

Gavin Bottom Ash Pond

Gavin Power, LLC

2022 Annual Groundwater Monitoring and Corrective Action Report

Gavin Power Plant
Cheshire, Ohio

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Cheshire, Ohio



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Acronyms and Abbreviations

Name	Description
ASD	Alternate Source Demonstration
BAC	Bottom Ash Complex
BAP	Bottom Ash Pond
CCR	Coal combustion residual
CFR	Code of Federal Regulations
CPT	Cone Penetration Test
ERM	ERM Consulting & Engineering, Inc.
Gavin	Gavin Power, LLC
mya	Million years ago
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), ERM Consulting & Engineering, Inc. (ERM) has prepared this *2022 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) management units at the Plant 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. 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).

Review comments on the BAP groundwater monitoring program were received in 2022 from the United States Environmental Protection Agency (USEPA). In response, revisions and enhancements to the monitoring program are underway and additional investigation work performed in 2022 is summarized in this report. Some aspects of the additional investigation require collection of data over several seasons, and results from those tasks may result in future refinements of how hydraulic and groundwater quality monitoring data are interpreted and reported.

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 2022 in a “detection monitoring” program status as defined by 40 CFR § 257.94 and remained in detection monitoring at the end of the 2022 reporting period. Groundwater monitoring in 2022 consisted of two semi-annual monitoring events completed in March/April and October 2022 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 2022:

Well	Date Sampled	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids (TDS)
BAC-02	Mar/Apr-2022	X	X	X	X	X	X	X
	Oct-2022	X	X	X	φ	X	X	X
BAC-03	Mar/Apr-2022	X	φ	X	φ	X	X	φ
	Oct-2022	X	φ	X	φ	X	X	φ
BAC-04	Mar/Apr-2022	X	φ	X	φ	X	X	φ
	Oct-2022	X	φ	X	φ	X	X	φ
BAC-05	Mar/Apr-2022	X	φ	φ	φ	X	X	φ
	Oct-2022	X	φ	X	φ	X	X	φ

Notes: φ = No SSI; X = SSI; SSI = statistically significant increase

Each identified SSI was evaluated in the corresponding attached Alternate Source Demonstration (ASD) Reports. The ASD reports identify regional background (total dissolved solids [TDS], calcium, chloride, and fluoride), and the North Fly Ash Pond at the adjacent Kyger Creek Generating Station (boron, pH, and sulfate) as the sources of these SSIs; therefore, these wells remained in detection monitoring at the conclusion of 2022. Accordingly, no remedial actions were selected, initiated or performed in 2022.

1. INTRODUCTION

The General James M. Gavin Power Plant is a coal-fired generating station located in Gallia County in Cheshire, Ohio, along the Ohio River. The Plant contains three regulated coal combustion residual (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 (RWL), the Fly Ash Reservoir (FAR), and the Bottom Ash Pond. The BAP has a total surface area of approximately 49.1 acres and is located south of the main Plant area and adjacent to the Ohio River (Figure 1-1). The BAP, together with the smaller Reclaim Pond, makes up the Bottom Ash Complex (BAC), which has operated since 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 water in the Reclaim Pond is either pumped to the Plant for reuse or discharged to the Ohio River via an overflow structure subject to the Gavin National Pollution Discharge Elimination System (NPDES) permit. The Reclaim Pond is not intended to and does not receive any significant amount of CCR from the BAP; was not designed to retain an accumulation of CCR; and does not treat, store, or dispose of CCR. Therefore, it is not subject to the CCR Rule. The conversion of Units 1 and 2 to dry ash handling systems was completed and the placement of bottom ash in the BAP ceased in 2022.

ERM Consulting & Engineering, Inc. (ERM) produced this report on behalf of Gavin Power, LLC. 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 2023 (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.

Initial feedback on the BAP program was received from the United States Environmental Protection Agency (USEPA) in 2022. Ongoing discussion regarding this feedback may result in potential refinement of the groundwater monitoring program. In addition, some aspects of additional investigations require collection of data over several seasons, and results from those tasks may result in future refinements of how hydraulic and groundwater quality monitoring data are interpreted and reported.

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 coal combustion residual (CCR) unit and all background and downgradient monitoring wells.	Figure 1-2
§ 257.90(e)(2)	Identification of new monitoring wells installed or abandoned during the preceding year and narrative description.	Section 4.1
§ 257.90(e)(3)	Summary of groundwater data, wells sampled, date sampled, and whether sampling was required under detection or assessment monitoring.	Section 4.3, 5.4, Appendix C
§ 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, 5.3
§ 257.94(e)(2) (via § 257.90(e)(5))	Any Alternate Source Demonstration (ASD) reports and related certifications pertaining to a detection monitoring program.	Appendices C–D
§ 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 unit began the 2022 reporting period in detection monitoring. SSIs were identified for the BAP groundwater monitoring network for boron, calcium, chloride, fluoride, pH, sulfate, and TDS in 2022. Regional background (calcium, chloride, fluoride, and TDS), and the Kyger Creek North Fly Ash Pond (boron, pH, and sulfate) were identified as alternate sources for the SSIs. Therefore, the BAP remains in detection monitoring at the end of the 2022 reporting period.

3. BACKGROUND

3.1 Description of CCR Unit

The water from the BAP is 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. The Reclaim Pond was not designed to retain an accumulation of CCR, does not receive significant amounts of CCR from the BAP, and does not treat, store, or dispose of CCR, and therefore 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.

The BAP previously received bottom ash and as of the end of 2022 continued to receive miscellaneous Plant wastewaters including coal-pile runoff, cooling-tower blowdown, pyrites, and various Plant sump wastewaters, and is subject to the CCR Rule. The BAP will continue to receive non-CCR waste streams until March 2023 when a temporary water treatment system will be installed for these waste streams. Gavin is on track to meet the USEPA's cease receipt of waste deadline of 12 April 2023 for the BAP. Gavin plans to achieve closure of the BAP through removal of CCR. CCR is currently being excavated from the BAP and disposed of in Gavin's lined landfill. The BAP will be converted to a process water pond only.

3.2 Geology and Hydrogeology

3.2.1 Regional Geologic History

The Plant is located in the southeastern region of Ohio within the Allegheny Section of the Appalachian Plateau. Bedrock in Gallia County consists of sedimentary series of Allegheny, Conemaugh and Monongahela formations of Pennsylvanian age that were deposited about 298 to 302 million years ago (mya) (ODNR, 2006). The general dip of the underlying bedrock is east-southeast. The stratigraphic arrangement of the bedrock series in the region generally follows a cyclothymic sequence, defined by a cyclic repetition of sedimentary beds (Blake, 1952). The sedimentary beds include sandstone, siltstone/claystone and coal. The thickness and lateral extent of these beds vary in the area due to numerous drainage systems incising the bedrock. A prominent erosional force, originating over 2.5 mya in the Tertiary Period, was The Teays River (ODNR, 1995). The Teays Rivers headwaters began in western North Carolina, and its vast network of tributaries flowed to the north and northwest into West Virginia, Ohio, Indiana and Illinois (Erjavec, 2018). As the river moved through the landscape, it eroded bedrock material and deposited thick fluvial (deposited by a river system) sands and gravels in southeastern and central Ohio (Stout et al. 1943).

As time continued into the Pleistocene epoch (1.6 mya to 11,000 years ago), multiple glacial lobes advanced over the landscape and divided Ohio into its glaciated and non-glaciated regions. Early Pleistocene glaciation covered the northern and western sections of Ohio extending to its limit in central Ohio, near Chillicothe (Szabo, 2011). The glaciers of the Early Pleistocene created a blockade in central Ohio where the Teays River dammed and ponded, forming long/narrow lakes (termed finger lakes) extending throughout the Teays River tributary valleys. These finger lakes were generally interconnected, and the overall territory of these finger lakes is referred to as Lake Tight (ODNR, 1995). Lake Tight was between 0.79 to 0.88 mya, comparable in size to present day Lake Erie and expanded to the south and east from central Ohio into parts of West Virginia and Kentucky (Erjavec, 2018). The historical extent of Lake Tight included the southeastern portion of Ohio in which the Gavin Site and the BAP currently exists. Lake Tight became the dominant depositional environment, creating very thick lacustrine beds (sedimentary beds formed in a lake depositional environment) of clays, silts and fine sands that lay on top

of the coarser sands and gravels. The geologic combination of these deposits is referred to as the Teays Formation (Hoyer, 1976).

When Lake Tight breached, a new drainage system formed called Deep Stage. The Deep Stage drainage system had a reversed flow direction from the Teays River, now flowing from north to south and southwest (Stout et. al, 1943; Tight 1903). Deep Stage deeply incised the Teays Formation, eroding down to bedrock in areas of southern Ohio and creating high elevation terraces made up of Lake Tight silts and clays. Deep Stage created the Pomeroy River, which was the origin for the historic and present-day Ohio River Valley system (Stout et. Al, 1943). During the Wisconsin glacial stage in the Late Pleistocene (~24,000 to 11,000 years ago), the historic Ohio River valleys filled with sediments from the fluvio-glacial outwash (eroded and/or deposited by flowing meltwater from glaciers) (Bergolc, 2004). The glacial meltwater rivers deposited coarser-grained sands and gravels, which filled the incised valleys where the former Teays deposits existed, and over time increased the base elevations of the historic Ohio River valleys (Ray, 1974; Hoyer, 1976).

As the historic Ohio River had periods of high-energy sedimentation due to increased glacial meltwaters, it also experienced periods of low-energy sedimentation as meltwaters depleted. Low-energy environments, such as fluvial floodplains, deposit finer grained materials including clays, silts, and fine sands (Dunne et al., 2013). These postglacial lower-energy deposits occurred through the Quaternary Period into the Holocene Epoch (10,000 years ago to recent) (Ray, 1974; Bergolc, 2004). Simultaneously, erosion of the surrounding historic Ohio River valley walls deposited alluvial and colluvial sediments made of the previously deposited finer-grained Lake Tight beds (Ray, 1974; Hoyer 1976; Nelson et. al, 2022). As such, a fining upward sequence was created from the deposition of the alluvial and colluvial sediments, along with the low-energy fluvial deposition. This fining-upward sequence exists as a younger, finer-grained unit consisting of clays, silts and fine sands overlying the older, coarser-grained glacial sands and gravels.

3.2.2 Site-Specific Geology

Observation of bedrock cores collected around the BAP indicate the uppermost bedrock layers are claystone/siltstone (interpreted to be the Round Knob) and an underlying sandstone stratum (interpreted to be the Cow Run). A sharp contact exists between the bedrock units and the overlying coarser-grained glacial sands and gravels. These coarser sediments, consisting primarily of medium to coarse sands and gravels, are buried by the younger, finer-grained unit, which exists as a laterally extensive layer of clays and silts. This younger, finer-grained unit is also known as the separation layer, existing between the base of the BAP and the coarser sediments, which make up the alluvial aquifer below. Some fine-grained sands are also observed within the clays and silts within the separation layer, primarily being intermixed within the clay and silt matrix. However, two instances of interbedded fine sands, clays and/or silts have been described in the boring/well logs for B-0904 on the northern border of the neighboring Kyger Creek property and BAC-13, which was installed on the eastern berm of the BAP in 2022. The descriptions of interbedding in B-0904 and BAC-13 were both described at the base of the separation layer where contact exists with the deeper, coarser sands and gravels. These intervals of interbedding are not laterally or vertically extensive, as evidenced by lithologic observations in adjacent borings. As such, these few descriptions of interbedding are not considered to be representative of the clay and silt separation layer located above the coarse sand and gravel. Rather these may be isolated depositional instances. The wells installed in 2022 around the BAP area show general agreement in Site lithology and provide more detailed geologic descriptions of the sediments beneath the BAC than did historical borings/wells installed in the area.

3.2.3 Site Hydrology and Hydrogeology

The uppermost aquifer beneath the BAC area is approximately 20 to 40 feet thick and consists primarily of the coarser-grained sands and gravels described in section 3.2.2, 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 units below (Figure 3-2). The Ohio River acts as a hydraulic boundary condition to the east. Water supply wells FW-15 and FW-1101, which are operated by the Gavin plant, exist to the north of the BAC (Figure 3-3). These wells are screened within the alluvial aquifer and have 20-to-30-foot screens. Water supply wells FW-17 and FW-1102 are not expected to have a significant influence on groundwater at the BAP due to their distance from the BAP (0.4 to 0.5 miles to the north) and the infrequency of their use. A wetland area exists to the west of the BAC, which contains naturally occurring ponds and wetland vegetation.

Five undisturbed Shelby tube samples of the separation layer were collected from a barge within the BAP in 2020 for laboratory grain size distribution and permeameter testing (ERM 2021a). 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 values (K values) ranging from 1.44E-08 cm/sec to 1.18E-07 cm/sec. Thus, even the samples with the highest amount of sand yielded very low K values. These data are direct evidence that the separation layer beneath the BAP is not transmissive enough for water to flow from the BAP through the separation layer to the uppermost aquifer, and the separation layer acts as aquitard to downward migration of water stored in the BAP.

3.3 Monitoring Well Network

The 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. In 2020, BAC-06 and BAC-07 were installed at the southern boundary of the Bottom Ash Pond and were incorporated into the updated monitoring network in 2021 (ERM 2021b). Figure 3-3 provides the monitoring well locations on the Site location map.

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 North Fly Ash Pond (NFAP). The downgradient wells are positioned at the downgradient boundary of waste to detect potential releases of CCR constituents from the BAP into groundwater in the uppermost aquifer. In addition, monitoring well B-0904 has historically been used to provide supplemental information to the monitoring network. This monitoring well is screened in both the separation and alluvial aquifer and is not located on Gavin's property and access issues have prevented consistent sampling and therefore is not included in the certified monitoring network.

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 subsequent groundwater sampling events in July 2017, May and September 2018, March and September 2019, March and September 2020, and March and September 2021, the prediction limits were compared to the results from the downgradient wells to identify statistically significant increases. Alternate Source Demonstration (ASD) Reports were developed for each sampling event discussing each SSI, which concluded that SSIs resulted from alternate sources,

and thus the CCR unit remained in detection monitoring (ERM 2018a; ERM 2018b; ERM 2019a; ERM 2019b; ERM 2020a; ERM 2020b; ERM 2021c; ERM 2022a).

4. MONITORING ACTIVITIES

4.1 Monitoring Well Installation

Sixteen monitoring wells were proposed and successfully installed in key areas around the BAP in 2022 (Figure 3-3). Well construction information is presented in Appendix A. Boring and construction logs are provided in Appendix B.

- Alluvial Aquifer - Nine wells 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).
- Separation Layer - Two wells installed in the fine-grained silt and clay layer (BAC-15 and BAC-20).
- Bedrock - Four wells installed in shallow bedrock (BAC-09, BAC-11, BAC-13, and BAC-19).
- Alluvial Aquifer and Separation Layer – One well installed to span the alluvial aquifer and the separation layer (BAC-17). 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.

4.2 Hydraulic Testing

Following well installation activities, slug tests were completed by ERM at six previously installed monitoring wells and 13 wells installed in 2022, in the alluvial aquifer, separation layer, bedrock, and one location that spans the alluvial aquifer and the separation layer. A slug test is designed to measure the response of an aquifer to an instantaneous displacement of a known volume of water within a well. This is accomplished either by inserting (falling head test) or removing (rising head test) a solid mass of known volume (solid slug) thereby raising or lowering the water level from its initial static position and monitoring recovery or displacing the water in the well with pressurized air, releasing the pressure by opening a valve and monitoring recovery (pneumatic slug). A range of hydraulic conductivity values was obtained by performing both falling and rising head slug. Water levels were monitored continuously throughout this process to obtain the aquifer response.

Aquifer data was analyzed using the aquifer test analysis software program, Aqtesolv™. Analysis was completed using analytical methods appropriate for the hydrogeology. The dataset was analyzed to calculate an estimated hydraulic conductivity value for each well screen interval.

4.3 Groundwater Elevation Monitoring to Assess Groundwater Mounding

Programmable electronic data loggers equipped with a pressure-sensitive water level transducer were installed at four alluvial aquifer monitoring well couplets (eight monitoring wells) installed at the southern, western, northern, and eastern boundaries of the BAP to evaluate the potential for groundwater mounding. These monitoring well couplets were selectively chosen based on their placement and proximity to one another, and to the BAP. Each well couplet included a well on top of the berm directly adjacent to the BAP, and the other at the base of the berm, 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 groundwater elevations at the well located at the top of the berm (closer to the BAP) compared to its counterpart at the base of the berm (further from the BAP). The four well couplet pairs included:

- BAC-01 (base of berm) and BAC-08 (top of berm), installed at the western boundary of the BAP
- BAC-10 (base of berm) and BAC-02 (top of berm), installed at the northern boundary of the BAP
- BAC-12 (base of berm) and BAC-04 (top of berm), installed at the eastern boundary of the BAP
- BAC-16 (base of berm) and BAC-18 (top of berm), installed at the southern boundary of the BAP

Groundwater elevations were compared over time for each well couplet to evaluate whether mounding was occurring. As a measure of data quality, transducer data were reviewed against corresponding manual water level measurements to ensure accuracy and consistency between the two datasets. In addition, a piezometer was installed in the Ohio River adjacent to the BAP to collect river stage elevation data, which was also reviewed against the transducer-based groundwater elevations. Transducers were deployed at the eight couplet wells between August and December, with some intermittent periods where data was not collected to allow for data download and other field activities. During the transducer deployment periods, water supply wells FW-15 and FW-1101 (located north of the BAP) were periodically cycled on and off to evaluate groundwater elevations under both pumping and non-pumping conditions.

4.4 2022 Sampling Summary

Groundwater samples were collected in 2022 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 provide a summary of the 2022 sample dates and the well gradient designation (upgradient or downgradient) relative to the BAP. During the H1 2022 and H2 2022 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	31 March 2022	11 October 2022
BAC-02	Downgradient	31 March 2022	17 October 2022
BAC-03	Downgradient	01 April 2022	13 October 2022
BAC-04	Downgradient	01 April 2022	12 October 2022
BAC-05	Downgradient	01 April 2022	12 October 2022
BAC-06	Upgradient	31 March 2022	17 October 2022
BAC-07	Upgradient	31 March 2022	14 October 2022
MW-1	Upgradient	31 March 2022	10 October 2022
MW-6	Upgradient	31 March 2022	11 October 2022

Notes: H1 = spring; H2 = fall

In order to obtain more information on groundwater quality surrounding the BAP, the monitoring wells installed in mid-2022 were sampled for the first time in October 2022 and were analyzed for the constituents listed in Appendices III and IV.

In addition to the semiannual groundwater monitoring events at the Site required under 40 CFR § 257.94, supplemental samples were collected wells BAC-06 and BAC-07 towards the required minimum of eight independent samples for each background well for the constituents listed in Appendices III and IV per the requirements of 40 CFR § 257.94(b).

Additionally, in order to more completely understand concentrations of constituents listed in Appendix IV, Gavin requested that the laboratory revisit analytical data for samples collected from 2018-2021 and

report valid results for any Appendix IV constituents that were analyzed by appropriate methods within the appropriate holding time.

4.5 Data Quality

Samples collected during 2022 were analyzed by Eurofins Canton 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 March 2022 and twice in September 2022 to collect depth to groundwater measurements for each monitoring well prior to sampling. The synoptic gauging events completed in September 2022 included one gauging event on 9 September 2022 where nearby water supply wells FW-15 and FW-1101 were operational and actively pumping, and a second event on 28 September 2022 conducted under non-pumping conditions, after FW-15 and FW-1101 had been shut off for approximately 36 hours. Resulting groundwater elevations for each gauging round were calculated by subtracting the depth to groundwater from the surveyed reference elevation for each well. Groundwater elevations, interpreted potentiometric surface maps, and interpreted groundwater flow directions for wells screened in the alluvium are presented on Figure 5-1 (2022 H1), Figure 5-2 (2022 H2, pumping conditions), and Figure 5-3 (2022 H2, non-pumping conditions).

During the March gauging event, the principal groundwater flow direction in the uppermost aquifer system (alluvial aquifer) under the BAP was from west to east with a northeasterly component of flow in the northeastern BAP closest to the water supply wells which were in operation at the time (Figure 5-1). In the first September gauging event, a stronger influence of the water supply wells FW-15 and FW-1101 was observed when groundwater flow was from the south, west and east, toward the water supply wells which were operational at the time (Figure 5-2). In the second September gauging event, when the water supply wells had been off for three days, groundwater flow was generally from the west to the east (Figure 5-3). If the BAP were leaking into the uppermost aquifer and creating mounding conditions, one would expect to see evidence of this under the non-pumping scenario shown in Figure 5-3; however, couplets BAC-01/BAC-08 and BAC-10/BAC-02 showed higher hydraulic heads further away from the BAP, couplet BAC-12/BAC-04 had only 0.02 ft of hydraulic head difference (which is within the margin of measurement error) and couplet and BAC-16/BAC-18 showed the same head readings. These results are not consistent with a mounding scenario.

5.2 Hydraulic Testing and Groundwater Velocity Calculation

Previous estimates of groundwater velocity were calculated using estimated hydraulic conductivity values based on the particle size distribution of the sandy alluvium (Freeze and Cherry 1979). Slug tests were completed by ERM in 2022 at six previously installed monitoring wells and 13 wells installed in 2022. These revised hydraulic conductivity values were used to calculate updated 2022 groundwater velocities below. Slug test summary statistics for wells screened in the alluvial aquifer, separation layer, bedrock, and across the alluvial aquifer and separation layer interface are provided in Table 5-1 and individual slug test results are provided in Table 5-2.

Table 5-1. Summary of Slug Test Results

Geologic Unit	Average K (cm/sec)	Low K (cm/sec)	High K (cm/sec)
Alluvial Aquifer (13 wells)	6.99E-02	1.05E-02	4.12E-01
Bedrock (3 wells)	1.39E-02	2.65E-08	4.17E-02

Notes: cm/sec = centimeters per second; K = hydraulic conductivity
 1. ERM 2022 slug tests at locations shown in Table 5-1 below.

Table 5-2. BAP Slug Test Results by Well

Well	Geologic Unit	Estimated K (cm/sec)
BAC-01	Alluvial Aquifer	8.18E-02
BAC-02	Alluvial Aquifer	4.12E-01
BAC-04	Alluvial Aquifer	7.66E-02
BAC-05	Alluvial Aquifer	1.40E-02
BAC-06	Alluvial Aquifer	4.39E-02
BAC-07	Alluvial Aquifer	5.19E-02
BAC-08	Alluvial Aquifer	1.54E-02
BAC-09	Bedrock	1.23E-06
BAC-10	Alluvial Aquifer	7.35E-02
BAC-11	Bedrock	4.17E-02
BAC-12	Alluvial Aquifer	1.53E-02
BAC-16	Alluvial Aquifer	2.60E-02
BAC-18	Alluvial Aquifer	1.05E-02
BAC-19	Bedrock	2.65E-08
BAC-21	Alluvial Aquifer	4.43E-02
BAC-23	Alluvial Aquifer	4.37E-02

Notes: cm/sec = centimeters per second; K = hydraulic conductivity

The horizontal hydraulic gradient for both the March/April 2022 sampling event and the September 2022 sampling event was generally to the northeast, toward the Ohio River. 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. As was discussed in the *Updated Groundwater Monitoring System Evaluation and Certification—40 CFR 257.91 (2021b)*, groundwater flow and gradient at the BAP is sensitive to river stage. During times of high river stage (e.g., flooding), groundwater generally flows away from the Ohio River (i.e., flow reversal). The frequency and duration of flow reversals at the BAP are driven by the frequency and duration of flooding of the Ohio River, which vary from year to year.

The gradient is also sensitive to the status of pumping of water supply wells FW-15 and FW-1101. Pumping of these wells creates a cone of depression near BAC-10 that results in a steepening of the hydraulic gradient. For this reason, hydraulic gradients for both pumping and non-pumping scenarios will be considered.

Measured horizontal hydraulic gradients between MW-1 and BAC-03 were 0.0012 for the March 2022 event and 0.0006 and 0.0011 for the 9 September (pumping) and 28 September 2022 (non-pumping) events, respectively. Based on the measured hydraulic gradients, an assumed porosity of 0.3, and an estimated average hydraulic conductivity of 6.99E-02 cm/sec for the alluvial aquifer, the horizontal velocity of groundwater in the alluvial aquifer beneath the BAP varied between 260 and 290 feet per year under pumping conditions and was 140 feet per year in September under non-pumping conditions. These values are similar to but lower than the horizontal groundwater velocities calculated in 2021 (1,200 to 1,800 feet per year). The primary reason for this difference is the site-specific hydraulic conductivity

estimated from the slug tests (6.99E-02 cm/sec) was an order of magnitude lower than previous estimate of 0.5 cm/sec for sandy alluvium (Freeze and Cherry 1979).

5.3 Vertical Gradient Calculation

The four new bedrock monitoring wells were installed collocated with an alluvial aquifer well in order to evaluate vertical hydraulic gradients (i.e., potential for discharge from the bedrock to the alluvial aquifer). Each of the alluvial/bedrock well couplets was installed at the mid-point of the north, east, south, and west berms. The couplets were gauged on 9 and 15 September with both pumping wells on and on 28 September with the pumping wells off. Vertical gradients were calculated by dividing the difference in hydraulic head by the distance between the mid-point of the well screens. Calculated vertical gradients for the three gauging events is provided in Table 5-3 below and as shown in Figure 5-4, Figure 5-5 and Figure 5-6. All measured vertical gradients were upwards from the bedrock to alluvial aquifer. Boring logs indicate that the alluvium-bedrock contact is not a flow barrier and as such, under the measured vertical head gradients, groundwater is flowing upward from the bedrock aquifer and mixing with water in the alluvium aquifer.

The results indicate that the upward gradient closest to the river (east berm) is the steepest observed under both pumping and non-pumping conditions. The upward gradient at the north berm was also relatively steep under pumping conditions but was significantly less steep under non-pumping conditions due to less drawdown in the alluvial aquifer. Both the south berm and west berm had relatively low upward gradients and there was less difference between pumping and non-pumping observations.

Table 5-3: Vertical Head Gradients for BAP Well Couplets

Bedrock Wells	Alluvial Aquifer Well	Location at BAP	9/9/2022 (pumping)	9/15/2022 (pumping)	9/28/2022 (non-pumping)
BAC-09	BAC-01	West Berm	0.014 (upward)	0.016 (upward)	0.010 (upward)
BAC-11	BAC-02	North Berm	0.044 (upward)	0.044 (upward)	0.003 (upward)
BAC-13	BAC-04	East Berm	0.078 (upward)	0.084 (upward)	0.061 (upward)
BAC-19	BAC-18	South Berm	0.015 (upward)	0.017 (upward)	0.004 (upward)

1. Vertical gradients reported in units of ft/ft
2. Positive values indicate upward flow from bedrock to alluvium aquifer.
3. Only data from synoptic gauging events is considered.

5.4 Evaluation of Groundwater Mounding at the BAP

As described in Section 4.3, electronic pressure transducers were installed at four alluvial aquifer monitoring well couplets (eight monitoring wells) and water levels were recorded between August and December 2022.

At the western boundary of the BAP, groundwater elevations in BAC-01 were consistently higher than at couplet well BAC-08, indicating that mounding is not occurring at the western boundary of the BAP. No significant response related to the operation of the water supply wells was observed. Hydrographs containing transducer-calculated groundwater elevations and manual gauging data for BAC-01 and BAC-08, along with Ohio River stage elevations and precipitation data for the monitoring period are presented in Figure 5-7.

At the northern boundary of the BAP, groundwater elevations were strongly affected by operation of water supply wells FW-15 and FW-1101, which are located directly north of BAC-02 and BAC-10. Comparison of groundwater elevation data from the pumping and non-pumping periods reveal a direct drawdown

effect on these two wells, and especially on the groundwater elevations at BAC-10 due to its closer proximity to the water supply wells. As such, groundwater elevations at BAC-02 were consistently higher than at BAC-10 under pumping conditions, as would be expected due to the drawdown effect of the water supply wells on BAC-10. When pumping was not occurring, groundwater elevations were generally higher at BAC-10 compared to BAC-02, and thus no evidence of mounding was observed. Hydrographs containing transducer-calculated groundwater elevations and manual gauging data for BAC-02 and BAC-10, along with Ohio River stage elevations and precipitation data for the monitoring period are presented in Figure 5-8.

At the eastern boundary of the BAP, groundwater elevations are moderately affected by operation of water supply wells FW-15 and FW-1101 north of the BAP. Groundwater elevations were consistently higher at BAC-12 than at BAC-04, and no evidence of groundwater mounding was observed between these couplet wells during any of the monitoring periods. Hydrographs containing transducer-calculated groundwater elevations and manual gauging data for BAC-04 and BAC-12, along with Ohio River stage elevations and precipitation data for the monitoring period are presented in Figure 5-9.

