: 674444

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/03/25 10:14	1

Lab Sample ID: LCS 240-674444/2
Matrix: Water
Analysis Batch: 674444

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	160		mg/L		91	80 - 120

Lab Sample ID: MB 240-674510/1
Matrix: Water
Analysis Batch: 674510

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/03/25 14:16	1

Lab Sample ID: LCS 240-674510/2
Matrix: Water
Analysis Batch: 674510

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	154		mg/L		88	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-674352/3
Matrix: Water
Analysis Batch: 674352

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/03/25 03:07	1
Fluoride	ND		0.050	0.024	mg/L			10/03/25 03:07	1
Sulfate	ND		1.0	0.35	mg/L			10/03/25 03:07	1

Lab Sample ID: LCS 240-674352/4
Matrix: Water
Analysis Batch: 674352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.0		mg/L		100	90 - 110
Fluoride	2.50	2.57		mg/L		103	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-674352/4
Matrix: Water
Analysis Batch: 674352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate			50.0	51.2		mg/L		102	90 - 110		

Lab Sample ID: MB 240-674524/3
Matrix: Water
Analysis Batch: 674524

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/03/25 19:25	1
Fluoride	ND		0.050	0.024	mg/L			10/03/25 19:25	1
Sulfate	ND		1.0	0.35	mg/L			10/03/25 19:25	1

Lab Sample ID: LCS 240-674524/4
Matrix: Water
Analysis Batch: 674524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	50.1		mg/L		100	90 - 110		
Fluoride			2.50	2.57		mg/L		103	90 - 110		
Sulfate			50.0	51.0		mg/L		102	90 - 110		

Lab Sample ID: 240-234201-4 MS
Matrix: Water
Analysis Batch: 674524

Client Sample ID: DUP-006-F-20250926-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	37		250	289		mg/L		101	80 - 120		
Fluoride	0.14	J	12.5	13.1		mg/L		103	80 - 120		
Sulfate	260		250	496		mg/L		95	80 - 120		

Lab Sample ID: 240-234201-4 MSD
Matrix: Water
Analysis Batch: 674524

Client Sample ID: DUP-006-F-20250926-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	37		250	290		mg/L		101	80 - 120	1	15
Fluoride	0.14	J	12.5	13.2		mg/L		104	80 - 120	1	15
Sulfate	260		250	498		mg/L		96	80 - 120	0	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-739219/1-A
Matrix: Water
Analysis Batch: 743502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 739219

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03825	U	0.107	0.107	1.00	0.207	pCi/L	10/06/25 07:44	11/03/25 08:07	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.1*		*30 - 110*	*10/06/25 07:44*	*11/03/25 08:07*	*1*

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: LCS 160-739219/2-A
Matrix: Water
Analysis Batch: 743503

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 739219

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.57	7.985		1.07	1.00	0.268	pCi/L	83	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*80.6*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-739220/1-A
Matrix: Water
Analysis Batch: 743272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 739220

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3990	U	0.313	0.315	1.00	0.478	pCi/L	10/06/25 07:47	11/02/25 10:47	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.1*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:47*	*1*
Y Carrier	*81.9*		*30 - 110*	*10/06/25 07:47*	*11/02/25 10:47*	*1*

Lab Sample ID: LCS 160-739220/2-A
Matrix: Water
Analysis Batch: 743272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 739220

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.96	9.731		1.39	1.00	0.683	pCi/L	122	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*80.6*		*30 - 110*
Y Carrier	*80.4*		*30 - 110*

Metals

Prep Batch: 674282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-2	BAC-02-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-3	BAC-05-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-4	DUP-006-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-5	BAC-04-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-6	BAC-13-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-7	BAC-10-F-20250929-01	Total Recoverable	Water	3005A	
MB 240-674282/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-674282/26-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-674282/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-234201-1 MS	BAC-11-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-1 MS	BAC-11-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-1 MSD	BAC-11-F-20250926-01	Total Recoverable	Water	3005A	
240-234201-1 MSD	BAC-11-F-20250926-01	Total Recoverable	Water	3005A	

Prep Batch: 674290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total/NA	Water	7470A	
240-234201-2	BAC-02-F-20250926-01	Total/NA	Water	7470A	
240-234201-3	BAC-05-F-20250926-01	Total/NA	Water	7470A	
240-234201-4	DUP-006-F-20250926-01	Total/NA	Water	7470A	
240-234201-5	BAC-04-F-20250926-01	Total/NA	Water	7470A	
240-234201-6	BAC-13-F-20250926-01	Total/NA	Water	7470A	
240-234201-7	BAC-10-F-20250929-01	Total/NA	Water	7470A	
MB 240-674290/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-674290/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-234201-1 MS	BAC-11-F-20250926-01	Total/NA	Water	7470A	
240-234201-1 MSD	BAC-11-F-20250926-01	Total/NA	Water	7470A	

Analysis Batch: 674429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-2	BAC-02-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-3	BAC-05-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-4	DUP-006-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-5	BAC-04-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-6	BAC-13-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-7	BAC-10-F-20250929-01	Total Recoverable	Water	6020B	674282
MB 240-674282/1-A	Method Blank	Total Recoverable	Water	6020B	674282
LCS 240-674282/26-A	Lab Control Sample	Total Recoverable	Water	6020B	674282
240-234201-1 MS	BAC-11-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-1 MSD	BAC-11-F-20250926-01	Total Recoverable	Water	6020B	674282

Analysis Batch: 674509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total/NA	Water	7470A	674290
240-234201-2	BAC-02-F-20250926-01	Total/NA	Water	7470A	674290
240-234201-3	BAC-05-F-20250926-01	Total/NA	Water	7470A	674290
240-234201-4	DUP-006-F-20250926-01	Total/NA	Water	7470A	674290
240-234201-5	BAC-04-F-20250926-01	Total/NA	Water	7470A	674290
240-234201-6	BAC-13-F-20250926-01	Total/NA	Water	7470A	674290

Metals (Continued)

Analysis Batch: 674509 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-7	BAC-10-F-20250929-01	Total/NA	Water	7470A	674290
MB 240-674290/1-A	Method Blank	Total/NA	Water	7470A	674290
LCS 240-674290/2-A	Lab Control Sample	Total/NA	Water	7470A	674290
240-234201-1 MS	BAC-11-F-20250926-01	Total/NA	Water	7470A	674290
240-234201-1 MSD	BAC-11-F-20250926-01	Total/NA	Water	7470A	674290

Analysis Batch: 674593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total Recoverable	Water	6010D	674282
240-234201-2	BAC-02-F-20250926-01	Total Recoverable	Water	6010D	674282
240-234201-3	BAC-05-F-20250926-01	Total Recoverable	Water	6010D	674282
240-234201-4	DUP-006-F-20250926-01	Total Recoverable	Water	6010D	674282
240-234201-5	BAC-04-F-20250926-01	Total Recoverable	Water	6010D	674282
240-234201-6	BAC-13-F-20250926-01	Total Recoverable	Water	6010D	674282
240-234201-7	BAC-10-F-20250929-01	Total Recoverable	Water	6010D	674282
MB 240-674282/1-A	Method Blank	Total Recoverable	Water	6010D	674282
LCS 240-674282/2-A	Lab Control Sample	Total Recoverable	Water	6010D	674282
240-234201-1 MS	BAC-11-F-20250926-01	Total Recoverable	Water	6010D	674282
240-234201-1 MSD	BAC-11-F-20250926-01	Total Recoverable	Water	6010D	674282

Analysis Batch: 674708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-2	BAC-02-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-3	BAC-05-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-4	DUP-006-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-5	BAC-04-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-6	BAC-13-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-7	BAC-10-F-20250929-01	Total Recoverable	Water	6020B	674282
MB 240-674282/1-A	Method Blank	Total Recoverable	Water	6020B	674282
LCS 240-674282/26-A	Lab Control Sample	Total Recoverable	Water	6020B	674282
240-234201-1 MS	BAC-11-F-20250926-01	Total Recoverable	Water	6020B	674282
240-234201-1 MSD	BAC-11-F-20250926-01	Total Recoverable	Water	6020B	674282

General Chemistry

Analysis Batch: 674352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total/NA	Water	300.0	
240-234201-1	BAC-11-F-20250926-01	Total/NA	Water	300.0	
240-234201-2	BAC-02-F-20250926-01	Total/NA	Water	300.0	
240-234201-2	BAC-02-F-20250926-01	Total/NA	Water	300.0	
240-234201-3	BAC-05-F-20250926-01	Total/NA	Water	300.0	
240-234201-4	DUP-006-F-20250926-01	Total/NA	Water	300.0	
240-234201-5	BAC-04-F-20250926-01	Total/NA	Water	300.0	
240-234201-6	BAC-13-F-20250926-01	Total/NA	Water	300.0	
240-234201-6	BAC-13-F-20250926-01	Total/NA	Water	300.0	
240-234201-7	BAC-10-F-20250929-01	Total/NA	Water	300.0	
240-234201-7	BAC-10-F-20250929-01	Total/NA	Water	300.0	
MB 240-674352/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674352/4	Lab Control Sample	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 674444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total/NA	Water	2540 C-2020	
240-234201-2	BAC-02-F-20250926-01	Total/NA	Water	2540 C-2020	
240-234201-3	BAC-05-F-20250926-01	Total/NA	Water	2540 C-2020	
240-234201-4	DUP-006-F-20250926-01	Total/NA	Water	2540 C-2020	
240-234201-5	BAC-04-F-20250926-01	Total/NA	Water	2540 C-2020	
240-234201-6	BAC-13-F-20250926-01	Total/NA	Water	2540 C-2020	
MB 240-674444/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-674444/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 674510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-7	BAC-10-F-20250929-01	Total/NA	Water	2540 C-2020	
MB 240-674510/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-674510/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 674524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-3	BAC-05-F-20250926-01	Total/NA	Water	300.0	
240-234201-4	DUP-006-F-20250926-01	Total/NA	Water	300.0	
240-234201-5	BAC-04-F-20250926-01	Total/NA	Water	300.0	
MB 240-674524/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674524/4	Lab Control Sample	Total/NA	Water	300.0	
240-234201-4 MS	DUP-006-F-20250926-01	Total/NA	Water	300.0	
240-234201-4 MSD	DUP-006-F-20250926-01	Total/NA	Water	300.0	

Analysis Batch: 674800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total/NA	Water	2320 B-2021	
240-234201-2	BAC-02-F-20250926-01	Total/NA	Water	2320 B-2021	
MB 240-674800/31	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-674800/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-674800/30	Lab Control Sample	Total/NA	Water	2320 B-2021	

Analysis Batch: 674959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-3	BAC-05-F-20250926-01	Total/NA	Water	2320 B-2021	
240-234201-4	DUP-006-F-20250926-01	Total/NA	Water	2320 B-2021	
240-234201-5	BAC-04-F-20250926-01	Total/NA	Water	2320 B-2021	
240-234201-6	BAC-13-F-20250926-01	Total/NA	Water	2320 B-2021	
240-234201-7	BAC-10-F-20250929-01	Total/NA	Water	2320 B-2021	
MB 240-674959/3	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-674959/2	Lab Control Sample	Total/NA	Water	2320 B-2021	

Rad

Prep Batch: 739219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total/NA	Water	PrecSep-21	
240-234201-2	BAC-02-F-20250926-01	Total/NA	Water	PrecSep-21	
240-234201-3	BAC-05-F-20250926-01	Total/NA	Water	PrecSep-21	
240-234201-4	DUP-006-F-20250926-01	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 739219 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-5	BAC-04-F-20250926-01	Total/NA	Water	PrecSep-21	
240-234201-6	BAC-13-F-20250926-01	Total/NA	Water	PrecSep-21	
240-234201-7	BAC-10-F-20250929-01	Total/NA	Water	PrecSep-21	
MB 160-739219/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-739219/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 739220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234201-1	BAC-11-F-20250926-01	Total/NA	Water	PrecSep_0	
240-234201-2	BAC-02-F-20250926-01	Total/NA	Water	PrecSep_0	
240-234201-3	BAC-05-F-20250926-01	Total/NA	Water	PrecSep_0	
240-234201-4	DUP-006-F-20250926-01	Total/NA	Water	PrecSep_0	
240-234201-5	BAC-04-F-20250926-01	Total/NA	Water	PrecSep_0	
240-234201-6	BAC-13-F-20250926-01	Total/NA	Water	PrecSep_0	
240-234201-7	BAC-10-F-20250929-01	Total/NA	Water	PrecSep_0	
MB 160-739220/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-739220/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234201-1

Client Sample ID: BAC-11-F-20250926-01

Lab Sample ID: 240-234201-1

Date Collected: 09/26/25 10:43
Date Received: 10/01/25 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6010D		1	674593	RKT	EET CLE	10/04/25 00:20
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674429	S4FJ	EET CLE	10/03/25 16:35
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		100	674708	S4FJ	EET CLE	10/06/25 11:50
Total/NA	Prep	7470A			674290	MN7X	EET CLE	10/02/25 14:00
Total/NA	Analysis	7470A		1	674509	BN	EET CLE	10/03/25 12:49
Total/NA	Analysis	2320 B-2021		1	674800	PQD2	EET CLE	10/06/25 17:58
Total/NA	Analysis	2540 C-2020		1	674444	TAV2	EET CLE	10/03/25 10:14
Total/NA	Analysis	300.0		100	674352	JMR	EET CLE	10/03/25 03:59
Total/NA	Analysis	300.0		1000	674352	JMR	EET CLE	10/03/25 04:08
Total/NA	Prep	PrecSep-21			739219	AMS	EET SL	10/06/25 07:44
Total/NA	Analysis	9315		1	743504	SWS	EET SL	11/03/25 08:11
Total/NA	Prep	PrecSep_0			739220	AMS	EET SL	10/06/25 07:47
Total/NA	Analysis	9320		1	743271	SWS	EET SL	11/02/25 10:47
Total/NA	Analysis	Ra226_Ra228		1	743511	SCB	EET SL	11/03/25 12:34

Client Sample ID: BAC-02-F-20250926-01

Lab Sample ID: 240-234201-2

Date Collected: 09/26/25 12:03
Date Received: 10/01/25 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6010D		1	674593	RKT	EET CLE	10/04/25 00:51
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674429	S4FJ	EET CLE	10/03/25 16:53
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674708	S4FJ	EET CLE	10/06/25 12:05
Total/NA	Prep	7470A			674290	MN7X	EET CLE	10/02/25 14:00
Total/NA	Analysis	7470A		1	674509	BN	EET CLE	10/03/25 12:54
Total/NA	Analysis	2320 B-2021		1	674800	PQD2	EET CLE	10/06/25 18:03
Total/NA	Analysis	2540 C-2020		1	674444	TAV2	EET CLE	10/03/25 10:14
Total/NA	Analysis	300.0		1	674352	JMR	EET CLE	10/03/25 04:17
Total/NA	Analysis	300.0		5	674352	JMR	EET CLE	10/03/25 04:25
Total/NA	Prep	PrecSep-21			739219	AMS	EET SL	10/06/25 07:44
Total/NA	Analysis	9315		1	743504	SWS	EET SL	11/03/25 08:11
Total/NA	Prep	PrecSep_0			739220	AMS	EET SL	10/06/25 07:47
Total/NA	Analysis	9320		1	743271	SWS	EET SL	11/02/25 10:47
Total/NA	Analysis	Ra226_Ra228		1	743511	SCB	EET SL	11/03/25 12:34

Client Sample ID: BAC-05-F-20250926-01

Lab Sample ID: 240-234201-3

Date Collected: 09/26/25 13:15

Matrix: Water

Date Received: 10/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6010D		1	674593	RKT	EET CLE	10/04/25 00:55
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674429	S4FJ	EET CLE	10/03/25 16:56
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674708	S4FJ	EET CLE	10/06/25 12:08
Total/NA	Prep	7470A			674290	MN7X	EET CLE	10/02/25 14:00
Total/NA	Analysis	7470A		1	674509	BN	EET CLE	10/03/25 12:56
Total/NA	Analysis	2320 B-2021		1	674959	PQD2	EET CLE	10/06/25 20:29
Total/NA	Analysis	2540 C-2020		1	674444	TAV2	EET CLE	10/03/25 10:14
Total/NA	Analysis	300.0		1	674352	JMR	EET CLE	10/03/25 04:51
Total/NA	Analysis	300.0		5	674524	JMR	EET CLE	10/03/25 21:35
Total/NA	Prep	PrecSep-21			739219	AMS	EET SL	10/06/25 07:44
Total/NA	Analysis	9315		1	743504	SWS	EET SL	11/03/25 08:11
Total/NA	Prep	PrecSep_0			739220	AMS	EET SL	10/06/25 07:47
Total/NA	Analysis	9320		1	743271	SWS	EET SL	11/02/25 10:48
Total/NA	Analysis	Ra226_Ra228		1	743511	SCB	EET SL	11/03/25 12:34

Client Sample ID: DUP-006-F-20250926-01

Lab Sample ID: 240-234201-4

Date Collected: 09/26/25 00:00

Matrix: Water

Date Received: 10/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6010D		1	674593	RKT	EET CLE	10/04/25 00:59
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674429	S4FJ	EET CLE	10/03/25 16:59
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674708	S4FJ	EET CLE	10/06/25 12:10
Total/NA	Prep	7470A			674290	MN7X	EET CLE	10/02/25 14:00
Total/NA	Analysis	7470A		1	674509	BN	EET CLE	10/03/25 12:58
Total/NA	Analysis	2320 B-2021		1	674959	PQD2	EET CLE	10/06/25 20:34
Total/NA	Analysis	2540 C-2020		1	674444	TAV2	EET CLE	10/03/25 10:14
Total/NA	Analysis	300.0		1	674352	JMR	EET CLE	10/03/25 05:00
Total/NA	Analysis	300.0		5	674524	JMR	EET CLE	10/03/25 21:44
Total/NA	Prep	PrecSep-21			739219	AMS	EET SL	10/06/25 07:44
Total/NA	Analysis	9315		1	743504	SWS	EET SL	11/03/25 08:11
Total/NA	Prep	PrecSep_0			739220	AMS	EET SL	10/06/25 07:47
Total/NA	Analysis	9320		1	743271	SWS	EET SL	11/02/25 10:48
Total/NA	Analysis	Ra226_Ra228		1	743511	SCB	EET SL	11/03/25 12:34

Client Sample ID: BAC-04-F-20250926-01

Lab Sample ID: 240-234201-5

Date Collected: 09/26/25 14:20

Matrix: Water

Date Received: 10/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6010D		1	674593	RKT	EET CLE	10/04/25 01:04
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674429	S4FJ	EET CLE	10/03/25 17:01
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674708	S4FJ	EET CLE	10/06/25 12:13
Total/NA	Prep	7470A			674290	MN7X	EET CLE	10/02/25 14:00
Total/NA	Analysis	7470A		1	674509	BN	EET CLE	10/03/25 12:59
Total/NA	Analysis	2320 B-2021		1	674959	PQD2	EET CLE	10/06/25 20:40
Total/NA	Analysis	2540 C-2020		1	674444	TAV2	EET CLE	10/03/25 10:14
Total/NA	Analysis	300.0		1	674352	JMR	EET CLE	10/03/25 05:09
Total/NA	Analysis	300.0		5	674524	JMR	EET CLE	10/03/25 22:10
Total/NA	Prep	PrecSep-21			739219	AMS	EET SL	10/06/25 07:44
Total/NA	Analysis	9315		1	743504	SWS	EET SL	11/03/25 08:12
Total/NA	Prep	PrecSep_0			739220	AMS	EET SL	10/06/25 07:47
Total/NA	Analysis	9320		1	743271	SWS	EET SL	11/02/25 10:49
Total/NA	Analysis	Ra226_Ra228		1	743511	SCB	EET SL	11/03/25 12:34