At the southern boundary of the BAP, groundwater elevations at BAC-16 (located at the base of the berm) were generally higher than groundwater elevations at BAC-18 through the majority of monitoring. For a duration of approximately one week in mid-September, groundwater elevations were observed to be higher in BAC-18 than in BAC-16. However, the short duration of this change in groundwater elevations and the relatively small difference in groundwater elevations is insufficient to indicate mounding. Although smaller in magnitude than observed at the northern couplet, a response related to the operation of the water supply wells was observed at the southern couplet. Hydrographs containing transducer-calculated groundwater elevations and manual gauging data for BAC-16 and BAC-18, along with Ohio River stage elevations and precipitation data for the monitoring period are presented in Figure 5-10.

Additional groundwater elevation data are being collected at the BAP, and a more comprehensive evaluation of the potential for groundwater mounding will be completed when long-term groundwater elevation trends become available.

5.5 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.

5.5.1 2022 Sampling Event Results

Table 5-2 summarizes a comparison of the March/April and October 2022 results to the identified SSIs based on prediction limits for Appendix III analytes in the downgradient wells.

Table 5-4: SSIs from 2022 Sampling Events

Analyte/Event	Monitoring Well							
	BAC-02		BAC-03		BAC-04		BAC-05	
	H1	H2	H1	H2	H1	H2	H1	H2
Boron	X	X	X	X	X	X	X	X
Calcium	X	X	φ	φ	φ	φ	φ	φ
Chloride	X	X	X	X	X	X	φ	X
Fluoride	X	φ	φ	φ	φ	φ	φ	φ
pH	X	X	X	X	X	X	X	X
Sulfate	X	X	X	X	X	X	X	X
TDS	X	X	φ	φ	φ	φ	φ	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 and October 2022.

March and April 2022 SSIs were similar to those observed in 2017, 2018, 2019, and 2020, and 2021. Alternate sources were similarly identified for each of the SSIs detected in the March and April 2022 data and documented in the *Gavin BAP First Semiannual Sampling Event of 2022 ASD Report (ERM 2022b)* which is included as Appendix C. The report identified the regional discharge of groundwater as the source of calcium, chloride, sulfate, and total dissolved solids (TDS), and the Kyger Creek North Fly Ash Pond as the source of boron and low pH.

October 2022 SSIs were also similar to those observed in 2017, 2018, 2019, 2020, and 2021. Alternate sources were identified for each of the SSIs associated with the October 2022 data and documented in the *Gavin BAP Second Semiannual Sampling Event of 2022 ASD Report (ERM 2021c)* which is included as Appendix D. The report identified the regional discharge of groundwater as the source of calcium, chloride, and TDS, and the Kyger Creek North Fly Ash Pond as the source of boron, low pH, and sulfate. The source identified for sulfate was changed in this report due to new information obtained in the *Ohio Valley Electric Corporation Kyger Creek Station- Closed North Fly Ash Pond Groundwater Semiannual Data Analysis (OVEC 2022)*.

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

6. KEY FUTURE ACTIVITIES

The following key future activities are planned for 2023:

- Groundwater Sampling
 - Two groundwater sampling events will be performed in 2023 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.
- Groundwater Hydraulic Monitoring
 - New monitoring wells will be gauged along with the existing wells to establish relative hydraulic positions and evaluate areas of interest (i.e., potential for mounding at the BAP).
 - Transducers will be downloaded, and the data processed and evaluated against the Conceptual Site Model
- Monitoring Network
 - The existing monitoring network will be evaluated for potential additional wells.
 - The background dataset will be evaluated and updated if appropriate to include all valid background data

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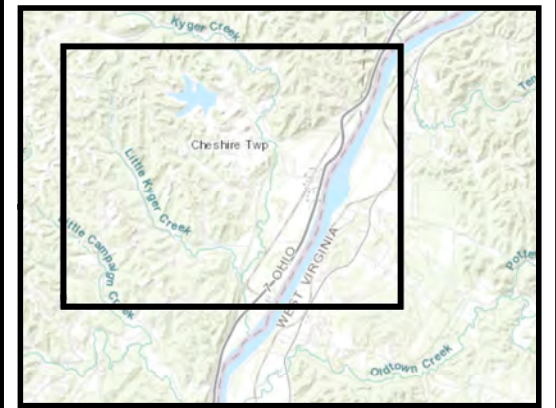
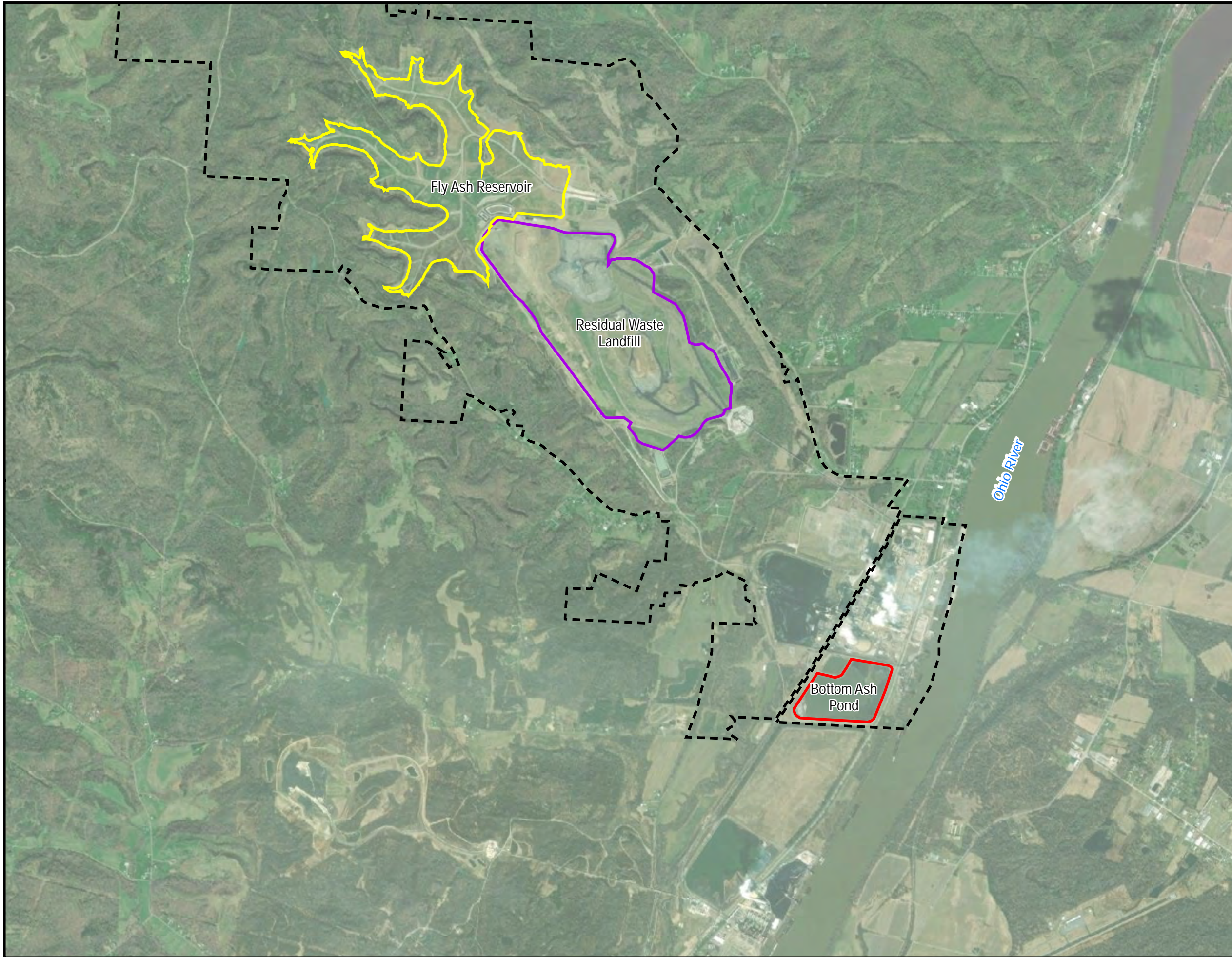
FIGURES



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



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Legend

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

NOTES:
 1. Aerial Imagery: ESRI World Imagery
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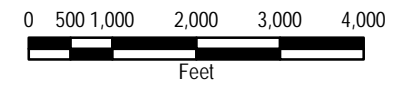
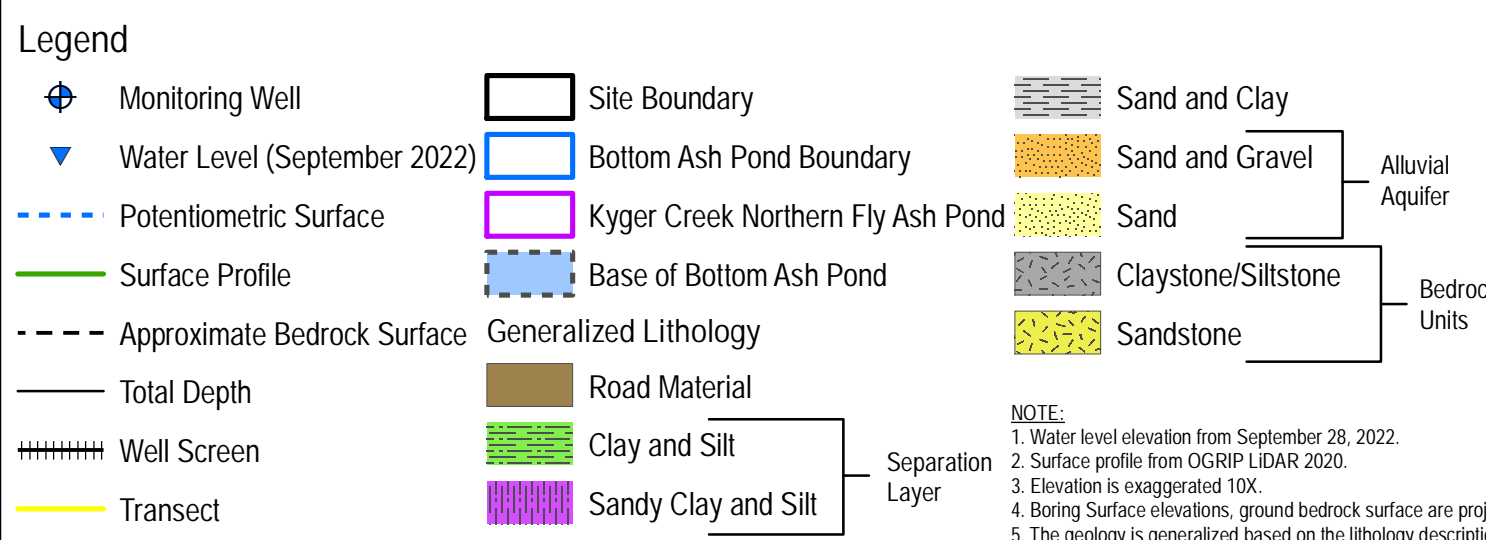
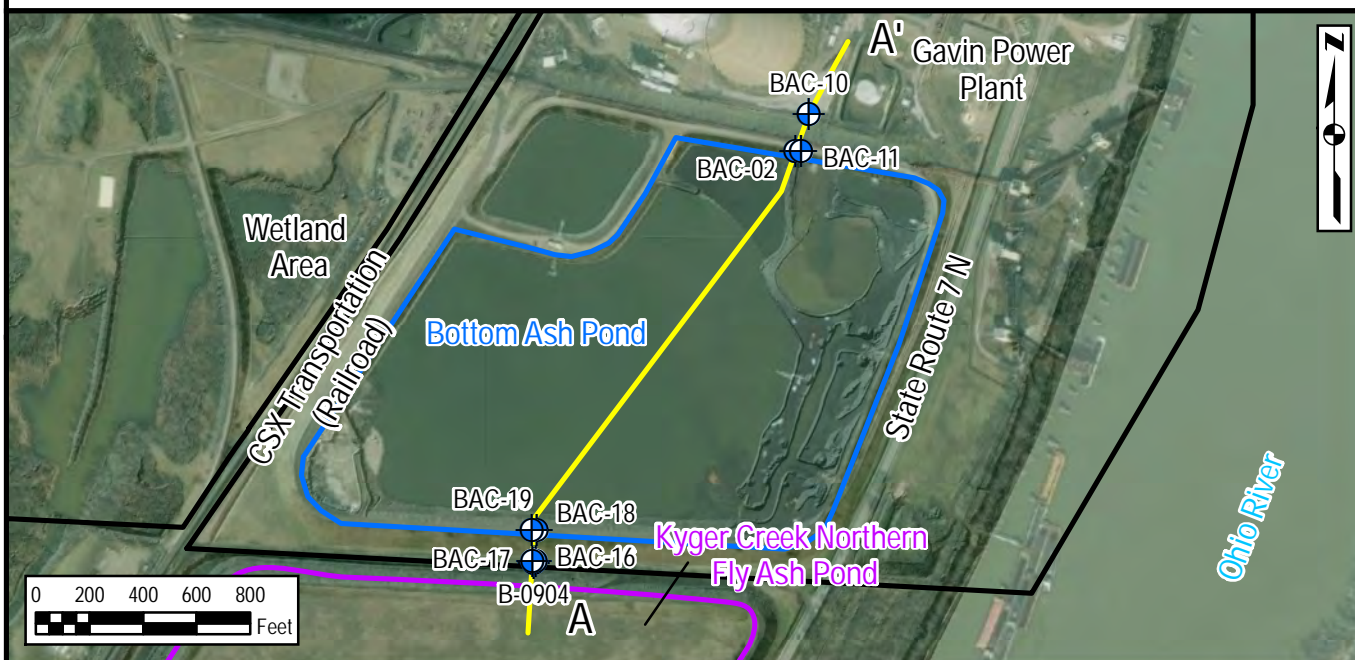
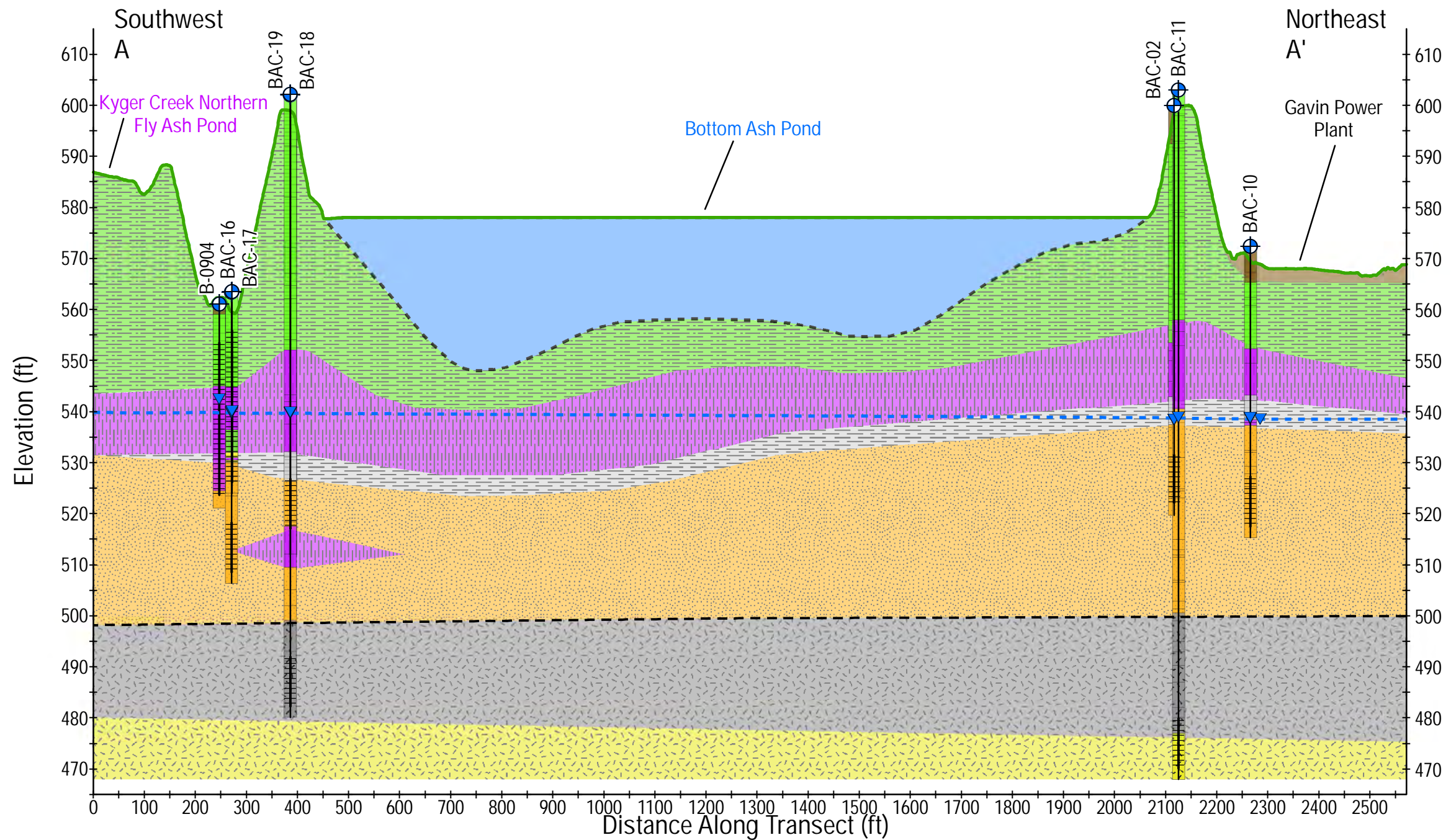


Figure 3-1: Bottom Ash Pond Location
 Gavin Generating Station
 Cheshire, Ohio



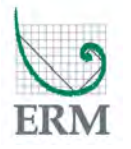
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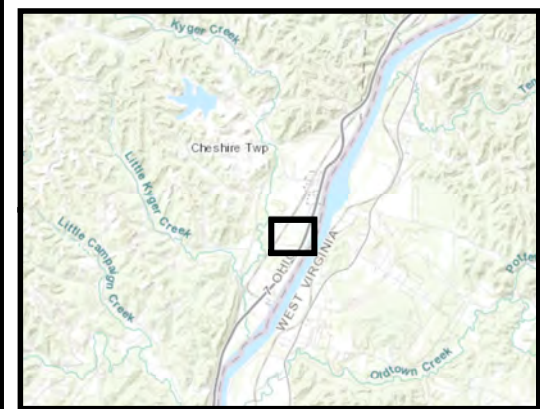
NOTE:

1. Water level elevation from September 28, 2022.
2. Surface profile from OGRIP LIDAR 2020.
3. Elevation is exaggerated 10X.
4. Boring Surface elevations, ground 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.

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



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Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Upgradient Monitoring Well (Not in Federal Program)
- 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:

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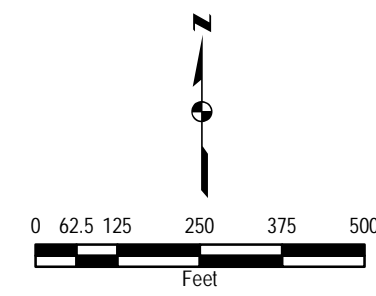
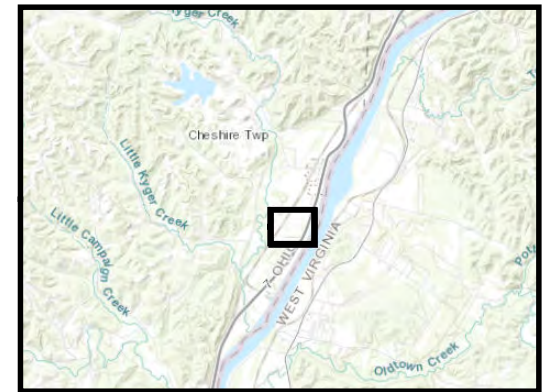
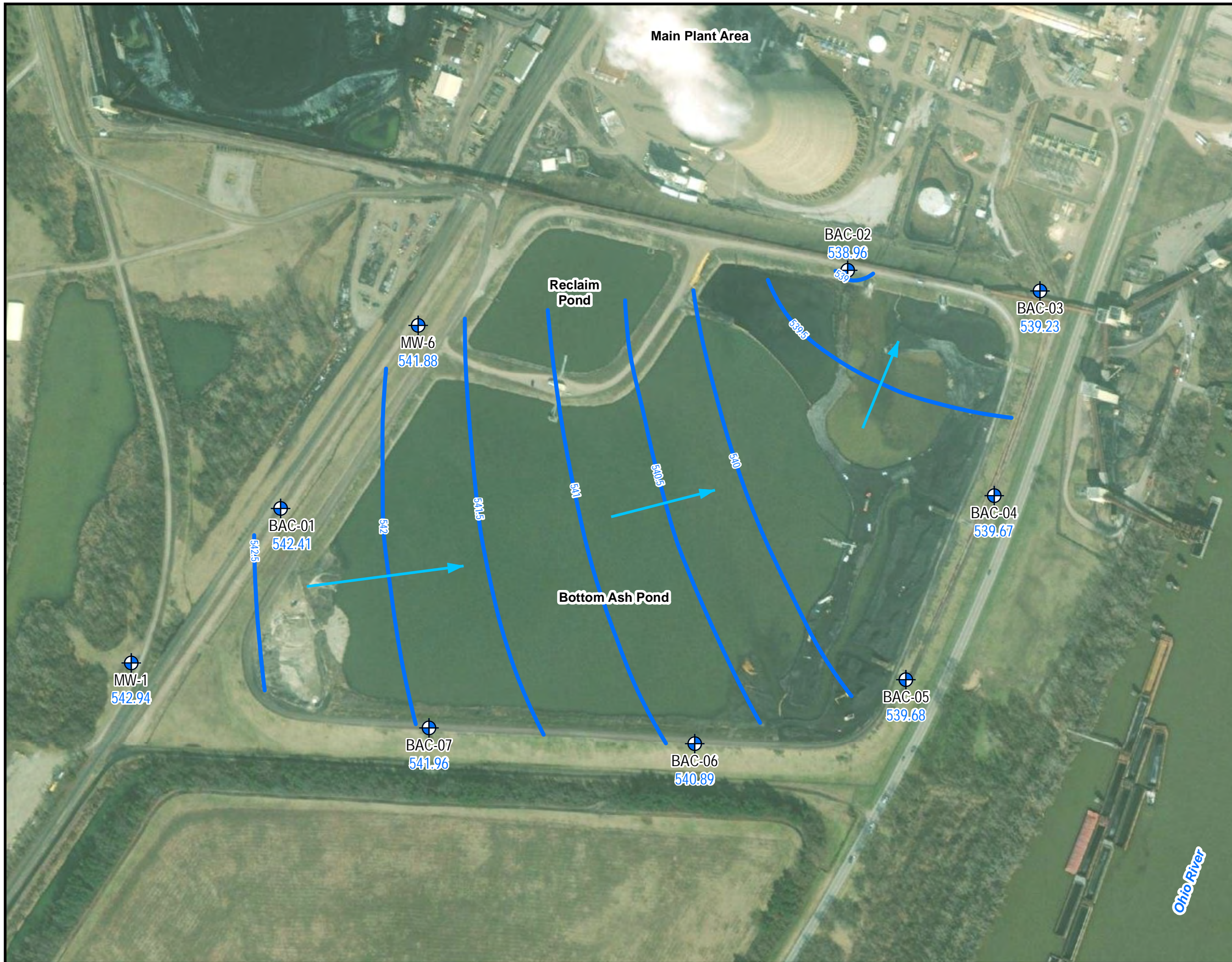


Figure 3-3: Bottom Ash Pond Monitoring Well Network
Gavin Power, LLC
Cheshire, Ohio



I:\Projects\AC\Backstone_ERP\GIS\PowerPlant\Map\2022_BAP_MW_Network_2022_02_1.mxd - Kelly McGhee - 12/27/2022



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
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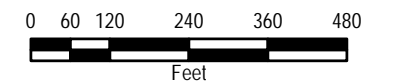
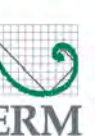
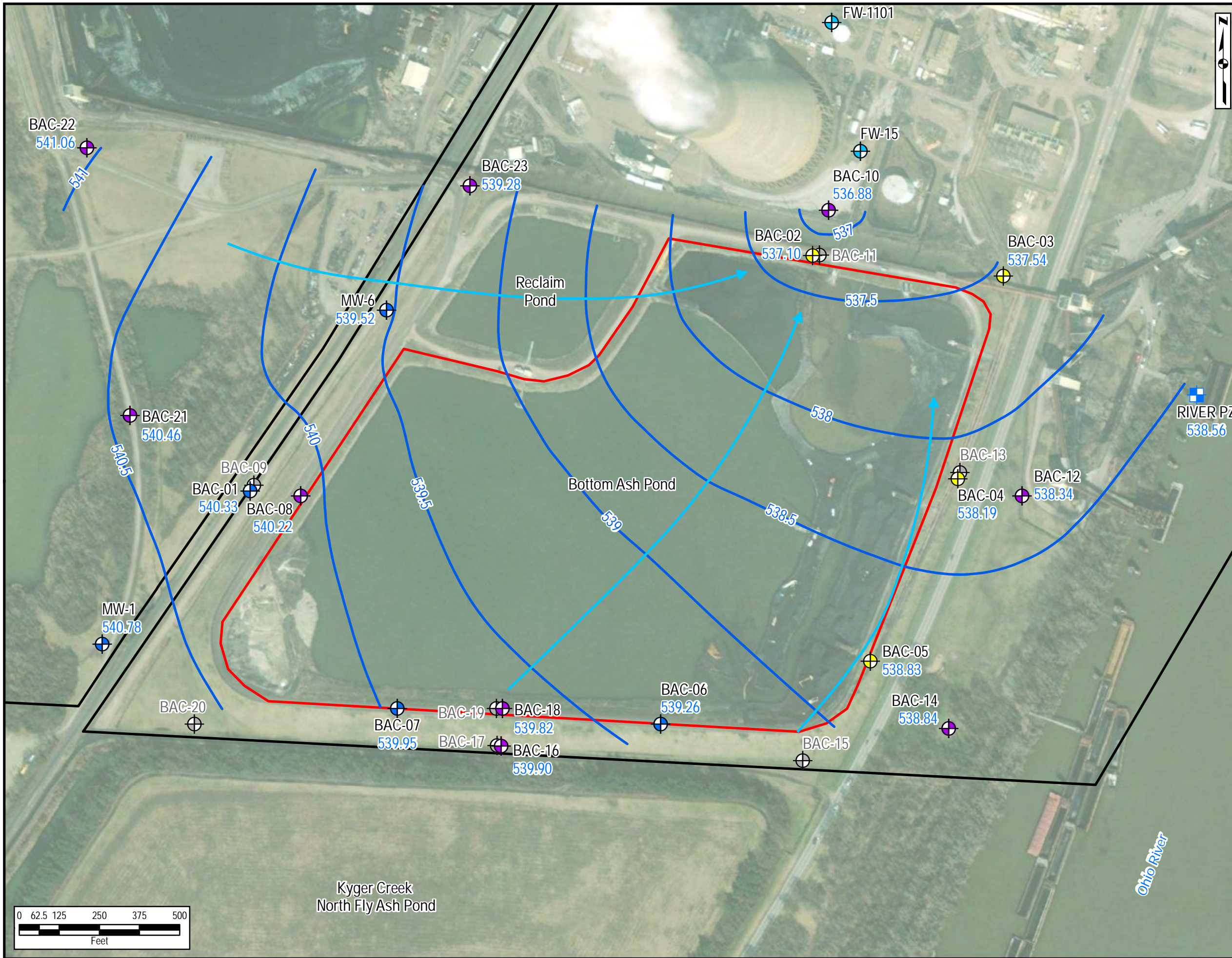


Figure 5-1: Interpreted Groundwater Potentiometric Contour Map
 Spring 2022
 Gavin Power, LLC
 Chesire, Ohio