Client Sample ID: BAC-13-F-20250926-01

Lab Sample ID: 240-234201-6

Date Collected: 09/26/25 15:02

Matrix: Water

Date Received: 10/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6010D		1	674593	RKT	EET CLE	10/04/25 01:08
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674429	S4FJ	EET CLE	10/03/25 17:04
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674708	S4FJ	EET CLE	10/06/25 12:16
Total/NA	Prep	7470A			674290	MN7X	EET CLE	10/02/25 14:00
Total/NA	Analysis	7470A		1	674509	BN	EET CLE	10/03/25 13:05
Total/NA	Analysis	2320 B-2021		1	674959	PQD2	EET CLE	10/06/25 20:45
Total/NA	Analysis	2540 C-2020		1	674444	TAV2	EET CLE	10/03/25 10:14
Total/NA	Analysis	300.0		5	674352	JMR	EET CLE	10/03/25 05:18
Total/NA	Analysis	300.0		50	674352	JMR	EET CLE	10/03/25 05:26
Total/NA	Prep	PrecSep-21			739219	AMS	EET SL	10/06/25 07:44
Total/NA	Analysis	9315		1	743504	SWS	EET SL	11/03/25 08:12
Total/NA	Prep	PrecSep_0			739220	AMS	EET SL	10/06/25 07:47
Total/NA	Analysis	9320		1	743271	SWS	EET SL	11/02/25 10:50
Total/NA	Analysis	Ra226_Ra228		1	743511	SCB	EET SL	11/03/25 12:34

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234201-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-10-F-20250929-01
Lab Sample ID: 240-234201-7

Date Collected: 09/29/25 15:04
Matrix: Water
Date Received: 10/01/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6010D		1	674593	RKT	EET CLE	10/04/25 01:13
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674429	S4FJ	EET CLE	10/03/25 17:07
Total Recoverable	Prep	3005A			674282	MN7X	EET CLE	10/02/25 14:00
Total Recoverable	Analysis	6020B		1	674708	S4FJ	EET CLE	10/06/25 12:18
Total/NA	Prep	7470A			674290	MN7X	EET CLE	10/02/25 14:00
Total/NA	Analysis	7470A		1	674509	BN	EET CLE	10/03/25 13:06
Total/NA	Analysis	2320 B-2021		1	674959	PQD2	EET CLE	10/06/25 20:50
Total/NA	Analysis	2540 C-2020		1	674510	TAV2	EET CLE	10/03/25 14:16
Total/NA	Analysis	300.0		1	674352	JMR	EET CLE	10/03/25 05:35
Total/NA	Analysis	300.0		5	674352	JMR	EET CLE	10/03/25 05:44
Total/NA	Prep	PrecSep-21			739219	AMS	EET SL	10/06/25 07:44
Total/NA	Analysis	9315		1	743504	SWS	EET SL	11/03/25 08:12
Total/NA	Prep	PrecSep_0			739220	AMS	EET SL	10/06/25 07:47
Total/NA	Analysis	9320		1	743271	SWS	EET SL	11/02/25 10:50
Total/NA	Analysis	Ra226_Ra228		1	743511	SCB	EET SL	11/03/25 12:34

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234201-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-26
Iowa	State	421	06-01-27
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	2250	09-30-26
New Jersey	NELAP	OH001	06-30-26
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	10-28-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	10-15-25
Pennsylvania	NELAP	68-00340	08-31-26
Texas	NELAP	T104704517	08-31-26
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-26
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-26

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-26
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-26
HI - RadChem Recognition	State	n/a	06-30-26
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25 *
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-26
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	10-01-26
Massachusetts	State	M-MO054	06-30-26
MI - RadChem Recognition	State	9005	06-30-26
Missouri	State	780	06-30-28
Nevada	State	MO00054	07-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234201-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-26
New Mexico	State	MO00054	06-30-26
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	06-30-26
North Dakota	State	R-207	06-30-25 *
Oklahoma	NELAP	9997	12-31-25
Oregon	NELAP	4157	09-01-26
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-26
Texas	NELAP	T104704193	07-31-26
US Fish & Wildlife	US Federal Programs	058448	07-31-26
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-26
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-31-26
West Virginia DEP	State	381	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

COLUMBUS 209

eurofins Environment Testing

Client Information	Sampler: Bobby Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No.: 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: (740) 373-4306	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

240-234201 COC

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra228, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-11-F-20250926-01	9-26-25	1043	G	Water			1	1	2	1	1		
BAC-02-F-20250926-01	9-26-25	1203	G	Water			1	1	2	1	1		
BAC-05-F-20250926-01	9-26-25	1315	G	Water			1	1	2	1	1		
DUP-006-F-20250926-01	9-26-25	—	G	Water			1	1	2	1	1		
BAC-04-F-20250926-01	9-26-25	1420	G	Water			1	1	2	1	1		
BAC-13-F-20250926-01	9-26-25	1502	G	Water			1	1	2	1	1		
BAC-10-F-20250929-01	9-29-25	1504	G	Water			1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	9-29-25/1530	EGMRCA	Ashley McCloskey	9-30-25 1115	EUCO
Relinquished by:	09/30/25 1700	Ford	JORDAN PYLES	10/1/25 0800	EUCO
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative **Login #** _____
Barberton Facility

Client Lightstone Grain Site Name _____ Cooler unpacked by JPyles

Cooler Received on 10/1/25 Opened on 10/1/25

FedEx 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used Bubble Wrap Foam Plastic Bag None Other _____

COOLANT Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 13 (CF +.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4 Did custody papers accompany the sample(s)?	(Yes)	No
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7 Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11 Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# HC567196
14 Were VOAs on the COC?	Yes	(No)
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes	No (NA)
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	(No)
17 Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by

Labels Verified by

_____

_____

_____

_____

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 13	13.7	13.9	Wet Ice Blue Ice Dry Ice Water (None)
(EC) Client Box Other	IR GUN #: _____	1.0	1.2	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #: _____	1.5	1.7	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice

10/1/2025

Login Container Summary Report

240-234201

11/3/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-11 F-20250926-01	240-234201-A-1	Plastic 60 mL - unpreserved				
BAC-11-F 20250926-01	240-234201 B-1	Plastic 60 mL - unpreserved				
BAC-11-F-20250926-01	240 234201-C-1	Plastic 500ml unpreserved				
BAC-11-F-20250926-01	240-234201-D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-11 F 20250926-01	240-234201-E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-11-F-20250926-01	240-234201 F 1	Plastic 1 liter - Nitric Acid	<2			
BAC-02-F-20250926-01	240-234201-A-2	Plastic 60 mL - unpreserved				
BAC-02-F-20250926-01	240 234201-B-2	Plastic 60 mL - unpreserved				
BAC-02-F 20250926-01	240-234201-C-2	Plastic 500ml - unpreserved				
BAC-02-F-20250926-01	240-234201-D-2	Plastic 500ml with Nitric Acid	<2			
BAC-02-F 20250926-01	240-234201-E-2	Plastic 1 liter - Nitric Acid	<2			
BAC-02-F-20250926-01	240-234201-F-2	Plastic 1 liter Nitric Acid	<2			
BAC-05-F-20250926-01	240-234201 A-3	Plastic 60 mL - unpreserved				
BAC-05-F-20250926-01	240-234201-B-3	Plastic 60 mL - unpreserved				
BAC-05-F-20250926-01	240-234201-C-3	Plastic 500ml - unpreserved				
BAC-05 F-20250926-01	240-234201-D-3	Plastic 500ml - with Nitric Acid	<2			
BAC-05-F-20250926-01	240-234201 E-3	Plastic 1 liter - Nitric Acid	<2			
BAC-05-F-20250926-01	240-234201-F-3	Plastic 1 liter Nitric Acid	<2			
DUP-006-F-20250926-01	240-234201 A-4	Plastic 60 mL - unpreserved				
DUP-006-F-20250926-01	240-234201-B-4	Plastic 60 mL unpreserved				
DUP-006 F 20250926-01	240-234201-C-4	Plastic 500ml - unpreserved				
DUP-006 F-20250926-01	240 234201-D-4	Plastic 500ml with Nitric Acid	<2			
DUP-006-F-20250926-01	240-234201 E-4	Plastic 1 liter - Nitric Acid	<2			
DUP-006-F-20250926-01	240-234201-F-4	Plastic 1 liter - Nitric Acid	<2			
BAC-04-F-20250926-01	240-234201 A 5	Plastic 60 mL - unpreserved				
BAC-04 F 20250926-01	240-234201-B-5	Plastic 60 mL unpreserved				
BAC-04-F-20250926-01	240-234201-C-5	Plastic 500ml - unpreserved				
BAC-04-F-20250926-01	240 234201-D-5	Plastic 500ml with Nitric Acid	<2			
BAC-04-F-20250926-01	240-234201-E-5	Plastic 1 liter - Nitric Acid	<2			
BAC-04 F 20250926-01	240-234201-F-5	Plastic 1 liter Nitric Acid	<2			
BAC-13 F-20250926-01	240-234201-A-6	Plastic 60 mL - unpreserved				
BAC-13 F 20250926-01	240-234201-B-6	Plastic 60 mL unpreserved				
BAC-13-F-20250926-01	240 234201-C-6	Plastic 500ml - unpreserved				
BAC-13 F 20250926-01	240-234201-D-6	Plastic 500ml with Nitric Acid	<2			
BAC-13-F-20250926-01	240-234201-E-6	Plastic 1 liter - Nitric Acid	<2			

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-13 F-20250926-01	240-234201-F-6	Plastic 1 liter - Nitric Acid	<2			
BAC-10-F-20250926-01	240-234201-A-7	Plastic 60 mL unpreserved				
BAC-10-F-20250926-01	240-234201-B-7	Plastic 60 mL - unpreserved				
BAC-10-F 20250926-01	240-234201-C-7	Plastic 500ml unpreserved				
BAC-10-F-20250926-01	240-234201 D-7	Plastic 500ml - with Nitric Acid	<2			
BAC-10 F-20250926-01	240-234201-E-7	Plastic 1 liter - Nitric Acid	<2			
BAC-10-F-20250926-01	240-234201-F 7	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-208728.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-234201-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/3/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal CCR Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0Radium-228 (GFPC)	9315_Ra226/PrecSep_21Radium-226 (GFPC)	Ra226Ra228_GFPCCombined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-11-F-20250926-01 (240-234201-1)	9/26/25	10:43 Eastern	G	Water			X	X	X	2	
BAC-02-F-20250926-01 (240-234201-2)	9/26/25	12:03 Eastern	G	Water			X	X	X	2	
BAC-05-F-20250926-01 (240-234201-3)	9/26/25	13:15 Eastern	G	Water			X	X	X	2	
DUP-006-F-20250926-01 (240-234201-4)	9/26/25	Eastern	G	Water			X	X	X	2	
BAC-04-F-20250926-01 (240-234201-5)	9/26/25	14:20 Eastern	G	Water			X	X	X	2	
BAC-13-F-20250926-01 (240-234201-6)	9/26/25	15:02 Eastern	G	Water			X	X	X	2	
BAC-10-F-20250929-01 (240-234201-7)	9/29/25	15:04 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/1/25 1600			0820 OCT 02 2025	
Relinquished by:	Date/Time:	Company	Received by: Cheyenne Forrest	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-234201-1

Login Number: 234201
List Number: 2
Creator: Forrest, Cheyenne L

List Source: Eurofins St. Louis
List Creation: 10/02/25 12:10 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Generated 11/6/2025 10:49:12 AM

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-234530-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

Generated
11/6/2025 10:49:12 AM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234530-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-234530-1 — Eurofins Cleveland

Job Narrative
240-234530-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The sample was received on 10/4/2025 8:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 11 coolers at receipt time were 0.8°C, 0.9°C, 1.0°C, 1.1°C, 1.3°C, 1.5°C, 1.6°C, 1.6°C, 1.7°C, 1.9°C and 9.4°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
Method 9320_Ra228: Radium-228 prep batch 160-739575:

The Ra-228 laboratory control sample (LCS) associated with the following samples recovered at 126%: (LCS 160-739575/2-A). The limits in our LIMS system at (75-125%)) reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (68-154%). The LCS is within criteria and no further action is required.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234530-1
Project/Site: Federal CCR Wells

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234530-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
240-234530-1	BAC-23-F-20251003-01	Water	10/03/25 09:55	10/04/25 08:00	Ohio

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234530-1

Client Sample ID: BAC-23-F-20251003-01

Lab Sample ID: 240-234530-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	240		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.78	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	110		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	120000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.73	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Magnesium	15000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	18000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	210		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	210		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	480		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	31		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.17		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	140		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-23-F-20251003-01
Date Collected: 10/03/25 09:55
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234530-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**240**		100	57	ug/L		10/06/25 14:00	10/07/25 20:31	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 19:07	1
Arsenic	**0.78**	**J**	5.0	0.75	ug/L		10/06/25 14:00	10/07/25 19:07	1
Barium	**110**		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 19:07	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 19:07	1
Cadmium	ND		1.0	0.077	ug/L		10/06/25 14:00	10/07/25 19:07	1
Calcium	**120000**		1000	250	ug/L		10/06/25 14:00	10/07/25 19:07	1
Chromium	ND		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 19:07	1
Cobalt	**0.73**	**J**	1.0	0.086	ug/L		10/06/25 14:00	10/07/25 19:07	1
Lead	ND		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 19:07	1
Lithium	ND		8.0	3.4	ug/L		10/06/25 14:00	10/07/25 19:07	1
Magnesium	**15000**		1000	61	ug/L		10/06/25 14:00	10/07/25 19:07	1
Molybdenum	ND		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 19:07	1
Potassium	**1800**		1000	220	ug/L		10/06/25 14:00	10/07/25 19:07	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 19:07	1
Sodium	**18000**		1000	880	ug/L		10/06/25 14:00	10/07/25 19:07	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 19:07	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 12:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**210**		5.0	2.6	mg/L			10/08/25 23:34	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**210**		5.0	2.6	mg/L			10/08/25 23:34	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/08/25 23:34	1
Total Dissolved Solids (SM 2540 C-2020)	**480**		10	7.8	mg/L			10/09/25 10:28	1
Chloride (EPA 300.0)	**31**		1.0	0.13	mg/L			10/06/25 22:29	1
Fluoride (EPA 300.0)	**0.17**		0.050	0.024	mg/L			10/06/25 22:29	1
Sulfate (EPA 300.0)	**140**		1.0	0.35	mg/L			10/06/25 22:29	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.293	U	0.238	0.240	1.00	0.353	pCi/L	10/07/25 15:15	11/05/25 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.3*		*30 - 110*	*10/07/25 15:15*	*11/05/25 17:43*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.270	U	0.357	0.358	1.00	0.597	pCi/L	10/07/25 15:18	11/05/25 11:40	1

Client Sample ID: BAC-23-F-20251003-01
Date Collected: 10/03/25 09:55
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234530-1
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.3*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:40*	*1*
Y Carrier	*71.8*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:40*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.563	U	0.429	0.431	5.00	0.597	pCi/L		11/06/25 09:34	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234530-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-234530-1	BAC-23-F-20251003-01	85.3
LCS 160-739573/2-A	Lab Control Sample	89.1
MB 160-739573/1-A	Method Blank	93.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-234530-1	BAC-23-F-20251003-01	85.3	71.8
LCS 160-739575/2-A	Lab Control Sample	89.1	77.0
MB 160-739575/1-A	Method Blank	93.8	75.1

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-674600/1-A
Matrix: Water
Analysis Batch: 674891

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		10/06/25 14:00	10/07/25 18:49	1

Lab Sample ID: LCS 240-674600/2-A
Matrix: Water
Analysis Batch: 674891

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1040		ug/L		104	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-674600/1-A
Matrix: Water
Analysis Batch: 674899

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 18:04	1
Arsenic	ND		5.0	0.75	ug/L		10/06/25 14:00	10/07/25 18:04	1
Barium	ND		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 18:04	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 18:04	1
Cadmium	ND		1.0	0.077	ug/L		10/06/25 14:00	10/07/25 18:04	1
Calcium	ND		1000	250	ug/L		10/06/25 14:00	10/07/25 18:04	1
Chromium	ND		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 18:04	1
Cobalt	ND		1.0	0.086	ug/L		10/06/25 14:00	10/07/25 18:04	1
Lead	ND		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 18:04	1
Lithium	ND		8.0	3.4	ug/L		10/06/25 14:00	10/07/25 18:04	1
Magnesium	ND		1000	61	ug/L		10/06/25 14:00	10/07/25 18:04	1
Molybdenum	ND		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 18:04	1
Potassium	ND		1000	220	ug/L		10/06/25 14:00	10/07/25 18:04	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 18:04	1
Sodium	ND		1000	880	ug/L		10/06/25 14:00	10/07/25 18:04	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 18:04	1

Lab Sample ID: LCS 240-674600/3-A
Matrix: Water
Analysis Batch: 674899

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	95.4		ug/L		95	80 - 120
Arsenic	1000	941		ug/L		94	80 - 120
Barium	1000	941		ug/L		94	80 - 120
Beryllium	500	463		ug/L		93	80 - 120
Cadmium	500	455		ug/L		91	80 - 120
Calcium	25000	24700		ug/L		99	80 - 120
Chromium	500	486		ug/L		97	80 - 120
Cobalt	500	473		ug/L		95	80 - 120
Lead	500	488		ug/L		98	80 - 120
Lithium	500	500		ug/L		100	80 - 120
Magnesium	25000	25200		ug/L		101	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-674600/3-A
Matrix: Water
Analysis Batch: 674899

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	500	475		ug/L		95	80 - 120
Potassium	25000	24600		ug/L		99	80 - 120
Selenium	1000	920		ug/L		92	80 - 120
Sodium	25000	24900		ug/L		100	80 - 120
Thallium	1000	985		ug/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-674603/1-A
Matrix: Water
Analysis Batch: 674947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 674603

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 11:55	1

Lab Sample ID: LCS 240-674603/2-A
Matrix: Water
Analysis Batch: 674947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 674603

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.35		ug/L		107	80 - 120

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-675289/33
Matrix: Water
Analysis Batch: 675289

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/08/25 23:00	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/08/25 23:00	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/08/25 23:00	1

Lab Sample ID: MB 240-675289/4
Matrix: Water
Analysis Batch: 675289

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/08/25 18:24	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/08/25 18:24	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/08/25 18:24	1

Lab Sample ID: LCS 240-675289/32
Matrix: Water
Analysis Batch: 675289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	260		mg/L		93	85 - 115

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-675288/1
Matrix: Water
Analysis Batch: 675288

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/09/25 10:28	1

Lab Sample ID: LCS 240-675288/2
Matrix: Water
Analysis Batch: 675288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	495	526		mg/L		106	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-674796/3
Matrix: Water
Analysis Batch: 674796

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/06/25 19:16	1
Fluoride	ND		0.050	0.024	mg/L			10/06/25 19:16	1
Sulfate	ND		1.0	0.35	mg/L			10/06/25 19:16	1

Lab Sample ID: LCS 240-674796/4
Matrix: Water
Analysis Batch: 674796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.7		mg/L		101	90 - 110
Fluoride	2.50	2.60		mg/L		104	90 - 110
Sulfate	50.0	51.6		mg/L		103	90 - 110

Lab Sample ID: 240-234530-1 MS
Matrix: Water
Analysis Batch: 674796

Client Sample ID: BAC-23-F-20251003-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	31		50.0	89.2		mg/L		117	80 - 120
Fluoride	0.17		2.50	3.15		mg/L		119	80 - 120
Sulfate	140		50.0	192		mg/L		101	80 - 120

Lab Sample ID: 240-234530-1 MSD
Matrix: Water
Analysis Batch: 674796

Client Sample ID: BAC-23-F-20251003-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	31		50.0	82.7		mg/L		104	80 - 120	8	15
Fluoride	0.17		2.50	2.84		mg/L		107	80 - 120	10	15
Sulfate	140		50.0	186		mg/L		89	80 - 120	3	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-739573/1-A
Matrix: Water
Analysis Batch: 743868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 739573

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.3148	U	0.238	0.240	1.00	0.343	pCi/L	10/07/25 15:15	11/05/25 14:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*10/07/25 15:15*	*11/05/25 14:30*	*1*

Lab Sample ID: LCS 160-739573/2-A
Matrix: Water
Analysis Batch: 743868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 739573

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.57	8.918		1.23	1.00	0.322	pCi/L	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.1*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-739575/1-A
Matrix: Water
Analysis Batch: 743834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 739575

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4369	U	0.395	0.397	1.00	0.630	pCi/L	10/07/25 15:18	11/05/25 11:37	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:37*	*1*
Y Carrier	*75.1*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:37*	*1*

Lab Sample ID: LCS 160-739575/2-A
Matrix: Water
Analysis Batch: 743834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 739575

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.96	10.06		1.36	1.00	0.543	pCi/L	126	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.1*		*30 - 110*
Y Carrier	*77.0*		*30 - 110*