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

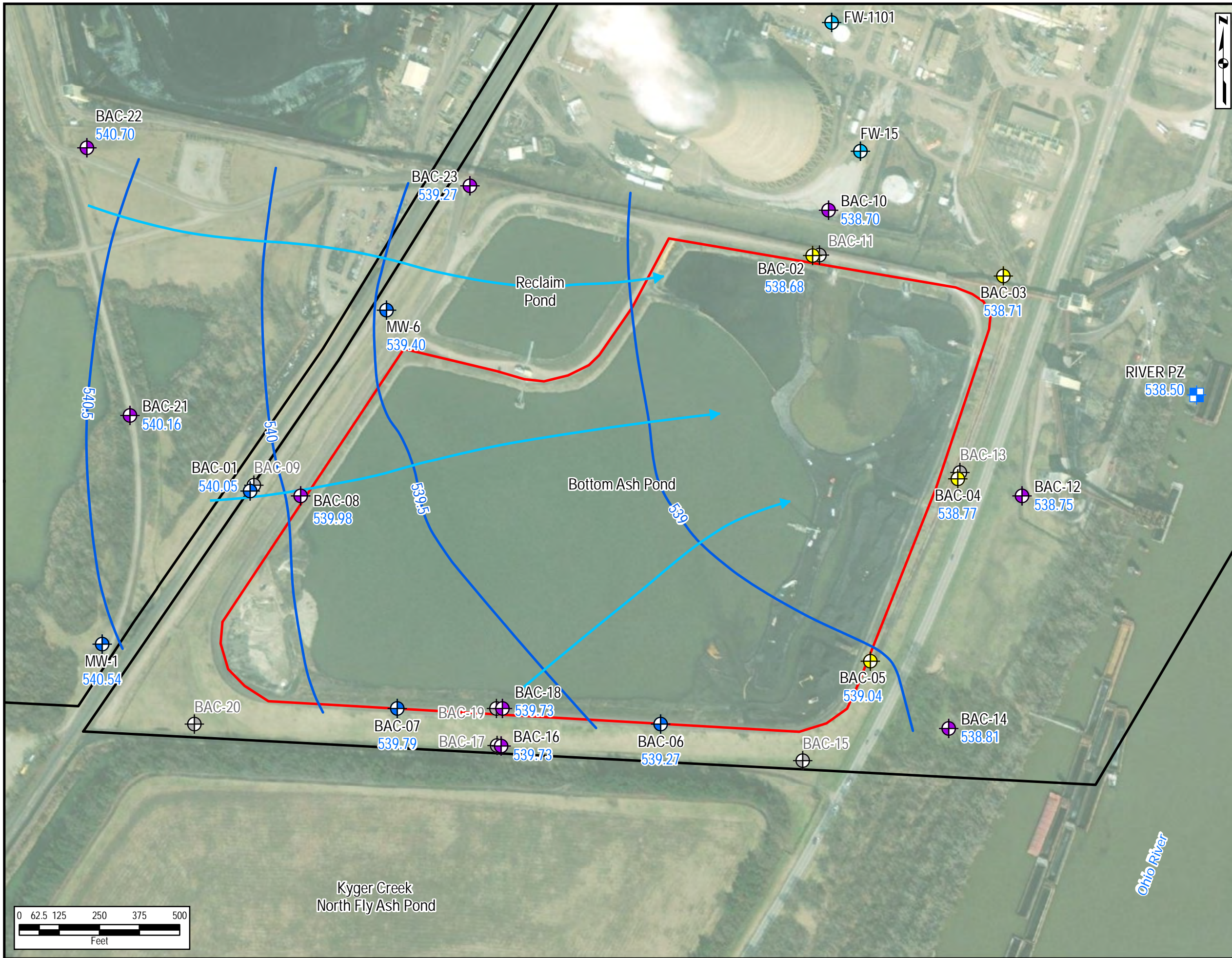
NOTES:

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
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Figure 5-2: Interpreted Groundwater Potentiometric Contour Map (9 September - Pumping)
Gavin Generating Station
Cheshire, Ohio

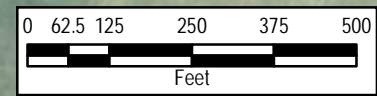


Y:\GIS\Projects\A-4\Backgrounds\BAC\ASD_Report\Figure_2_BAC_ASD_GWContours_Pumping_Sep2022_20221228.mxd - Jonathan Mills - 1/2/2023



- 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)
 - 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 28 September 2022.
 2. Wells not used for contouring of the Alluvium include wells screened in silt/clay and bedrock materials.
 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. Aerial Imagery: ESRI World Imagery
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Kyger Creek
North Fly Ash Pond

Ohio River

Figure 5-3: Interpreted Groundwater Potentiometric Contour Map (28 September - Non-Pumping)
Gavin Generating Station
Cheshire, Ohio



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Head Difference: 2.44 ft
 Vertical Gradient = 0.044 ft/ft
 Flow Direction: **Upward**

Head Difference: 0.66 ft
 Vertical Gradient = 0.014 ft/ft
 Flow Direction: **Upward**

Head Difference: 3.20 ft
 Vertical Gradient = 0.078 ft/ft
 Flow Direction: **Upward**

Head Difference: 0.53 ft
 Vertical Gradient = 0.015 ft/ft
 Flow Direction: **Upward**

Vertical Gradient	
↑	0.0 - 0.02 ft/ft
↑	0.02 - 0.04 ft/ft
↑	0.04 - 0.06 ft/ft
↑	0.06 - 0.08 ft/ft
↑	0.08 - 0.10 ft/ft



- Legend**
- ⊕ New 2022 Monitoring Well
 - ⊕ Federal Upgradient Monitoring Well
 - ⊕ Federal Downgradient Monitoring Well
 - ⊕ Upgradient Monitoring Well (Not in Federal Program)
 - ⊕ Water Supply Well
 - ⊕ Piezometer
 - BAC Alluvium Well
 - BAC Bedrock Well
 - ⬡ Approximate Location of Bottom Ash Pond Boundary
 - ⬡ Gavin Property Boundary

NOTES:

- Water level measurements collected 9 September 2022 while water supply wells were active.
- Aerial Imagery: ESRI World Imagery
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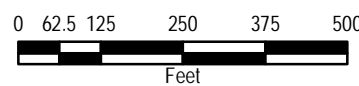
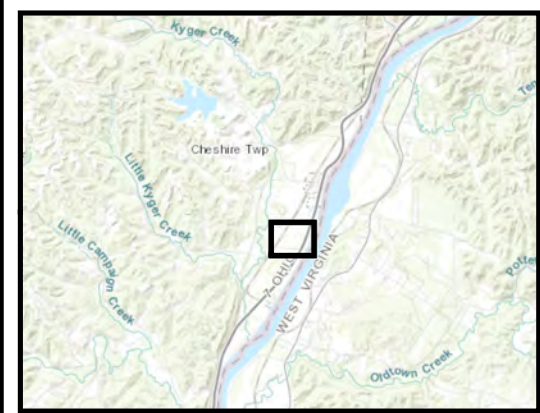


Figure 5-4: Bottom Ash Pond Vertical Gradient Assessment (9 September 2022 - Pumping)
 Gavin Generating Station
 Cheshire, Ohio



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Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Upgradient Monitoring Well (Not in Federal Program)
- Water Supply Well
- Piezometer
- BAC Alluvium Well
- BAC Bedrock Well
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary

NOTES:
 1. Water level measurements collected 15 September 2022 while water supply wells were active.
 2. Aerial Imagery: ESRI World Imagery
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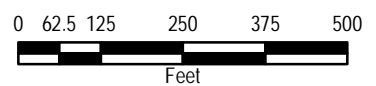
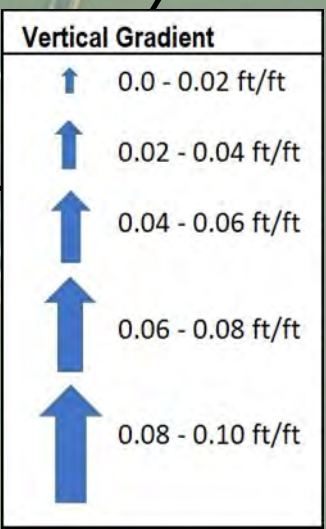


Figure 5-5: Bottom Ash Pond Vertical Gradient Assessment (15 September 2022 - Pumping)
 Gavin Generating Station
 Cheshire, Ohio



Y:\GIS\Projects\SA-01\Backstage_Erpic\GavinPowerPlant\MXD\Groundwater\Elevations_Fig05-05_VerticalGradient_15Sep2022_2022070.mxd - Cheshire, Ohio - 1/20/2023



Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Upgradient Monitoring Well (Not in Federal Program)
- Water Supply Well
- Piezometer
- BAC Alluvium Well
- BAC Bedrock Well
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary

NOTES:

- Water level measurements collected 28 September 2022 while water supply wells were not active.
- Aerial Imagery: ESRI World Imagery
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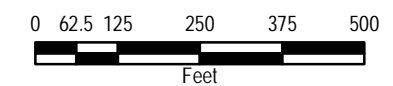


Figure 5-6: Bottom Ash Pond Vertical Gradient Assessment (28 September 2022 - Non-Pumping)
Gavin Generating Station
Cheshire, Ohio



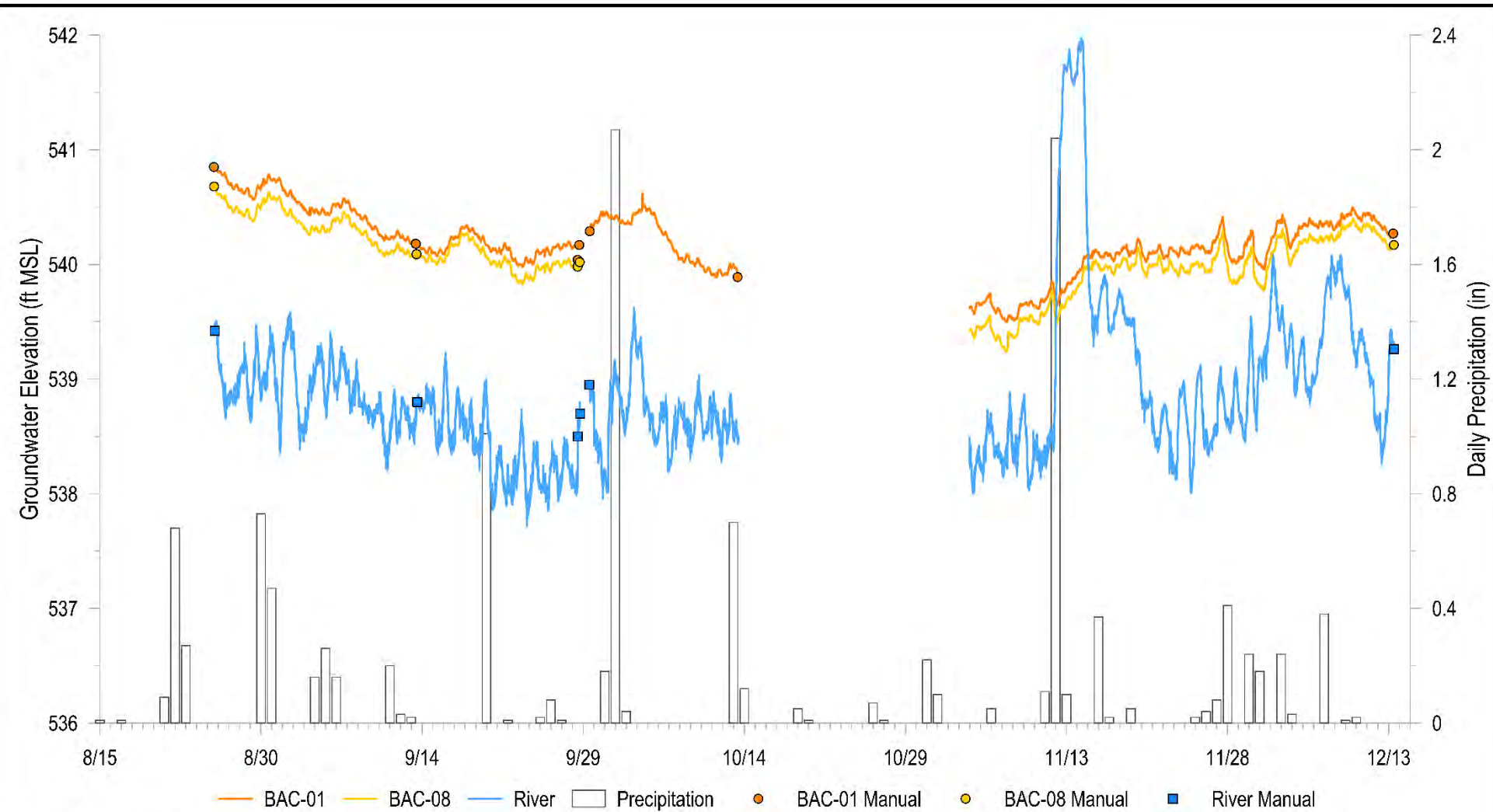


Figure 5-7. Bottom Ash Pond Transducer Time-Series, West Couplet
 Gavin Generating Station
 Cheshire, Ohio

- Notes:
- 1.) River data from on-site stilling well
 - 2.) Transducer reading frequency was set to 15min
 - 3.) All data is from 2022

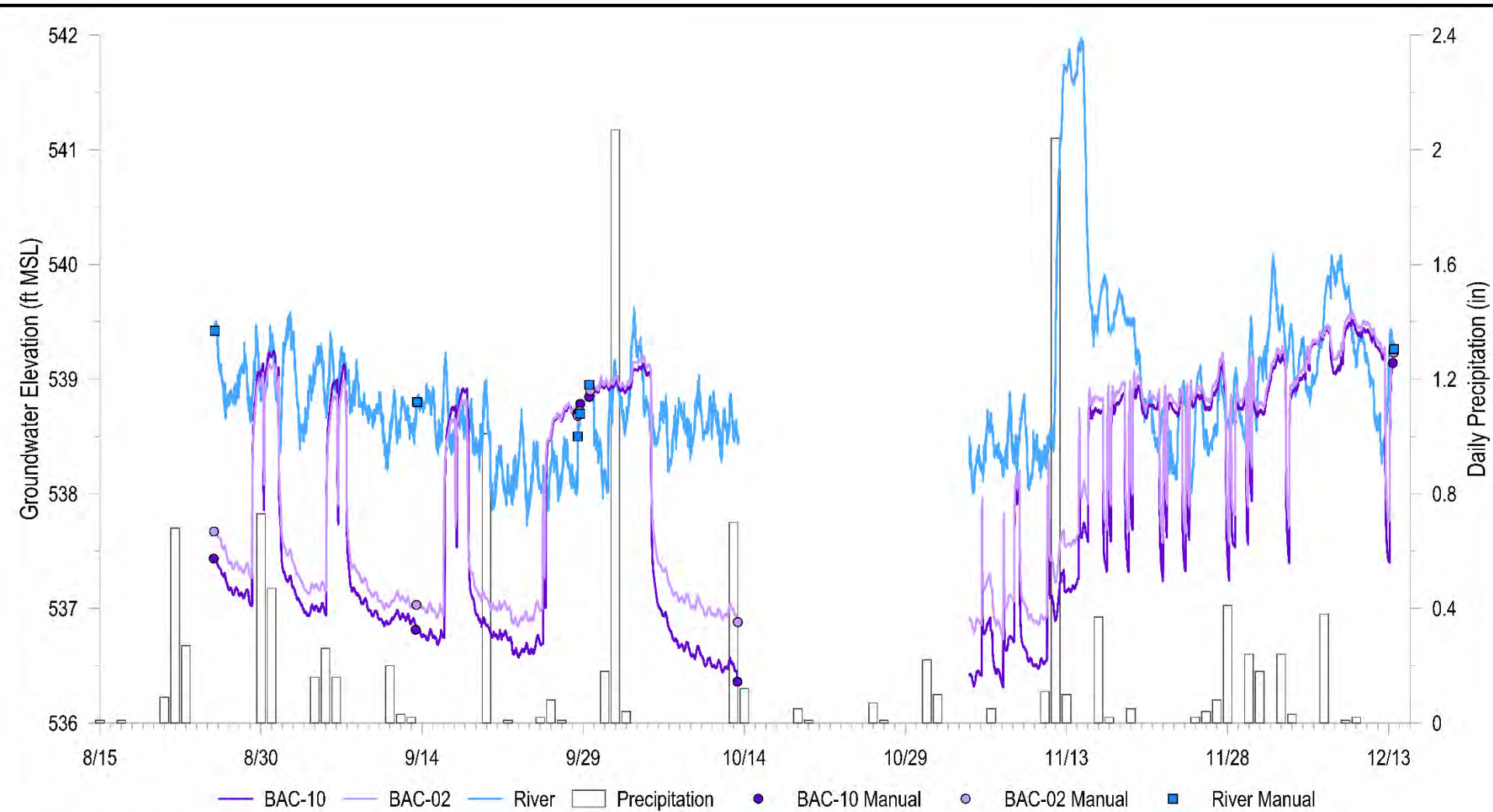


Figure 5-8. Bottom Ash Pond Transducer Time-Series, North Couplet
 Gavin Generating Station
 Cheshire, Ohio

- Notes:
- 1.) River data from on-site stilling well
 - 2.) Transducer reading frequency was set to 15min
 - 3.) All data is from 2022

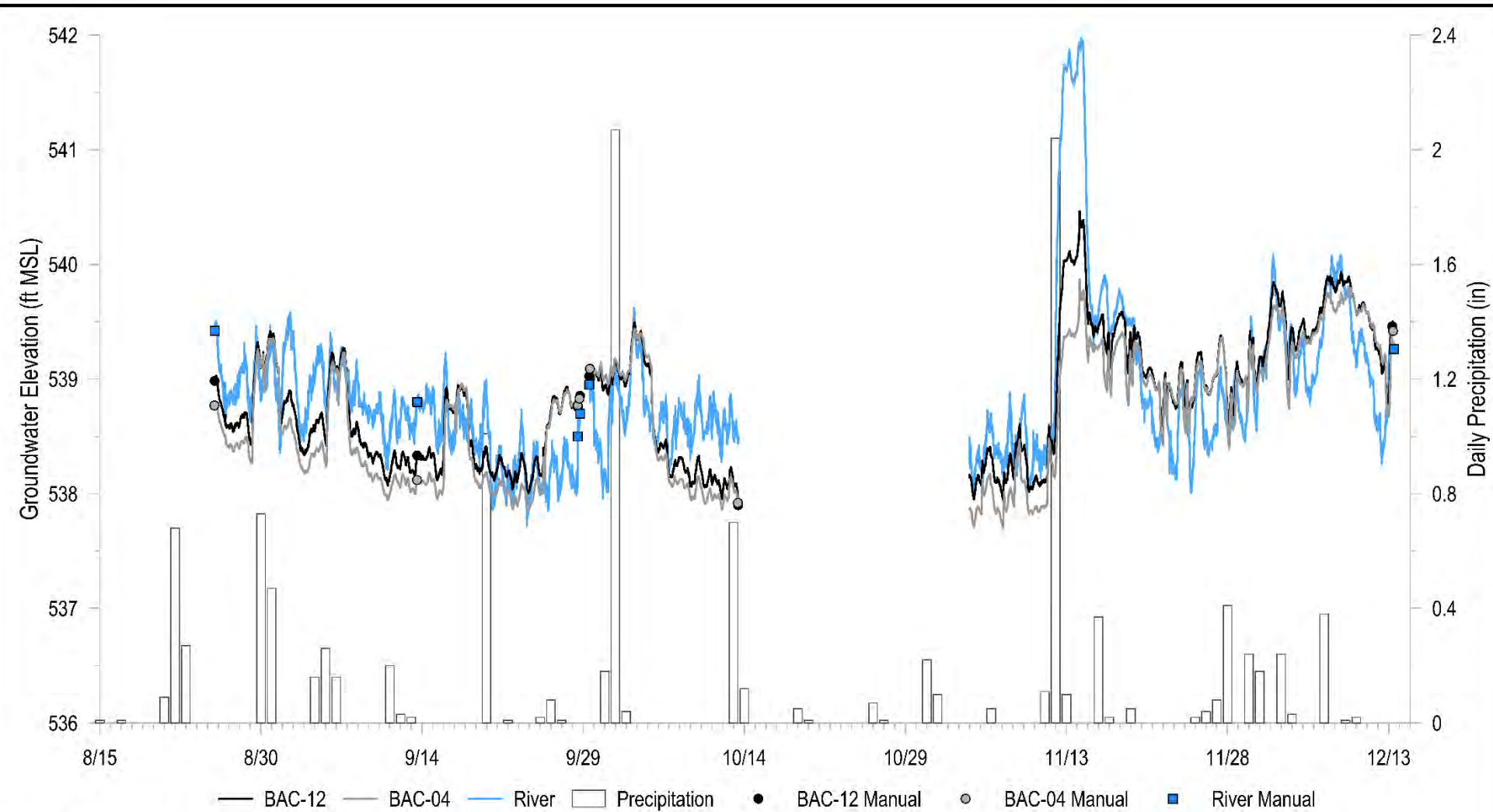


Figure 5-9. Bottom Ash Pond Transducer Time-Series, East Couplet
 Gavin Generating Station
 Cheshire, Ohio

- Notes:
- 1.) River data from on-site stilling well
 - 2.) Transducer reading frequency was set to 15min
 - 3.) All data is from 2022

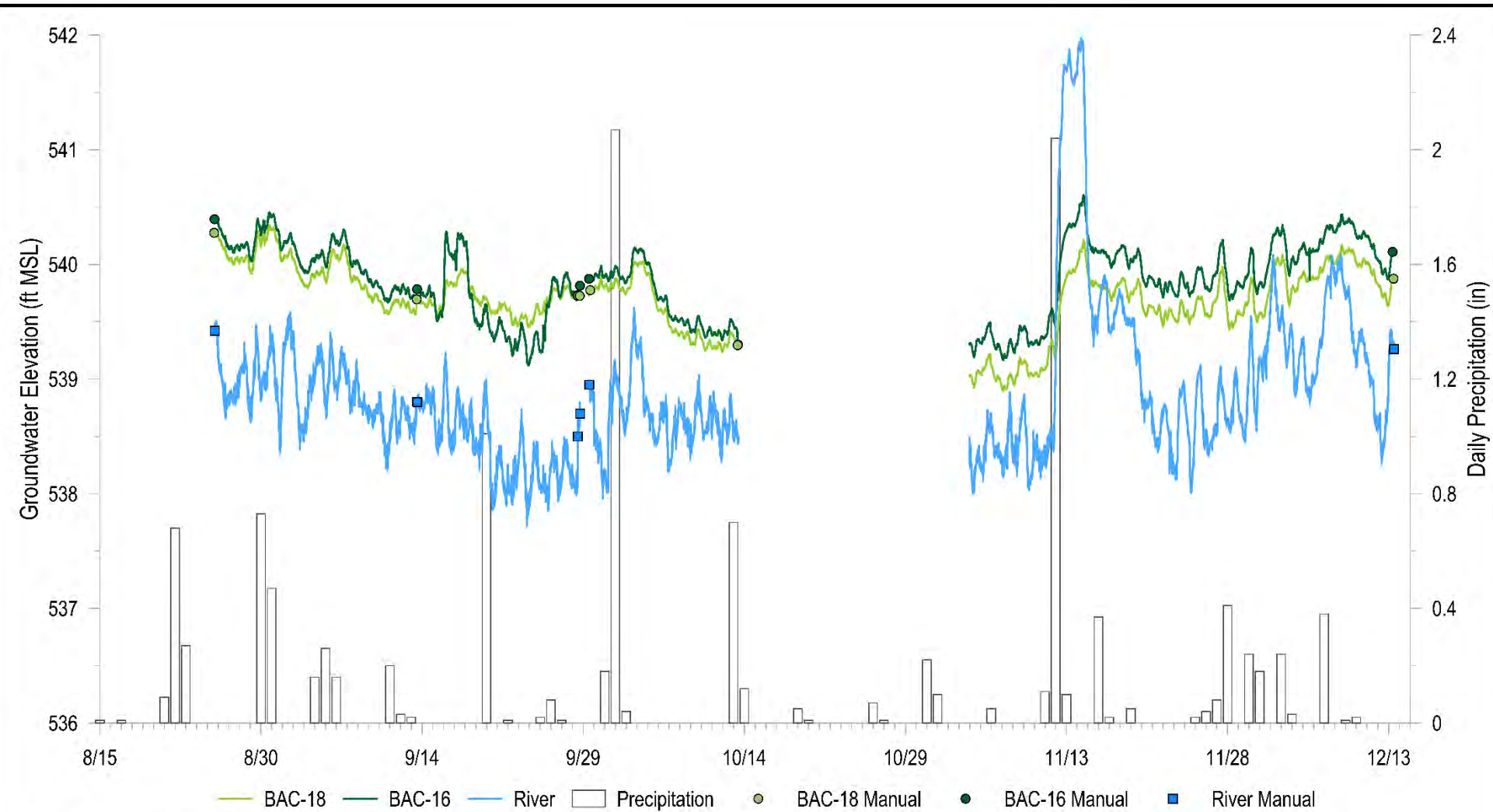


Figure 5-10. Bottom Ash Pond Transducer Time-Series, South Couplet
 Gavin Generating Station
 Cheshire, Ohio



- Notes:
- 1.) River data from on-site stilling well
 - 2.) Transducer reading frequency was set to 15min
 - 3.) All data is from 2022

APPENDIX A WELL CONSTRUCTION SUMMARY

Appendix A
Well Construction Details
Galvin 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)	Screen Start Depth (ft bgs)	Screen End Depth (ft bgs)	Screen Length (ft)	Well Diameter (in)	Screen Material
New/Replacement Monitoring Wells													
BAC-08	6/30/2022	Alluvial Sand and Gravel	BAP	2075428.2150	339189.2539	594.65	597.64	70.00	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	520	510	10	2	PVC SCH 40
Federal CCR Monitoring Wells													
MW-1		Alluvial Sand and Gravel	BAP	2074809.110	338727.030	567.86	570.85	67.4	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	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	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	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	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	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	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	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	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 B 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 _____

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**

Water Level, ft	▽	▼	▼
TIME			
DATE			

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO									
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 _____

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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
15	SS	21.0	22.5	2-2-3	1.5		25			CLAY w/silt and fine sand		
16	SS	22.5	24.0	WOR-2-2	1.2				MEDIUM STIFF PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY			
17	SS	24.0	25.5	2-2-2	1.5				SOFT STIFF PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY			
18	SS	25.5	27.0	WOR-2-1	1.5		30			SOFT PALE YELLOWISH BROWN 10YR 6/2 SILTY SANDY CLAY wet		
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				MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL			
22	SS	31.5	33.0	3-6-6	1.3		35			MEDIUM DENSE MODERATE YELLOWISH BROWN 10YR 5/4 SAND AND GRAVEL		
23	SS	34.0	35.5	4-10-11	1.4				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							

AEP_GV_BAC_CCR_COMPLIANCE.GPJ_AEP.GDT_7/7/16

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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
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 _____

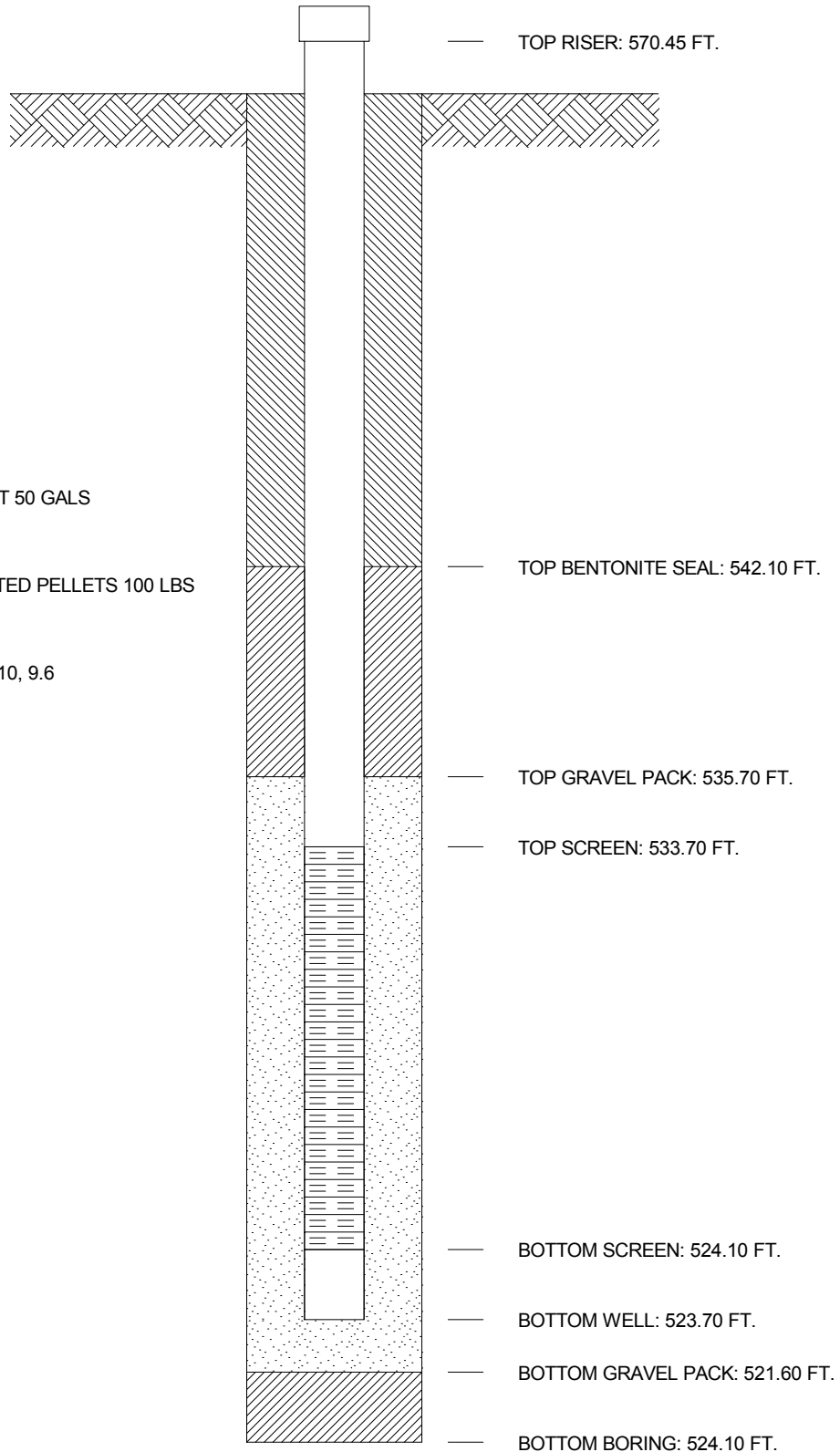
WELL No. **BAC-01** BORING No. **BAC-01** INSTALLED **12/9/15**