Metals

Prep Batch: 674600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total Recoverable	Water	3005A	
MB 240-674600/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-674600/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-674600/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 674603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total/NA	Water	7470A	
MB 240-674603/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-674603/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 674891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total Recoverable	Water	6010D	674600
MB 240-674600/1-A	Method Blank	Total Recoverable	Water	6010D	674600
LCS 240-674600/2-A	Lab Control Sample	Total Recoverable	Water	6010D	674600

Analysis Batch: 674899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total Recoverable	Water	6020B	674600
MB 240-674600/1-A	Method Blank	Total Recoverable	Water	6020B	674600
LCS 240-674600/3-A	Lab Control Sample	Total Recoverable	Water	6020B	674600

Analysis Batch: 674947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total/NA	Water	7470A	674603
MB 240-674603/1-A	Method Blank	Total/NA	Water	7470A	674603
LCS 240-674603/2-A	Lab Control Sample	Total/NA	Water	7470A	674603

General Chemistry

Analysis Batch: 674796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total/NA	Water	300.0	
MB 240-674796/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674796/4	Lab Control Sample	Total/NA	Water	300.0	
240-234530-1 MS	BAC-23-F-20251003-01	Total/NA	Water	300.0	
240-234530-1 MSD	BAC-23-F-20251003-01	Total/NA	Water	300.0	

Analysis Batch: 675288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total/NA	Water	2540 C-2020	
MB 240-675288/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-675288/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 675289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total/NA	Water	2320 B-2021	
MB 240-675289/33	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-675289/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-675289/32	Lab Control Sample	Total/NA	Water	2320 B-2021	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234530-1

Rad

Prep Batch: 739573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total/NA	Water	PrecSep-21	
MB 160-739573/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-739573/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 739575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234530-1	BAC-23-F-20251003-01	Total/NA	Water	PrecSep_0	
MB 160-739575/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-739575/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234530-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-23-F-20251003-01
Lab Sample ID: 240-234530-1

Date Collected: 10/03/25 09:55
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6010D		1	674891	RKT	EET CLE	10/07/25 20:31
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6020B		1	674899	S4FJ	EET CLE	10/07/25 19:07
Total/NA	Prep	7470A			674603	F3PF	EET CLE	10/06/25 14:00
Total/NA	Analysis	7470A		1	674947	TQ6W	EET CLE	10/07/25 12:33
Total/NA	Analysis	2320 B-2021		1	675289	PQD2	EET CLE	10/08/25 23:34
Total/NA	Analysis	2540 C-2020		1	675288	VH6H	EET CLE	10/09/25 10:28
Total/NA	Analysis	300.0		1	674796	JMR	EET CLE	10/06/25 22:29
Total/NA	Prep	PrecSep-21			739573	JTR	EET SL	10/07/25 15:15
Total/NA	Analysis	9315		1	743868	SWS	EET SL	11/05/25 17:43
Total/NA	Prep	PrecSep_0			739575	JTR	EET SL	10/07/25 15:18
Total/NA	Analysis	9320		1	743834	SWS	EET SL	11/05/25 11:40
Total/NA	Analysis	Ra226_Ra228		1	743869	SCB	EET SL	11/06/25 09:34

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234530-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-26
Iowa	State	421	06-01-27
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	2250	09-30-26
New Jersey	NELAP	OH001	06-30-26
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	10-28-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	10-15-25
Pennsylvania	NELAP	68-00340	08-31-26
Texas	NELAP	T104704517	08-31-26
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-26
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-26

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-26
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-26
HI - RadChem Recognition	State	n/a	06-30-26
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25 *
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-26
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	10-01-26
Massachusetts	State	M-MO054	06-30-26
MI - RadChem Recognition	State	9005	06-30-26
Missouri	State	780	06-30-28
Nevada	State	MO00054	07-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234530-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-26
New Mexico	State	MO00054	06-30-26
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	06-30-26
North Dakota	State	R-207	06-30-25 *
Oklahoma	NELAP	9997	12-31-25
Oregon	NELAP	4157	09-01-26
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-26
Texas	NELAP	T104704193	07-31-26
US Fish & Wildlife	US Federal Programs	058448	07-31-26
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-26
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-31-26
West Virginia DEP	State	381	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

COLUMBUS
209

eurofins
Environment Testing

Client Information	Sampler: Bobby Gasto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No. 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-23-F-20251003-01	10-3-25	0955	G	Water			1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									

240-234530 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10-3-25/1025	[illegible]	Ashley McCloskey	10-3-25 1324	FCR
Relinquished by: Ashley McCloskey	Date/Time: 10-3-25 1700	Company FCR	Received by: J Collins	Date/Time: 10-4-25 800	Company [illegible]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative Login #
Barberton Facility

Client Gavin Site Name

Cooler unpacked by JC

Cooler Received on 10-4-25 Opened on 10-4-25

FedEx: 1st Grd Exp UPS FAS (Waypoint) Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN # 13 (CF +0.2 °C) Observed Cooler Temp °C Corrected Cooler Temp °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3 Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4 Did custody papers accompany the sample(s)?	(Yes)	No
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7 Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Y)	(N)
10 Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11 Sufficient quantity received to perform indicated analyses?	(Yes)	No
12 Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# HC567196
14 Were VOAs on the COC?	Yes	(No)
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes	(No) (NA)
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	(No)
17 Was a LL Hg or Me Hg trip blank present?	Yes	(No)

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:

Labels Verified by:

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved. Preservative(s) added/Lot number(s)

VOA Sample Preservation Date/Time VOAs Frozen

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 13	1.5	1.7	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	9.2	9.4	Wet Ice Blue Ice Dry Ice Water (None)
(EC) Client Box Other	IR GUN #:	1.4	1.6	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	0.6	0.8	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	1.1	1.3	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	1.3	1.5	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	0.8	1.0	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	0.7	0.9	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	1.7	1.9	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	0.9	1.1	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	1.4	1.6	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

10/4/2025

Login Container Summary Report

240-234530

11/6/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-23-F 20251003-01	240-234530-A-1	Plastic 60 mL - unpreserved				
BAC-23-F-20251003-01	240-234530-B-1	Plastic 60 mL - unpreserved				
BAC-23 F-20251003-01	240-234530-C-1	Plastic 500ml unpreserved				
BAC-23-F-20251003-01	240-234530-D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-23-F-20251003-01	240-234530 E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-23-F-20251003-01	240-234530-F-1	Plastic 1 liter - Nitric Acid	<2			

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-234530-1

Login Number: 234530
List Number: 2
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 10/07/25 11:34 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620
Generated 11/6/2025 10:49:55 AM

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-234533-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

Generated
11/6/2025 10:49:55 AM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Receipt Checklists 45

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234533-1
Project/Site: Federal CCR Wells

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
240-234533-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 10/4/2025 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 11 coolers at receipt time were 0.8°C, 0.9°C, 1.0°C, 1.1°C, 1.3°C, 1.5°C, 1.6°C, 1.6°C, 1.7°C, 1.9°C and 9.4°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
Method 9320_Ra228: Radium-228 prep batch 160-739575:

The Ra-228 laboratory control sample (LCS) associated with the following samples recovered at 126%: (LCS 160-739575/2-A). The limits in our LIMS system at (75-125%)) reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (68-154%). The LCS is within criteria and no further action is required.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234533-1
Project/Site: Federal CCR Wells

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234533-1
Project/Site: Federal CCR Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
240-234533-1	BAC-01-F-20251001-01	Water	10/01/25 12:06	10/04/25 08:00	Ohio
240-234533-2	BAC-09-F-20251001-01	Water	10/01/25 13:28	10/04/25 08:00	Ohio
240-234533-3	MW-6-F-20251001-01	Water	10/01/25 14:36	10/04/25 08:00	Ohio
240-234533-4	BAC-03-F-20251001-01	Water	10/01/25 15:29	10/04/25 08:00	Ohio
240-234533-5	MW-1-F-20251002-01	Water	10/02/25 13:05	10/04/25 08:00	Ohio
240-234533-6	BAC-22-F-20251002-01	Water	10/02/25 14:54	10/04/25 08:00	Ohio

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234533-1

Client Sample ID: BAC-01-F-20251001-01 — Lab Sample ID: 240-234533-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	110		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.99	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	69		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	92000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.67	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	2.1		1.0	0.45	ug/L	1		6020B	Total Recoverable
Magnesium	12000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	12000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	190		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	350		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	22		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.14		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	75		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-09-F-20251001-01 — Lab Sample ID: 240-234533-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	190		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	0.99	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	3800		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	280000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	6.2		5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	0.95	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	1.0		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	55		8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	64000		1000	61	ug/L	1		6020B	Total Recoverable
Molybdenum	13		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	4100		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	1100000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	140		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	3500		50	39	mg/L	1		2540 C-2020	Total/NA
Chloride	3100		50	6.4	mg/L	50		300.0	Total/NA
Fluoride	0.51		0.25	0.12	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample ID: BAC-09-F-20251001-01 (Continued) — Lab Sample ID: 240-234533-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	62		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: MW-6-F-20251001-01 — Lab Sample ID: 240-234533-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	67	J	100	57	ug/L	1		6010D	Total Recoverable
Barium	120		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	110000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.34	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.1	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	14000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	440		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	28		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.099		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	120		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-03-F-20251001-01 — Lab Sample ID: 240-234533-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2200		100	57	ug/L	1		6010D	Total Recoverable
Barium	40		5.0	0.77	ug/L	1		6020B	Total Recoverable
Cadmium	0.12	J	1.0	0.077	ug/L	1		6020B	Total Recoverable
Calcium	90000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.57	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	2.5		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	5.7	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	18000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	32000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	98		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	98		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	500		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	58		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.062		0.050	0.024	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234533-1

Client Sample ID: BAC-03-F-20251001-01 (Continued)

Lab Sample ID: 240-234533-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	190	F1	1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: MW-1-F-20251002-01

Lab Sample ID: 240-234533-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	74	J	100	57	ug/L	1		6010D	Total Recoverable
Barium	120		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	120000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.52	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	4.0	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	19000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	480		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	32		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.12		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	130		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: BAC-22-F-20251002-01

Lab Sample ID: 240-234533-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	210		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	1.6	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	120		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	150000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.59	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	3.8	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	20000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	290		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	38		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.083		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	220		5.0	1.7	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-01-F-20251001-01
Date Collected: 10/01/25 12:06
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**110**		100	57	ug/L		10/06/25 14:00	10/07/25 20:35	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 19:10	1
Arsenic	**0.99**	**J**	5.0	0.75	ug/L		10/06/25 14:00	10/07/25 19:10	1
Barium	**69**		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 19:10	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 19:10	1
Cadmium	ND		1.0	0.077	ug/L		10/06/25 14:00	10/07/25 19:10	1
Calcium	**92000**		1000	250	ug/L		10/06/25 14:00	10/07/25 19:10	1
Chromium	ND		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 19:10	1
Cobalt	**0.67**	**J**	1.0	0.086	ug/L		10/06/25 14:00	10/07/25 19:10	1
Lead	**2.1**		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 19:10	1
Lithium	ND		8.0	3.4	ug/L		10/06/25 14:00	10/07/25 19:10	1
Magnesium	**12000**		1000	61	ug/L		10/06/25 14:00	10/07/25 19:10	1
Molybdenum	ND		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 19:10	1
Potassium	**1500**		1000	220	ug/L		10/06/25 14:00	10/07/25 19:10	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 19:10	1
Sodium	**12000**		1000	880	ug/L		10/06/25 14:00	10/07/25 19:10	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 19:10	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 12:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**190**		5.0	2.6	mg/L			10/08/25 23:41	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**190**		5.0	2.6	mg/L			10/08/25 23:41	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/08/25 23:41	1
Total Dissolved Solids (SM 2540 C-2020)	**350**		10	7.8	mg/L			10/07/25 09:56	1
Chloride (EPA 300.0)	**22**		1.0	0.13	mg/L			10/07/25 01:05	1
Fluoride (EPA 300.0)	**0.14**		0.050	0.024	mg/L			10/07/25 01:05	1
Sulfate (EPA 300.0)	**75**		1.0	0.35	mg/L			10/07/25 01:05	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0916	U	0.199	0.199	1.00	0.361	pCi/L	10/07/25 15:15	11/05/25 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.1*		*30 - 110*	*10/07/25 15:15*	*11/05/25 17:43*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.145	U	0.375	0.375	1.00	0.665	pCi/L	10/07/25 15:18	11/05/25 11:41	1

Client Sample ID: BAC-01-F-20251001-01
Date Collected: 10/01/25 12:06
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-1
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.1*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:41*	*1*
Y Carrier	*68.0*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:41*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.237	U	0.425	0.425	5.00	0.665	pCi/L		11/06/25 09:34	1

Client Sample ID: BAC-09-F-20251001-01
Date Collected: 10/01/25 13:28
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-2
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**190**		100	57	ug/L		10/06/25 14:00	10/07/25 20:39	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 19:12	1
Arsenic	**0.99**	**J**	5.0	0.75	ug/L		10/06/25 14:00	10/07/25 19:12	1
Barium	**3800**		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 19:12	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 19:12	1
Cadmium	ND		1.0	0.077	ug/L		10/06/25 14:00	10/07/25 19:12	1
Calcium	**280000**		1000	250	ug/L		10/06/25 14:00	10/07/25 19:12	1
Chromium	**6.2**		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 19:12	1
Cobalt	**0.95**	**J**	1.0	0.086	ug/L		10/06/25 14:00	10/07/25 19:12	1
Lead	**1.0**		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 19:12	1
Lithium	**55**		8.0	3.4	ug/L		10/06/25 14:00	10/07/25 19:12	1
Magnesium	**64000**		1000	61	ug/L		10/06/25 14:00	10/07/25 19:12	1
Molybdenum	**13**		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 19:12	1
Potassium	**4100**		1000	220	ug/L		10/06/25 14:00	10/07/25 19:12	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 19:12	1
Sodium	**1100000**		1000	880	ug/L		10/06/25 14:00	10/07/25 19:12	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 19:12	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 12:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**140**		5.0	2.6	mg/L			10/09/25 14:11	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**140**		5.0	2.6	mg/L			10/09/25 14:11	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/09/25 14:11	1
Total Dissolved Solids (SM 2540 C-2020)	**3500**		50	39	mg/L			10/07/25 15:51	1
Chloride (EPA 300.0)	**3100**		50	6.4	mg/L			10/07/25 01:23	50
Fluoride (EPA 300.0)	**0.51**		0.25	0.12	mg/L			10/07/25 01:14	5
Sulfate (EPA 300.0)	**62**		5.0	1.7	mg/L			10/07/25 01:14	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.69**		0.601	0.648	1.00	0.486	pCi/L	10/07/25 15:15	11/05/25 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*30 - 110*	*10/07/25 15:15*	*11/05/25 17:43*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**3.75**		0.772	0.845	1.00	0.738	pCi/L	10/07/25 15:18	11/05/25 11:41	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234533-1

Client Sample ID: BAC-09-F-20251001-01
Date Collected: 10/01/25 13:28
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-2
Matrix: Water

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	100		30 - 110	10/07/25 15:18	11/05/25 11:41	1
Y Carrier	71.8		30 - 110	10/07/25 15:18	11/05/25 11:41	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.43		0.978	1.06	5.00	0.738	pCi/L		11/06/25 09:34	1

Client Sample ID: MW-6-F-20251001-01
Date Collected: 10/01/25 14:36
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-3
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**67**	**J**	100	57	ug/L		10/06/25 14:00	10/07/25 20:44	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 19:15	1
Arsenic	ND		5.0	0.75	ug/L		10/06/25 14:00	10/07/25 19:15	1
Barium	**120**		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 19:15	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 19:15	1
Cadmium	ND		1.0	0.077	ug/L		10/06/25 14:00	10/07/25 19:15	1
Calcium	**110000**		1000	250	ug/L		10/06/25 14:00	10/07/25 19:15	1
Chromium	ND		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 19:15	1
Cobalt	**0.34**	**J**	1.0	0.086	ug/L		10/06/25 14:00	10/07/25 19:15	1
Lead	ND		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 19:15	1
Lithium	**4.1**	**J**	8.0	3.4	ug/L		10/06/25 14:00	10/07/25 19:15	1
Magnesium	**14000**		1000	61	ug/L		10/06/25 14:00	10/07/25 19:15	1
Molybdenum	ND		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 19:15	1
Potassium	**1500**		1000	220	ug/L		10/06/25 14:00	10/07/25 19:15	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 19:15	1
Sodium	**15000**		1000	880	ug/L		10/06/25 14:00	10/07/25 19:15	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 19:15	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 12:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**230**		5.0	2.6	mg/L			10/08/25 23:57	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**230**		5.0	2.6	mg/L			10/08/25 23:57	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/08/25 23:57	1
Total Dissolved Solids (SM 2540 C-2020)	**440**		10	7.8	mg/L			10/07/25 15:51	1
Chloride (EPA 300.0)	**28**		1.0	0.13	mg/L			10/07/25 01:32	1
Fluoride (EPA 300.0)	**0.099**		0.050	0.024	mg/L			10/07/25 01:32	1
Sulfate (EPA 300.0)	**120**		1.0	0.35	mg/L			10/07/25 01:32	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0317	U	0.195	0.195	1.00	0.376	pCi/L	10/07/25 15:15	11/05/25 17:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.8*		*30 - 110*	*10/07/25 15:15*	*11/05/25 17:43*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.508	U	0.361	0.364	1.00	0.543	pCi/L	10/07/25 15:18	11/05/25 11:41	1

Client Sample ID: MW-6-F-20251001-01
Date Collected: 10/01/25 14:36
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-3
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.8*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:41*	*1*
Y Carrier	*72.9*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:41*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.540	U	0.410	0.413	5.00	0.543	pCi/L		11/06/25 09:34	1

Client Sample ID: BAC-03-F-20251001-01
Date Collected: 10/01/25 15:29
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-4
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2200**		100	57	ug/L		10/06/25 14:00	10/07/25 18:57	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 18:09	1
Arsenic	ND		5.0	0.75	ug/L		10/06/25 14:00	10/07/25 18:09	1
Barium	**40**		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 18:09	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 18:09	1
Cadmium	**0.12**	**J**	1.0	0.077	ug/L		10/06/25 14:00	10/07/25 18:09	1
Calcium	**90000**		1000	250	ug/L		10/06/25 14:00	10/07/25 18:09	1
Chromium	ND		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 18:09	1
Cobalt	**0.57**	**J**	1.0	0.086	ug/L		10/06/25 14:00	10/07/25 18:09	1
Lead	**2.5**		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 18:09	1
Lithium	**5.7**	**J**	8.0	3.4	ug/L		10/06/25 14:00	10/07/25 18:09	1
Magnesium	**18000**		1000	61	ug/L		10/06/25 14:00	10/07/25 18:09	1
Molybdenum	ND		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 18:09	1
Potassium	**1800**		1000	220	ug/L		10/06/25 14:00	10/07/25 18:09	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 18:09	1
Sodium	**32000**		1000	880	ug/L		10/06/25 14:00	10/07/25 18:09	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 18:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 11:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**98**		5.0	2.6	mg/L			10/09/25 00:27	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**98**		5.0	2.6	mg/L			10/09/25 00:27	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/09/25 00:27	1
Total Dissolved Solids (SM 2540 C-2020)	**500**		10	7.8	mg/L			10/07/25 15:51	1
Chloride (EPA 300.0)	**58**		1.0	0.13	mg/L			10/07/25 03:04	1
Fluoride (EPA 300.0)	**0.062**		0.050	0.024	mg/L			10/07/25 03:04	1
Sulfate (EPA 300.0)	**190**	**F1**	1.0	0.35	mg/L			10/07/25 03:04	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0857	U	0.221	0.221	1.00	0.402	pCi/L	10/07/25 15:15	11/05/25 17:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.6*		*30 - 110*	*10/07/25 15:15*	*11/05/25 17:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.889**		0.412	0.420	1.00	0.541	pCi/L	10/07/25 15:18	11/05/25 11:41	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234533-1

Client Sample ID: BAC-03-F-20251001-01
Date Collected: 10/01/25 15:29
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-4
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.6*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:41*	*1*
Y Carrier	*71.8*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:41*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.975**		0.468	0.475	5.00	0.541	pCi/L		11/06/25 09:34	1

Client Sample ID: MW-1-F-20251002-01
Date Collected: 10/02/25 13:05
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-5
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	74	J	100	57	ug/L		10/06/25 14:00	10/07/25 20:48	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 19:18	1
Arsenic	ND		5.0	0.75	ug/L		10/06/25 14:00	10/07/25 19:18	1
Barium	120		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 19:18	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 19:18	1
Cadmium	ND		1.0	0.077	ug/L		10/06/25 14:00	10/07/25 19:18	1
Calcium	120000		1000	250	ug/L		10/06/25 14:00	10/07/25 19:18	1
Chromium	ND		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 19:18	1
Cobalt	0.52	J	1.0	0.086	ug/L		10/06/25 14:00	10/07/25 19:18	1
Lead	ND		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 19:18	1
Lithium	4.0	J	8.0	3.4	ug/L		10/06/25 14:00	10/07/25 19:18	1
Magnesium	16000		1000	61	ug/L		10/06/25 14:00	10/07/25 19:18	1
Molybdenum	ND		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 19:18	1
Potassium	1500		1000	220	ug/L		10/06/25 14:00	10/07/25 19:18	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 19:18	1
Sodium	19000		1000	880	ug/L		10/06/25 14:00	10/07/25 19:18	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 19:18	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 12:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	230		5.0	2.6	mg/L			10/09/25 00:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	230		5.0	2.6	mg/L			10/09/25 00:04	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/09/25 00:04	1
Total Dissolved Solids (SM 2540 C-2020)	480		10	7.8	mg/L			10/08/25 11:24	1
Chloride (EPA 300.0)	32		1.0	0.13	mg/L			10/07/25 01:41	1
Fluoride (EPA 300.0)	0.12		0.050	0.024	mg/L			10/07/25 01:41	1
Sulfate (EPA 300.0)	130		1.0	0.35	mg/L			10/07/25 01:41	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.438		0.291	0.293	1.00	0.409	pCi/L	10/07/25 15:15	11/05/25 17:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.1*		*30 - 110*	*10/07/25 15:15*	*11/05/25 17:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.719		0.405	0.411	1.00	0.576	pCi/L	10/07/25 15:18	11/05/25 11:48	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-234533-1

Client Sample ID: MW-1-F-20251002-01

Date Collected: 10/02/25 13:05
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-5

Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.1*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:48*	*1*
Y Carrier	*72.1*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:48*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.16**		0.499	0.505	5.00	0.576	pCi/L		11/06/25 09:34	1

Client Sample ID: BAC-22-F-20251002-01
Date Collected: 10/02/25 14:54
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-6
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**210**		100	57	ug/L		10/06/25 14:00	10/07/25 20:52	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 19:21	1
Arsenic	**1.6**	**J**	5.0	0.75	ug/L		10/06/25 14:00	10/07/25 19:21	1
Barium	**120**		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 19:21	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 19:21	1
Cadmium	ND		1.0	0.077	ug/L		10/06/25 14:00	10/07/25 19:21	1
Calcium	**150000**		1000	250	ug/L		10/06/25 14:00	10/07/25 19:21	1
Chromium	ND		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 19:21	1
Cobalt	**0.59**	**J**	1.0	0.086	ug/L		10/06/25 14:00	10/07/25 19:21	1
Lead	ND		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 19:21	1
Lithium	**3.8**	**J**	8.0	3.4	ug/L		10/06/25 14:00	10/07/25 19:21	1
Magnesium	**20000**		1000	61	ug/L		10/06/25 14:00	10/07/25 19:21	1
Molybdenum	ND		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 19:21	1
Potassium	**2500**		1000	220	ug/L		10/06/25 14:00	10/07/25 19:21	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 19:21	1
Sodium	**20000**		1000	880	ug/L		10/06/25 14:00	10/07/25 19:21	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 19:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 12:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			10/09/25 00:11	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			10/09/25 00:11	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/09/25 00:11	1
Total Dissolved Solids (SM 2540 C-2020)	**290**		10	7.8	mg/L			10/08/25 11:24	1
Chloride (EPA 300.0)	**38**		1.0	0.13	mg/L			10/07/25 03:31	1
Fluoride (EPA 300.0)	**0.083**		0.050	0.024	mg/L			10/07/25 03:31	1
Sulfate (EPA 300.0)	**220**		5.0	1.7	mg/L			10/07/25 03:41	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.442	U	0.322	0.325	1.00	0.478	pCi/L	10/07/25 15:15	11/05/25 17:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.1*		*30 - 110*	*10/07/25 15:15*	*11/05/25 17:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.24**		0.516	0.529	1.00	0.691	pCi/L	10/07/25 15:18	11/05/25 11:48	1

Client Sample ID: BAC-22-F-20251002-01
Date Collected: 10/02/25 14:54
Date Received: 10/04/25 08:00

Lab Sample ID: 240-234533-6
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.1*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:48*	*1*
Y Carrier	*71.8*		*30 - 110*	*10/07/25 15:18*	*11/05/25 11:48*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.68**		0.608	0.621	5.00	0.691	pCi/L		11/06/25 09:34	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234533-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
240-234533-1	BAC-01-F-20251001-01	79.1
240-234533-2	BAC-09-F-20251001-01	100
240-234533-3	MW-6-F-20251001-01	89.8
240-234533-4	BAC-03-F-20251001-01	86.6
240-234533-4 MS	BAC-03-F-20251001-01	83.3
240-234533-4 MSD	BAC-03-F-20251001-01	83.1
240-234533-5	MW-1-F-20251002-01	89.1
240-234533-6	BAC-22-F-20251002-01	85.1
LCS 160-739573/2-A	Lab Control Sample	89.1
MB 160-739573/1-A	Method Blank	93.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
240-234533-1	BAC-01-F-20251001-01	79.1	68.0
240-234533-2	BAC-09-F-20251001-01	100	71.8
240-234533-3	MW-6-F-20251001-01	89.8	72.9
240-234533-4	BAC-03-F-20251001-01	86.6	71.8
240-234533-4 MS	BAC-03-F-20251001-01	83.3	75.1
240-234533-4 MSD	BAC-03-F-20251001-01	83.1	73.3
240-234533-5	MW-1-F-20251002-01	89.1	72.1
240-234533-6	BAC-22-F-20251002-01	85.1	71.8
LCS 160-739575/2-A	Lab Control Sample	89.1	77.0
MB 160-739575/1-A	Method Blank	93.8	75.1

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-674600/1-A
Matrix: Water
Analysis Batch: 674891

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		10/06/25 14:00	10/07/25 18:49	1

Lab Sample ID: LCS 240-674600/2-A
Matrix: Water
Analysis Batch: 674891

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			1000	1040		ug/L		104	80 - 120		

Lab Sample ID: 240-234533-4 MS
Matrix: Water
Analysis Batch: 674891

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron	2200		1000	3090		ug/L		90	75 - 125		

Lab Sample ID: 240-234533-4 MSD
Matrix: Water
Analysis Batch: 674891

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	2200		1000	3150		ug/L		96	75 - 125	2	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-674600/1-A
Matrix: Water
Analysis Batch: 674899

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/06/25 14:00	10/07/25 18:04	1
Arsenic	ND		5.0	0.75	ug/L		10/06/25 14:00	10/07/25 18:04	1
Barium	ND		5.0	0.77	ug/L		10/06/25 14:00	10/07/25 18:04	1
Beryllium	ND		1.0	0.27	ug/L		10/06/25 14:00	10/07/25 18:04	1
Cadmium	ND		1.0	0.077	ug/L		10/06/25 14:00	10/07/25 18:04	1
Calcium	ND		1000	250	ug/L		10/06/25 14:00	10/07/25 18:04	1
Chromium	ND		5.0	1.2	ug/L		10/06/25 14:00	10/07/25 18:04	1
Cobalt	ND		1.0	0.086	ug/L		10/06/25 14:00	10/07/25 18:04	1
Lead	ND		1.0	0.45	ug/L		10/06/25 14:00	10/07/25 18:04	1
Lithium	ND		8.0	3.4	ug/L		10/06/25 14:00	10/07/25 18:04	1
Magnesium	ND		1000	61	ug/L		10/06/25 14:00	10/07/25 18:04	1
Molybdenum	ND		5.0	1.1	ug/L		10/06/25 14:00	10/07/25 18:04	1
Potassium	ND		1000	220	ug/L		10/06/25 14:00	10/07/25 18:04	1
Selenium	ND		5.0	0.89	ug/L		10/06/25 14:00	10/07/25 18:04	1
Sodium	ND		1000	880	ug/L		10/06/25 14:00	10/07/25 18:04	1
Thallium	ND		1.0	0.51	ug/L		10/06/25 14:00	10/07/25 18:04	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-674600/3-A
Matrix: Water
Analysis Batch: 674899

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony			100	95.4		ug/L		95	80 - 120		
Arsenic			1000	941		ug/L		94	80 - 120		
Barium			1000	941		ug/L		94	80 - 120		
Beryllium			500	463		ug/L		93	80 - 120		
Cadmium			500	455		ug/L		91	80 - 120		
Calcium			25000	24700		ug/L		99	80 - 120		
Chromium			500	486		ug/L		97	80 - 120		
Cobalt			500	473		ug/L		95	80 - 120		
Lead			500	488		ug/L		98	80 - 120		
Lithium			500	500		ug/L		100	80 - 120		
Magnesium			25000	25200		ug/L		101	80 - 120		
Molybdenum			500	475		ug/L		95	80 - 120		
Potassium			25000	24600		ug/L		99	80 - 120		
Selenium			1000	920		ug/L		92	80 - 120		
Sodium			25000	24900		ug/L		100	80 - 120		
Thallium			1000	985		ug/L		98	80 - 120		

Lab Sample ID: 240-234533-4 MS
Matrix: Water
Analysis Batch: 674899

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony	ND		100	102		ug/L		102	80 - 120		
Arsenic	ND		1000	978		ug/L		98	80 - 120		
Barium	40		1000	1010		ug/L		97	80 - 120		
Beryllium	ND		500	477		ug/L		95	80 - 120		
Cadmium	0.12	J	500	470		ug/L		94	80 - 120		
Calcium	90000		25000	117000		ug/L		105	80 - 120		
Chromium	ND		500	493		ug/L		99	80 - 120		
Cobalt	0.57	J	500	481		ug/L		96	80 - 120		
Lead	2.5		500	499		ug/L		99	80 - 120		
Lithium	5.7	J	500	513		ug/L		101	80 - 120		
Magnesium	18000		25000	43000		ug/L		101	80 - 120		
Molybdenum	ND		500	496		ug/L		99	80 - 120		
Potassium	1800		25000	26900		ug/L		101	80 - 120		
Selenium	ND		1000	914		ug/L		91	80 - 120		
Sodium	32000		25000	57200		ug/L		101	80 - 120		
Thallium	ND		1000	1010		ug/L		101	80 - 120		

Lab Sample ID: 240-234533-4 MSD
Matrix: Water
Analysis Batch: 674899

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		100	97.6		ug/L		98	80 - 120	4	20
Arsenic	ND		1000	909		ug/L		91	80 - 120	7	20
Barium	40		1000	947		ug/L		91	80 - 120	7	20
Beryllium	ND		500	443		ug/L		89	80 - 120	7	20
Cadmium	0.12	J	500	436		ug/L		87	80 - 120	7	20

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-234533-4 MSD
Matrix: Water
Analysis Batch: 674899

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total Recoverable
Prep Batch: 674600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	90000		25000	114000		ug/L		93	80 - 120	3	20
Chromium	ND		500	467		ug/L		93	80 - 120	6	20
Cobalt	0.57	J	500	445		ug/L		89	80 - 120	8	20
Lead	2.5		500	474		ug/L		94	80 - 120	5	20
Lithium	5.7	J	500	484		ug/L		96	80 - 120	6	20
Magnesium	18000		25000	42400		ug/L		98	80 - 120	1	20
Molybdenum	ND		500	462		ug/L		92	80 - 120	7	20
Potassium	1800		25000	26900		ug/L		100	80 - 120	0	20
Selenium	ND		1000	862		ug/L		86	80 - 120	6	20
Sodium	32000		25000	56300		ug/L		98	80 - 120	2	20
Thallium	ND		1000	945		ug/L		95	80 - 120	7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-674603/1-A
Matrix: Water
Analysis Batch: 674947

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 674603

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/06/25 14:00	10/07/25 11:55	1

Lab Sample ID: LCS 240-674603/2-A
Matrix: Water
Analysis Batch: 674947

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 674603

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.35		ug/L		107	80 - 120

Lab Sample ID: 240-234533-4 MS
Matrix: Water
Analysis Batch: 674947

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total/NA
Prep Batch: 674603

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		1.00	1.09		ug/L		109	80 - 120

Lab Sample ID: 240-234533-4 MSD
Matrix: Water
Analysis Batch: 674947

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total/NA
Prep Batch: 674603

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		1.00	1.05		ug/L		105	80 - 120	4	20

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-675289/33
Matrix: Water
Analysis Batch: 675289

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/08/25 23:00	1

Method: 2320 B-2021 - Alkalinity (Continued)

Lab Sample ID: MB 240-675289/33
Matrix: Water
Analysis Batch: 675289

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/08/25 23:00	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/08/25 23:00	1

Lab Sample ID: MB 240-675289/4
Matrix: Water
Analysis Batch: 675289

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/08/25 18:24	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/08/25 18:24	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/08/25 18:24	1

Lab Sample ID: LCS 240-675289/32
Matrix: Water
Analysis Batch: 675289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity			280	260		mg/L		93	85 - 115		

Lab Sample ID: 240-234533-4 DU
Matrix: Water
Analysis Batch: 675289

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	98			98.6		mg/L				0.8	20
Bicarbonate Alkalinity as CaCO3	98			98.6		mg/L				0.8	20
Carbonate Alkalinity as CaCO3	ND			ND		mg/L				NC	20

Lab Sample ID: MB 240-675359/4
Matrix: Water
Analysis Batch: 675359

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/09/25 13:21	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/09/25 13:21	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/09/25 13:21	1

Lab Sample ID: LCS 240-675359/3
Matrix: Water
Analysis Batch: 675359

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity			280	259		mg/L		92	85 - 115		

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-674879/1
Matrix: Water
Analysis Batch: 674879

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/07/25 09:56	1

Lab Sample ID: LCS 240-674879/2
Matrix: Water
Analysis Batch: 674879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			495	467		mg/L		94	80 - 120		

Lab Sample ID: MB 240-674979/1
Matrix: Water
Analysis Batch: 674979

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/07/25 15:51	1

Lab Sample ID: LCS 240-674979/2
Matrix: Water
Analysis Batch: 674979

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			495	478		mg/L		97	80 - 120		

Lab Sample ID: 240-234533-4 DU
Matrix: Water
Analysis Batch: 674979

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	500			487		mg/L				2	20

Lab Sample ID: MB 240-675110/1
Matrix: Water
Analysis Batch: 675110

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/08/25 11:24	1

Lab Sample ID: LCS 240-675110/2
Matrix: Water
Analysis Batch: 675110

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			495	571		mg/L		115	80 - 120		

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-674796/3
Matrix: Water
Analysis Batch: 674796

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/06/25 19:16	1
Fluoride	ND		0.050	0.024	mg/L			10/06/25 19:16	1
Sulfate	ND		1.0	0.35	mg/L			10/06/25 19:16	1

Lab Sample ID: LCS 240-674796/4
Matrix: Water
Analysis Batch: 674796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.7		mg/L		101	90 - 110
Fluoride	2.50	2.60		mg/L		104	90 - 110
Sulfate	50.0	51.6		mg/L		103	90 - 110

Lab Sample ID: MB 240-674797/3
Matrix: Water
Analysis Batch: 674797

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/07/25 02:46	1
Fluoride	ND		0.050	0.024	mg/L			10/07/25 02:46	1
Sulfate	ND		1.0	0.35	mg/L			10/07/25 02:46	1

Lab Sample ID: LCS 240-674797/4
Matrix: Water
Analysis Batch: 674797

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.7		mg/L		101	90 - 110
Fluoride	2.50	2.59		mg/L		104	90 - 110
Sulfate	50.0	51.4		mg/L		103	90 - 110

Lab Sample ID: 240-234533-4 MS
Matrix: Water
Analysis Batch: 674797

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	58		50.0	108		mg/L		98	80 - 120
Fluoride	0.062		2.50	2.73		mg/L		107	80 - 120
Sulfate	190	F1	50.0	233	E	mg/L		81	80 - 120

Lab Sample ID: 240-234533-4 MSD
Matrix: Water
Analysis Batch: 674797

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	58		50.0	106		mg/L		96	80 - 120	1	15
Fluoride	0.062		2.50	2.67		mg/L		104	80 - 120	2	15
Sulfate	190	F1	50.0	232	E F1	mg/L		78	80 - 120	1	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-739573/1-A
Matrix: Water
Analysis Batch: 743868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 739573

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.3148	U	0.238	0.240	1.00	0.343	pCi/L	10/07/25 15:15	11/05/25 14:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*10/07/25 15:15*	*11/05/25 14:30*	*1*

Lab Sample ID: LCS 160-739573/2-A
Matrix: Water
Analysis Batch: 743868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 739573

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.57	8.918		1.23	1.00	0.322	pCi/L	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.1*		*30 - 110*

Lab Sample ID: 240-234533-4 MS
Matrix: Water
Analysis Batch: 743868

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total/NA
Prep Batch: 739573

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.0857	U	9.55	9.024		1.25	1.00	0.411	pCi/L	94	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*83.3*		*30 - 110*

Lab Sample ID: 240-234533-4 MSD
Matrix: Water
Analysis Batch: 743868

Client Sample ID: BAC-03-F-20251001-01
Prep Type: Total/NA
Prep Batch: 739573

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.0857	U	9.50	9.174		1.24	1.00	0.338	pCi/L	96	60 - 140	0.06	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*83.1*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-739575/1-A
Matrix: Water
Analysis Batch: 743834

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 739575

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4369	U	0.395	0.397	1.00	0.630	pCi/L	10/07/25 15:18	11/05/25 11:37	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		30 - 110	10/07/25 15:18	11/05/25 11:37	1
Y Carrier	75.1		30 - 110	10/07/25 15:18	11/05/25 11:37	1

Lab Sample ID: LCS 160-739575/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743834 — **Prep Batch: 739575**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.96	10.06		1.36	1.00	0.543	pCi/L	126	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	89.1		30 - 110
Y Carrier	77.0		30 - 110

Lab Sample ID: 240-234533-4 MS — **Client Sample ID: BAC-03-F-20251001-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743834 — **Prep Batch: 739575**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.889		7.94	11.73		1.57	1.00	0.592	pCi/L	137	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	83.3		30 - 110
Y Carrier	75.1		30 - 110

Lab Sample ID: 240-234533-4 MSD — **Client Sample ID: BAC-03-F-20251001-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743868 — **Prep Batch: 739575**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.889		7.90	10.63		1.48	1.00	0.681	pCi/L	123	60 - 140	0.36	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	83.1		30 - 110
Y Carrier	73.3		30 - 110

Metals

Prep Batch: 674600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total Recoverable	Water	3005A	
240-234533-2	BAC-09-F-20251001-01	Total Recoverable	Water	3005A	
240-234533-3	MW-6-F-20251001-01	Total Recoverable	Water	3005A	
240-234533-4	BAC-03-F-20251001-01	Total Recoverable	Water	3005A	
240-234533-5	MW-1-F-20251002-01	Total Recoverable	Water	3005A	
240-234533-6	BAC-22-F-20251002-01	Total Recoverable	Water	3005A	
MB 240-674600/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-674600/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-674600/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-234533-4 MS	BAC-03-F-20251001-01	Total Recoverable	Water	3005A	
240-234533-4 MS	BAC-03-F-20251001-01	Total Recoverable	Water	3005A	
240-234533-4 MSD	BAC-03-F-20251001-01	Total Recoverable	Water	3005A	
240-234533-4 MSD	BAC-03-F-20251001-01	Total Recoverable	Water	3005A	

Prep Batch: 674603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total/NA	Water	7470A	
240-234533-2	BAC-09-F-20251001-01	Total/NA	Water	7470A	
240-234533-3	MW-6-F-20251001-01	Total/NA	Water	7470A	
240-234533-4	BAC-03-F-20251001-01	Total/NA	Water	7470A	
240-234533-5	MW-1-F-20251002-01	Total/NA	Water	7470A	
240-234533-6	BAC-22-F-20251002-01	Total/NA	Water	7470A	
MB 240-674603/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-674603/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-234533-4 MS	BAC-03-F-20251001-01	Total/NA	Water	7470A	
240-234533-4 MSD	BAC-03-F-20251001-01	Total/NA	Water	7470A	