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:

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 _____

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**

Water Level, ft	<u> </u>	<u> </u>	<u> </u>
TIME			
DATE			

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
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		10					
8	SPT	10.5	12.0	3-3-6	1.5							
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 CLAY		

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

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 _____

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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
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		35					
25	SPT	36.0	37.5	4-5-9	1.5					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		

AEP_GV_BAC_CCR_COMPLIANCE.GPJ_AEP.GDT_7/7/16

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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
31	SPT	46.5	48.0	4-6-10						2.5 tsf		
32	ST	48.0	50.0							VERY STIFF LIGHT BROWN 5YR 6/4 CLAY AND SAND 1.5 tsf		
							50			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		
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							
							55			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		
36	SPT	55.5	57.0	4-6-8	1.5							
37	SPT	57.0	58.5	2-2-4	1.4							
38	SPT	58.5	60.0	2-2-3	1.3					LOOSE LIGHT BROWN 5YR 6/4 SAND AND CLAY		
							60			LOOSE MEDIUM LIGHT GRAY N6 SAND AND CLAY		
39	SPT	60.0	61.5	3-3-5	1.5							
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		

AEP_GV BAC CCR COMPLIANCE.GPJ_AEP.GDT_7/7/16

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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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
45	SPT	73.0	74.5	10-11-6	1.3		75			MEDIUM DENSE BROWN 5YR 5/6 COARSE SAND AND GRAVEL wet		
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 _____

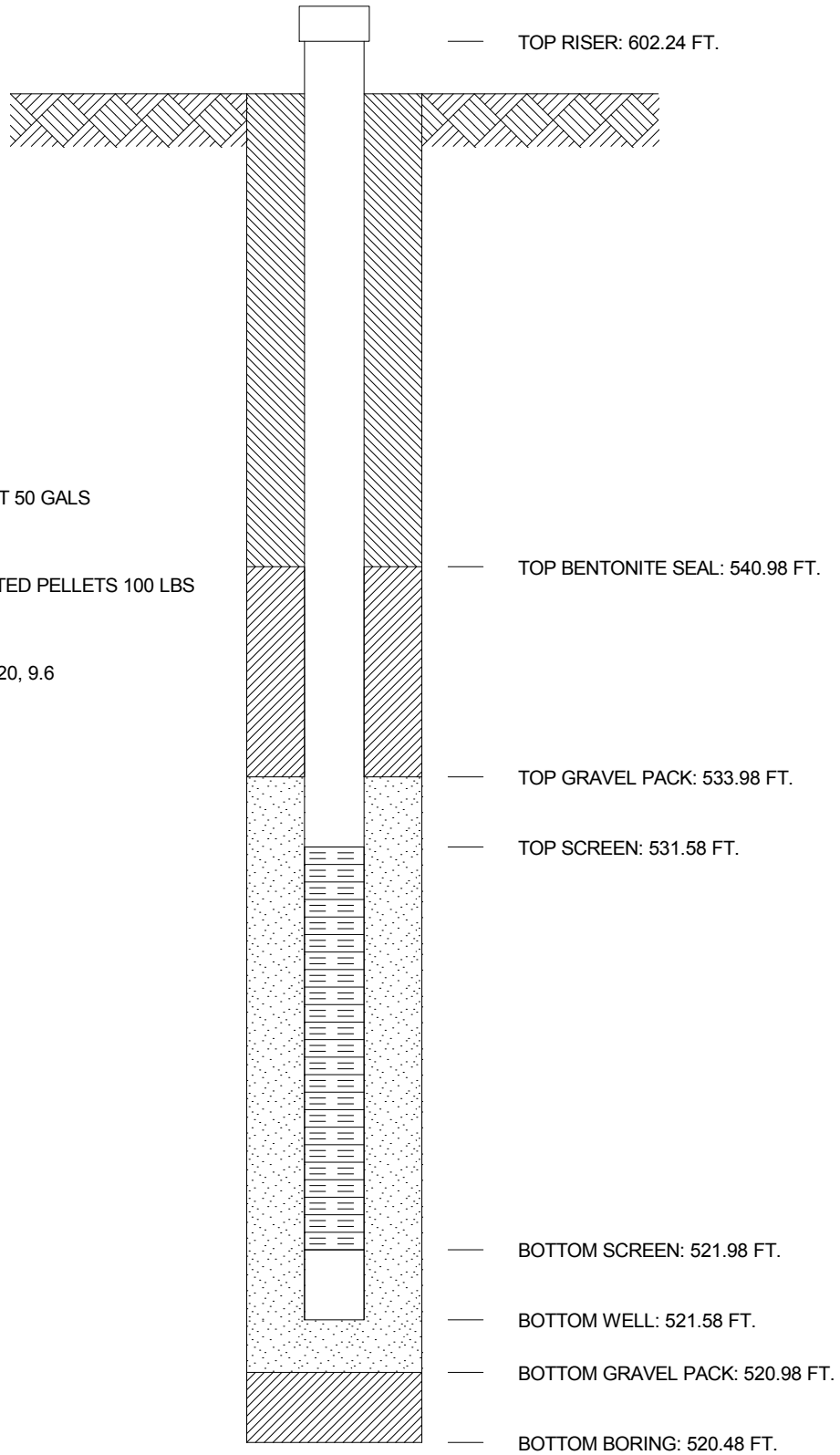
WELL No. **BAC-02** BORING No. **BAC-02** INSTALLED **12/17/15**







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:

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 _____

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**

Water Level, ft	▽	▼	▼
TIME			
DATE			

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO									
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		10			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					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		
11	SS	15.0	16.5	3-1-2	.9		15			MC 24.5% LL 29.5% PI 10.4% SAND 33.5% FINES 66.5% TESTED SAMPLE #9		
12	ST	16.5	18.0							SOFT LIGHT BROWN 5YR 5/6 CLAY 2.0 tsf, moist		
13	ST	18.0	19.5							SOFT LIGHT BROWN 5YR 5/6 CLAY 1.0 tsf, moist		
14	SS	19.5	21.0	1-1-2	.9					SOFT LIGHT BROWN 5YR 5/6 CLAY moist PSI 250 / SEC 10 / REC / DEPTH 17 - 19		

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

AEP_GV BAC CCR COMPLIANCE.GPJ_AEP.GDT_7/7/16

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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
31	SS	46.5	48.0	10-8-10	1.5		50	[Dotted Pattern]				
32	SS	49.0	50.5	11-11-14	1.5							
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 _____

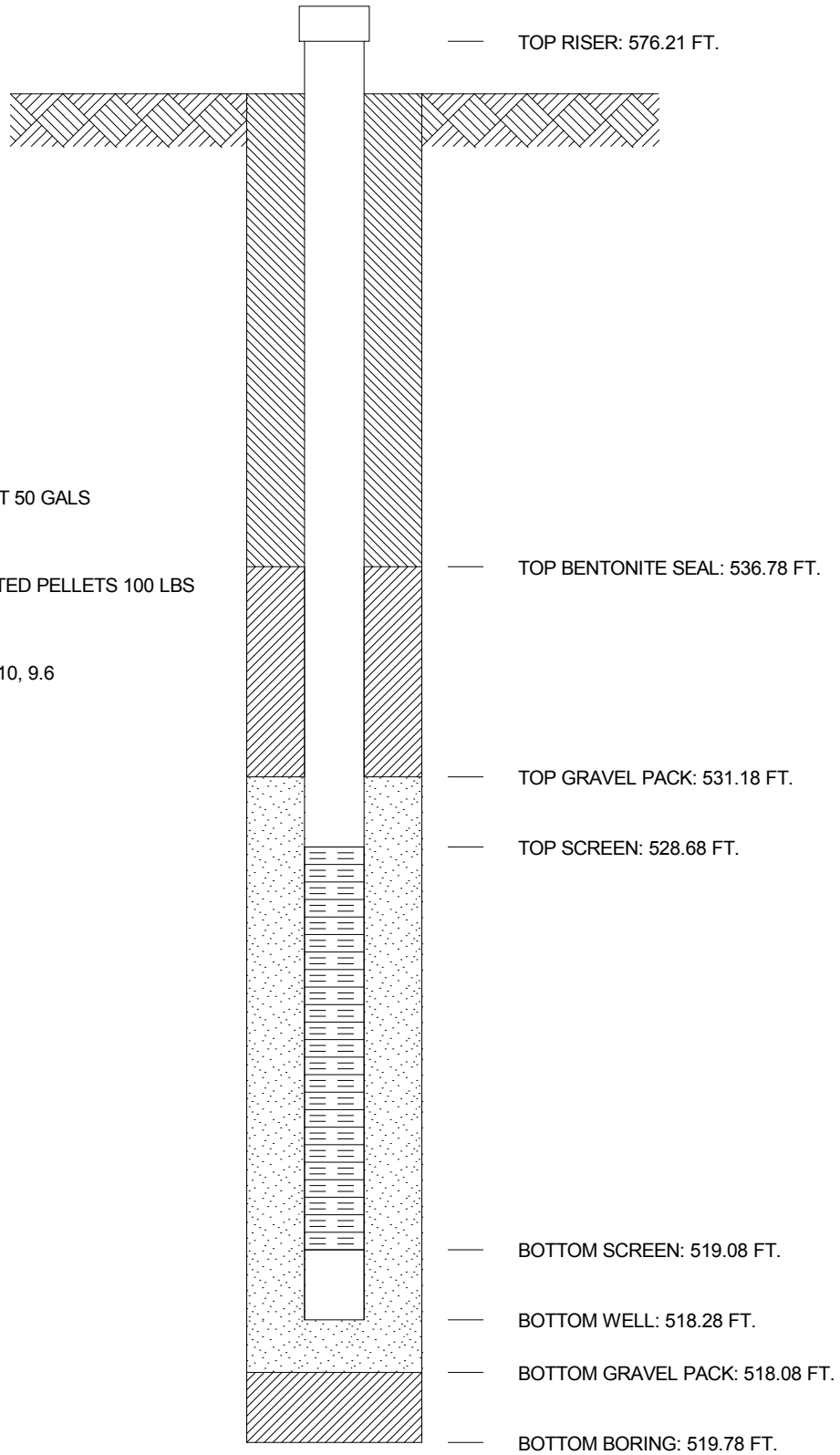
WELL No. **BAC-03** BORING No. **BAC-03** INSTALLED **12/15/15**







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:

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 _____

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**

Water Level, ft	▽	▼	▼
TIME			
DATE			

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO									
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					STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace of river gravel		
6	SS	7.5	9.0	3-6-6	1.5					STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace of bottom ash		
7	SS	9.0	10.5	3-5-7	1.5		10			STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/trace bottom and river gravel		
8	SS	10.5	12.0	3-4-7	1.5					VERY STIFF DUSKY BROWN 5YR 2/2 CLAY w/trace of sand fine		
9	SS	12.0	13.5	4-7-11	1.5					NO RECOVERY limestone cobble stuck in end of spoon		
10	SS	13.5	15.0	4-7-9	0		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 NO RECOVERY limestone cobble stuck in end of spoon		
11	SS	15.0	16.5	6-5-6	1.1					MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 FINE CLAY SILT SAND SAND 52.9% FINES 47.1%		
12	SS	16.5	18.0	3-6-9	0					MEDIUM STIFF MODERATE YELLOWISH		
13	SS	18.0	19.5	2-3-3	1.4							
14	SS	19.5	21.0	2-3-3	1.4							

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-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		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
		FROM	TO			%						
15	SS	21.0	22.5	2-3-4	1.5		25			BROWN 10YR 5/4 CLAY AND SILT w/little sand		
16	SS	22.5	24.0	2-4-5	1.5	MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 CLAY w/some silt						
17	SS	24.0	25.5	3-2-4	.8	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		30			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							
1	ST	30.5	33.0									
21	SS	33.0	34.5	2-1-2	.9		35			SOFT MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY PSI 700 / SEC 10 / REC 1.5		
22	SS	34.5	36.0	1-2-2	1.5							
23	SS	36.0	37.5	2-2-3	1.5	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						
24	SS	37.5	39.0	1-1-1	1.5		40			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							
27	SS	42.0	43.5	1-1-1	1.5		45			MEDIUM STIFF MODERATE YELLOWISH BROWN 10YR 5/4 SILT AND CLAY w/some sand fine		
28	SS	43.5	45.0	3-2-3	1.5							
29	SS	45.0	46.5	1-3-2	1.5							

AEP_GV_BAC_CCR_COMPLIANCE.GPJ_AEP.GDT_7/7/16

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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
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			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			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							
38	SS	60.5	62.0	9-11-13	.9							
39	SS	63.0	64.5	22-20-29	1.2				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 _____

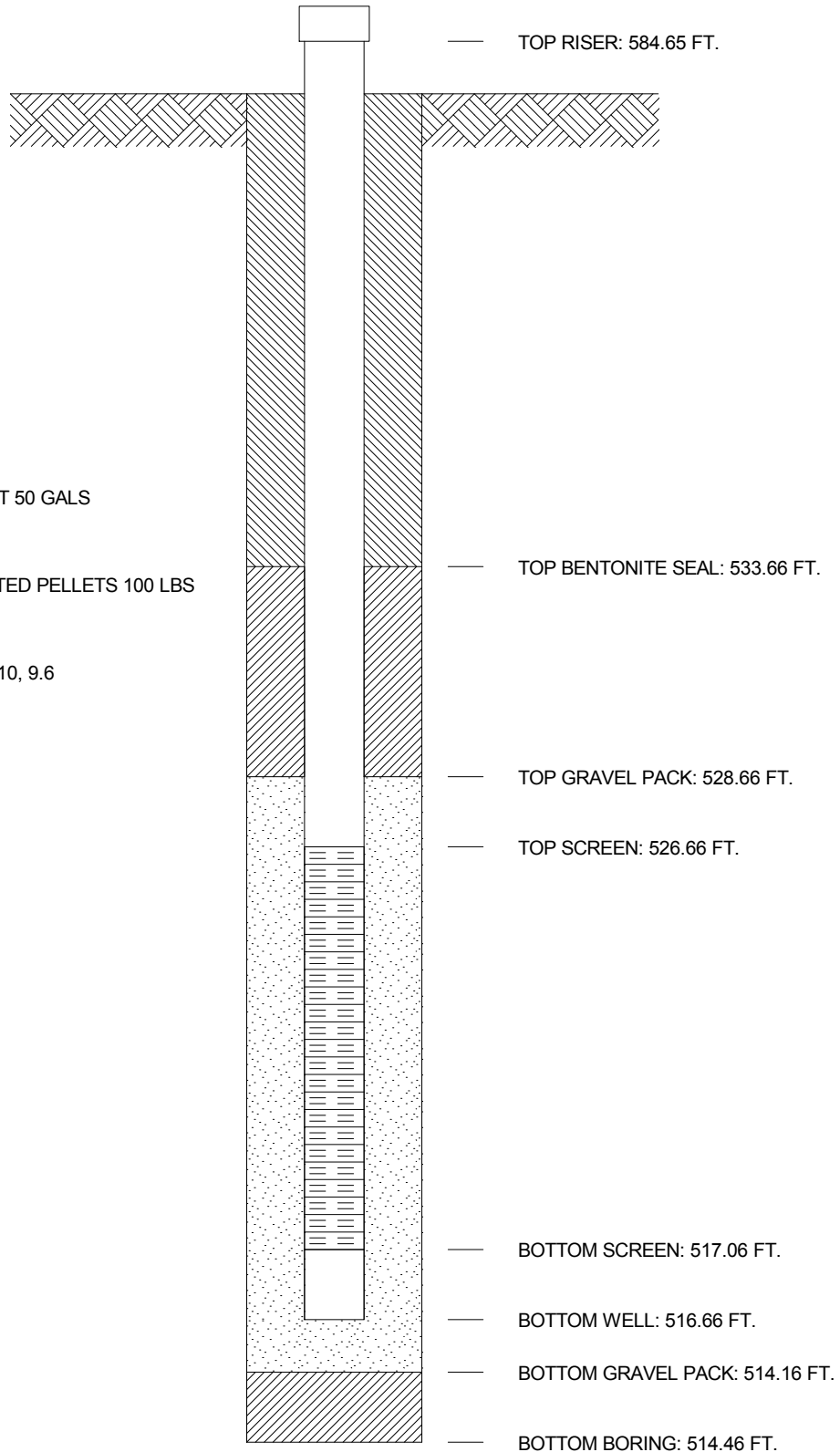
WELL No. **BAC-04** BORING No. **BAC-04** INSTALLED **12/22/15**







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:

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 _____

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**

Water Level, ft	▽	▼	▼
TIME			
DATE			

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO									
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			10			MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
8	SS	10.5	12.0	3-4-7	1.5					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 _____

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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
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					
25	SS	37.5	39.0	2-3-4	1.5					MEDIUM STIFF MODERATE BROWN 5YR 4/4 CLAY dry		
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					
28	SS	42.5	44.0	WOH-WOH-2	1.5					SOFT MODERATE BROWN 5YR 4/4 CLAY AND SILT 1.0 tsf, w/sands fine, moist		
29	SS	44.0	45.5	WOH-2-1	1.5					VERY SOFT MODERATE BROWN 5YR 4/4 CLAY AND SILT w/sands fine, moist		
30	SS	45.5	47.0	WOH-1-2	1.5		45					
										SOFT MODERATE BROWN 5YR 4/4 CLAY		

AEP_GV_BAC_CCR_COMPLIANCE.GPJ_AEP.GDT_7/7/16

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

AEP_GV BAC CCR COMPLIANCE.GPJ_AEP.GDT_7/7/16

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		STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
		FROM	TO			%						
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 _____

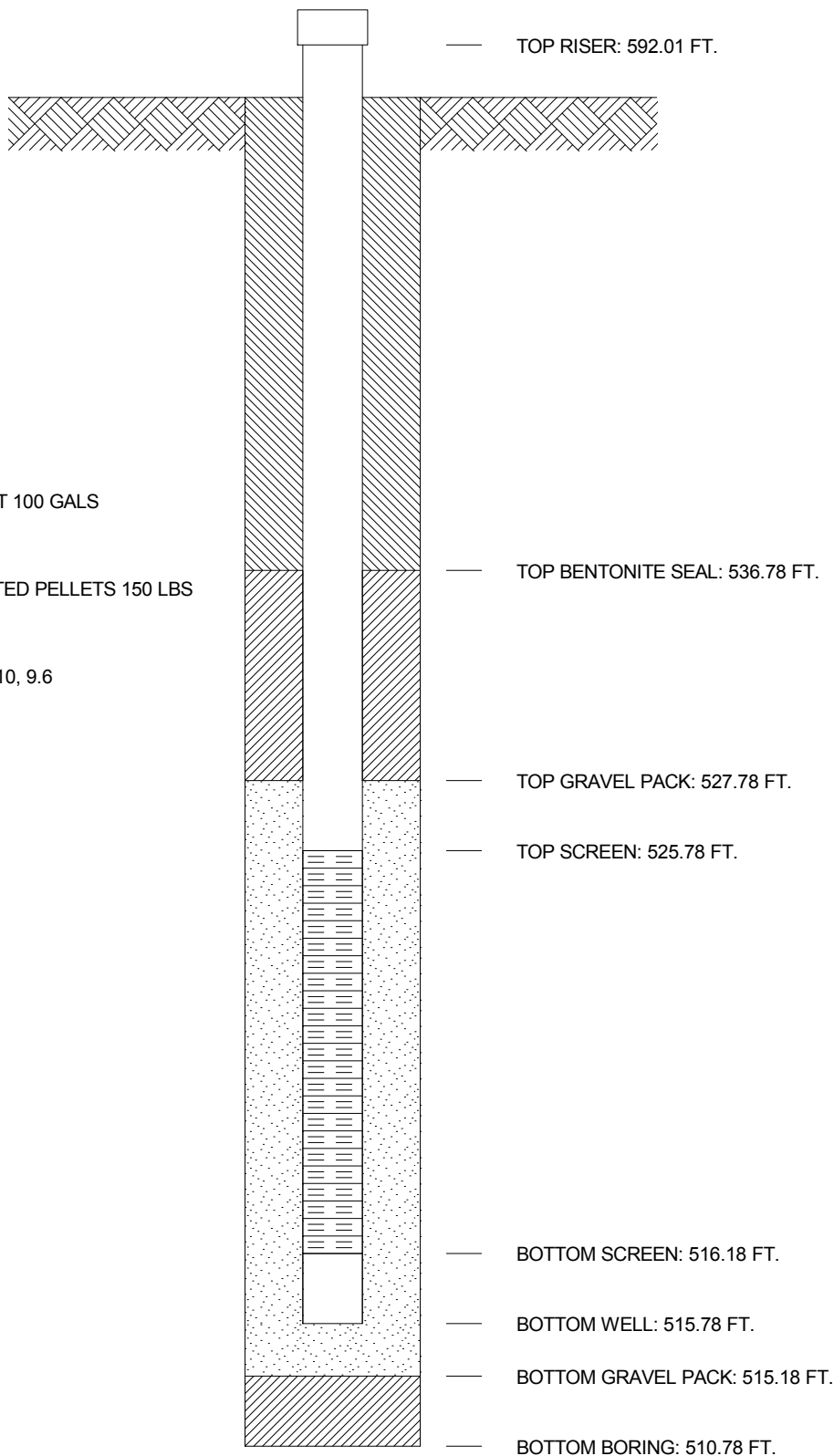
WELL No. **BAC-05** BORING No. **BAC-05** INSTALLED **12/30/15**

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:



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

Client: Gavin Power, LLC

Project Name: Residual Waste Landfill Monitoring Well Installation

Project Number: 0488799

Project Location: Cheshire, OH

DATE STARTED: 6/10/2020

TOTAL DEPTH: 90 ft bgs

WELL DEVELOPMENT

DATE COMPLETED: 6/11/2020

DIAMETER: 5-6 inches

METHOD(S): Air Lift

DRILLING CONTRACTOR: Enviroprobe Service, Inc.

GROUND ELEVATION: 599.64 ft amsl (approx.)

DATE STARTED: 8/5/2020

DRILLING METHODS: Sonic Drilling

PVC ELEVATION: 602.54 ft amsl

DATE ENDED: 8/5/2020

LOGGED BY: P. Gebhard

NORTHING: 338477.383

DTW AT START: 62.1 ft bgs

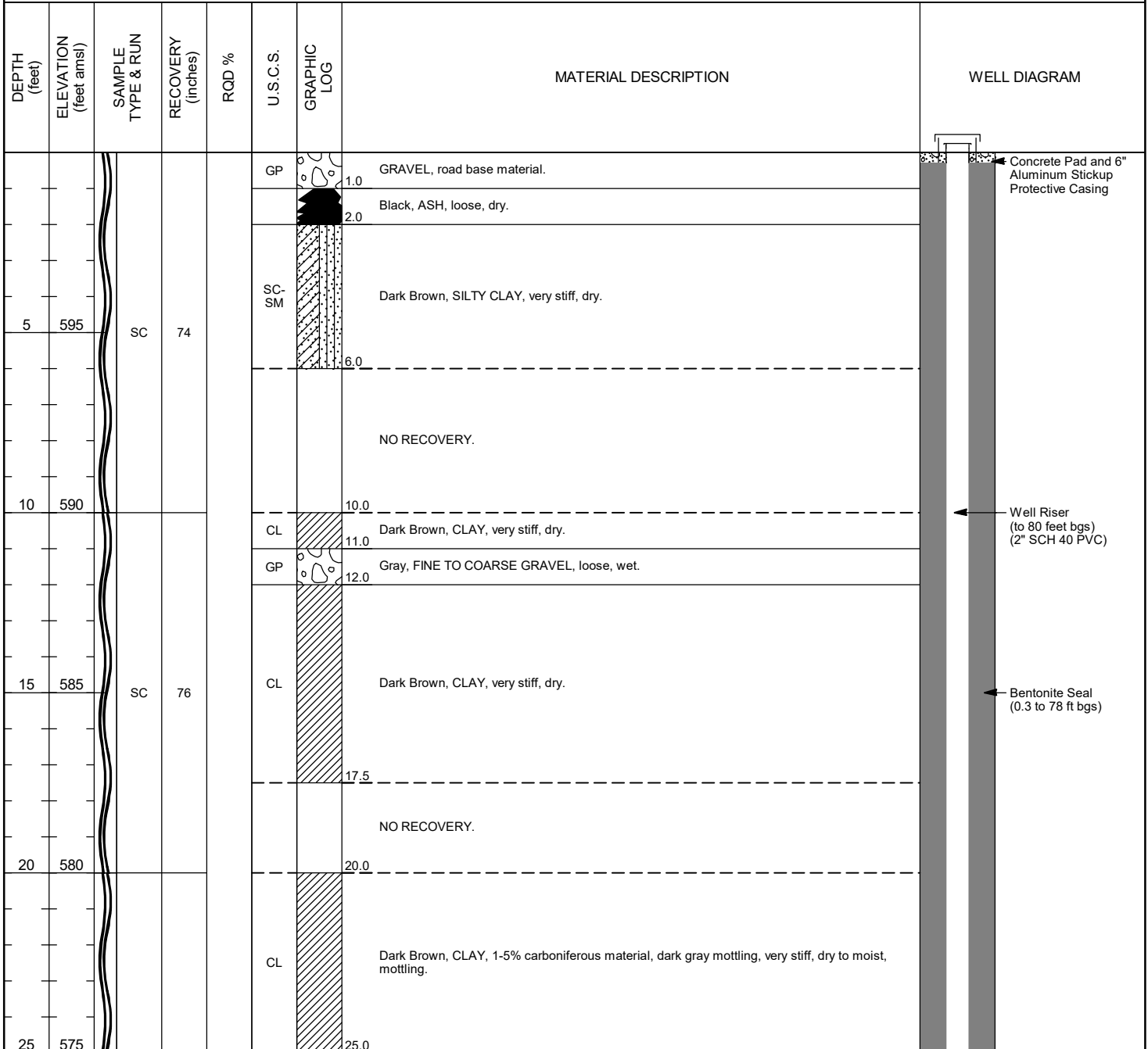
CHECKED BY: H. Usle

EASTING: 2076549.323

DTW AT END: 62.2 ft bgs

NOTES: 6-inch steel casing advanced to 80 ft bgs; 5-inch casing to termination depth.

VOLUME PURGED: 17.5 gallons



SAMPLE TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling	GP Poorly-graded Gravel ASH Ash CL Low Plasticity Clay ML Silt SC-SM Clayey and Silty Sand SM Silty Sand	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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 1 Beacon Street; 5th Floor
 Boston, Massachusetts 02108
 Telephone: +1 (617) 646-7800

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
30	570	SC	80				NO RECOVERY. (continued)	<p>Well Riser (to 80 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Seal (0.3 to 78 ft bgs)</p>
35	565	SC	120		CL		Dark Brown, CLAY, 1-5% carboniferous material, dark gray mottling, medium stiff, dry to moist.	
40	560							
45	555	SC	120		ML		Dark Brown, SILT, minor carboniferous material, dark gray mottling, medium stiff, moist, mottling.	
50	550							
							NO RECOVERY.	
					SC-SM		Medium Brown, SILTY FINE SAND, and clay, soft, moist to very moist.	