Analysis Batch: 674891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total Recoverable	Water	6010D	674600
240-234533-2	BAC-09-F-20251001-01	Total Recoverable	Water	6010D	674600
240-234533-3	MW-6-F-20251001-01	Total Recoverable	Water	6010D	674600
240-234533-4	BAC-03-F-20251001-01	Total Recoverable	Water	6010D	674600
240-234533-5	MW-1-F-20251002-01	Total Recoverable	Water	6010D	674600
240-234533-6	BAC-22-F-20251002-01	Total Recoverable	Water	6010D	674600
MB 240-674600/1-A	Method Blank	Total Recoverable	Water	6010D	674600
LCS 240-674600/2-A	Lab Control Sample	Total Recoverable	Water	6010D	674600
240-234533-4 MS	BAC-03-F-20251001-01	Total Recoverable	Water	6010D	674600
240-234533-4 MSD	BAC-03-F-20251001-01	Total Recoverable	Water	6010D	674600

Analysis Batch: 674899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total Recoverable	Water	6020B	674600
240-234533-2	BAC-09-F-20251001-01	Total Recoverable	Water	6020B	674600
240-234533-3	MW-6-F-20251001-01	Total Recoverable	Water	6020B	674600
240-234533-4	BAC-03-F-20251001-01	Total Recoverable	Water	6020B	674600
240-234533-5	MW-1-F-20251002-01	Total Recoverable	Water	6020B	674600
240-234533-6	BAC-22-F-20251002-01	Total Recoverable	Water	6020B	674600
MB 240-674600/1-A	Method Blank	Total Recoverable	Water	6020B	674600
LCS 240-674600/3-A	Lab Control Sample	Total Recoverable	Water	6020B	674600
240-234533-4 MS	BAC-03-F-20251001-01	Total Recoverable	Water	6020B	674600

Metals (Continued)

Analysis Batch: 674899 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-4 MSD	BAC-03-F-20251001-01	Total Recoverable	Water	6020B	674600

Analysis Batch: 674947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total/NA	Water	7470A	674603
240-234533-2	BAC-09-F-20251001-01	Total/NA	Water	7470A	674603
240-234533-3	MW-6-F-20251001-01	Total/NA	Water	7470A	674603
240-234533-4	BAC-03-F-20251001-01	Total/NA	Water	7470A	674603
240-234533-5	MW-1-F-20251002-01	Total/NA	Water	7470A	674603
240-234533-6	BAC-22-F-20251002-01	Total/NA	Water	7470A	674603
MB 240-674603/1-A	Method Blank	Total/NA	Water	7470A	674603
LCS 240-674603/2-A	Lab Control Sample	Total/NA	Water	7470A	674603
240-234533-4 MS	BAC-03-F-20251001-01	Total/NA	Water	7470A	674603
240-234533-4 MSD	BAC-03-F-20251001-01	Total/NA	Water	7470A	674603

General Chemistry

Analysis Batch: 674796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total/NA	Water	300.0	
240-234533-2	BAC-09-F-20251001-01	Total/NA	Water	300.0	
240-234533-2	BAC-09-F-20251001-01	Total/NA	Water	300.0	
240-234533-3	MW-6-F-20251001-01	Total/NA	Water	300.0	
240-234533-5	MW-1-F-20251002-01	Total/NA	Water	300.0	
MB 240-674796/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674796/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 674797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-4	BAC-03-F-20251001-01	Total/NA	Water	300.0	
240-234533-6	BAC-22-F-20251002-01	Total/NA	Water	300.0	
240-234533-6	BAC-22-F-20251002-01	Total/NA	Water	300.0	
MB 240-674797/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674797/4	Lab Control Sample	Total/NA	Water	300.0	
240-234533-4 MS	BAC-03-F-20251001-01	Total/NA	Water	300.0	
240-234533-4 MSD	BAC-03-F-20251001-01	Total/NA	Water	300.0	

Analysis Batch: 674879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total/NA	Water	2540 C-2020	
MB 240-674879/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-674879/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 674979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-2	BAC-09-F-20251001-01	Total/NA	Water	2540 C-2020	
240-234533-3	MW-6-F-20251001-01	Total/NA	Water	2540 C-2020	
240-234533-4	BAC-03-F-20251001-01	Total/NA	Water	2540 C-2020	
MB 240-674979/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-674979/2	Lab Control Sample	Total/NA	Water	2540 C-2020	
240-234533-4 DU	BAC-03-F-20251001-01	Total/NA	Water	2540 C-2020	

General Chemistry

Analysis Batch: 675110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-5	MW-1-F-20251002-01	Total/NA	Water	2540 C-2020	
240-234533-6	BAC-22-F-20251002-01	Total/NA	Water	2540 C-2020	
MB 240-675110/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-675110/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 675289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total/NA	Water	2320 B-2021	
240-234533-3	MW-6-F-20251001-01	Total/NA	Water	2320 B-2021	
240-234533-4	BAC-03-F-20251001-01	Total/NA	Water	2320 B-2021	
240-234533-5	MW-1-F-20251002-01	Total/NA	Water	2320 B-2021	
240-234533-6	BAC-22-F-20251002-01	Total/NA	Water	2320 B-2021	
MB 240-675289/33	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-675289/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-675289/32	Lab Control Sample	Total/NA	Water	2320 B-2021	
240-234533-4 DU	BAC-03-F-20251001-01	Total/NA	Water	2320 B-2021	

Analysis Batch: 675359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-2	BAC-09-F-20251001-01	Total/NA	Water	2320 B-2021	
MB 240-675359/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-675359/3	Lab Control Sample	Total/NA	Water	2320 B-2021	

Rad

Prep Batch: 739573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total/NA	Water	PrecSep-21	
240-234533-2	BAC-09-F-20251001-01	Total/NA	Water	PrecSep-21	
240-234533-3	MW-6-F-20251001-01	Total/NA	Water	PrecSep-21	
240-234533-4	BAC-03-F-20251001-01	Total/NA	Water	PrecSep-21	
240-234533-5	MW-1-F-20251002-01	Total/NA	Water	PrecSep-21	
240-234533-6	BAC-22-F-20251002-01	Total/NA	Water	PrecSep-21	
MB 160-739573/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-739573/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-234533-4 MS	BAC-03-F-20251001-01	Total/NA	Water	PrecSep-21	
240-234533-4 MSD	BAC-03-F-20251001-01	Total/NA	Water	PrecSep-21	

Prep Batch: 739575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234533-1	BAC-01-F-20251001-01	Total/NA	Water	PrecSep_0	
240-234533-2	BAC-09-F-20251001-01	Total/NA	Water	PrecSep_0	
240-234533-3	MW-6-F-20251001-01	Total/NA	Water	PrecSep_0	
240-234533-4	BAC-03-F-20251001-01	Total/NA	Water	PrecSep_0	
240-234533-5	MW-1-F-20251002-01	Total/NA	Water	PrecSep_0	
240-234533-6	BAC-22-F-20251002-01	Total/NA	Water	PrecSep_0	
MB 160-739575/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-739575/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-234533-4 MS	BAC-03-F-20251001-01	Total/NA	Water	PrecSep_0	
240-234533-4 MSD	BAC-03-F-20251001-01	Total/NA	Water	PrecSep_0	

Client Sample ID: BAC-01-F-20251001-01
Lab Sample ID: 240-234533-1

Date Collected: 10/01/25 12:06
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6010D		1	674891	RKT	EET CLE	10/07/25 20:35
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6020B		1	674899	S4FJ	EET CLE	10/07/25 19:10
Total/NA	Prep	7470A			674603	F3PF	EET CLE	10/06/25 14:00
Total/NA	Analysis	7470A		1	674947	TQ6W	EET CLE	10/07/25 12:35
Total/NA	Analysis	2320 B-2021		1	675289	PQD2	EET CLE	10/08/25 23:41
Total/NA	Analysis	2540 C-2020		1	674879	TAV2	EET CLE	10/07/25 09:56
Total/NA	Analysis	300.0		1	674796	JMR	EET CLE	10/07/25 01:05
Total/NA	Prep	PrecSep-21			739573	JTR	EET SL	10/07/25 15:15
Total/NA	Analysis	9315		1	743868	SWS	EET SL	11/05/25 17:43
Total/NA	Prep	PrecSep_0			739575	JTR	EET SL	10/07/25 15:18
Total/NA	Analysis	9320		1	743834	SWS	EET SL	11/05/25 11:41
Total/NA	Analysis	Ra226_Ra228		1	743869	SCB	EET SL	11/06/25 09:34

Client Sample ID: BAC-09-F-20251001-01
Lab Sample ID: 240-234533-2

Date Collected: 10/01/25 13:28
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6010D		1	674891	RKT	EET CLE	10/07/25 20:39
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6020B		1	674899	S4FJ	EET CLE	10/07/25 19:12
Total/NA	Prep	7470A			674603	F3PF	EET CLE	10/06/25 14:00
Total/NA	Analysis	7470A		1	674947	TQ6W	EET CLE	10/07/25 12:36
Total/NA	Analysis	2320 B-2021		1	675359	PQD2	EET CLE	10/09/25 14:11
Total/NA	Analysis	2540 C-2020		1	674979	TAV2	EET CLE	10/07/25 15:51
Total/NA	Analysis	300.0		5	674796	JMR	EET CLE	10/07/25 01:14
Total/NA	Analysis	300.0		50	674796	JMR	EET CLE	10/07/25 01:23
Total/NA	Prep	PrecSep-21			739573	JTR	EET SL	10/07/25 15:15
Total/NA	Analysis	9315		1	743868	SWS	EET SL	11/05/25 17:43
Total/NA	Prep	PrecSep_0			739575	JTR	EET SL	10/07/25 15:18
Total/NA	Analysis	9320		1	743834	SWS	EET SL	11/05/25 11:41
Total/NA	Analysis	Ra226_Ra228		1	743869	SCB	EET SL	11/06/25 09:34

Client Sample ID: MW-6-F-20251001-01
Lab Sample ID: 240-234533-3

Date Collected: 10/01/25 14:36
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6010D		1	674891	RKT	EET CLE	10/07/25 20:44

Client Sample ID: MW-6-F-20251001-01
Lab Sample ID: 240-234533-3

Date Collected: 10/01/25 14:36
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6020B		1	674899	S4FJ	EET CLE	10/07/25 19:15
Total/NA	Prep	7470A			674603	F3PF	EET CLE	10/06/25 14:00
Total/NA	Analysis	7470A		1	674947	TQ6W	EET CLE	10/07/25 12:38
Total/NA	Analysis	2320 B-2021		1	675289	PQD2	EET CLE	10/08/25 23:57
Total/NA	Analysis	2540 C-2020		1	674979	TAV2	EET CLE	10/07/25 15:51
Total/NA	Analysis	300.0		1	674796	JMR	EET CLE	10/07/25 01:32
Total/NA	Prep	PrecSep-21			739573	JTR	EET SL	10/07/25 15:15
Total/NA	Analysis	9315		1	743868	SWS	EET SL	11/05/25 17:43
Total/NA	Prep	PrecSep_0			739575	JTR	EET SL	10/07/25 15:18
Total/NA	Analysis	9320		1	743834	SWS	EET SL	11/05/25 11:41
Total/NA	Analysis	Ra226_Ra228		1	743869	SCB	EET SL	11/06/25 09:34

Client Sample ID: BAC-03-F-20251001-01
Lab Sample ID: 240-234533-4

Date Collected: 10/01/25 15:29
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6010D		1	674891	RKT	EET CLE	10/07/25 18:57
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6020B		1	674899	S4FJ	EET CLE	10/07/25 18:09
Total/NA	Prep	7470A			674603	F3PF	EET CLE	10/06/25 14:00
Total/NA	Analysis	7470A		1	674947	TQ6W	EET CLE	10/07/25 11:59
Total/NA	Analysis	2320 B-2021		1	675289	PQD2	EET CLE	10/09/25 00:27
Total/NA	Analysis	2540 C-2020		1	674979	TAV2	EET CLE	10/07/25 15:51
Total/NA	Analysis	300.0		1	674797	JMR	EET CLE	10/07/25 03:04
Total/NA	Prep	PrecSep-21			739573	JTR	EET SL	10/07/25 15:15
Total/NA	Analysis	9315		1	743868	SWS	EET SL	11/05/25 17:44
Total/NA	Prep	PrecSep_0			739575	JTR	EET SL	10/07/25 15:18
Total/NA	Analysis	9320		1	743834	SWS	EET SL	11/05/25 11:41
Total/NA	Analysis	Ra226_Ra228		1	743869	SCB	EET SL	11/06/25 09:34

Client Sample ID: MW-1-F-20251002-01
Lab Sample ID: 240-234533-5

Date Collected: 10/02/25 13:05
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6010D		1	674891	RKT	EET CLE	10/07/25 20:48
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6020B		1	674899	S4FJ	EET CLE	10/07/25 19:18
Total/NA	Prep	7470A			674603	F3PF	EET CLE	10/06/25 14:00
Total/NA	Analysis	7470A		1	674947	TQ6W	EET CLE	10/07/25 12:40

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234533-1
Project/Site: Federal CCR Wells

Client Sample ID: MW-1-F-20251002-01
Lab Sample ID: 240-234533-5

Date Collected: 10/02/25 13:05
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320 B-2021		1	675289	PQD2	EET CLE	10/09/25 00:04
Total/NA	Analysis	2540 C-2020		1	675110	AAP	EET CLE	10/08/25 11:24
Total/NA	Analysis	300.0		1	674796	JMR	EET CLE	10/07/25 01:41
Total/NA	Prep	PrecSep-21			739573	JTR	EET SL	10/07/25 15:15
Total/NA	Analysis	9315		1	743868	SWS	EET SL	11/05/25 17:44
Total/NA	Prep	PrecSep_0			739575	JTR	EET SL	10/07/25 15:18
Total/NA	Analysis	9320		1	743868	SWS	EET SL	11/05/25 11:48
Total/NA	Analysis	Ra226_Ra228		1	743869	SCB	EET SL	11/06/25 09:34

Client Sample ID: BAC-22-F-20251002-01
Lab Sample ID: 240-234533-6

Date Collected: 10/02/25 14:54
Matrix: Water
Date Received: 10/04/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6010D		1	674891	RKT	EET CLE	10/07/25 20:52
Total Recoverable	Prep	3005A			674600	F3PF	EET CLE	10/06/25 14:00
Total Recoverable	Analysis	6020B		1	674899	S4FJ	EET CLE	10/07/25 19:21
Total/NA	Prep	7470A			674603	F3PF	EET CLE	10/06/25 14:00
Total/NA	Analysis	7470A		1	674947	TQ6W	EET CLE	10/07/25 12:42
Total/NA	Analysis	2320 B-2021		1	675289	PQD2	EET CLE	10/09/25 00:11
Total/NA	Analysis	2540 C-2020		1	675110	AAP	EET CLE	10/08/25 11:24
Total/NA	Analysis	300.0		1	674797	JMR	EET CLE	10/07/25 03:31
Total/NA	Analysis	300.0		5	674797	JMR	EET CLE	10/07/25 03:41
Total/NA	Prep	PrecSep-21			739573	JTR	EET SL	10/07/25 15:15
Total/NA	Analysis	9315		1	743868	SWS	EET SL	11/05/25 17:44
Total/NA	Prep	PrecSep_0			739575	JTR	EET SL	10/07/25 15:18
Total/NA	Analysis	9320		1	743868	SWS	EET SL	11/05/25 11:48
Total/NA	Analysis	Ra226_Ra228		1	743869	SCB	EET SL	11/06/25 09:34

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234533-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-26
Iowa	State	421	06-01-27
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	2250	09-30-26
New Jersey	NELAP	OH001	06-30-26
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	10-28-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	10-15-25
Pennsylvania	NELAP	68-00340	08-31-26
Texas	NELAP	T104704517	08-31-26
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-26
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-26

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-26
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-26
HI - RadChem Recognition	State	n/a	06-30-26
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25 *
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-26
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	10-01-26
Massachusetts	State	M-MO054	06-30-26
MI - RadChem Recognition	State	9005	06-30-26
Missouri	State	780	06-30-28
Nevada	State	MO00054	07-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234533-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-26
New Mexico	State	MO00054	06-30-26
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	06-30-26
North Dakota	State	R-207	06-30-25 *
Oklahoma	NELAP	9997	12-31-25
Oregon	NELAP	4157	09-01-26
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-26
Texas	NELAP	T104704193	07-31-26
US Fish & Wildlife	US Federal Programs	058448	07-31-26
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-26
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-31-26
West Virginia DEP	State	381	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

COLUMBUS
209

eurofins
Environment Testing

Client Information	Sampler: Bobby Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No. 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 8020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
BAC-01-F-20251001-01	10-1-25	1206	G	Water			1	1	2	1	1		
BAC-09-F-20251001-01	10-1-25	1328	G	Water			1	1	2	1	1		
MW-6-F-20251001-01	10-1-25	1436	G	Water			1	1	2	1	1		
BAC-03-F-20251001-01	10-1-25	1529	G	Water			1	1	2	1	1		
BAC-03-F-20251001-MS-01	10-1-25	1529	G	Water			1	1	2	1	1		
BAC-03-F-20251001-MSD-01	10-1-25	1529	G	Water			1	1	2	1	1		
MW-1-F-20251002-01	10-2-25	1305	G	Water			1	1	2	1	1		
BAC-22-F-20251002-01	10-2-25	1454	G	Water			1	1	2	1	1		
				Water									
				Water									
				Water									

240-234533 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10-3-25/0845	Kleinfelder	Ashley McCluskey	10-3-25 1304	Eurofins
Relinquished by: Ashley McCluskey	Date/Time: 10-3-25 1700	Company Eurofins	Received by: Collins	Date/Time: 10-4-25 800	Company [signature]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative Login # _____
Barberton Facility

Client Gavin Site Name _____ Cooler unpacked by: JC
Cooler Received on 10-4-25 Opened on 10-4-25
FedEx. 1st Grd Exp UPS FAS (Waypoint) Client Drop Off Eurofins Courier Other _____
Receipt After-hours. Drop-off Date/Time _____ Storage Location _____
Eurofins Cooler # 2C Foam Box Client Cooler Box Other _____
Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____
COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☑ See Multiple Cooler Form
IR GUN # 13 (CF +0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3 Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4 Did custody papers accompany the sample(s)?	(Yes)	No
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7 Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Y)	(Y)
10 Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11 Sufficient quantity received to perform indicated analyses?	(Yes)	No
12 Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13 17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# HC567196
14 Were VOAs on the COC?	Yes	(No)
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes	No (NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	(No)
17 Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ *Date* _____ *by* _____ *via Verbal Voice Mail Other*

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:
Labels Verified by

19 SAMPLE CONDITION
Sample(s) _____ were received after the recommended holding time had expired
Sample(s) _____ were received in a broken container
Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION
Sample(s) _____ were further preserved in the laboratory
Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 13	1.5	1.7	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	9.2	9.4	Wet Ice Blue Ice Dry Ice Water (None)
(EC) Client Box Other	IR GUN #:	1.4	1.6	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	0.6	0.8	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	1.1	1.3	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	1.3	1.5	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	0.8	1.0	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	0.7	0.9	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	1.7	1.9	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	0.9	1.1	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #:	1.4	1.6	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

10/4/2025

Login Container Summary Report

240-234533

11/6/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-01-F-20251001-01	240-234533-A-1	Plastic 60 mL - unpreserved				
BAC-01 F-20251001-01	240-234533-B-1	Plastic 60 mL - unpreserved				
BAC-01-F-20251001-01	240-234533-C-1	Plastic 500ml unpreserved				
BAC-01 F-20251001-01	240-234533-D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-01-F-20251001-01	240-234533-E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-01 F 20251001-01	240-234533 F 1	Plastic 1 liter - Nitric Acid	<2			
BAC-09-F-20251001-01	240-234533-A-2	Plastic 60 mL - unpreserved				
BAC-09-F-20251001-01	240-234533-B-2	Plastic 60 mL - unpreserved				
BAC-09-F-20251001-01	240-234533-C-2	Plastic 500ml - unpreserved				
BAC-09 F-20251001-01	240-234533 D-2	Plastic 500ml with Nitric Acid	<2			
BAC-09-F-20251001-01	240-234533-E-2	Plastic 1 liter - Nitric Acid	<2			
BAC-09 F 20251001-01	240 234533 F 2	Plastic 1 liter - Nitric Acid	<2			
BAC-6 F 20251001-01	240-234533-A-3	Plastic 60 mL - unpreserved				
BAC-6 F-20251001-01	240-234533 B-3	Plastic 60 mL - unpreserved				
BAC-6-F-20251001-01	240-234533-C-3	Plastic 500ml - unpreserved				
BAC-6-F-20251001-01	240-234533 D-3	Plastic 500ml - with Nitric Acid	<2			
BAC-6-F-20251001-01	240-234533-E-3	Plastic 1 liter Nitric Acid	<2			
BAC-6 F 20251001-01	240-234533-F-3	Plastic 1 liter - Nitric Acid	<2			
BAC-03-F-20251001-01	240-234533-A-4	Plastic 60 mL unpreserved				
BAC-03 F 20251001 MS-01	240-234533-A-4 MS	Plastic 60 mL - unpreserved				
BAC-03-F-20251001-MSD-01	240-234533-A-4 MSD	Plastic 60 mL - unpreserved				
BAC-03 F-20251001-01	240-234533-B-4	Plastic 60 mL unpreserved				
BAC-03-F-20251001-MS-01	240 234533-B-4 MS	Plastic 60 mL - unpreserved				
BAC-03-F 20251001 MSD-01	240-234533-B-4 MSD	Plastic 60 mL - unpreserved				
BAC-03-F-20251001-01	240-234533-C-4	Plastic 500ml - unpreserved				
BAC-03-F-20251001 MS-01	240-234533-C-4 MS	Plastic 500ml - unpreserved				
BAC-03-F-20251001-MSD-01	240-234533-C-4 MSD	Plastic 500ml - unpreserved				
BAC-03 F 20251001-01	240 234533-D-4	Plastic 500ml - with Nitric Acid	<2			
BAC-03-F-20251001 MS-01	240-234533 D-4 MS	Plastic 500ml - with Nitric Acid	<2			
BAC-03-F-20251001 MSD-01	240-234533-D-4 MSD	Plastic 500ml - with Nitric Acid	<2			
BAC-03 F-20251001-01	240-234533-E-4	Plastic 1 liter - Nitric Acid	<2			
BAC-03 F-20251001-MS-01	240-234533-E-4 MS	Plastic 1 liter - Nitric Acid	<2			

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-03 F-20251001 MSD-01	240-234533-E-4 MSD	Plastic 1 liter - Nitric Acid	<2			
BAC-03-F-20251001-01	240-234533-F-4	Plastic 1 liter - Nitric Acid	<2			
BAC-03-F-20251001-MS-01	240-234533 F-4 MS	Plastic 1 liter - Nitric Acid	<2			
BAC-03-F-20251001-MSD-01	240-234533-F-4 MSD	Plastic 1 liter Nitric Acid	<2			
MW 1 F 20251002-01	240-234533-A-5	Plastic 60 mL - unpreserved				
MW-1-F-20251002-01	240-234533-B-5	Plastic 60 mL - unpreserved				
MW-1-F-20251002-01	240-234533-C-5	Plastic 500ml - unpreserved				
MW-1-F-20251002-01	240-234533-D-5	Plastic 500ml - with Nitric Acid	<2			
MW-1-F-20251002-01	240-234533 E-5	Plastic 1 liter - Nitric Acid	<2			
MW 1-F 20251002-01	240 234533-F-5	Plastic 1 liter - Nitric Acid	<2			
BAC-22-F-20251002-01	240 234533 A-6	Plastic 60 mL - unpreserved				
BAC-22-F-20251002-01	240-234533-B-6	Plastic 60 mL - unpreserved				
BAC-22-F-20251002-01	240-234533-C-6	Plastic 500ml - unpreserved				
BAC-22-F-20251002-01	240-234533-D-6	Plastic 500ml - with Nitric Acid	<2			
BAC-22-F-20251002-01	240-234533-E-6	Plastic 1 liter - Nitric Acid	<2			
BAC-22-F-20251002-01	240-234533-F-6	Plastic 1 liter - Nitric Acid	<2			

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-234533-1

Login Number: 234533
List Number: 2
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 10/07/25 11:31 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

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JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-235095-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

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Authorized for release by
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Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-235095-1 — Eurofins Cleveland

Job Narrative
240-235095-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The sample was received on 10/11/2025 8:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 9 coolers at receipt time were 0.7°C, 0.8°C, 1.8°C, 2.4°C, 2.5°C, 3.1°C, 3.8°C, 4.0°C and 15.6°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-235095-1
Project/Site: Federal CCR Wells

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-235095-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
240-235095-1	BAC-21-F-20251009-01	Water	10/09/25 13:05	10/11/25 08:00	Ohio

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-235095-1

Client Sample ID: BAC-21-F-20251009-01

Lab Sample ID: 240-235095-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	390		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	4.0	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	190		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	130000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	2.0	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	0.59	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	1.1		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	4.8	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	15000		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	31000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	520		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	64		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.081		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	130		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BAC-21-F-20251009-01
Date Collected: 10/09/25 13:05
Date Received: 10/11/25 08:00

Lab Sample ID: 240-235095-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**390**		100	57	ug/L		10/13/25 14:00	10/14/25 19:25	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/13/25 14:00	10/14/25 14:09	1
Arsenic	**4.0**	**J**	5.0	0.75	ug/L		10/13/25 14:00	10/14/25 14:09	1
Barium	**190**		5.0	0.77	ug/L		10/13/25 14:00	10/14/25 14:09	1
Beryllium	ND		1.0	0.27	ug/L		10/13/25 14:00	10/14/25 14:09	1
Cadmium	ND		1.0	0.077	ug/L		10/13/25 14:00	10/14/25 14:09	1
Calcium	**130000**		1000	250	ug/L		10/13/25 14:00	10/14/25 14:09	1
Chromium	**2.0**	**J**	5.0	1.2	ug/L		10/13/25 14:00	10/14/25 14:09	1
Cobalt	**0.59**	**J**	1.0	0.086	ug/L		10/13/25 14:00	10/14/25 14:09	1
Lead	**1.1**		1.0	0.45	ug/L		10/13/25 14:00	10/14/25 14:09	1
Lithium	**4.8**	**J**	8.0	3.4	ug/L		10/13/25 14:00	10/14/25 14:09	1
Magnesium	**15000**		1000	61	ug/L		10/13/25 14:00	10/14/25 14:09	1
Molybdenum	ND		5.0	1.1	ug/L		10/13/25 14:00	10/14/25 14:09	1
Potassium	**2000**		1000	220	ug/L		10/13/25 14:00	10/14/25 14:09	1
Selenium	ND		5.0	0.89	ug/L		10/13/25 14:00	10/14/25 14:09	1
Sodium	**31000**		1000	880	ug/L		10/13/25 14:00	10/14/25 14:09	1
Thallium	ND		1.0	0.51	ug/L		10/13/25 14:00	10/14/25 14:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/15/25 14:00	10/16/25 12:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			10/14/25 03:22	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**220**		5.0	2.6	mg/L			10/14/25 03:22	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			10/14/25 03:22	1
Total Dissolved Solids (SM 2540 C-2020)	**520**		10	7.8	mg/L			10/15/25 10:43	1
Chloride (EPA 300.0)	**64**		1.0	0.13	mg/L			10/14/25 01:38	1
Fluoride (EPA 300.0)	**0.081**		0.050	0.024	mg/L			10/14/25 01:38	1
Sulfate (EPA 300.0)	**130**		1.0	0.35	mg/L			10/14/25 01:38	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.591	U	0.411	0.415	1.00	0.605	pCi/L	10/16/25 08:00	11/10/25 15:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.4*		*30 - 110*	*10/16/25 08:00*	*11/10/25 15:42*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.557	U	0.481	0.483	1.00	0.753	pCi/L	10/16/25 08:04	11/10/25 09:58	1

Client Sample ID: BAC-21-F-20251009-01
Date Collected: 10/09/25 13:05
Date Received: 10/11/25 08:00

Lab Sample ID: 240-235095-1
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.4*		*30 - 110*	*10/16/25 08:04*	*11/10/25 09:58*	*1*
Y Carrier	*77.8*		*30 - 110*	*10/16/25 08:04*	*11/10/25 09:58*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.15**		0.633	0.637	5.00	0.753	pCi/L		11/11/25 12:37	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-235095-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
		Ba							
Lab Sample ID	Client Sample ID	(30-110)							
240-235095-1	BAC-21-F-20251009-01	87.4							
LCS 160-740920/2-A	Lab Control Sample	81.1							
MB 160-740920/1-A	Method Blank	79.8							

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)							
		Ba	Y						
Lab Sample ID	Client Sample ID	(30-110)	(30-110)						
240-235095-1	BAC-21-F-20251009-01	87.4	77.8						
LCS 160-740921/2-A	Lab Control Sample	81.1	79.3						
MB 160-740921/1-A	Method Blank	79.8	83.4						

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-675746/1-A
Matrix: Water
Analysis Batch: 676032

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 675746

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		10/13/25 14:00	10/14/25 18:47	1

Lab Sample ID: LCS 240-675746/2-A
Matrix: Water
Analysis Batch: 676032

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 675746

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1000		ug/L		100	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-675746/1-A
Matrix: Water
Analysis Batch: 676047

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 675746

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		10/13/25 14:00	10/14/25 14:02	1
Arsenic	ND		5.0	0.75	ug/L		10/13/25 14:00	10/14/25 14:02	1
Barium	ND		5.0	0.77	ug/L		10/13/25 14:00	10/14/25 14:02	1
Beryllium	ND		1.0	0.27	ug/L		10/13/25 14:00	10/14/25 14:02	1
Cadmium	ND		1.0	0.077	ug/L		10/13/25 14:00	10/14/25 14:02	1
Calcium	ND		1000	250	ug/L		10/13/25 14:00	10/14/25 14:02	1
Chromium	ND		5.0	1.2	ug/L		10/13/25 14:00	10/14/25 14:02	1
Cobalt	ND		1.0	0.086	ug/L		10/13/25 14:00	10/14/25 14:02	1
Lead	ND		1.0	0.45	ug/L		10/13/25 14:00	10/14/25 14:02	1
Lithium	ND		8.0	3.4	ug/L		10/13/25 14:00	10/14/25 14:02	1
Magnesium	ND		1000	61	ug/L		10/13/25 14:00	10/14/25 14:02	1
Molybdenum	ND		5.0	1.1	ug/L		10/13/25 14:00	10/14/25 14:02	1
Potassium	ND		1000	220	ug/L		10/13/25 14:00	10/14/25 14:02	1
Selenium	ND		5.0	0.89	ug/L		10/13/25 14:00	10/14/25 14:02	1
Sodium	ND		1000	880	ug/L		10/13/25 14:00	10/14/25 14:02	1
Thallium	ND		1.0	0.51	ug/L		10/13/25 14:00	10/14/25 14:02	1

Lab Sample ID: LCS 240-675746/3-A
Matrix: Water
Analysis Batch: 676047

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 675746

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	96.7		ug/L		97	80 - 120
Arsenic	1000	986		ug/L		99	80 - 120
Barium	1000	986		ug/L		99	80 - 120
Beryllium	500	444		ug/L		89	80 - 120
Cadmium	500	483		ug/L		97	80 - 120
Calcium	25000	24700		ug/L		99	80 - 120
Chromium	500	502		ug/L		100	80 - 120
Cobalt	500	478		ug/L		96	80 - 120
Lead	500	509		ug/L		102	80 - 120
Lithium	500	493		ug/L		99	80 - 120
Magnesium	25000	26200		ug/L		105	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-675746/3-A
Matrix: Water
Analysis Batch: 676047

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 675746

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	500	491		ug/L		98	80 - 120
Potassium	25000	25400		ug/L		102	80 - 120
Selenium	1000	941		ug/L		94	80 - 120
Sodium	25000	25700		ug/L		103	80 - 120
Thallium	1000	1030		ug/L		103	80 - 120

Lab Sample ID: 240-235095-1 MS
Matrix: Water
Analysis Batch: 676047

Client Sample ID: BAC-21-F-20251009-01
Prep Type: Total Recoverable
Prep Batch: 675746

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		100	98.8		ug/L		99	80 - 120
Arsenic	4.0	J	1000	943		ug/L		94	80 - 120
Barium	190		1000	1130		ug/L		94	80 - 120
Beryllium	ND		500	433		ug/L		87	80 - 120
Cadmium	ND		500	458		ug/L		92	80 - 120
Calcium	130000		25000	144000	4	ug/L		76	80 - 120
Chromium	2.0	J	500	486		ug/L		97	80 - 120
Cobalt	0.59	J	500	443		ug/L		88	80 - 120
Lead	1.1		500	493		ug/L		98	80 - 120
Lithium	4.8	J	500	479		ug/L		95	80 - 120
Magnesium	15000		25000	39500		ug/L		97	80 - 120
Molybdenum	ND		500	472		ug/L		94	80 - 120
Potassium	2000		25000	26700		ug/L		99	80 - 120
Selenium	ND		1000	904		ug/L		90	80 - 120
Sodium	31000		25000	55000		ug/L		94	80 - 120
Thallium	ND		1000	1000		ug/L		100	80 - 120

Lab Sample ID: 240-235095-1 MSD
Matrix: Water
Analysis Batch: 676047

Client Sample ID: BAC-21-F-20251009-01
Prep Type: Total Recoverable
Prep Batch: 675746

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		100	99.9		ug/L		100	80 - 120	1	20
Arsenic	4.0	J	1000	978		ug/L		97	80 - 120	4	20
Barium	190		1000	1170		ug/L		99	80 - 120	4	20
Beryllium	ND		500	453		ug/L		91	80 - 120	5	20
Cadmium	ND		500	475		ug/L		95	80 - 120	4	20
Calcium	130000		25000	148000	4	ug/L		93	80 - 120	3	20
Chromium	2.0	J	500	504		ug/L		101	80 - 120	4	20
Cobalt	0.59	J	500	459		ug/L		92	80 - 120	4	20
Lead	1.1		500	512		ug/L		102	80 - 120	4	20
Lithium	4.8	J	500	511		ug/L		101	80 - 120	6	20
Magnesium	15000		25000	41400		ug/L		105	80 - 120	5	20
Molybdenum	ND		500	492		ug/L		98	80 - 120	4	20
Potassium	2000		25000	27700		ug/L		103	80 - 120	4	20
Selenium	ND		1000	927		ug/L		93	80 - 120	3	20
Sodium	31000		25000	57300		ug/L		104	80 - 120	4	20
Thallium	ND		1000	1050		ug/L		105	80 - 120	4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-676190/1-A
Matrix: Water
Analysis Batch: 676401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 676190

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		10/15/25 14:00	10/16/25 12:14	1

Lab Sample ID: LCS 240-676190/2-A
Matrix: Water
Analysis Batch: 676401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 676190

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.13		ug/L		83	80 - 120

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-675921/56
Matrix: Water
Analysis Batch: 675921

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/13/25 22:58	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/13/25 22:58	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/13/25 22:58	1

Lab Sample ID: MB 240-675921/82
Matrix: Water
Analysis Batch: 675921

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			10/14/25 01:42	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/14/25 01:42	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			10/14/25 01:42	1

Lab Sample ID: LCS 240-675921/81
Matrix: Water
Analysis Batch: 675921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	263		mg/L		94	85 - 115

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-676132/1
Matrix: Water
Analysis Batch: 676132

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			10/15/25 10:43	1

Method: 2540 C-2020 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-676132/2
Matrix: Water
Analysis Batch: 676132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	495	531		mg/L		107	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-675780/3
Matrix: Water
Analysis Batch: 675780

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/13/25 19:30	1
Fluoride	ND		0.050	0.024	mg/L			10/13/25 19:30	1
Sulfate	ND		1.0	0.35	mg/L			10/13/25 19:30	1

Lab Sample ID: LCS 240-675780/4
Matrix: Water
Analysis Batch: 675780

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.1		mg/L		98	90 - 110
Fluoride	2.50	2.50		mg/L		100	90 - 110
Sulfate	50.0	49.5		mg/L		99	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-740920/1-A
Matrix: Water
Analysis Batch: 744616

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 740920

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1833	U	0.222	0.223	1.00	0.365	pCi/L	10/16/25 08:00	11/10/25 15:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.8*		*30 - 110*	*10/16/25 08:00*	*11/10/25 15:30*	*1*

Lab Sample ID: LCS 160-740920/2-A
Matrix: Water
Analysis Batch: 744616

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 740920

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.57	9.075		1.24	1.00	0.305	pCi/L	95	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*81.1*		*30 - 110*

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-235095-1

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-740921/1-A
Matrix: Water
Analysis Batch: 744620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 740921

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3448	U	0.390	0.392	1.00	0.640	pCi/L	10/16/25 08:04	11/10/25 09:57	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.8*		*30 - 110*	*10/16/25 08:04*	*11/10/25 09:57*	*1*
Y Carrier	*83.4*		*30 - 110*	*10/16/25 08:04*	*11/10/25 09:57*	*1*

Lab Sample ID: LCS 160-740921/2-A
Matrix: Water
Analysis Batch: 744620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 740921

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.94	9.020		1.30	1.00	0.601	pCi/L	114	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*81.1*		*30 - 110*
Y Carrier	*79.3*		*30 - 110*

Metals

Prep Batch: 675746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total Recoverable	Water	3005A	
MB 240-675746/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-675746/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-675746/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-235095-1 MS	BAC-21-F-20251009-01	Total Recoverable	Water	3005A	
240-235095-1 MSD	BAC-21-F-20251009-01	Total Recoverable	Water	3005A	

Analysis Batch: 676032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total Recoverable	Water	6010D	675746
MB 240-675746/1-A	Method Blank	Total Recoverable	Water	6010D	675746
LCS 240-675746/2-A	Lab Control Sample	Total Recoverable	Water	6010D	675746

Analysis Batch: 676047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total Recoverable	Water	6020B	675746
MB 240-675746/1-A	Method Blank	Total Recoverable	Water	6020B	675746
LCS 240-675746/3-A	Lab Control Sample	Total Recoverable	Water	6020B	675746
240-235095-1 MS	BAC-21-F-20251009-01	Total Recoverable	Water	6020B	675746
240-235095-1 MSD	BAC-21-F-20251009-01	Total Recoverable	Water	6020B	675746

Prep Batch: 676190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total/NA	Water	7470A	
MB 240-676190/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-676190/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 676401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total/NA	Water	7470A	676190
MB 240-676190/1-A	Method Blank	Total/NA	Water	7470A	676190
LCS 240-676190/2-A	Lab Control Sample	Total/NA	Water	7470A	676190

General Chemistry

Analysis Batch: 675780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total/NA	Water	300.0	
MB 240-675780/3	Method Blank	Total/NA	Water	300.0	
LCS 240-675780/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 675921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total/NA	Water	2320 B-2021	
MB 240-675921/56	Method Blank	Total/NA	Water	2320 B-2021	
MB 240-675921/82	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-675921/81	Lab Control Sample	Total/NA	Water	2320 B-2021	

Analysis Batch: 676132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total/NA	Water	2540 C-2020	

General Chemistry (Continued)

Analysis Batch: 676132 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-676132/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-676132/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Rad

Prep Batch: 740920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total/NA	Water	PrecSep-21	
MB 160-740920/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-740920/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 740921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-235095-1	BAC-21-F-20251009-01	Total/NA	Water	PrecSep_0	
MB 160-740921/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-740921/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-235095-1
Project/Site: Federal CCR Wells

Client Sample ID: BAC-21-F-20251009-01
Lab Sample ID: 240-235095-1

Date Collected: 10/09/25 13:05
Matrix: Water
Date Received: 10/11/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			675746	GEV	EET CLE	10/13/25 14:00
Total Recoverable	Analysis	6010D		1	676032	RKT	EET CLE	10/14/25 19:25
Total Recoverable	Prep	3005A			675746	GEV	EET CLE	10/13/25 14:00
Total Recoverable	Analysis	6020B		1	676047	S4FJ	EET CLE	10/14/25 14:09
Total/NA	Prep	7470A			676190	GEV	EET CLE	10/15/25 14:00
Total/NA	Analysis	7470A		1	676401	BN	EET CLE	10/16/25 12:43
Total/NA	Analysis	2320 B-2021		1	675921	PQD2	EET CLE	10/14/25 03:22
Total/NA	Analysis	2540 C-2020		1	676132	TAV2	EET CLE	10/15/25 10:43
Total/NA	Analysis	300.0		1	675780	JMR	EET CLE	10/14/25 01:38
Total/NA	Prep	PrecSep-21			740920	AMS	EET SL	10/16/25 08:00
Total/NA	Analysis	9315		1	744619	SWS	EET SL	11/10/25 15:42
Total/NA	Prep	PrecSep_0			740921	AMS	EET SL	10/16/25 08:04
Total/NA	Analysis	9320		1	744616	SWS	EET SL	11/10/25 09:58
Total/NA	Analysis	Ra226_Ra228		1	744642	FLC	EET SL	11/11/25 12:37