SAMPLE TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling	GP Poorly-graded Gravel ASH Ash CL Low Plasticity Clay ML Silt	SC-SM Clayey and Silty Sand SM Silty Sand 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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 1 Beacon Street; 5th Floor
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 Telephone: +1 (617) 646-7800

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
55	545	SC	108		SC-SM		Medium Brown, SILTY FINE SAND, and clay, soft, moist to very moist. <i>(continued)</i>	<p>Well Riser (to 80 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Seal (0.3 to 78 ft bgs)</p> <p>Filter Sand (#0 and #1)</p> <p>Well Screen (80 to 90 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p>
60	540				SC-SM		Dark Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, soft to medium stiff, moist.	
65	535	SC	120		SC-SM		Dark Gray, FINE SILTY TO CLAYEY SAND, loose to medium dense, moist.	
70	530							
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						NO RECOVERY.	

SAMPLE TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling	GP Poorly-graded Gravel ASH Ash CL Low Plasticity Clay ML Silt SM Silty Sand	SC-SM Clayey and Silty Sand SM Silty Sand 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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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)	<p>Well Screen (80 to 90 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Filter Sand (#0 and #1)</p> <p>End Cap</p>
					SM	86.0	Dark Brown, MEDIUM SILTY SAND, well sorted, loose, wet.	
					SM	87.0	Dark Brown, COARSE SILTY SAND, trace well rounded gravel, (0.5" diameter), poorly sorted, loose, wet.	
90	510				SM	89.0	Dark Brown, COARSE SILTY SAND, and well rounded gravel, (0.5" diameter), possible close proximity to bedrock, poorly sorted.	
							Bottom of Boring @ 90.00 feet bgs	
95	505							
100	500							
105	495							
110	490							

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

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

DATE STARTED: <u>6/12/2020</u>	TOTAL DEPTH: <u>90 ft bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>6/15/2020</u>	DIAMETER: <u>5-6 inches</u>	METHOD(S): <u>Air Lift</u>
DRILLING CONTRACTOR: <u>Enviroprobe Service, Inc.</u>	GROUND ELEVATION: <u>599.71 ft amsl (approx.)</u>	DATE STARTED: <u>8/5/2020</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>602.76 ft amsl</u>	DATE ENDED: <u>8/5/2020</u>
LOGGED BY: <u>P. Gebhard</u>	NORTHING: <u>338526.105</u>	DTW AT START: <u>61.4 ft bgs</u>
CHECKED BY: <u>H. Usle</u>	EASTING: <u>2075728.652</u>	DTW AT END: <u>61.4 ft bgs</u>
NOTES: <u>6-inch steel casing advanced to 80 ft bgs; 5-inch casing to termination depth.</u>		VOLUME PURGED: <u>20 gallons</u>

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
					GP		GRAVEL, road base material.	<p>Concrete Pad and 6" Aluminum Stickup Protective Casing</p> <p>Well Riser (to 80 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Seal (0.3 to 76 ft bgs)</p>
							Black, ASH, loose, dry.	
5	595	SC	76		CL-ML		Dark Brown, SILTY CLAY, very stiff, dry.	
10	590						NO RECOVERY.	
15	585	SC	84		GP		COARSE GRAVEL, "fill-like" material.	
20	580				CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, very stiff, dry.	
25	575						NO RECOVERY.	
					CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor mica, soft, very moist.	

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

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
30	570	SC	96		CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor carboniferous material, minor mica, very stiff, slightly moist. (continued)	<p>Well Riser (to 80 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Seal (0.3 to 76 ft bgs)</p>
					ML		Dark Gray, SILT, minor dark brown mottling, very soft to soft, very moist to wet.	
35	565	SC	NM		CL-ML		Dark Brown, SILTY CLAY, dark gray mottling, minor carboniferous material, minor mica, very stiff, slightly moist.	
40	560						NO RECOVERY.	
45	555	SC	78		CL-ML		Dark Brown, SILTY CLAY, soft, wet.	
					CL-ML		Dark Gray, SILTY CLAY, thin laminations of dark brown clay, plant material on bedding plane, stiff to very stiff, dry to moist.	
50	550				CL		Dark Brown, CLAY, dark gray mottling, minor mica, very stiff, moist.	
					CL-ML		Dark Brown, SILTY CLAY, soft, wet.	
					CL		Dark Brown, CLAY, dark gray mottling, minor mica, minor roots, very stiff, moist.	

SAMPLE TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling	GP Poorly-graded Gravel ML Silt CL Low Plasticity Clay	ASH Ash CL-ML Silty Clay SC-SM Clayey and Silty Sand
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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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
55	545	SC	120		CL		Dark Brown, CLAY, dark gray mottling, minor mica, minor roots, very stiff, moist. <i>(continued)</i>	
60	540						60.0 NO RECOVERY. 61.0	
65	535	SC	108		CL-ML		Dark Brown, SILTY CLAY, very soft, wet.	
							63.0	
70	530	SC	108		CL-ML		Dark Gray, SILTY CLAY, dark brown mottling, soft to medium stiff, moist.	
							65.0	
75	525	SC	48		CL-ML		Dark Gray, SILTY CLAY, dark brown mottling, stiff, moist.	
							66.0	
70	530	SC	108		SC-SM		Dark Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, dense, moist.	
							70.0	
75	525	SC	48		SC-SM		NO RECOVERY.	
							76.0	
80	520	SC	48		SC-SM		Light Brown, FINE TO MEDIUM SILTY TO CLAYEY SAND, poorly sorted, medium dense, wet.	
							78.0	
80	520	SC	48		SP		Light Brown, FINE SAND AND COBBLES, well rounded silty, poorly sorted, loose, dry.	
							80.0	
					SM		Light Brown, MEDIUM TO COARSE SILTY SAND, very loose, very moist.	

SAMPLE TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling	GP Poorly-graded Gravel ML Silt CL Low Plasticity Clay CL-ML Silty Clay SC-SM Clayey and Silty Sand	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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Project Number: 0488799

Project Location: Cheshire, OH

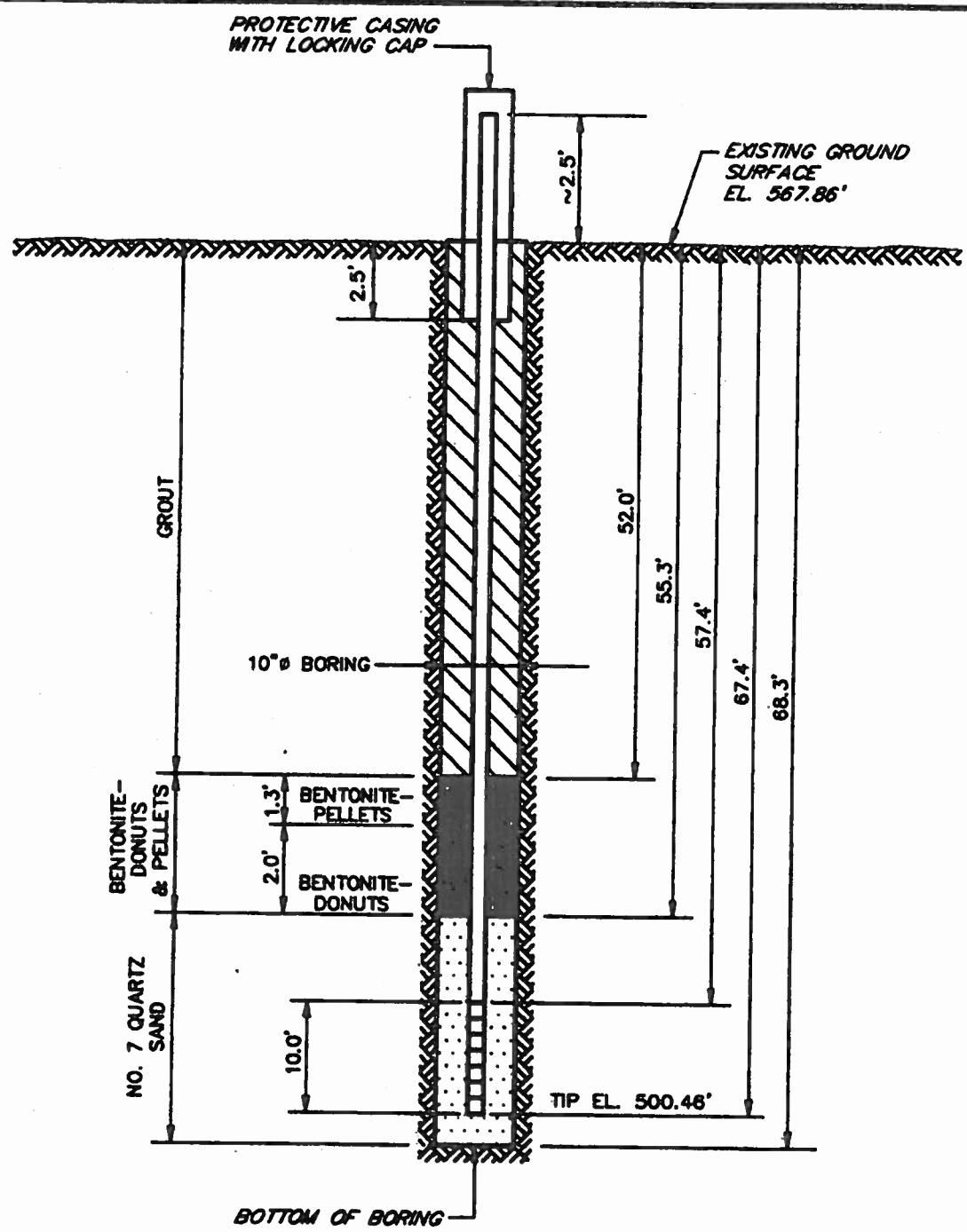
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
85	515	SC	120		SM		Light Brown, MEDIUM TO COARSE SILTY SAND, very loose, very moist. <i>(continued)</i>	<p>Well Screen (80 to 90 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p>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

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

PROJECT NO: 313579 BORING NO: M1-1 PAGE 1 OF 2
 DATE BEGAN: 7-15-93 DATE FINISHED: 7-19-93 PROJECT NAME: AEP GAVIN PLANT
 DRILLER: C. ROUSH/R. YATES N: 6900.00' FIELD ENGINEER: M. HARDNER
 GROUND SURFACE ELEV.: 567.86' GWL DATE/TIME: NA E: 8950.00'
 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)	DEPTH	DESCRIPTION	SOIL CLASS.	REMARKS
	0.00	S 12-12 1 11-13	1.17			Loose, dark brown, topsoil, over hard, medium to dark brown, silty CLAY, trace pebbles, 10% coal (small pieces), dry		PID READINGS 1095 hrs. HNU - 0 ppm LEL - 0%
565.0	-5.00	S 5-5- 2 7-12	1.33			Hard, medium brown, mottled gray silty CLAY, trace coal pieces, slightly to non-plastic, dry		1100 hrs. HNU - 0 ppm LEL - 0%
560.0	-10.00	S 5-5- 3 7-8	1.58			Hard, medium brown, silty CLAY, slight-medium plasticity, dry	cl	1115 hrs. HNU - 0 ppm LEL - 0%
555.0	-15.00	S 2-3- 4 5-8	1.25			Hard, medium brown, silty CLAY, slightly plastic, dry		1120 hrs. HNU - 0 ppm LEL - 0%
550.0	-20.00	S 2-3- 5 4-4	1.67			Hard, medium brown, silty CLAY, medium plasticity, moist		1128 hrs. HNU - 0 ppm LEL - 0%
545.0	-25.00	S 2-3- 6 5-9	1.75			Soft, gray brown clayey SILT, medium plasticity, moist		1132 hrs. HNU - 0 ppm LEL - 0%
540.0	-30.00	S 2-3- 7 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%
535.0	-35.00	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	END 07/15/93 BEGIN 07/16/93 0805 hrs. HNU - 0 ppm LEL - 0%

DRAWING NUMBER 313579-A1
 DATE 12/27/93
 CHECKED BY SJA
 APPROVED BY CLP
 NAME 26 SEPT 93
 BY DA



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**



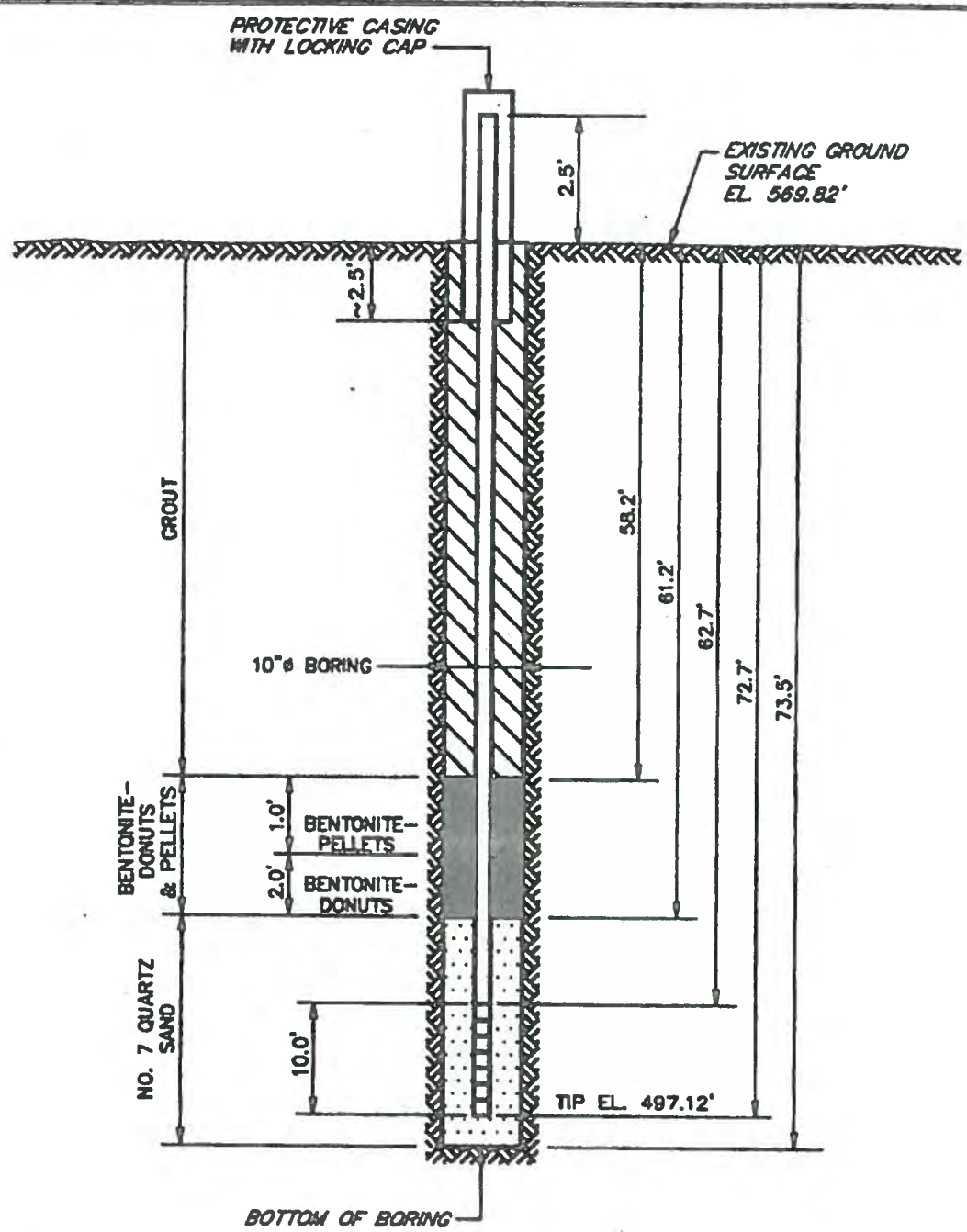
PROJECT NO: 313579
 DATE BEGAN: 7-20-93
 DRILLER: C. ROUSH/R. YATES
 GROUND SURFACE ELEV.: 569.82'
 DRILLING METHOD: 3.25" ID HOLLOW STEM AUGER
 CONTRACTOR: AEP ENVIRONMENTAL

BORING NO: M-6
 DATE FINISHED: 7-20-93
 N: 8277.67'
 GWL DATE/TIME: NA

PROJECT NAME: AEP GAVIN PLANT
 FIELD ENGINEER: M. HARDNER
 E: 9491.54'
 GWL DEPTH: NA
 EQUIPMENT: B-K 81 RIG
 CHECKED BY: S. HANNAH

ELEV (FT)	DEPTH (FT)	SAMPLE TYPE AND NO.	SPT BLOWS PER (0.5')	REC (FT)	DEPTH (FT)	DESCRIPTION	CODE	REMARKS
569.82	0.00				0.00		SW	
					42.0'		NA	
		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%)		1510 HNU - 0 ppm LEL - 0%
565.0	5.00						sp	
		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%
560.0	10.00						NA	
		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	SW	1535 HNU - 0 ppm LEL - 0%
555.0	15.00						NA	
		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	GW/sp	1625 HNU - 0 ppm LEL - 0%
550.0	20.00						NA	
		S 13	8-12-15-19	1.67		Medium dense, light brown, fine to medium grained SAND, trace pebbles/cobbles, wet	sp	1642 HNU - 0 ppm LEL - 0%
545.0	25.00						NA	
		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%
540.0	30.00						NA	
		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							

D. BY: NAW
 CHECKED BY: SBH
 APPROVED BY: CLP
 DATE: 12/07/93
 DRAWING NUMBER: 313579-A6



NOTES:

1. RISER PIPE IS 2 IN. I.D. SCHEDULE 40 PVC PIPE, THREADED, FLUSH-JOINED.
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**





ERM
1 Beacon Street, 5th Floor
Boston MA, 02108
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BORING BAC-08

Page 1 of 4

Client: Gavin Power, LLC

Project Name: Bottom Ash Pond Monitoring Well Installation

Project Number: 0643653

Project Location: Cheshire, OH

DATE STARTED: 6/30/2022

TOTAL DEPTH: 70 feet bgs

WELL DEVELOPMENT

DATE COMPLETED: 6/30/2022

DIAMETER: 6 inches

METHOD(S): Grundfos & Buffalo Pump

DRILLING CONTRACTOR: Cascade Drilling

GROUND ELEVATION: 594.650

DATE STARTED: 7/7/2022

DRILLING METHODS: Sonic Drilling

PVC ELEVATION: 597.64

DATE ENDED: 7/7/2022

LOGGED BY: K. Popyack

NORTHING: 339189.254

DTW AT START: 55.9 feet bgs

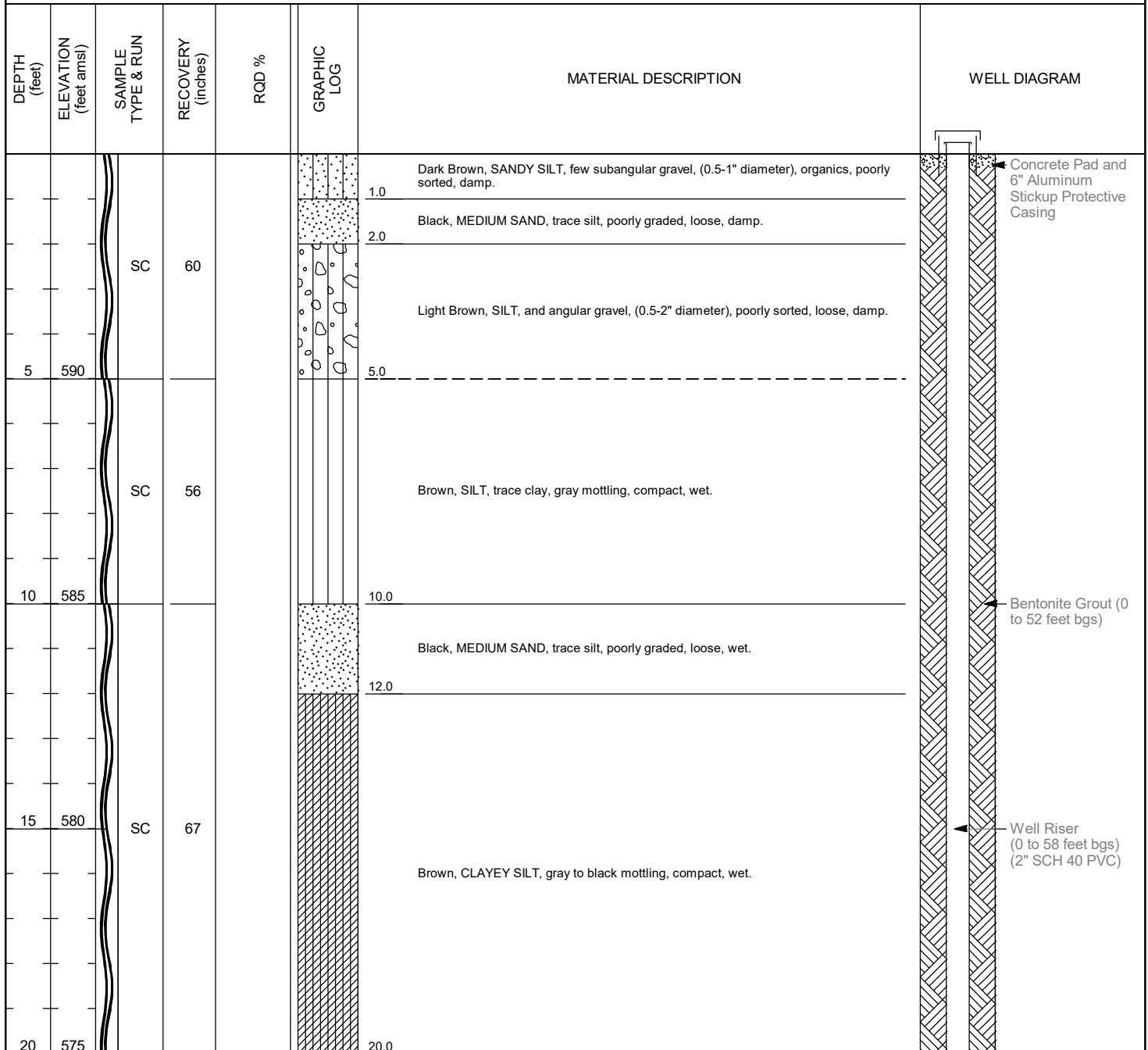
CHECKED BY: A. Harford

EASTING: 2075428.215

DTW AT END: NM

NOTES: Well ran dry during development, RQD only applicable for bedrock wells

VOLUME PURGED: 42 gallons



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Sandy Silt Poorly-graded Sand Gravelly Silt Silt Silty Clay Low Plasticity Clay	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-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
						21.0 Brown, CLAYEY SILT, gray mottling, compact, wet. (continued)	
						23.0 Gray Brown, CLAYEY SILT, little brown mottling, increasing clay with depth, compact, wet.	
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 Gray Brown, SILT, little clay, compact, wet.	Well Riser (0 to 58 feet bgs) (2" SCH 40 PVC)
						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.	
						40.0 Brown, SANDY CLAY, medium plasticity, saturated.	
40	555					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

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



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BORING BAC-08

Page 3 of 4

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	550	SC	96			Brown, SANDY CLAY, and silt, low plasticity, saturated. <i>(continued)</i>	
					46.0		
50	545	SC	84			Brown, FINE SAND, some clay, cohesive, saturated.	
					49.5		
55	540	SC	95			Brown, MEDIUM SAND, and subrounded gravel, (0.5-2" diameter), poorly sorted, loose, saturated.	
60	535				60.0		
65	530	60.4			Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), dark gray sand at 63 feet bgs, poorly sorted, loose, saturated.		

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-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, saturated. <i>(continued)</i>	
75	520					Bottom of Boring @ 70.00 feet bgs	
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

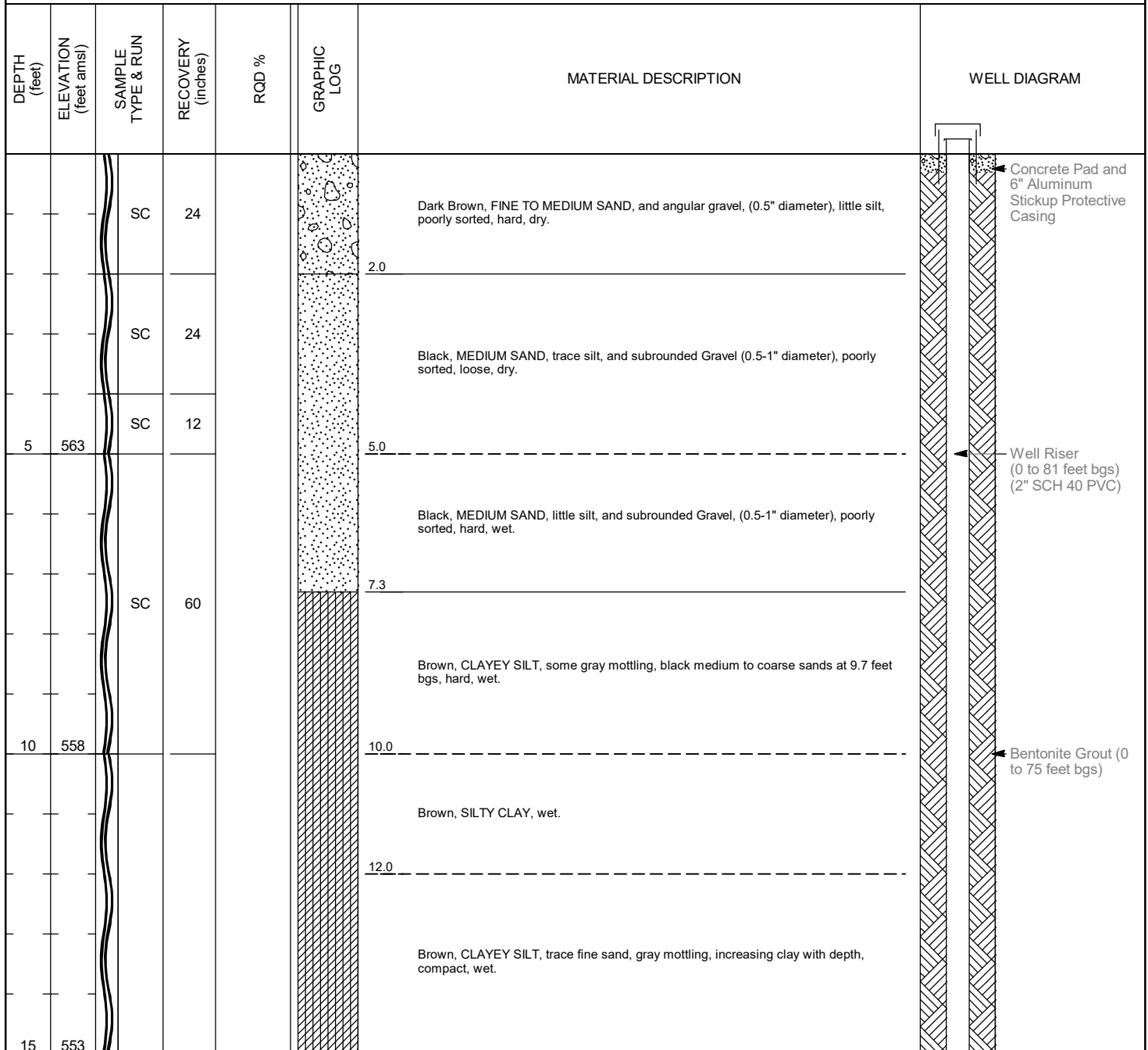


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BORING BAC-09

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

DATE STARTED: <u>6/16/2022</u>	TOTAL DEPTH: <u>94 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>6/16/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>567.930</u>	DATE STARTED: <u>7/7/2022</u>
DRILLING METHODS: <u>Sonic Drilling & Wireline Rock Coring</u>	PVC ELEVATION: <u>570.53</u>	DATE ENDED: <u>7/7/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>339222.733</u>	DTW AT START: <u>34.51 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2075281.613</u>	DTW AT END: <u>NM</u>
NOTES: <u>RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>25 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Poorly-graded Gravelly Sand Poorly-graded Sand Silty Clay Low Plasticity Clay Poorly-graded Gravel Clayey Sand	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

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

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



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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	533	SC	113			33.0 Dark Brown, COARSE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	 Bentonite Grout (0 to 75 feet bgs) Well Riser (0 to 81 feet bgs) (2" SCH 40 PVC)
						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 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			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

ACRONYM LEGEND

- amsl = above mean sea level
- 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-09

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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	WELL DIAGRAM
55	513	SC	112			Brown, FINE TO MEDIUM SAND, few subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated. <i>(continued)</i> Brown, CLAYEY SAND, well sorted, loose, saturated.	<p>Bentonite Grout (0 to 75 feet bgs)</p> <p>Well Riser (0 to 81 feet bgs) (2" SCH 40 PVC)</p>
60	508				Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), trace clay, medium sand at 58 feet bgs, poorly sorted, loose, saturated.		
65	503				Brown, FINE SAND, little coarse sand at 65 feet bgs, well sorted, loose, saturated.		
		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