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-235095-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-26
Iowa	State	421	06-01-27
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	2250	09-30-26
New Jersey	NELAP	OH001	06-30-26
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	10-28-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-26
Texas	NELAP	T104704517	08-31-26
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-26
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-26

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-26
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-26
HI - RadChem Recognition	State	n/a	06-30-26
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25 *
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-26
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	10-01-26
Massachusetts	State	M-MO054	06-30-26
MI - RadChem Recognition	State	9005	06-30-26
Missouri	State	780	06-30-28
Nevada	State	MO00054	07-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-235095-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-26
New Mexico	State	MO00054	06-30-26
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	06-30-26
North Dakota	State	R-207	06-30-25 *
Oklahoma	NELAP	9997	12-31-25
Oregon	NELAP	4157	09-01-26
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-26
Texas	NELAP	T104704193	07-31-26
US Fish & Wildlife	US Federal Programs	058448	07-31-26
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-26
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-31-26
West Virginia DEP	State	381	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax 330-497-0772

Chain of Custody Record

COLUMBUS
209

eurofins
Environment Testing

Client Information	Sampler: Bobby Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No.: 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra226, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	N	D	N	N	X	
BAC-21-F-20251009-01	10-9-25	1305	G	Water			1	1	Z	1	1		
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									

240-235095 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10-9-25/1345	KEMRON	Ashley McCloskey	10-10-25 1345	EURO
2	Ashley McCloskey	10-10-25 1700	EURO	JCollins	10-11-25 800	CLV
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative Login # _____
Barberton Facility

Client Lightstone GAVin Site Name _____ Cooler unpacked by: JC

Cooler Received on 10-11-25 Opened on 10-11-25

FedEx. 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 6 Foam Box Client Cooler Box Other _____

Packing material used. Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1	*Cooler temperature upon receipt* ☑ *See Multiple Cooler Form*	
	IR GUN # _____ (CF _____ °C) Observed Cooler Temp _____ °C Corrected Cooler Temp _____ °C	
2.	Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____	Yes No
	-Were the seals on the outside of the cooler(s) signed & dated?	Yes No NA
	Were tamper/custody seals on the bottle(s) or bottle kits (*LLHg/MeHg*)?	Yes No
	-Were tamper/custody seals intact and uncompromised?	Yes No NA
3	Shippers' packing slip attached to the cooler(s)?	Yes No
4	Did custody papers accompany the sample(s)?	Yes No
5	Were the custody papers relinquished & signed in the appropriate place?	Yes No
6	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes No
7	Did all bottles arrive in good condition (Unbroken)?	Yes No
8	Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes No
9	For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	
10	Were correct bottle(s) used for the test(s) indicated?	Yes No
11	Sufficient quantity received to perform indicated analyses?	Yes No
12	Are these work share samples and all listed on the COC?	Yes No
	If yes, Questions 13-17 have been checked at the originating laboratory	
13	Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA pH Strip Lot# HC567196
14	Were VOAs on the COC?	Yes No
15	Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes No NA
16	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes No
17	Was a LL Hg or Me Hg trip blank present? _____	Yes No

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:

Labels Verified by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: 12	3.3	4.0	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: 13	15.0	15.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.9	2.5	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.1	0.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.2	0.8	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	2.5	3.1	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	3.2	3.8	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.2	1.8	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.8	2.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

10/11/2025

Login Container Summary Report

240-235095

11/11/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
BAC-21 F-20251009-01	240-235095-A 1	Plastic 60 mL - unpreserved				
BAC-21-F-20251009-01	240 235095-B-1	Plastic 60 mL - unpreserved				
BAC-21 F 20251009-01	240-235095-C-1	Plastic 500ml - unpreserved				
BAC-21-F 20251009-01	240-235095-D-1	Plastic 500ml - with Nitric Acid	<2			
BAC-21-F-20251009-01	240 235095-E-1	Plastic 1 liter - Nitric Acid	<2			
BAC-21-F-20251009-01	240-235095-F-1	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-209282.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-235095-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/12/2025			
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal CCR Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0Radium-228 (GFPC)	9315_Ra226/PrecSep_21Radium-226 (GFPC)	Ra226Ra228_GFPCCombined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
BAC-21-F-20251009-01 (240-235095-1)	10/9/25	13:05 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/13/25 1415		M. Pinette	OCT 14 2025 0845	
Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

11/11/2025

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-235095-1

Login Number: 235095
List Number: 2
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 10/14/25 12:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Generated 5/7/2025 5:58:41 PM

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-221676-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

Generated
5/7/2025 5:58:41 PM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221676-1
Project/Site: Federal CCR Wells

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-221676-1 — Eurofins Cleveland

Job Narrative
240-221676-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 4/4/2025 3:45 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.0°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221676-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221676-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-221676-1	OHIO RIVER	Water	04/02/25 09:20	04/04/25 15:45

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221676-1

Client Sample ID: OHIO RIVER

Lab Sample ID: 240-221676-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.77	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	42		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	25000		1000	250	ug/L	1		6020B	Total Recoverable
Chromium	1.6	J	5.0	1.2	ug/L	1		6020B	Total Recoverable
Cobalt	0.76	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lead	1.0		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	5.1	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	6700		1000	61	ug/L	1		6020B	Total Recoverable
Potassium	2000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	20000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	65		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	65		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	160		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	27		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.093		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	43		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: OHIO RIVER

Date Collected: 04/02/25 09:20
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221676-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		04/07/25 14:00	04/09/25 00:12	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/07/25 14:00	04/09/25 11:34	1
Arsenic	**0.77**	**J**	5.0	0.75	ug/L		04/07/25 14:00	04/09/25 11:34	1
Barium	**42**		5.0	0.77	ug/L		04/07/25 14:00	04/09/25 11:34	1
Beryllium	ND		1.0	0.27	ug/L		04/07/25 14:00	04/09/25 11:34	1
Cadmium	ND		1.0	0.077	ug/L		04/07/25 14:00	04/09/25 11:34	1
Calcium	**25000**		1000	250	ug/L		04/07/25 14:00	04/09/25 11:34	1
Chromium	**1.6**	**J**	5.0	1.2	ug/L		04/07/25 14:00	04/09/25 11:34	1
Cobalt	**0.76**	**J**	1.0	0.086	ug/L		04/07/25 14:00	04/09/25 11:34	1
Lead	**1.0**		1.0	0.45	ug/L		04/07/25 14:00	04/09/25 11:34	1
Lithium	**5.1**	**J**	8.0	3.4	ug/L		04/07/25 14:00	04/09/25 11:34	1
Magnesium	**6700**		1000	61	ug/L		04/07/25 14:00	04/09/25 11:34	1
Molybdenum	ND		5.0	1.1	ug/L		04/07/25 14:00	04/09/25 11:34	1
Potassium	**2000**		1000	220	ug/L		04/07/25 14:00	04/09/25 11:34	1
Selenium	ND		5.0	0.89	ug/L		04/07/25 14:00	04/09/25 11:34	1
Sodium	**20000**		1000	880	ug/L		04/07/25 14:00	04/10/25 13:09	1
Thallium	ND		1.0	0.51	ug/L		04/07/25 14:00	04/09/25 11:34	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/07/25 14:00	04/08/25 11:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**65**		5.0	2.6	mg/L			04/11/25 19:27	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**65**		5.0	2.6	mg/L			04/11/25 19:27	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			04/11/25 19:27	1
Total Dissolved Solids (SM 2540 C-2020)	**160**		10	7.8	mg/L			04/09/25 10:12	1
Chloride (EPA 300.0)	**27**		1.0	0.13	mg/L			04/07/25 19:39	1
Fluoride (EPA 300.0)	**0.093**		0.050	0.024	mg/L			04/07/25 19:39	1
Sulfate (EPA 300.0)	**43**		1.0	0.35	mg/L			04/07/25 19:39	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.308	U	0.270	0.271	1.00	0.397	pCi/L	04/09/25 07:24	05/07/25 14:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.8*		*30 - 110*	*04/09/25 07:24*	*05/07/25 14:21*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.766	U	0.587	0.591	1.00	0.909	pCi/L	04/09/25 07:28	05/07/25 09:57	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221676-1

Client Sample ID: OHIO RIVER
Date Collected: 04/02/25 09:20
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221676-1
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.8*		*30 - 110*	*04/09/25 07:28*	*05/07/25 09:57*	*1*
Y Carrier	*79.6*		*30 - 110*	*04/09/25 07:28*	*05/07/25 09:57*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.07**		0.646	0.650	5.00	0.909	pCi/L		05/06/25 19:33	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221676-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	**Client Sample ID**	**(30-110)**
240-221676-1	OHIO RIVER	84.8
LCS 160-711578/2-A	Lab Control Sample	88.6
MB 160-711578/1-A	Method Blank	93.7

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	**Client Sample ID**	**(30-110)**	**(30-110)**
240-221676-1	OHIO RIVER	84.8	79.6
LCS 160-711579/2-A	Lab Control Sample	88.6	79.6
MB 160-711579/1-A	Method Blank	93.7	81.5

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-651163/1-A
Matrix: Water
Analysis Batch: 651433

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		04/07/25 14:00	04/08/25 23:18	1

Lab Sample ID: LCS 240-651163/2-A
Matrix: Water
Analysis Batch: 651433

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1050		ug/L		105	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-651163/1-A
Matrix: Water
Analysis Batch: 651537

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		04/07/25 14:00	04/09/25 10:51	1
Arsenic	ND		5.0	0.75	ug/L		04/07/25 14:00	04/09/25 10:51	1
Barium	ND		5.0	0.77	ug/L		04/07/25 14:00	04/09/25 10:51	1
Beryllium	ND		1.0	0.27	ug/L		04/07/25 14:00	04/09/25 10:51	1
Cadmium	ND		1.0	0.077	ug/L		04/07/25 14:00	04/09/25 10:51	1
Calcium	ND		1000	250	ug/L		04/07/25 14:00	04/09/25 10:51	1
Chromium	ND		5.0	1.2	ug/L		04/07/25 14:00	04/09/25 10:51	1
Cobalt	ND		1.0	0.086	ug/L		04/07/25 14:00	04/09/25 10:51	1
Lead	ND		1.0	0.45	ug/L		04/07/25 14:00	04/09/25 10:51	1
Lithium	ND		8.0	3.4	ug/L		04/07/25 14:00	04/09/25 10:51	1
Magnesium	ND		1000	61	ug/L		04/07/25 14:00	04/09/25 10:51	1
Molybdenum	ND		5.0	1.1	ug/L		04/07/25 14:00	04/09/25 10:51	1
Potassium	ND		1000	220	ug/L		04/07/25 14:00	04/09/25 10:51	1
Selenium	ND		5.0	0.89	ug/L		04/07/25 14:00	04/09/25 10:51	1
Sodium	ND		1000	880	ug/L		04/07/25 14:00	04/09/25 10:51	1
Thallium	ND		1.0	0.51	ug/L		04/07/25 14:00	04/09/25 10:51	1

Lab Sample ID: LCS 240-651163/3-A
Matrix: Water
Analysis Batch: 651537

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	91.3		ug/L		91	80 - 120
Arsenic	1000	929		ug/L		93	80 - 120
Barium	1000	881		ug/L		88	80 - 120
Beryllium	500	477		ug/L		95	80 - 120
Cadmium	500	438		ug/L		88	80 - 120
Calcium	25000	22800		ug/L		91	80 - 120
Chromium	500	460		ug/L		92	80 - 120
Cobalt	500	433		ug/L		87	80 - 120
Lead	500	479		ug/L		96	80 - 120
Lithium	500	444		ug/L		89	80 - 120
Magnesium	25000	22800		ug/L		91	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-651163/3-A
Matrix: Water
Analysis Batch: 651537

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 651163

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	500	450		ug/L		90	80 - 120
Potassium	25000	23300		ug/L		93	80 - 120
Selenium	1000	901		ug/L		90	80 - 120
Sodium	25000	23200		ug/L		93	80 - 120
Thallium	1000	1000		ug/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-651164/1-A
Matrix: Water
Analysis Batch: 651334

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 651164

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		04/07/25 14:00	04/08/25 11:12	1

Lab Sample ID: LCS 240-651164/2-A
Matrix: Water
Analysis Batch: 651334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 651164

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.03		ug/L		101	80 - 120

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-652101/4
Matrix: Water
Analysis Batch: 652101

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			04/11/25 18:18	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/11/25 18:18	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			04/11/25 18:18	1

Lab Sample ID: LCS 240-652101/3
Matrix: Water
Analysis Batch: 652101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	268		mg/L		96	86 - 123

Lab Sample ID: 240-221676-1 DU
Matrix: Water
Analysis Batch: 652101

Client Sample ID: OHIO RIVER
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	65		64.8		mg/L		0	20
Bicarbonate Alkalinity as CaCO3	65		64.8		mg/L		0	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	20

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221676-1

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-651469/1
Matrix: Water
Analysis Batch: 651469

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			04/09/25 10:12	1

Lab Sample ID: LCS 240-651469/2
Matrix: Water
Analysis Batch: 651469

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	169		mg/L		96	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-651187/3
Matrix: Water
Analysis Batch: 651187

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			04/07/25 15:22	1
Fluoride	ND		0.050	0.024	mg/L			04/07/25 15:22	1
Sulfate	ND		1.0	0.35	mg/L			04/07/25 15:22	1

Lab Sample ID: LCS 240-651187/4
Matrix: Water
Analysis Batch: 651187

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	47.6		mg/L		95	90 - 110
Fluoride	2.50	2.45		mg/L		98	90 - 110
Sulfate	50.0	47.1		mg/L		94	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-711578/1-A
Matrix: Water
Analysis Batch: 716364

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 711578

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04702	U	0.161	0.161	1.00	0.310	pCi/L	04/09/25 07:24	05/07/25 14:20	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.7*		*30 - 110*	*04/09/25 07:24*	*05/07/25 14:20*	*1*

Lab Sample ID: LCS 160-711578/2-A
Matrix: Water
Analysis Batch: 716364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 711578

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.58	8.203		1.16	1.00	0.353	pCi/L	86	75 - 125

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-711578/2-A
Matrix: Water
Analysis Batch: 716364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 711578

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*88.6*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-711579/1-A
Matrix: Water
Analysis Batch: 716362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 711579

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.01290	U	0.270	0.270	1.00	0.506	pCi/L	04/09/25 07:28	05/07/25 09:44	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.7*		*30 - 110*	*04/09/25 07:28*	*05/07/25 09:44*	*1*
Y Carrier	*81.5*		*30 - 110*	*04/09/25 07:28*	*05/07/25 09:44*	*1*

Lab Sample ID: LCS 160-711579/2-A
Matrix: Water
Analysis Batch: 716362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 711579

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.47	11.15		1.49	1.00	0.664	pCi/L	118	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*88.6*		*30 - 110*
Y Carrier	*79.6*		*30 - 110*

Metals

Prep Batch: 651163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total Recoverable	Water	3005A	
MB 240-651163/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-651163/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-651163/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 651164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total/NA	Water	7470A	
MB 240-651164/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-651164/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 651334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total/NA	Water	7470A	651164
MB 240-651164/1-A	Method Blank	Total/NA	Water	7470A	651164
LCS 240-651164/2-A	Lab Control Sample	Total/NA	Water	7470A	651164

Analysis Batch: 651433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total Recoverable	Water	6010D	651163
MB 240-651163/1-A	Method Blank	Total Recoverable	Water	6010D	651163
LCS 240-651163/2-A	Lab Control Sample	Total Recoverable	Water	6010D	651163

Analysis Batch: 651537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total Recoverable	Water	6020B	651163
MB 240-651163/1-A	Method Blank	Total Recoverable	Water	6020B	651163
LCS 240-651163/3-A	Lab Control Sample	Total Recoverable	Water	6020B	651163

Analysis Batch: 651731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total Recoverable	Water	6020B	651163

General Chemistry

Analysis Batch: 651187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total/NA	Water	300.0	
MB 240-651187/3	Method Blank	Total/NA	Water	300.0	
LCS 240-651187/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 651469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total/NA	Water	2540 C-2020	
MB 240-651469/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-651469/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 652101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total/NA	Water	2320 B-2021	
MB 240-652101/4	Method Blank	Total/NA	Water	2320 B-2021	

General Chemistry (Continued)

Analysis Batch: 652101 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-652101/3	Lab Control Sample	Total/NA	Water	2320 B-2021	
240-221676-1 DU	OHIO RIVER	Total/NA	Water	2320 B-2021	

Rad

Prep Batch: 711578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total/NA	Water	PrecSep-21	
MB 160-711578/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-711578/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 711579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-221676-1	OHIO RIVER	Total/NA	Water	PrecSep_0	
MB 160-711579/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-711579/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-221676-1

Client Sample ID: OHIO RIVER

Date Collected: 04/02/25 09:20
Date Received: 04/04/25 15:45

Lab Sample ID: 240-221676-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6010D		1	651433	AJC	EET CLE	04/09/25 00:12
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651731	S4FJ	EET CLE	04/10/25 13:09
Total Recoverable	Prep	3005A			651163	XWS6	EET CLE	04/07/25 14:00
Total Recoverable	Analysis	6020B		1	651537	S4FJ	EET CLE	04/09/25 11:34
Total/NA	Prep	7470A			651164	XWS6	EET CLE	04/07/25 14:00
Total/NA	Analysis	7470A		1	651334	BN	EET CLE	04/08/25 11:29
Total/NA	Analysis	2320 B-2021		1	652101	JWW	EET CLE	04/11/25 19:27
Total/NA	Analysis	2540 C-2020		1	651469	AAP	EET CLE	04/09/25 10:12
Total/NA	Analysis	300.0		1	651187	JMR	EET CLE	04/07/25 19:39
Total/NA	Prep	PrecSep-21			711578	OGC	EET SL	04/09/25 07:24
Total/NA	Analysis	9315		1	716364	SWS	EET SL	05/07/25 14:21
Total/NA	Prep	PrecSep_0			711579	OGC	EET SL	04/09/25 07:28
Total/NA	Analysis	9320		1	716364	SWS	EET SL	05/07/25 09:57
Total/NA	Analysis	Ra226_Ra228		1	716234	EMH	EET SL	05/06/25 19:33

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221676-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-221676-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

0.0
5.0

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: Bobby Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No. 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N	N		
Ohio River	4-2-25	0920	G	Water			1	1	2	1	1		
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									
				Water									

240-221676 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	4-3-25 / 1330	KEMRON			
	[signature]	4/4/25 3:45	Wayfinder	Martin	4/4/25 1545	EVR
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Gavin Site Name _____ Cooler unpacked by: KMartin

Cooler Received on 4/4/25 Opened on 4/4/25

FedEx. 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used. Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 13 (CF +0.0 °C) Observed Cooler Temp 0.0 °C Corrected Cooler Temp 0.0 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	Yes (No)	**Tests that are not checked for pH by Receiving:**
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No (NA)	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	**VOAs**
-Were tamper/custody seals intact and uncompromised?	Yes No (NA)	**Oil and Grease**
3 Shippers' packing slip attached to the cooler(s)?	Yes (No)	**TOC**
4. Did custody papers accompany the sample(s)?	(Yes) No	
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7 Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11 Sufficient quantity received to perform indicated analyses?	(Yes) No	
12 Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# HC448976
14 Were VOAs on the COC?	Yes (No)	
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes No (NA)	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes (No)	
17 Was a LL Hg or Me Hg trip blank present? _____	Yes (No)	

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by:

_____

_____

_____

_____

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved. _____ Preservative(s) added/Lot number(s). _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