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

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
70	498					Blue Gray, CLAYSTONE, less competent with depth, brittle, damp.	<p>Bentonite Grout (0 to 75 feet bgs)</p> <p>Well Riser (0 to 81 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Seal (75 to 79 feet bgs)</p> <p>Well Screen (81 to 91 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Filter Sand (79 to 93 feet bgs) (Global #5)</p>
72.0						Brown To Orange-Brown, CLAYSTONE, dry.	
73.0		RC	14.4	0		SILTSTONE, some gravel, brittle.	
75	493					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.	
76.0							
80	488						
81.0							
85	483						
		RC	46.8	0		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).	
		RC	57.6	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

ACRONYM LEGEND

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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
90	478	RC	84	27		86.0 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). 94.0	 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) 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

- amsl = above mean sea level
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BORING BAC-10

Page 1 of 3

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

DATE STARTED: <u>6/29/2022</u>	TOTAL DEPTH: <u>57 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>6/29/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>570.110</u>	DATE STARTED: <u>7/7/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>572.35</u>	DATE ENDED: <u>7/7/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>340079.422</u>	DTW AT START: <u>32.2 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2077071.633</u>	DTW AT END: <u>NM</u>
NOTES: <u>Well ran dry during development, RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>20 gallons</u>

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
5	565	SC	60			Brown, SANDY SILT, some black medium sands, brittle, moist.	<p>Concrete Pad and 6" Aluminum Stickup Protective Casing</p> <p>Bentonite Grout (0 to 39 feet bgs)</p> <p>Well Riser (0 to 45 feet bgs) (2" SCH 40 PVC)</p>
						Brown, MEDIUM SAND, some angular gravel, (1-6" diameter), poorly sorted, loose, moist.	
						Brown, SILTY CLAY, some fine sand, trace subangular gravel (0.5" diameter), poorly sorted, low plasticity, wet.	
						Brown, SILTY CLAY, and sand, some gravel, poorly sorted, low plasticity, saturated.	
10	560	SC	56			Brown, SILT, some subrounded gravel, (0.5-1" diameter), some gray mottling, trace clay, poorly sorted, saturated.	
						Brown, SANDY CLAY, with subangular gravel, (0.5-1" diameter), medium sands, some silt, poorly sorted, low plasticity, saturated.	
15	555	SC	114			Brown, SILT, little clay, red brown to gray mottling, compact, moist.	
20	550						

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Sandy Silt Silt Poorly-graded Sand Low Plasticity Sandy Clay Silty Clay Clayey Sand	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-10

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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, with fine sand, medium plasticity, saturated. <i>(continued)</i>	
25	545	SC	106			22.8	
						Brown, CLAYEY SAND, some silt, medium plasticity, saturated.	Well Riser (0 to 45 feet bgs) (2" SCH 40 PVC)
30	540					29.0	
						Brown, FINE SAND, with clay, some varving, well sorted, cohesive, saturated.	Bentonite Grout (0 to 39 feet bgs)
						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" diameter), little clay at 35 feet bgs, poorly sorted, saturated.	
						40.0	
						40.4	
						GRAVEL, subrounded (0.5-1.5" diameter), 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.	Bentonite Seal (39 to 43 feet bgs)
						43.0	
						Orange Brown, FINE TO MEDIUM SAND, and rounded gravel, (0.5" diameter), some	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Sandy Silt Silt Poorly-graded Sand Silty Clay Low Plasticity Sandy Clay Clayey Sand	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-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 subangular gravel (6" diameter) at 44 feet bgs, poorly sorted, saturated. Orange Brown, FINE TO MEDIUM SAND, and rounded gravel, (0.5" diameter), some larger subangular gravel (6" diameter) at 44 feet bgs, poorly sorted, saturated. (continued)	<p>Filter Sand (43 to 57 feet bgs) (Global #5)</p> <p>Well Screen (45 to 55 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Sump (2" SCH 40 PVC/2' long)</p>
						Gray Brown, GRAVEL, with subrounded coarse sand, poorly sorted, saturated.	
50	520					Gray Brown, FINE TO MEDIUM SAND, some subrounded gravel, (0.5-1" diameter), poorly sorted, saturated.	
55	515	SC	84				
60	510					Bottom of Boring @ 57.00 feet bgs	
65	505						

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Sandy Silt Silt Poorly-graded Sand Silty Clay Low Plasticity Sandy Clay Clayey Sand	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-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 TOTAL DEPTH: 135 feet bgs WELL DEVELOPMENT
DATE COMPLETED: 6/15/2022 DIAMETER: 6 inches METHOD(S): Grundfos & Buffalo Pump
DRILLING CONTRACTOR: Cascade Drilling GROUND ELEVATION: 600.180 DATE STARTED: 7/7/2022
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring PVC ELEVATION: 602.99 DATE ENDED: 7/7/2022
LOGGED BY: K. Popyack NORTHING: 339940.141 DTW AT START: 62.04 feet bgs
CHECKED BY: A. Harford EASTING: 2077043.833 DTW AT END: NM
NOTES: Well ran dry during development, RQD only applicable for bedrock wells VOLUME PURGED: 48 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
5	595	SC	47			Dark Brown, SILT, orange and black mottling, hard, moist.	<p>Concrete Pad and 6" Aluminum Stickup Protective Casing</p> <p>Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 117 feet bgs)</p>
10	590	SC	57			Dark Brown, SILT, some subrounded gravel, (0.5" diameter), poorly sorted, hard, wet.	
15	585	SC	90			Brown, CLAYEY GRAVEL, little silt, subangular, (0.5-1" diameter), poorly sorted, loose, wet.	
20	580	SC	90			Brown, SILT, some red brown mottling, black medium sands at 19.5 feet bgs, hard, wet.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Sandy Silt Poorly-graded Gravel with Clay Silty Clay Poorly-graded Sand with Clay Poorly-graded Gravelly Sand	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-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
25	575	SC	103			Brown, SILT, some red brown mottling, black medium sands at 19.5 feet bgs, hard, wet. <i>(continued)</i> 24.0 24.7 Dark Gray, SILT, organics (root and plant material), wet. Brown, SILT, little clay, some gray mottling, wet. 30.0	<p>Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 117 feet bgs)</p>
30	570						
35	565	SC	94			Brown, SILT, little clay, no mottling after 37 feet bgs, root material at 36.8 feet bgs, wet. 40.0 Brown, SILT, little clay, more clay with depth, wet.	
40	560						

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Sandy Silt Poorly-graded Gravel with Clay Silty Clay Poorly-graded Sand with Clay Poorly-graded Gravelly Sand	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-11

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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)	<p>Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 117 feet bgs)</p>
						Brown, SILTY CLAY, some fine sand, low plasticity, wet.	
						Brown, SANDY SILT, and clay, loose, wet.	
50	550						
55	545	SC	111			Brown, SANDY CLAY, trace silt, medium plasticity, saturated.	
60	540						
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
- Silty Clay
- Sandy Silt
- Poorly-graded Gravel with Clay
- Poorly-graded Sand with Clay
- Poorly-graded Gravelly Sand

ACRONYM LEGEND

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- 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

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)	<p>Bentonite Grout (0 to 117 feet bgs)</p> <p>Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC)</p>
75	525	SC	80			Brown, COARSE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
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					Brown, FINE TO MEDIUM SAND, little subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
85	515	SC	106			Brown, GRAVEL, and medium sand, subrounded, (0.5-1.5" diameter), poorly sorted, loose, saturated.	
90	510					Brown, GRAVEL, little medium sand, poorly sorted, loose, saturated.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Sandy Silt Poorly-graded Gravel with Clay Silty Clay Poorly-graded Sand with Clay Poorly-graded Gravelly Sand	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-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
95	505	SC	101			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. 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. 100.0 Brown, FINE TO MEDIUM SAND, trace subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated. 101.5 102.3 Brown, GRAVEL, and medium sand, subrounded, (0.5-1.5" diameter), poorly sorted, loose, wet. Grayish Blue, CLAYSTONE, trace brown mottling, soft, moist. 104.0 Gray, CLAYSTONE, brittle, dry. 108.0 Gray, CLAYSTONE, pulverized, dry. 110.0 Blue Gray, SILTSTONE, highly fractured and weathered, rubble zone at 111-112.7 feet bgs. 112.7 Red Brown, SILTSTONE, brittle, natural fracture at 112.9 feet bgs, rubble zone at 113-116 feet bgs.	 Well Riser (0 to 123 feet bgs) (2" SCH 40 PVC) Bentonite Grout (0 to 117 feet bgs)
100	500						
105	495	SC	107				
110	490	RC	6	0			
		RC	40.8	1.5			

CORING TYPE

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

GRAPHIC LOG LEGEND

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

ACRONYM LEGEND

- amsl = above mean sea level
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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

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115	485					Red Brown, SILTSTONE, brittle, natural fracture at 112.9 feet bgs, rubble zone at 113-116 feet bgs. <i>(continued)</i>	
					116.0		Bentonite Grout (0 to 117 feet bgs)
		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.	Bentonite Seal (117 to 121 feet bgs)
120	480						
					121.0		
		RC	60	24		Gray, LIMESTONE, competent.	Filter Sand (121 to 135 feet bgs) (Global #5)
					123.0		
125	475					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.	Well Screen (123 to 133 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
					126.0		
		RC	52.8	0			
130	470					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).	
		RC	40	0			Sump (2" SCH 40 PVC/2' long)
135	465						
					135.0		
						Bottom of Boring @ 135.00 feet bgs	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Sandy Silt Poorly-graded Gravel with Clay Silty Clay Poorly-graded Sand with Clay Poorly-graded Gravelly Sand	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

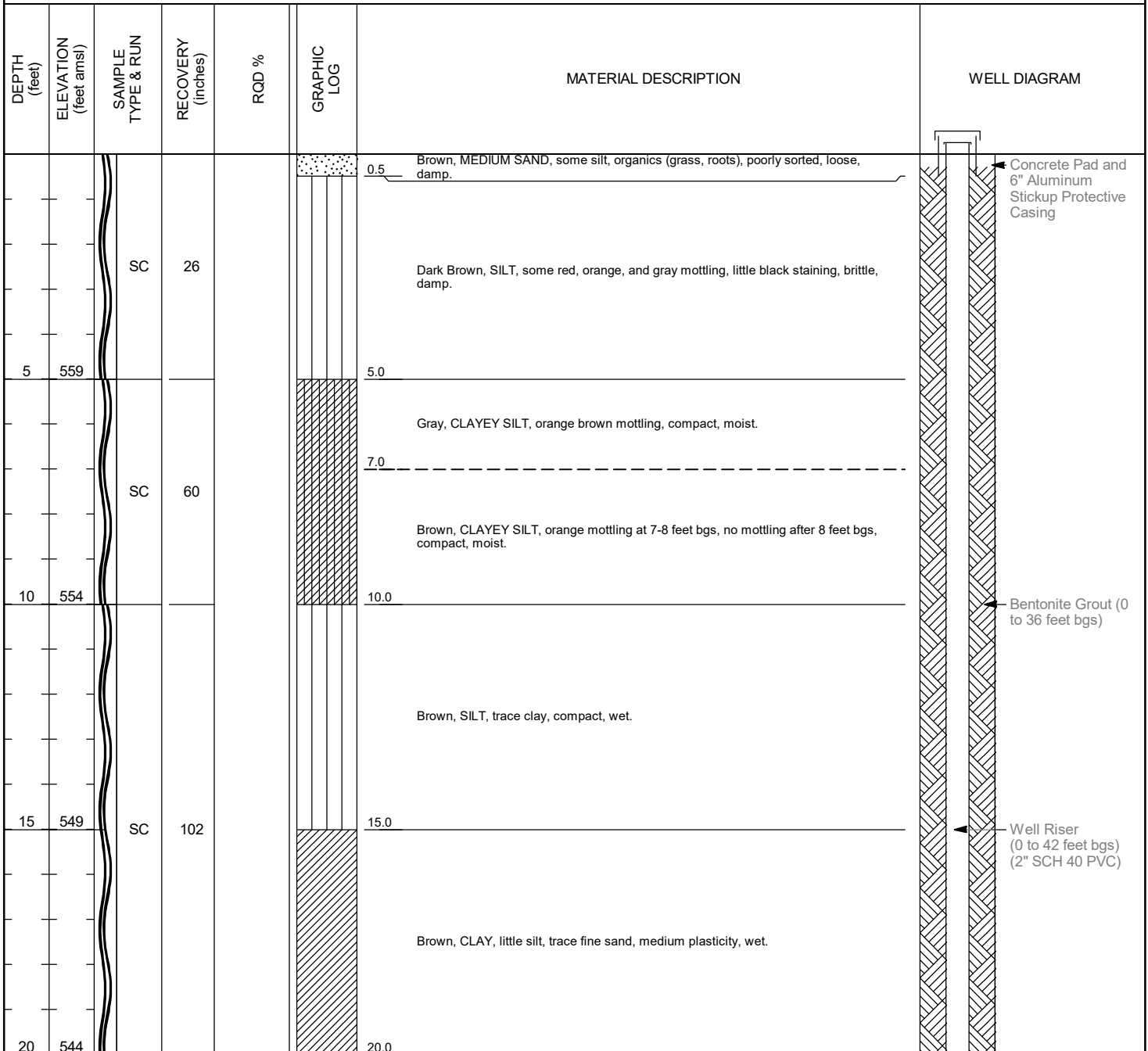


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BORING BAC-12

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

DATE STARTED: <u>7/8/2022</u>	TOTAL DEPTH: <u>54 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>7/8/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>564.210</u>	DATE STARTED: <u>8/12/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>567.01</u>	DATE ENDED: <u>8/12/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>339189.076</u>	DTW AT START: <u>27.44 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2077674.445</u>	DTW AT END: <u>NM</u>
NOTES: <u>RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>17 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Sand Silt Silty Clay Low Plasticity Clay High Plasticity Clay Low Plasticity Sandy Clay	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-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
25	539	SC	120			Brown, CLAY, little silt, trace fine sand, high plasticity, wet. (continued)	<p>Well Riser (0 to 42 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 36 feet bgs)</p> <p>Bentonite Seal (36 to 40 feet bgs)</p> <p>Filter Sand (40 to 54 feet bgs) (Global #5)</p>
30	534					Gray, CLAY, trace silt, medium plasticity, wet.	
35	529	SC	120			Gray, CLAY, trace silt, trace fine sand, low plasticity, wet.	
40	524					Gray, SILTY CLAY, increasing silt with depth, less plasticity with depth, medium plasticity, saturated.	
43.5						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.	
						Light Brown, FINE SAND, with subrounded gravel, (0.5-1.5" diameter), poorly sorted, loose, saturated.	
						Brown To Orange-Brown, MEDIUM TO COARSE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Sand Silt Low Plasticity Clay High Plasticity Clay Low Plasticity Sandy Clay	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-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. <i>(continued)</i> 44.5 GRAVEL, subrounded (0.5-1" diameter), poorly sorted, loose, saturated.	<p>Filter Sand (40 to 54 feet bgs) (Global #5)</p> <p>Well Screen (42 to 52 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Sump (2" SCH 40 PVC/2' long)</p>
50	514					Brown, MEDIUM SAND, and subrounded gravel, (0.5-2" diameter), some fine sand at 50 feet bgs, poorly sorted, loose, saturated.	
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

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



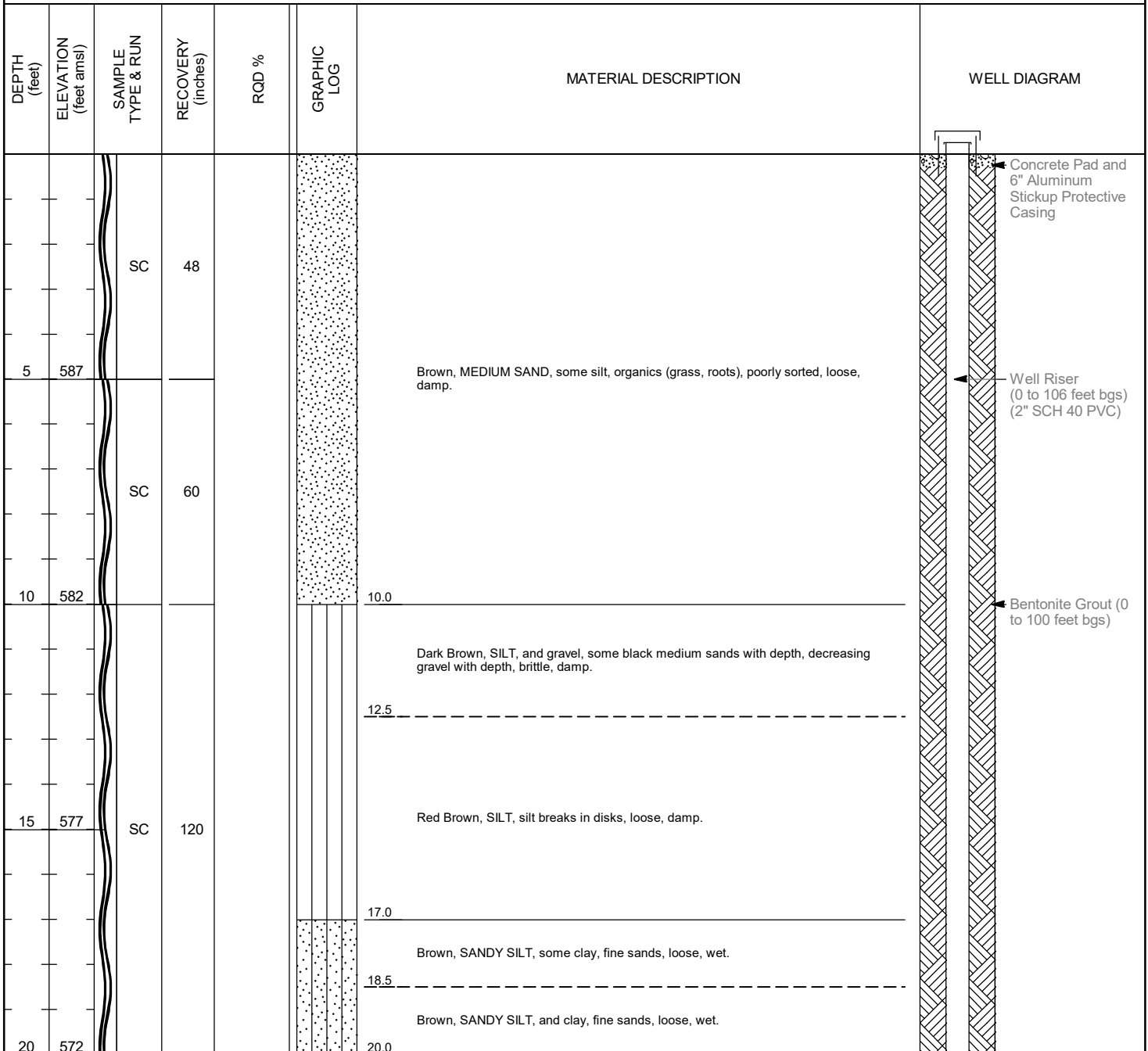
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BORING BAC-13

Page 1 of 6

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

DATE STARTED: <u>6/14/2022</u>	TOTAL DEPTH: <u>118 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>6/14/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>592.300</u>	DATE STARTED: <u>7/6/2022</u>
DRILLING METHODS: <u>Sonic Drilling & Wireline Rock Coring</u>	PVC ELEVATION: <u>584.71</u>	DATE ENDED: <u>7/7/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>339262.324</u>	DTW AT START: <u>34.4 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2077481.342</u>	DTW AT END: <u>NM</u>
NOTES: <u>RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>40.92 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Poorly-graded Sand Silt Sandy Silt Silty Clay Low Plasticity Clay Poorly-graded Sand with Clay	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
25	567	SC	120			Brown, CLAYEY SILT, increasing clay with depth, compact, wet. (continued)	<p>Well Riser (0 to 106 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 100 feet bgs)</p>
30	562					30.0 30.5 Brown, CLAY, little silt, low plasticity, wet.	
35	557	SC	120			Brown, SANDY CLAY, medium plasticity, saturated.	
40	552					35.0 40.0 Brown, FINE SAND, interbedded clayey silt, some organic matter, soft, saturated.	
						Brown, FINE SAND, interbedded clayey silt, orange sands, more clay, increasing organics, soft, saturated.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Poorly-graded Sand Silt Sandy Silt Silty Clay Low Plasticity Clay Poorly-graded Sand with Clay	amsl = above mean sea level PVC = polyvinyl chloride bgs = below ground surface DTW = depth to water NA = not applicable NM = not measured NR = no recovery



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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
45	547	SC	120		44.0	Gray, SILT, some clay, organic matter, wet.	Well Riser (0 to 106 feet bgs) (2" SCH 40 PVC)
					47.0		
50	542	SC	97			Orange Brown, MEDIUM SAND, trace rounded gravel, (0.5-1" diameter), poorly sorted, loose, wet.	Bentonite Grout (0 to 100 feet bgs)
					53.0	Light Brown, MEDIUM SAND, some rounded gravel, (0.5-1" diameter), poorly sorted, loose, wet.	
					54.0	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.	
55	537				56.0	Light Brown To Brown, MEDIUM SAND, some rounded gravel, (0.5" diameter), trace clay, less gravel with depth, poorly sorted, loose, wet.	
60	532				64.0	Brown, MEDIUM TO COARSE SAND, and rounded gravel, (0.5" diameter), few gravel (3" diameter), poorly sorted, loose, wet.	
65	527	SC	98				

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
						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.	
						74.0 Brown, GRAVELLY SAND, subrounded to subangular (0.5-2" diameter), medium to fine sands, finer with depth, poorly sorted, loose, wet.	
75	517	SC	92			74.7 Black, SILTY GRAVEL, trace medium sand, organic-like odor, angular gravel, poorly sorted, loose, wet.	
						76.5 Brown, MEDIUM TO COARSE SAND, and subrounded gravel, (0.5-2" diameter), some larger gravel (5" diameter), poorly sorted, loose, wet.	
						78.0 Brown, GRAVEL, rounded (0.5-2" diameter), poorly sorted, loose, wet.	
						80.0 Brown, MEDIUM SAND, some subrounded gravel, (0.5-1" diameter), trace silt, poorly sorted, loose, wet.	
80	512					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.	
		SC	60			82.0 Brown, FINE TO MEDIUM SAND, trace rounded gravel, (0.5-1" diameter), poorly sorted, loose, wet.	
						82.5 Gray, CLAYSTONE, weathered, dry.	
						83.5 Red Brown, CLAYSTONE, weathered, dry.	
						85.0 Gray, CLAYSTONE, pulverized, dry.	
85	507					86.0 Gray, GRAVEL, gravel stuck in drill bit.	
		RC	6	0			
						Blue Gray, SILTSTONE, thinly layered, brittle, numerous mechanical fractures, pyrite at 86.2 feet bgs.	
90	502	RC	26.4	0			

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Poorly-graded Sand Silt Sandy Silt Silty Clay Low Plasticity Clay Poorly-graded Sand with Clay	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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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
95	497	RC	0	0		NO RECOVERY.	
100	492	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.	Bentonite Grout (0 to 100 feet bgs) Well Riser (0 to 106 feet bgs) (2" SCH 40 PVC)
105	487	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).	Bentonite Seal (100 to 104 feet bgs)
110	482	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).	Filter Sand (104 to 118 feet bgs) (Global #5) Well Screen (106 to 116 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
						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).	

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
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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). <i>(continued)</i>	<p>Well Screen (106 to 116 feet bgs) (2" SCH 40 PVC/ 0.01" slot) Sump (2" SCH 40 PVC/2' long)</p>
						118.0	
						Bottom of Boring @ 118.00 feet bgs	
120	472						
125	467						
130	462						
135	457						

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Poorly-graded Sand Silt Sandy Silt Silty Clay Low Plasticity Clay Poorly-graded Sand with Clay	amsl = above mean sea level PVC = polyvinyl chloride bgs = below ground surface DTW = depth to water NA = not applicable NM = not measured NR = no recovery

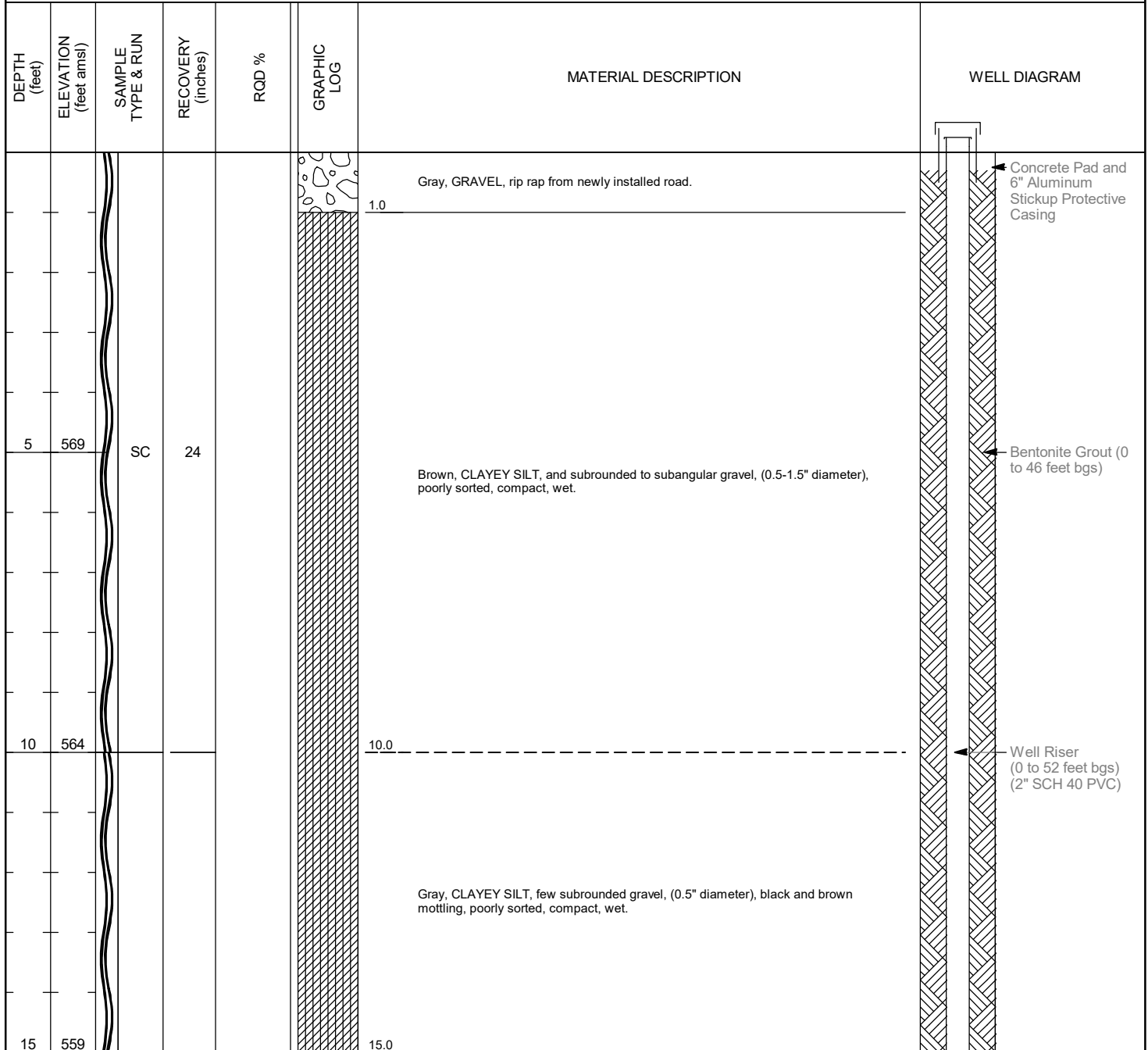


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BORING BAC-14

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

DATE STARTED: 7/8/2022	TOTAL DEPTH: 64 feet bgs	WELL DEVELOPMENT
DATE COMPLETED: 7/8/2022	DIAMETER: 6 inches	METHOD(S): Grundfos & Buffalo Pump
DRILLING CONTRACTOR: Cascade Drilling	GROUND ELEVATION: 573.740	DATE STARTED: 8/12/2022
DRILLING METHODS: Sonic Drilling	PVC ELEVATION: 576.22	DATE ENDED: 8/12/2022
LOGGED BY: K. Popyack	NORTHING: 338465.312	DTW AT START: 36.85 feet bgs
CHECKED BY: A. Harford	EASTING: 2077446.344	DTW AT END: NM
NOTES: Well ran dry during development, RQD only applicable for bedrock wells		VOLUME PURGED: 80 gallons



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Low Plasticity Clay Poorly-graded Sand with Clay Poorly-graded Gravelly Sand	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
20	554	SC	89			Gray Brown, CLAYEY SILT, little black staining at 18 feet bgs, more brown than gray with depth, compact, wet. <i>(continued)</i>	<p>Well Riser (0 to 52 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 46 feet bgs)</p>
25	549	SC	120			Brown, CLAYEY SILT, increasing clay content with depth, increasing moisture with depth, compact, wet.	
30	544					Brown, CLAY, with silt, medium plasticity, wet.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Low Plasticity Clay Poorly-graded Sand with Clay Poorly-graded Gravelly Sand	amsl = above mean sea level PVC = polyvinyl chloride bgs = below ground surface DTW = depth to water NA = not applicable NM = not measured NR = no recovery



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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)	<p>Bentonite Grout (0 to 46 feet bgs)</p> <p>Well Riser (0 to 52 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Seal (46 to 50 feet bgs)</p>
						Brown, CLAY, trace fine sand, medium plasticity, saturated.	
40	534					Brown, SANDY CLAY, medium plasticity, saturated.	
						Gray Brown, CLAY, some silt, low plasticity, saturated.	
45	529	SC	99			Gray, SILTY CLAY, trace fine sand, low plasticity, saturated.	
50	524					Gray, FINE SAND, and clay, cohesive, saturated.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Low Plasticity Clay Poorly-graded Sand with Clay Poorly-graded Gravelly Sand	amsl = above mean sea level PVC = polyvinyl chloride bgs = below ground surface DTW = depth to water NA = not applicable NM = not measured NR = no recovery



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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
55	519	SC	106			Brown, MEDIUM SAND, and subrounded gravel, (1-1.5" diameter), poorly sorted, loose, saturated. <i>(continued)</i> 52.0	
60	514					Orange Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated. 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 PVC = polyvinyl chloride
 bgs = below ground surface
 DTW = depth to water
 NA = not applicable
 NM = not measured
 NR = no recovery

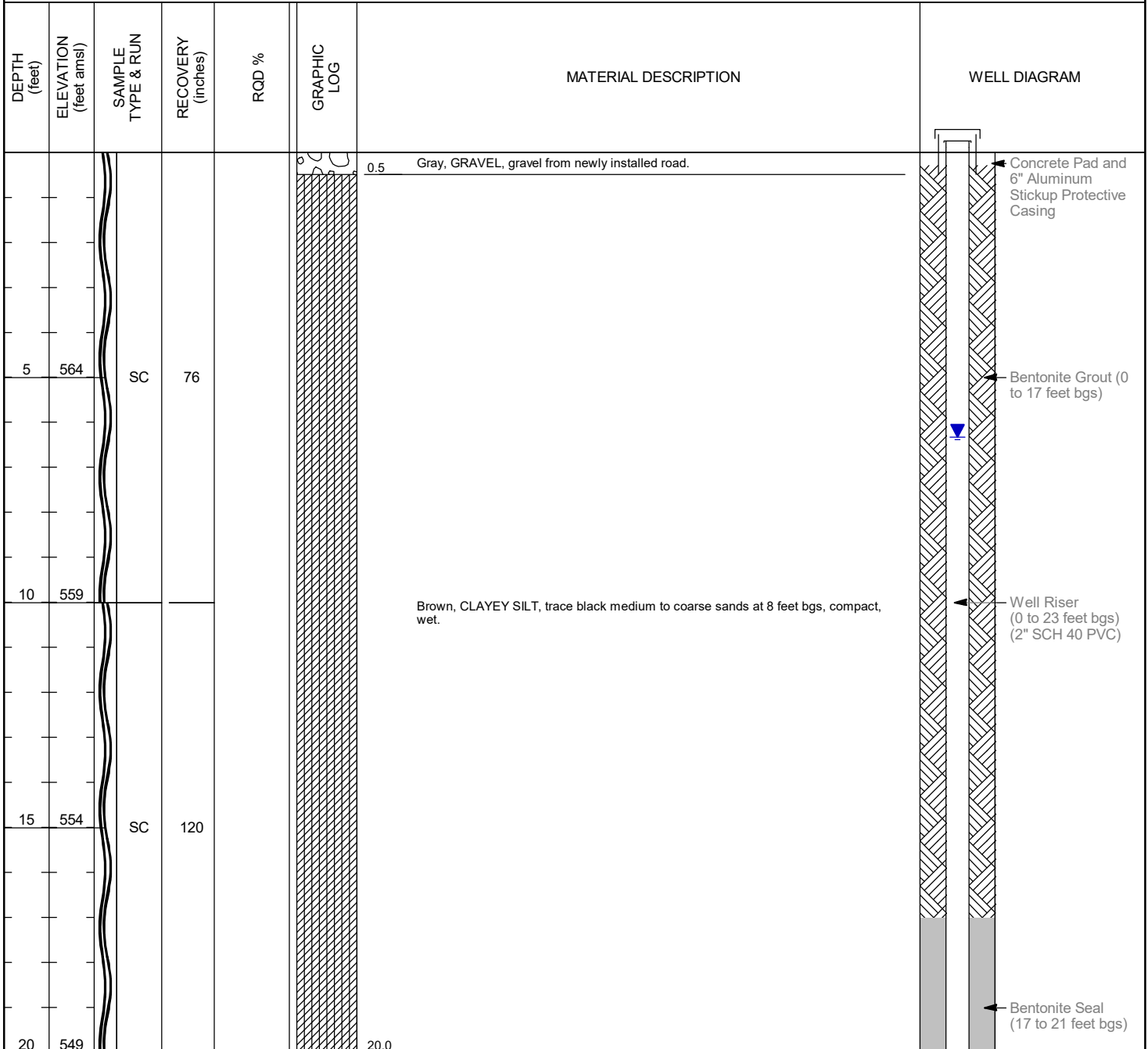


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BORING BAC-15

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

DATE STARTED: <u>7/7/2022</u>	TOTAL DEPTH: <u>40 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>7/7/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>569.060</u>	DATE STARTED: <u>7/8/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>571.50</u>	DATE ENDED: <u>7/8/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>338363.707</u>	DTW AT START: <u>6.33 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2076990.939</u>	DTW AT END: <u>NM</u>
NOTES: <u>Well ran dry during development, RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>6 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Low Plasticity Sandy Clay Poorly-graded Gravelly Sand	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

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)	<p>Filter Sand (21 to 35 feet bgs) (Global #5)</p> <p>Well Screen (23 to 33 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p>
30	539						
35	534	SC	120			Gray, CLAY, and fine sand, cohesive, saturated.	<p>Sump (2" SCH 40 PVC/2' long)</p> <p>Borehole Collapse</p>
40	529					Orange Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
						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 PVC = polyvinyl chloride
 bgs = below ground surface
 DTW = depth to water
 NA = not applicable
 NM = not measured
 NR = no recovery

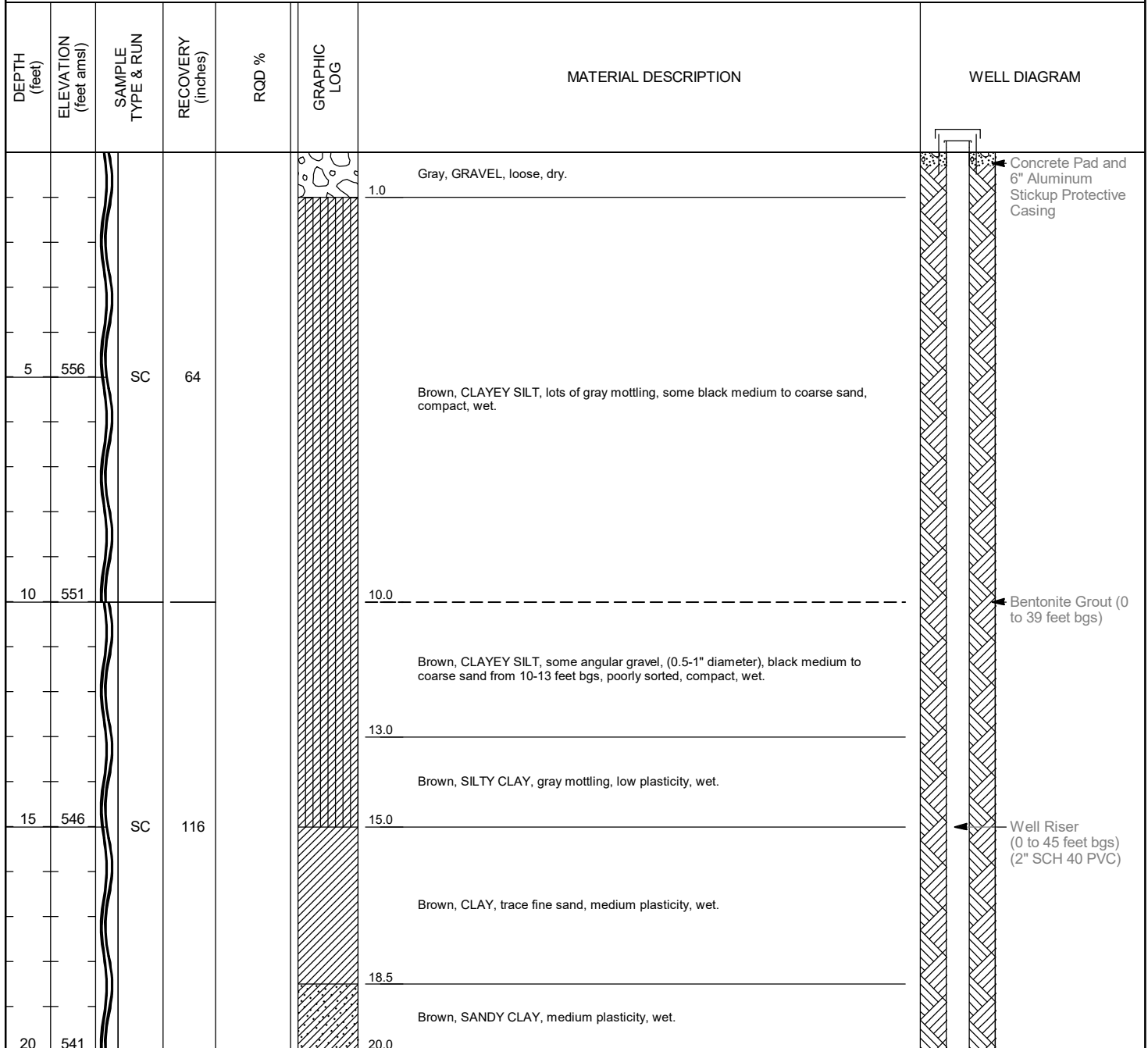


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BORING BAC-16

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

DATE STARTED: <u>7/6/2022</u>	TOTAL DEPTH: <u>57 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>7/7/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>560.780</u>	DATE STARTED: <u>7/8/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>563.39</u>	DATE ENDED: <u>7/8/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>338410.228</u>	DTW AT START: <u>22.15 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2076051.726</u>	DTW AT END: <u>NM</u>
NOTES: <u>Well ran dry during development, RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>65 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Low Plasticity Clay Low Plasticity Sandy Clay Silt Well-graded Sand	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-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
20.5						Brown, SANDY CLAY, medium plasticity, wet. (continued)	<p>Well Riser (0 to 45 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 39 feet bgs)</p> <p>Bentonite Seal (39 to 43 feet bgs)</p>
						Gray Brown, CLAYEY SILT, some fine sand, sand lenses, low plasticity, wet.	
22.5						Gray Brown, FINE SAND, with clay, medium plasticity, saturated.	
23.0						Gray, CLAY, little silt, some orange brown sand lenses, medium plasticity, saturated.	
25.0		SC	120			Gray, FINE SAND, with clay, medium plasticity, saturated.	
27.0						Gray, SILT, some clay, white flakes, compact, saturated.	
29.0						Gray, CLAY, medium plasticity, saturated.	
31.5						Orange, FINE SAND, cohesive, saturated.	
32.5						Gray, SILT, and fine sand, poorly sorted, compact, saturated.	
33.0						Orange, FINE SAND, saturated.	
33.5						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.	
35	526	SC	104			Brown, MEDIUM SAND, trace subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.	
36.0						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.	
37.0						Brown, FINE TO MEDIUM SAND, trace subrounded gravel, (0.5" diameter), increasing gravel with depth, poorly sorted, loose, saturated.	
40.0	521						

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Low Plasticity Clay Low Plasticity Sandy Clay Silt	Well-graded Sand 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-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)	<p>Filter Sand (43 to 57 feet bgs) (Global #5)</p> <p>Well Screen (45 to 55 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Sump (2" SCH 40 PVC/2' long)</p>
50	511						
55	506						
60	501						
65	496					Bottom of Boring @ 57.00 feet bgs	

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



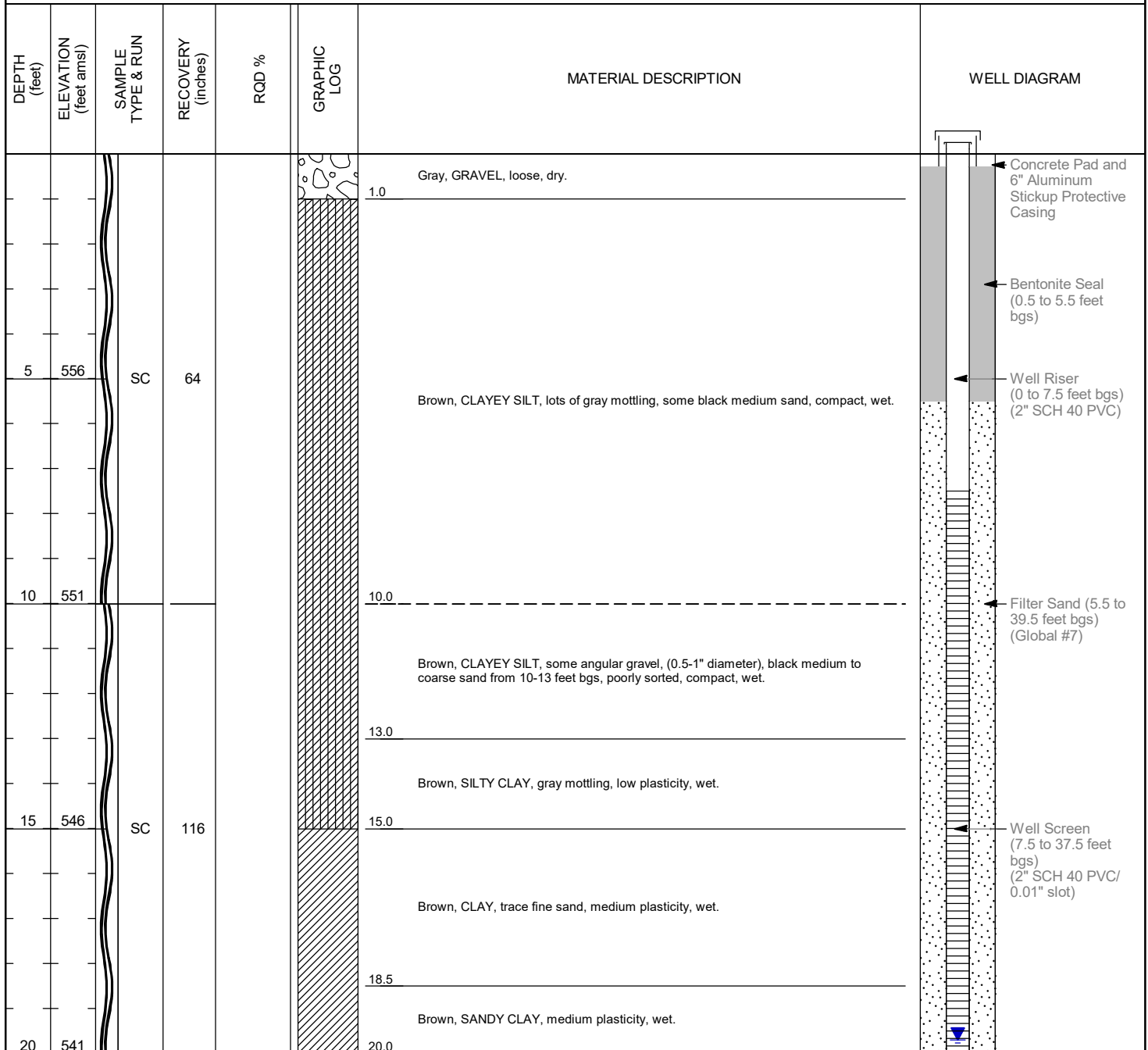
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BORING BAC-17

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

DATE STARTED: <u>7/7/2022</u>	TOTAL DEPTH: <u>39.5 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>7/7/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>560.720</u>	DATE STARTED: <u>7/8/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>563.49</u>	DATE ENDED: <u>7/8/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>338411.758</u>	DTW AT START: <u>19.7 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2076039.626</u>	DTW AT END: <u>NM</u>
NOTES: <u>RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>65 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Low Plasticity Clay Poorly-graded Sand with Clay Silt Poorly-graded Sand	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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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. <i>(continued)</i>	<p>Well Screen (7.5 to 37.5 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Filter Sand (5.5 to 39.5 feet bgs) (Global #7)</p> <p>Sump (2" SCH 40 PVC/2' long)</p>
						Gray Brown, CLAYEY SILT, some fine sand, sand lenses, low plasticity, wet.	
22.5						Gray Brown, FINE SAND, with clay, medium plasticity, saturated.	
23.0						Gray, CLAY, little silt, some orange brown sand lenses, medium plasticity, saturated.	
25.0						Gray, FINE SAND, with clay, medium plasticity, saturated.	
27.0						Gray, SILT, some clay, white flakes, compact, saturated.	
29.0						Gray, CLAY, medium plasticity, saturated.	
31.5						Orange, FINE SAND, cohesive, saturated.	
32.5						Gray, SILT, and fine sand, poorly sorted, compact, saturated.	
33.0						Orange, FINE SAND, saturated.	
33.5						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.	
39.5							
25	536	SC	120				
30	531						
35	526	SC	104				
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 PVC = polyvinyl chloride
 bgs = below ground surface
 DTW = depth to water
 NA = not applicable
 NM = not measured
 NR = no recovery



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BORING BAC-18

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

DATE STARTED: <u>7/7/2022</u>	TOTAL DEPTH: <u>90 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>7/7/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>599.320</u>	DATE STARTED: <u>7/5/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>601.95</u>	DATE ENDED: <u>7/5/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>338525.719</u>	DTW AT START: <u>58.25 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2076056.126</u>	DTW AT END: <u>NM</u>
NOTES: <u>Well ran dry during development, RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>25 gallons</u>

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
5	594	SC	60			Brown, SILT, trace clay, trace black medium sand, hard, wet.	<p>Concrete Pad and 6" Aluminum Stickup Protective Casing</p> <p>Bentonite Grout (0 to 69 feet bgs)</p> <p>Well Riser (0 to 75 feet bgs) (2" SCH 40 PVC)</p>
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.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Silt Sandy Silt Low Plasticity Clay Low Plasticity Sandy Clay Poorly-graded Sand Poorly-graded Gravelly Sand	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
20	579	SC	100			Brown, SILT, trace clay, trace black medium sand until 18 feet bgs, some gray mottling, hard, wet. <i>(continued)</i>	<p>Bentonite Grout (0 to 69 feet bgs)</p> <p>Well Riser (0 to 75 feet bgs) (2" SCH 40 PVC)</p>
25	574	SC	120			Brown, SILT, trace clay, some black medium sand, some gray mottling, hard, wet.	
30	569					Brown, SILT, trace clay, some gray mottling, hard, wet.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Silt Sandy Silt Low Plasticity Clay Low Plasticity Sandy Clay Poorly-graded Sand Poorly-graded Gravelly Sand	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
35	564	SC	108			Brown, SILT, trace clay, some gray mottling, hard, wet. (continued)	
						Gray, SILT, brown mottling, hard, wet.	
40	559					Brown, SILT, hard, wet.	
45	554	SC	120			Gray, SILT, little clay, some brown mottling, clay content increasing with depth, hard, wet.	
50	549					Brown, CLAY, some silt, trace fine sand, low plasticity, wet.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Silt Sandy Silt Low Plasticity Clay Low Plasticity Sandy Clay Poorly-graded Sand Poorly-graded Gravelly Sand	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
55	544	SC	98			Brown, SANDY CLAY, some silt, sand content increases with depth to a clayey sand, medium plasticity, saturated. <i>(continued)</i>	<p>Water level indicated by blue triangle at approximately 58.7 feet bgs.</p> <p>Bentonite Grout (0 to 69 feet bgs)</p> <p>Well Riser (0 to 75 feet bgs) (2" SCH 40 PVC)</p>
60	539					Gray, SANDY CLAY, with silt, fine sands, some orange sands, low plasticity, saturated.	
65	534	SC	97			Gray, SANDY SILT, little clay, some light gray mottling, compact, saturated.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling	Silt Low Plasticity Clay Low Plasticity Sandy Clay Sandy Silt Poorly-graded Sand Poorly-graded Gravelly Sand	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
70	529					Gray, SANDY SILT, little clay, some light gray mottling, compact, saturated. (continued)	
75	524	SC	120			Gray, FINE TO MEDIUM SAND, little clay, some brown sand, loose, wet.	Well Riser (0 to 75 feet bgs) (2" SCH 40 PVC)
75.7						Brown, MEDIUM SAND AND GRAVEL, trace clay, rounded, (0.5-1" diameter), poorly sorted, loose, wet.	Bentonite Seal (69 to 73 feet bgs)
77.5						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.	Filter Sand (74 to 87 feet bgs) (Global #5)
80	519					Dark Brown, MEDIUM SAND, and rounded gravel, (0.5" diameter), poorly sorted, loose, wet.	Well Screen (75 to 85 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
83.7		SC	95			Brown, COARSE SAND, lithic sand, loose, wet.	
84.5						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.	
85	514						

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)	<p>Sump (2" SCH 40 PVC/2' long)</p> <p>Borehole Collapse</p>
95	504					Bottom of Boring @ 90.00 feet bgs	
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

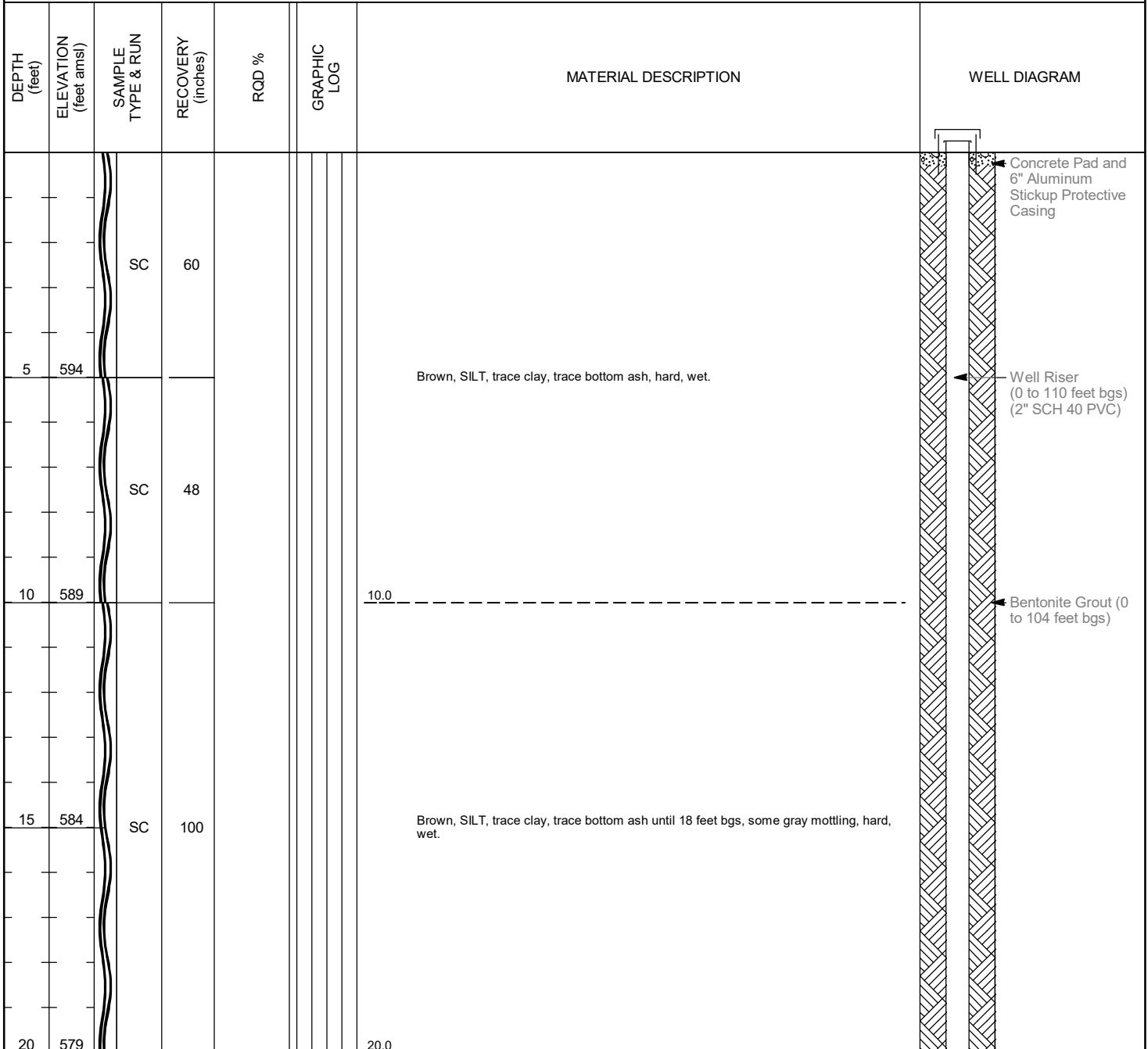


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BORING BAC-19

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

DATE STARTED: <u>6/14/2022</u>	TOTAL DEPTH: <u>122 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>6/14/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>599.280</u>	DATE STARTED: <u>7/5/2022</u>
DRILLING METHODS: <u>Sonic Drilling & Wireline Rock Coring</u>	PVC ELEVATION: <u>602.11</u>	DATE ENDED: <u>7/5/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>338526.438</u>	DTW AT START: <u>58.2 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2076037.426</u>	DTW AT END: <u>NM</u>
NOTES: <u>RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>25 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Low Plasticity Clay Clayey Sand Sandy Silt Poorly-graded Sand Poorly-graded Gravelly Sand	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

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. <i>(continued)</i>	<p>Well Riser (0 to 110 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 104 feet bgs)</p>
30	569				30.0	Brown, SILT, trace clay, some gray mottling, hard, wet.	
35	564	SC	108		35.0	Gray, SILT, brown mottling, hard, wet.	
40	559				37.5	Brown, SILT, hard, wet.	
					40.0	Gray, SILT, little clay, some brown mottling, increasing clay content with depth, hard, wet.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Sandy Silt Low Plasticity Clay Clayey Sand Poorly-graded Sand Poorly-graded Gravelly Sand	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

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. <i>(continued)</i>	<p>Well Riser (0 to 110 feet bgs) (2" SCH 40 PVC)</p> <p>Bentonite Grout (0 to 104 feet bgs)</p>
50	549				48.0	Brown, CLAY, some silt, trace fine sand, low plasticity, wet.	
55	544	SC	98		50.0	Brown, SANDY CLAY, some silt, sand content increases with depth to a clayey sand, medium plasticity, saturated.	
60	539				58.7	Gray, SANDY CLAY, with silt, some fine sands, some orange sands, low plasticity, saturated.	
65	534	SC	97		60.0	Gray Brown, SANDY CLAY, some silt, low plasticity, saturated.	
					64.5	Gray, SANDY SILT, little clay, some light gray mottling, compact, saturated.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Low Plasticity Clay Clayey Sand Sandy Silt Poorly-graded Sand Poorly-graded Gravelly Sand	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

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
70	529					Gray, SANDY SILT, little clay, some light gray mottling, compact, saturated. (continued)	
						70.0	
						Gray, FINE TO MEDIUM SAND, little clay, some brown sand, loose, wet.	
						71.0	
75	524	SC	120			Brown, MEDIUM SAND AND GRAVEL, trace clay, rounded, (0.5-1" diameter), poorly sorted, loose, wet.	
						75.7	← Bentonite Grout (0 to 104 feet bgs)
						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	← Well Riser (0 to 110 feet bgs) (2" SCH 40 PVC)
						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.	
						90.0	
90	509					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

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



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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)	
95	504	SC	103			92.5 Brown, GRAVEL, some coarse sand, subrounded to subangular, poorly sorted, loose, saturated.	
						97.0 Brown, COARSE SAND, some subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
100	499					100.0 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.	
105	494	SC	108			104.0 Gray, CLAYSTONE, (Round Knob), brittle, dry.	
						109.0 NO RECOVERY.	
110	489	RC	0	0		111.0 Red Brown, CLAYSTONE, (Round Knob), natural fractures seen at 111.5-111.9, 112.6, 113.0-113.4, and 113.8 feet bgs.	
		RC	39.6	0			