4/5/2025

Login Container Summary Report

240-221676

5/7/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
OHIO RIVER	240-221676-A-1	Plastic 60 mL - unpreserved				
OHIO RIVER	240-221676-B-1	Plastic 60 mL - unpreserved				
OHIO RIVER	240-221676-C-1	Plastic 500ml - unpreserved				
OHIO RIVER	240-221676-D-1	Plastic 500ml - with Nitric Acid	<2			
OHIO RIVER	240-221676-E-1	Plastic 1 liter - Nitric Acid	<2			
OHIO RIVER	240-221676-F-1	Plastic 1 liter - Nitric Acid	<2			

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-200891.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-221676-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 5/6/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Federal GWM Wells	Project #: 24019633			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
OHIO RIVER (240-221676-1)	4/2/25	09:20 Eastern	G	Water			X	X	X	2	

Analysis Requested

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	4/7/25 0900	EC	Sierra Worthington	4/8/25 0825	EAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

5/7/2025

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-221676-1

Login Number: 221676
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 04/08/25 12:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620
Generated 10/30/2025 6:19:59 PM

JOB DESCRIPTION

Ohio River CCR

JOB NUMBER

240-234007-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Roxanne Cisneros

Generated
10/30/2025 6:19:59 PM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(330)497-9396

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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Ohio River CCR

Job ID: 240-234007-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-234007-1 — Eurofins Cleveland

Job Narrative
240-234007-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The sample was received on 9/27/2025 8:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 12 coolers at receipt time were 0.4°C, 0.4°C, 0.7°C, 0.8°C, 1.0°C, 1.1°C, 1.4°C, 1.5°C, 1.5°C, 1.6°C, 1.7°C and 12.3°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Rad
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234007-1
Project/Site: Ohio River CCR

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
2320 B-2021	Alkalinity	SM	EET CLE
2540 C-2020	Solids, Total Dissolved (TDS)	SM	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
9315	Radium 226 by GFPC	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Ohio River CCR

Job ID: 240-234007-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
240-234007-1	OHIO RIVER	Water	09/23/25 12:15	09/27/25 08:00	Ohio

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Ohio River CCR

Job ID: 240-234007-1

Client Sample ID: OHIO RIVER

Lab Sample ID: 240-234007-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	120		100	57	ug/L	1		6010D	Total Recoverable
Arsenic	1.3	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	56		5.0	0.77	ug/L	1		6020B	Total Recoverable
Calcium	37000		1000	250	ug/L	1		6020B	Total Recoverable
Cobalt	0.19	J	1.0	0.086	ug/L	1		6020B	Total Recoverable
Lithium	6.2	J	8.0	3.4	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	61	ug/L	1		6020B	Total Recoverable
Molybdenum	2.9	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	2600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	37000		1000	880	ug/L	1		6020B	Total Recoverable
Total Alkalinity	71		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Bicarbonate Alkalinity as CaCO3	71		5.0	2.6	mg/L	1		2320 B-2021	Total/NA
Total Dissolved Solids	270		10	7.8	mg/L	1		2540 C-2020	Total/NA
Chloride	45		1.0	0.13	mg/L	1		300.0	Total/NA
Fluoride	0.17		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	90		1.0	0.35	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: OHIO RIVER
Date Collected: 09/23/25 12:15
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234007-1
Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**120**		100	57	ug/L		09/29/25 14:00	09/30/25 17:54	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 17:46	1
Arsenic	**1.3**	**J**	5.0	0.75	ug/L		09/29/25 14:00	09/30/25 17:46	1
Barium	**56**		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 17:46	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 17:46	1
Cadmium	ND		1.0	0.077	ug/L		09/29/25 14:00	09/30/25 17:46	1
Calcium	**37000**		1000	250	ug/L		09/29/25 14:00	09/30/25 17:46	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 17:46	1
Cobalt	**0.19**	**J**	1.0	0.086	ug/L		09/29/25 14:00	09/30/25 17:46	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 17:46	1
Lithium	**6.2**	**J**	8.0	3.4	ug/L		09/29/25 14:00	09/30/25 17:46	1
Magnesium	**13000**		1000	61	ug/L		09/29/25 14:00	09/30/25 17:46	1
Molybdenum	**2.9**	**J**	5.0	1.1	ug/L		09/29/25 14:00	09/30/25 17:46	1
Potassium	**2600**		1000	220	ug/L		09/29/25 14:00	09/30/25 17:46	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 17:46	1
Sodium	**37000**		1000	880	ug/L		09/29/25 14:00	09/30/25 17:46	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 17:46	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320 B-2021)	**71**		5.0	2.6	mg/L			09/30/25 10:46	1
Bicarbonate Alkalinity as CaCO3 (SM 2320 B-2021)	**71**		5.0	2.6	mg/L			09/30/25 10:46	1
Carbonate Alkalinity as CaCO3 (SM 2320 B-2021)	ND		5.0	2.6	mg/L			09/30/25 10:46	1
Total Dissolved Solids (SM 2540 C-2020)	**270**		10	7.8	mg/L			09/29/25 09:44	1
Chloride (EPA 300.0)	**45**		1.0	0.13	mg/L			10/01/25 20:30	1
Fluoride (EPA 300.0)	**0.17**		0.050	0.024	mg/L			10/01/25 20:30	1
Sulfate (EPA 300.0)	**90**		1.0	0.35	mg/L			10/01/25 20:30	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.177	U	0.241	0.242	1.00	0.406	pCi/L	10/03/25 07:59	10/30/25 14:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*74.1*		*30 - 110*	*10/03/25 07:59*	*10/30/25 14:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.390	U	0.394	0.395	1.00	0.836	pCi/L	10/03/25 08:10	10/30/25 09:52	1

Client: Lightstone Generation Gavin Power LLC
Project/Site: Ohio River CCR

Job ID: 240-234007-1

Client Sample ID: OHIO RIVER
Date Collected: 09/23/25 12:15
Date Received: 09/27/25 08:00

Lab Sample ID: 240-234007-1
Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*74.1*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:52*	*1*
Y Carrier	*70.3*		*30 - 110*	*10/03/25 08:10*	*10/30/25 09:52*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.213	U	0.462	0.463	5.00	0.836	pCi/L		10/30/25 17:10	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Ohio River CCR

Job ID: 240-234007-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)								
		Ba								
Lab Sample ID	Client Sample ID	(30-110)								
240-234007-1	OHIO RIVER	74.1								
LCS 160-738969/2-A	Lab Control Sample	90.8								
MB 160-738969/1-A	Method Blank	89.8								

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)								
		Ba	Y							
Lab Sample ID	Client Sample ID	(30-110)	(30-110)							
240-234007-1	OHIO RIVER	74.1	70.3							
LCS 160-738970/2-A	Lab Control Sample	90.8	81.1							
MB 160-738970/1-A	Method Blank	89.8	77.4							

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-673738/1-A
Matrix: Water
Analysis Batch: 673881

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		09/29/25 14:00	09/30/25 11:03	1

Lab Sample ID: LCS 240-673738/2-A
Matrix: Water
Analysis Batch: 673881

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1130		ug/L		113	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-673738/1-A
Matrix: Water
Analysis Batch: 674025

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.57	ug/L		09/29/25 14:00	09/30/25 17:25	1
Arsenic	ND		5.0	0.75	ug/L		09/29/25 14:00	09/30/25 17:25	1
Barium	ND		5.0	0.77	ug/L		09/29/25 14:00	09/30/25 17:25	1
Beryllium	ND		1.0	0.27	ug/L		09/29/25 14:00	09/30/25 17:25	1
Cadmium	ND		1.0	0.077	ug/L		09/29/25 14:00	09/30/25 17:25	1
Calcium	ND		1000	250	ug/L		09/29/25 14:00	09/30/25 17:25	1
Chromium	ND		5.0	1.2	ug/L		09/29/25 14:00	09/30/25 17:25	1
Cobalt	ND		1.0	0.086	ug/L		09/29/25 14:00	09/30/25 17:25	1
Lead	ND		1.0	0.45	ug/L		09/29/25 14:00	09/30/25 17:25	1
Lithium	ND		8.0	3.4	ug/L		09/29/25 14:00	09/30/25 17:25	1
Magnesium	ND		1000	61	ug/L		09/29/25 14:00	09/30/25 17:25	1
Molybdenum	ND		5.0	1.1	ug/L		09/29/25 14:00	09/30/25 17:25	1
Potassium	ND		1000	220	ug/L		09/29/25 14:00	09/30/25 17:25	1
Selenium	ND		5.0	0.89	ug/L		09/29/25 14:00	09/30/25 17:25	1
Sodium	ND		1000	880	ug/L		09/29/25 14:00	09/30/25 17:25	1
Thallium	ND		1.0	0.51	ug/L		09/29/25 14:00	09/30/25 17:25	1

Lab Sample ID: LCS 240-673738/3-A
Matrix: Water
Analysis Batch: 674025

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	101		ug/L		101	80 - 120
Arsenic	1000	953		ug/L		95	80 - 120
Barium	1000	982		ug/L		98	80 - 120
Beryllium	500	462		ug/L		92	80 - 120
Cadmium	500	484		ug/L		97	80 - 120
Calcium	25000	24800		ug/L		99	80 - 120
Chromium	500	499		ug/L		100	80 - 120
Cobalt	500	509		ug/L		102	80 - 120
Lead	500	518		ug/L		104	80 - 120
Lithium	500	500		ug/L		100	80 - 120
Magnesium	25000	26300		ug/L		105	80 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-673738/3-A
Matrix: Water
Analysis Batch: 674025

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 673738

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	500	493		ug/L		99	80 - 120
Potassium	25000	25600		ug/L		103	80 - 120
Selenium	1000	935		ug/L		94	80 - 120
Sodium	25000	25800		ug/L		103	80 - 120
Thallium	1000	1040		ug/L		104	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-673740/1-A
Matrix: Water
Analysis Batch: 673948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 673740

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		09/29/25 14:00	09/30/25 10:01	1

Lab Sample ID: LCS 240-673740/2-A
Matrix: Water
Analysis Batch: 673948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 673740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.12		ug/L		102	80 - 120

Method: 2320 B-2021 - Alkalinity

Lab Sample ID: MB 240-673946/4
Matrix: Water
Analysis Batch: 673946

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	2.6	mg/L			09/30/25 10:28	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			09/30/25 10:28	1
Carbonate Alkalinity as CaCO3	ND		5.0	2.6	mg/L			09/30/25 10:28	1

Lab Sample ID: LCS 240-673946/3
Matrix: Water
Analysis Batch: 673946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	280	255		mg/L		91	86 - 123

Method: 2540 C-2020 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-673661/1
Matrix: Water
Analysis Batch: 673661

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	7.8	mg/L			09/29/25 09:44	1

Method: 2540 C-2020 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-673661/2
Matrix: Water
Analysis Batch: 673661

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	176	158		mg/L		90	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-674179/3
Matrix: Water
Analysis Batch: 674179

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			10/01/25 20:13	1
Fluoride	ND		0.050	0.024	mg/L			10/01/25 20:13	1
Sulfate	ND		1.0	0.35	mg/L			10/01/25 20:13	1

Lab Sample ID: LCS 240-674179/4
Matrix: Water
Analysis Batch: 674179

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.7		mg/L		99	90 - 110
Fluoride	2.50	2.56		mg/L		102	90 - 110
Sulfate	50.0	50.6		mg/L		101	90 - 110

Lab Sample ID: 240-234007-1 MS
Matrix: Water
Analysis Batch: 674179

Client Sample ID: OHIO RIVER
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	45		50.0	92.1		mg/L		94	80 - 120
Fluoride	0.17		2.50	2.68		mg/L		100	80 - 120
Sulfate	90		50.0	141		mg/L		101	80 - 120

Lab Sample ID: 240-234007-1 MSD
Matrix: Water
Analysis Batch: 674179

Client Sample ID: OHIO RIVER
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	45		50.0	95.9		mg/L		102	80 - 120	4	15
Fluoride	0.17		2.50	2.87		mg/L		108	80 - 120	7	15
Sulfate	90		50.0	145		mg/L		109	80 - 120	3	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-738969/1-A
Matrix: Water
Analysis Batch: 742990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 738969

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.009226	U	0.227	0.227	1.00	0.446	pCi/L	10/03/25 07:59	10/30/25 14:03	1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: MB 160-738969/1-A
Matrix: Water
Analysis Batch: 742990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 738969

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110	10/03/25 07:59	10/30/25 14:03	1

Lab Sample ID: LCS 160-738969/2-A
Matrix: Water
Analysis Batch: 742990

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 738969

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.57	8.419		1.17	1.00	0.366	pCi/L	88	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.8		30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-738970/1-A
Matrix: Water
Analysis Batch: 743002

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 738970

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4017	U	0.335	0.337	1.00	0.521	pCi/L	10/03/25 08:10	10/30/25 09:52	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110	10/03/25 08:10	10/30/25 09:52	1
Y Carrier	77.4		30 - 110	10/03/25 08:10	10/30/25 09:52	1

Lab Sample ID: LCS 160-738970/2-A
Matrix: Water
Analysis Batch: 743002

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 738970

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			7.97	8.382		1.19	1.00	0.541	pCi/L	105	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.8		30 - 110
Y Carrier	81.1		30 - 110

Metals

Prep Batch: 673738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total Recoverable	Water	3005A	
MB 240-673738/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-673738/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-673738/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 673740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total/NA	Water	7470A	
MB 240-673740/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-673740/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 673881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total Recoverable	Water	6010D	673738
MB 240-673738/1-A	Method Blank	Total Recoverable	Water	6010D	673738
LCS 240-673738/2-A	Lab Control Sample	Total Recoverable	Water	6010D	673738

Analysis Batch: 673948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total/NA	Water	7470A	673740
MB 240-673740/1-A	Method Blank	Total/NA	Water	7470A	673740
LCS 240-673740/2-A	Lab Control Sample	Total/NA	Water	7470A	673740

Analysis Batch: 674025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total Recoverable	Water	6020B	673738
MB 240-673738/1-A	Method Blank	Total Recoverable	Water	6020B	673738
LCS 240-673738/3-A	Lab Control Sample	Total Recoverable	Water	6020B	673738

General Chemistry

Analysis Batch: 673661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total/NA	Water	2540 C-2020	
MB 240-673661/1	Method Blank	Total/NA	Water	2540 C-2020	
LCS 240-673661/2	Lab Control Sample	Total/NA	Water	2540 C-2020	

Analysis Batch: 673946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total/NA	Water	2320 B-2021	
MB 240-673946/4	Method Blank	Total/NA	Water	2320 B-2021	
LCS 240-673946/3	Lab Control Sample	Total/NA	Water	2320 B-2021	

Analysis Batch: 674179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total/NA	Water	300.0	
MB 240-674179/3	Method Blank	Total/NA	Water	300.0	
LCS 240-674179/4	Lab Control Sample	Total/NA	Water	300.0	
240-234007-1 MS	OHIO RIVER	Total/NA	Water	300.0	
240-234007-1 MSD	OHIO RIVER	Total/NA	Water	300.0	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Ohio River CCR

Job ID: 240-234007-1

Rad

Prep Batch: 738969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total/NA	Water	PrecSep-21	
MB 160-738969/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-738969/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 738970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-234007-1	OHIO RIVER	Total/NA	Water	PrecSep_0	
MB 160-738970/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-738970/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234007-1
Project/Site: Ohio River CCR

Client Sample ID: OHIO RIVER
Lab Sample ID: 240-234007-1

Date Collected: 09/23/25 12:15
Matrix: Water

Date Received: 09/27/25 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6010D		1	673881	KLC	EET CLE	09/30/25 17:54
Total Recoverable	Prep	3005A			673738	F3PF	EET CLE	09/29/25 14:00
Total Recoverable	Analysis	6020B		1	674025	RKT	EET CLE	09/30/25 17:46
Total/NA	Prep	7470A			673740	F3PF	EET CLE	09/29/25 14:00
Total/NA	Analysis	7470A		1	673948	TQ6W	EET CLE	09/30/25 10:12
Total/NA	Analysis	2320 B-2021		1	673946	PQD2	EET CLE	09/30/25 10:46
Total/NA	Analysis	2540 C-2020		1	673661	C5SV	EET CLE	09/29/25 09:44
Total/NA	Analysis	300.0		1	674179	JMR	EET CLE	10/01/25 20:30
Total/NA	Prep	PrecSep-21			738969	JTR	EET SL	10/03/25 07:59
Total/NA	Analysis	9315		1	742990	SWS	EET SL	10/30/25 14:06
Total/NA	Prep	PrecSep_0			738970	JTR	EET SL	10/03/25 08:10
Total/NA	Analysis	9320		1	743002	SWS	EET SL	10/30/25 09:52
Total/NA	Analysis	Ra226_Ra228		1	743091	SCB	EET SL	10/30/25 17:10

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234007-1
Project/Site: Ohio River CCR

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-26
Iowa	State	421	06-01-27
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	2250	09-30-26
New Jersey	NELAP	OH001	06-30-26
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	10-28-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	10-15-25
Pennsylvania	NELAP	68-00340	08-31-26
Texas	NELAP	T104704517	08-31-26
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-26
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-26

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-26
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-26
HI - RadChem Recognition	State	n/a	06-30-26
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-26
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	10-01-26
Massachusetts	State	M-MO054	06-30-26
MI - RadChem Recognition	State	9005	06-30-26
Missouri	State	780	06-30-28
Nevada	State	MO00054	07-31-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-234007-1
Project/Site: Ohio River CCR

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	MO002	06-30-26
New Mexico	State	MO00054	06-30-26
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	06-30-26
North Dakota	State	R-207	06-30-25 *
Oklahoma	NELAP	9997	12-31-25
Oregon	NELAP	4157	09-01-26
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-26
Texas	NELAP	T104704193	07-31-26
US Fish & Wildlife	US Federal Programs	058448	07-31-26
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-26
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-31-26
West Virginia DEP	State	381	10-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

COLUMBUS
209

eurofins
Environment Testing

Client Information	Sampler: Robby Cesto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No. 240-111832-39818.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 8
Company: Lightstone Generation Gavin Power LLC	PWSID			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	2540C_Calcd - TDS	9315_Ra228, 9320_Ra228, Ra226Ra228_GFPC	300.0_28D - Chloride, Fluoride & Sulfate	2320B - (MOD) Alkalinity										Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	N	D	N	N										X	
Ohio River	9-23-25	1215	G	Water			1	1	2	1	1										6	
				Water																		
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240-234007 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9-26-25/0920	KEMRL	Ashley McCluskey	9-26-25 1320	EURO
Ashley McCluskey	9-26-25 1700	EURO	J Collins	9-27-25 800	EURO
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins – Cleveland Sample Receipt Form/Narrative Login # _____
Barberton Facility

Client Enlighten Gavin Site Name _____ Cooler unpacked by JC
Cooler Received on 9-27-25 Opened on 9-27-25
FedEx 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____
Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____
Packing material used Bubble Wrap Foam Plastic Bag None Other _____
COOLANT Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☑ See Multiple Cooler Form
IR GUN # 13 (CF +0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4 Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12 Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13 17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC567196
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17 Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:
Labels Verified by:

_____
_____
_____
_____

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired
Sample(s) _____ were received in a broken container
Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory
Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: 13	1.5	1.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.3	1.5	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.6	0.8	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.5	0.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.8	1.0	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.2	0.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.2	1.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	12.1	12.3	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.3	1.5	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.4	1.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.9	1.1	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	0.2	0.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

9/27/2025

Login Container Summary Report

240-234007

10/30/2025

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
OHIO RIVER	240-234007-A-1	Plastic 60 mL unpreserved				
OHIO RIVER	240-234007-B-1	Plastic 60 mL - unpreserved				
OHIO RIVER	240-234007-C-1	Plastic 500ml - unpreserved				
OHIO RIVER	240-234007-D-1	Plastic 500ml - with Nitric Acid				
OHIO RIVER	240 234007 E-1	Plastic 1 liter Nitric Acid				

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): N/A	COC No: 240-208627.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 240-234007-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 10/29/2025			
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Ohio River CCR	Project #: 24019633			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0Radium-228 (GFPC)	9315_Ra226/PrecSep_21Radium-226 (GFPC)	Ra226Ra228_GFPCCombined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
OHIO RIVER (240-234007-1)	9/23/25	12:15 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
K Martin	9/29/25 1400	EUR		0830 SEP 30 2025	
Relinquished by:	Date/Time:	Company	Received by: Cheyenne Forrest	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

10/30/2025

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-234007-1

Login Number: 234007
List Number: 2
Creator: Forrest, Cheyenne L

List Source: Eurofins St. Louis
List Creation: 09/30/25 12:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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