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Sandy Silt Low Plasticity Clay Clayey Sand Poorly-graded Sand Poorly-graded Gravelly Sand	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

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115	484	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)	<p>Well Screen (110 to 120 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Filter Sand (108 to 122 feet bgs) (Global #5)</p> <p>Sump (2" SCH 40 PVC/2' long)</p>
120	479						
						122.0	
						Bottom of Boring @ 122.00 feet bgs	
125	474						
130	469						
135	464						

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC) Wireline Rock Coring (RC)	Silt Sandy Silt Low Plasticity Clay Clayey Sand Poorly-graded Sand Poorly-graded Gravelly Sand	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-20

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

DATE STARTED: <u>6/23/2022</u>	TOTAL DEPTH: <u>30 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>6/23/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>562.570</u>	DATE STARTED: <u>7/5/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>565.06</u>	DATE ENDED: <u>7/6/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>338477.169</u>	DTW AT START: <u>20.2 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2075096.614</u>	DTW AT END: <u>NM</u>
NOTES: <u>Well ran dry during development, RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>1.25 gallons</u>

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

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Silt Clayey Gravel Clayey Sand Poorly-graded Gravelly Sand	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-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	WELL DIAGRAM
20	543	SC	114			Brown, SILT, and clay, compact, saturated. (continued)	<p>Filter Sand (10 to 25 feet bgs) (Global #7)</p> <p>Well Screen (12 to 22 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Sump (2" SCH 40 PVC/2' long)</p>
25	538	SC	108			Brown, SANDY CLAY, medium plasticity, saturated.	
30	533					Brown To Dark Brown, MEDIUM SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	<p>Borehole collapse</p>
Bottom of Boring @ 30.00 feet bgs							

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Gravel Silty Clay Silt Clayey Gravel Clayey Sand Poorly-graded Gravelly Sand	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

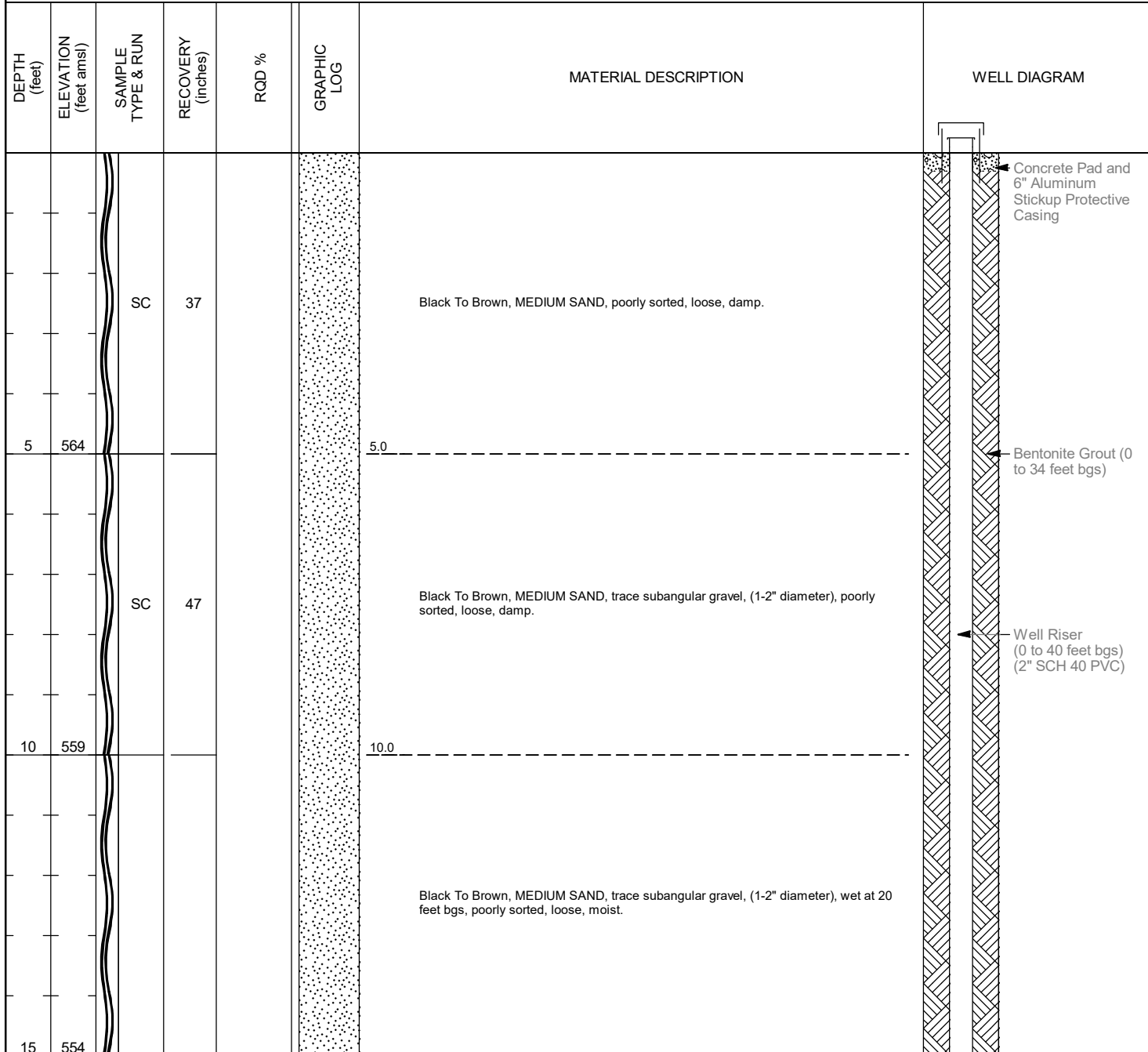


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BORING BAC-21

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

DATE STARTED: <u>7/5/2022</u>	TOTAL DEPTH: <u>60 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>7/5/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>569.300</u>	DATE STARTED: <u>7/7/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>572.41</u>	DATE ENDED: <u>7/7/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>339439.529</u>	DTW AT START: <u>35.0 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2074896.107</u>	DTW AT END: <u>NM</u>
NOTES: <u>Well ran dry during development, RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>27 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Sand Low Plasticity Clay High Plasticity Clay Silty Clay Poorly-graded Gravelly Sand Poorly-graded Sandy Gravel	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)	
						Brown, CLAY, trace silt, low plasticity, wet.	
						Brown, CLAY, some silt, medium plasticity, wet.	
25	544	SC	114			Gray Brown, CLAY, high plasticity, wet.	
						Brown, CLAY, little silt, medium plasticity, wet.	
30	539					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, saturated.	

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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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	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, saturated. (continued)	
40	529						
45	524	SC	118			43.0	Orange Brown, GRAVEL, and coarse sand, subrounded, (0.5-1.5" diameter), poorly sorted, loose, saturated.
						44.0	Orange Brown, MEDIUM TO COARSE SAND, some subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.
50	519					45.0	Light Brown, MEDIUM SAND, little subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.
						47.0	Orange Brown, GRAVEL, some coarse sand, subrounded, (0.5-1" diameter), poorly sorted, loose, saturated.
						48.0	Gray, GRAVEL, some coarse sand, subrounded, (0.5-1" diameter), poorly sorted, loose, saturated.
						49.0	Gray, GRAVEL, little coarse sand, subrounded to subangular, (0.5-1.5" diameter), poorly sorted, loose, saturated.
						49.5	Gray, MEDIUM SAND, trace subrounded gravel, (0.5" diameter), poorly sorted, loose, saturated.
						50.0	Gray, SILTY CLAY, and subrounded gravel, (0.5" diameter), poorly sorted, firm, saturated.

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Sand Low Plasticity Clay High Plasticity Clay Silty Clay Poorly-graded Gravelly Sand Poorly-graded Sandy Gravel	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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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	514	SC	107			Gray, GRAVEL, and coarse sand, subrounded, (0.5-1" diameter), poorly sorted, loose, saturated. <i>(continued)</i>	
						Light Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), poorly sorted, cohesive, saturated.	
60	509					Gray Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), trace subrounded gravel (4" diameter), poorly sorted, cohesive, saturated.	
						Dark Gray, MEDIUM SAND, and subrounded to subangular gravel, (0.5-1" diameter), poorly sorted, loose, saturated.	
65	504					Bottom of Boring @ 60.00 feet bgs	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Poorly-graded Sand Low Plasticity Clay High Plasticity Clay Silty Clay Poorly-graded Gravelly Sand Poorly-graded Sandy Gravel	amsl = above mean sea level PVC = polyvinyl chloride bgs = below ground surface DTW = depth to water NA = not applicable NM = not measured NR = no recovery



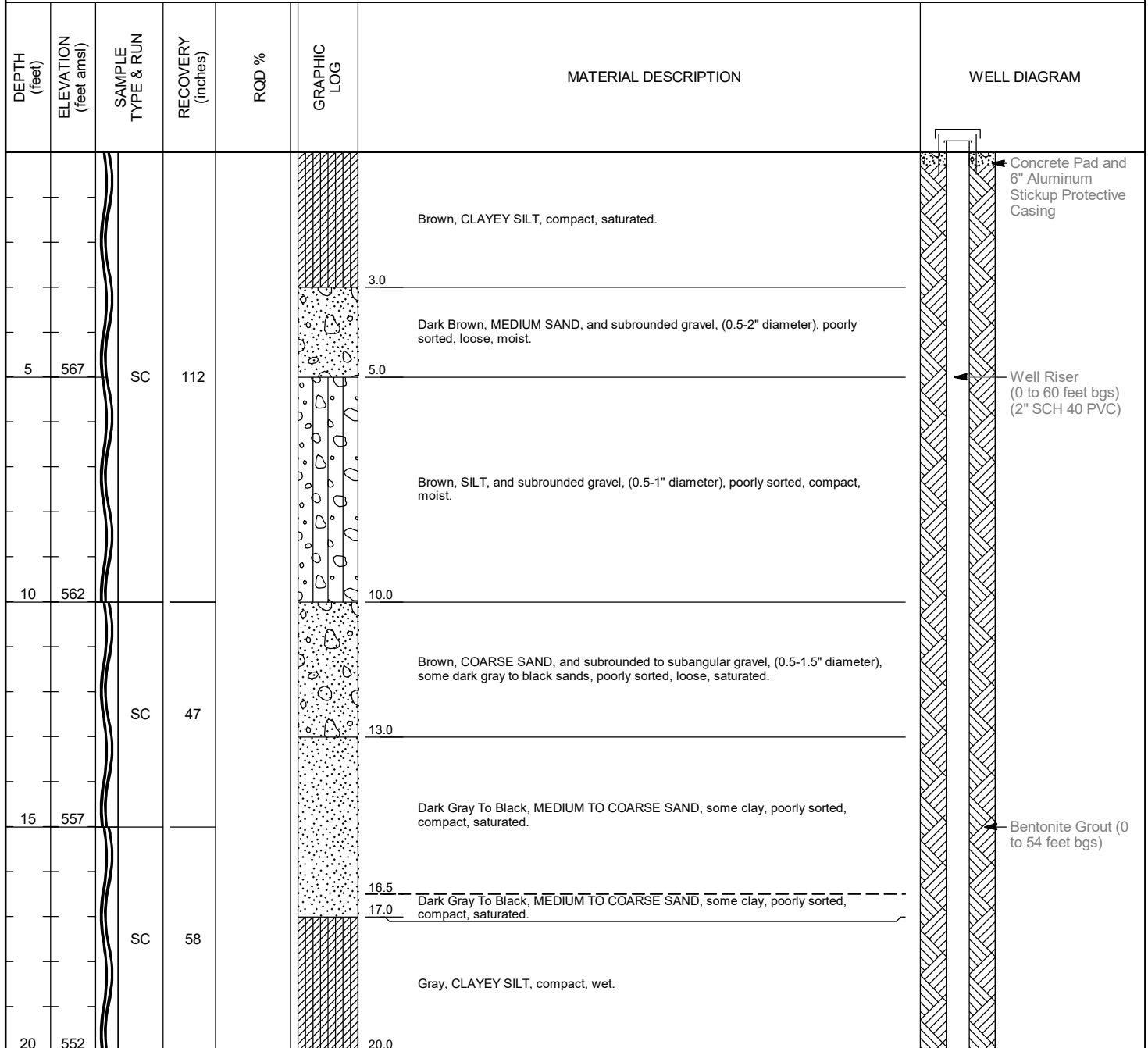
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BORING BAC-22

Page 1 of 4

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

DATE STARTED: <u>7/1/2022</u>	TOTAL DEPTH: <u>75 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>7/1/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>572.280</u>	DATE STARTED: <u>7/6/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>574.88</u>	DATE ENDED: <u>7/6/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>340273.51</u>	DTW AT START: <u>27.9 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2074761.802</u>	DTW AT END: <u>NM</u>
NOTES: <u>Well ran dry during development, RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>35 gallons</u>



CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Silty Clay Poorly-graded Gravelly Sand Poorly-graded Sand with Clay Low Plasticity Clay	Gravelly Silt Poorly-graded Sand with Clay 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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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)	<p>Bentonite Grout (0 to 54 feet bgs)</p> <p>Well Riser (0 to 60 feet bgs) (2" SCH 40 PVC)</p>
30	542					30.0 Brown, CLAYEY SILT, low plasticity, wet.	
35	537	SC	109			33.0 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
 NR = no recovery
 PVC = polyvinyl chloride



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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. <i>(continued)</i>	
						47.0	
						Gray, FINE SAND, and clay, black wood fragment at 47.5 feet bgs, cohesive, wet.	
50	522					50.0	
						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.	
						60.0	
60	512						
		SC	60			Gray, FINE TO MEDIUM SAND, cohesive, saturated.	
65	507					65.0	
						Brown, FINE SAND, trace subrounded gravel, (0.5" diameter), trace gravel at 68 feet bgs, poorly sorted, loose, saturated.	

Bentonite Grout (0 to 54 feet bgs)

Well Riser (0 to 60 feet bgs) (2" SCH 40 PVC)

Bentonite Seal (54 to 58 feet bgs)

Filter Sand (58 to 72 feet bgs) (Global #5)

Well Screen (60 to 70 feet bgs) (2" SCH 40 PVC/ 0.01" slot)

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Silty Clay Poorly-graded Gravelly Sand Poorly-graded Sand Low Plasticity Clay	Gravelly Silt Poorly-graded Sand with Clay 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. <i>(continued)</i>	<p>Filter Sand (58 to 72 feet bgs) (Global #5)</p> <p>Well Screen (60 to 70 feet bgs) (2" SCH 40 PVC/ 0.01" slot)</p> <p>Sump (2" SCH 40 PVC/2' long)</p> <p>Borehole Collapse</p>
75	497					Blue Gray, CLAYSTONE, dry.	
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: <u>6/30/2022</u>	TOTAL DEPTH: <u>67 feet bgs</u>	WELL DEVELOPMENT
DATE COMPLETED: <u>6/30/2022</u>	DIAMETER: <u>6 inches</u>	METHOD(S): <u>Grundfos & Buffalo Pump</u>
DRILLING CONTRACTOR: <u>Cascade Drilling</u>	GROUND ELEVATION: <u>574.790</u>	DATE STARTED: <u>7/6/2022</u>
DRILLING METHODS: <u>Sonic Drilling</u>	PVC ELEVATION: <u>577.47</u>	DATE ENDED: <u>7/6/2022</u>
LOGGED BY: <u>K. Popyack</u>	NORTHING: <u>340155.161</u>	DTW AT START: <u>36.35 feet bgs</u>
CHECKED BY: <u>A. Harford</u>	EASTING: <u>2075954.818</u>	DTW AT END: <u>NM</u>
NOTES: <u>Well ran dry during development, RQD only applicable for bedrock wells</u>		VOLUME PURGED: <u>15 gallons</u>

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Dark Brown, SANDY SILT, few subangular gravel, (0.5-1" diameter), organics, poorly sorted, damp.	<p>Concrete Pad and 6" Aluminum Stickup Protective Casing</p> <p>Bentonite Grout (0 to 49 feet bgs)</p> <p>Well Riser (0 to 55 feet bgs) (2" SCH 40 PVC)</p>
		SC	60			Black, MEDIUM TO COARSE SAND, trace silt, poorly sorted, loose, damp.	
						Light Brown, SILT, and angular gravel, (0.5-2 diameter), poorly sorted, loose, damp.	
5	570					Brown, SILT, trace subrounded gravel, (1" diameter), little gray mottling, some black medium to coarse sand, trace clay, poorly sorted, compact, moist.	
		SC	60			Brown, SILT, with subrounded gravel, (0.5-1" diameter), poorly sorted, brittle, moist.	
10	565					Brown, SILT, with subrounded gravel, (0.5-1" diameter), trace gravel, poorly sorted, brittle, moist.	
						Brown, CLAYEY SILT, trace fine sand, loose, wet.	
15	560						

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Sandy Silt Silt Poorly-graded Sand Gravelly Silt Silty Clay Poorly-graded Gravelly Sand	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

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. <i>(continued)</i>	
		SC	118			Brown, CLAYEY SILT, some gray mottling, compact, wet.	
						17.0	
						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)
		SC	53			Brown, FINE SAND, little silt, some black organics, trace medium sands, loose, wet.	Bentonite Grout (0 to 49 feet bgs)
25	550						
30	545					30.0	
						Brown, MEDIUM SAND, trace rounded gravel, (0.5" diameter), poorly sorted, wet.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Sandy Silt Silt Poorly-graded Sand Silty Clay Gravelly Silt Poorly-graded Gravelly Sand	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

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
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, trace 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					50.0 Orange Brown, COARSE SAND, and subrounded gravel, (0.5-1" diameter), poorly sorted, saturated.	
						Brown, FINE SAND, well sorted, saturated.	

CORING TYPE	GRAPHIC LOG LEGEND	ACRONYM LEGEND
Sonic Drilling (SC)	Sandy Silt Poorly-graded Sand Gravelly Silt Silt Silty Clay Poorly-graded Gravelly Sand	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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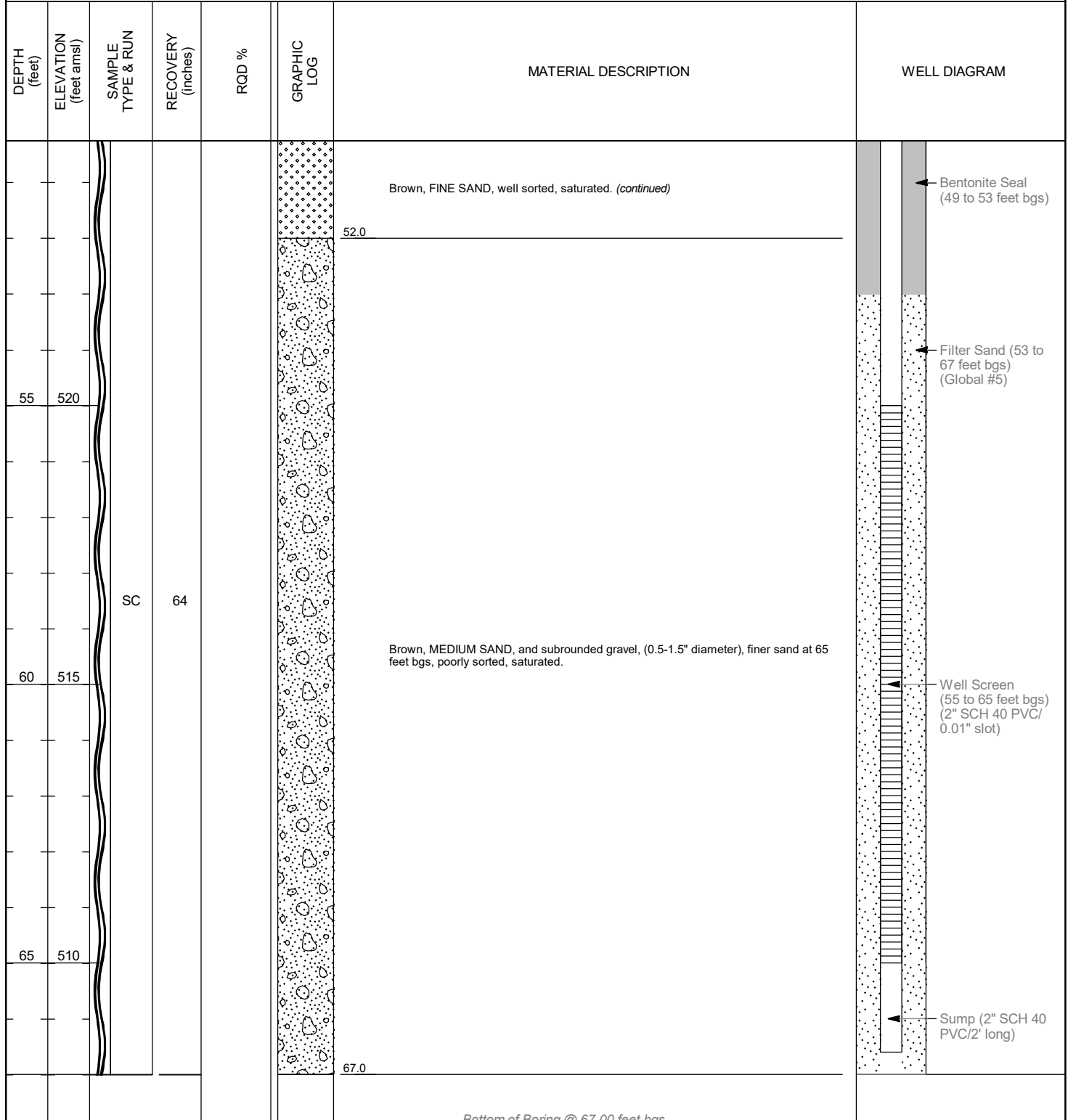
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Client: Gavin Power, LLC

Project Name: Bottom Ash Pond Monitoring Well Installation

Project Number: 0643653

Project Location: Cheshire, OH




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
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery

PVC = polyvinyl chloride

**APPENDIX C BOTTOM ASH POND FIRST SEMIANNUAL SAMPLING EVENT
OF 2022 ALTERNATE SOURCE DEMONSTRATION REPORT**

Gavin Bottom Ash Pond

Gavin Power, LLC

First Semiannual Sampling Event of 2022 Alternate Source Demonstration Report

Gavin Power Plant
Cheshire, Ohio

15 September 2022

Project No.: 0632695

Signature Page

15 September 2022

Gavin Bottom Ash Pond

First Semiannual Sampling Event of 2022 Alternate Source Demonstration Report

Gavin Power Plant
Cheshire, Ohio



David Shotts
Principal-in-Charge



Joseph Robb, P.G.
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PROFESSIONAL ENGINEER CERTIFICATION

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Appendices

Appendix A: 1998 OEPA Interoffice Memorandum

Appendix B: 2017 OEPA Interoffice Memorandum

Acronyms and Abbreviations

Name	Description
ASD	Alternate Source Demonstration
BAC	Bottom Ash Complex
BAP	Bottom Ash Pond
CCR	Coal Combustion Residuals
CCR Rule	Coal Combustion Residuals in Landfills and Surface Impoundments
CFR	Code of Federal Regulations
Gavin	Gavin Power, LLC
mg/L	milligrams per liter
NFAP	North Fly Ash Pond
Plant	General James M. Gavin Power Plant
SFAP	South Fly Ash Pond
SSI	Statistically significant increase
TDS	Total Dissolved Solids
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 Appendix III constituents for the first semiannual groundwater sampling event of 2022 and are explained in this Alternate Source Demonstration (ASD) Report.

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.

1. An alternative source exists.
2. A hydraulic connection exists between the alternative source and the well with the significant increase.
3. 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.
4. 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.
5. 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.
6. The data supporting conclusions regarding the alternative source are historically consistent with the hydrogeologic conditions and findings of the monitoring program.

This ASD Report addresses each of these lines of evidence for the SSIs detected in groundwater beneath the BAP. The groundwater monitoring program and ASD have been prepared utilizing accepted practices incorporating both site specific and regional information in their development. In 2022, Gavin responded to feedback from the USEPA concerning the groundwater monitoring program at the BAP (USEPA 2022). In consideration of this feedback, Gavin is currently installing additional monitoring wells

and conducting supplemental characterization at the BAP to refine the conceptual site model. Findings and updates will be provided in the 2022 Annual Groundwater Monitoring and Corrective Action Report.

1.2 Background

The Plant is a coal-fired generating station located in Gallia County in Cheshire, Ohio (Figure 1-1), and is bounded to the east by the Ohio River (Figure 1-2). 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 has operated since 1974.

The groundwater monitoring well network 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). In addition, monitoring well B-0904 is located south of the BAP and is used in this ASD Report to define the shallow groundwater quality migrating from Ohio Valley Electric Corporation's Kyger Creek North Fly Ash Pond (NFAP) under the BAP. Monitoring wells BAC-06 and BAC-07 were installed in 2020 to provide two additional upgradient monitoring wells screened in the uppermost aquifer. The uppermost alluvial aquifer (Figure 1-4) monitored by the groundwater well network exhibits the following characteristics (Geosyntec 2016; ERM 2021a):

- The alluvial aquifer consists of fine to coarse sand with some gravel that grades progressively finer with decreasing depth;
- It is approximately 10 to 35 feet thick in the BAP area; and
- It is located below an approximate 20-foot-thick silty clay confining layer and above a shale bedrock unit.

Consistent with the CCR Rule and the Groundwater Monitoring Plan developed for Gavin (ERM 2017), a prediction limit approach was used to identify potential effects 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 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 semi-annual 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 2018c; ERM 2019a; ERM 2019b; ERM 2020a; ERM 2020b; ERM 2021b; ERM 2021c; ERM 2022) were prepared to address SSIs which were identified during the initial and subsequent reporting periods.

The first semiannual groundwater sampling event of 2022 was performed in March and April 2022. The data from this sampling event were compared to the upper and lower prediction limits, and SSIs for Appendix III analytes were identified. Table 1-1 summarizes occurrences of SSIs from the March and April 2022 sampling event.

Table 1-1: SSIs in Groundwater beneath the BAP

Analyte	Monitoring Well			
	BAC-02	BAC-03	BAC-04	BAC-05
Boron	X	X	X	X
Calcium	X	φ	φ	φ
Chloride	X	X	X	φ
Fluoride	X	φ	φ	φ
pH	X	X	X	X
Sulfate	X	X	X	X
Total Dissolved Solids	X	φ	φ	φ

Notes: φ = No SSI; X = SSI; BAP = Bottom Ash Pond; SSI = statistically significant increase.
 Results are for the downgradient wells sampled in March and April 2022.

Consistent with previous ASD Reports, this ASD Report identifies the regional discharge of groundwater as the source of calcium, chloride, fluoride, sulfate, and total dissolved solids (TDS) and the Kyger Creek NFAP is identified as the source of boron and low pH. Supporting information and additional discussion of each of the lines of evidence discussed in Section 1.1 are presented in subsequent sections of this ASD Report.

2. DESCRIPTION OF ALTERNATE SOURCES

The first ASD Report for the BAP (ERM 2018b) identified and described alternate sources for the Appendix III constituents that included the discharge of bedrock groundwater to the uppermost aquifer near the BAP and migration of CCR-impacted groundwater from the neighboring Kyger Creek Generating Station. A summary of each of these alternate sources is provided below.

2.1 Ohio River

The Ohio River extends approximately 981 river miles from Pittsburgh, Pennsylvania to Cairo, Illinois and drains an area of approximately 205,000 square miles (ORSANCO 2018). The Ohio River is approximately 700 feet east of the BAP, and the alluvial aquifer beneath the BAP is hydraulically connected to the river. When the Ohio River floods, water from the river mixes with groundwater within the alluvial aquifer (ERM 2018b) beneath the BAP. 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). The quality of the Ohio River water that mixes with groundwater is discussed in Section 4.

2.2 Regional Background

The regional bedrock geology near the Plant includes Pennsylvanian-age sedimentary rocks from the Monongahela and Conemaugh Formations, with the Morgantown and Cow Run Sandstone members being part of the latter. These sedimentary rocks consist primarily of shale and siltstone, with minor amounts of mudstone, sandstone, and incidental amounts of limestone and coal (United States Geological Survey [USGS] 2005). Overlying the Pennsylvanian-age rocks are Quaternary-age alluvium that consists primarily of sand, silt, clay, and gravel (Ohio Environmental Protection Agency [OEPA] 2018). The sedimentary rocks form the ridges and valleys west of the Ohio River, and the unconsolidated sand, silt, clay, and gravel, are located along the Ohio River and tributaries. The consolidated sedimentary rocks and the unconsolidated alluvium form the two major aquifers near the Plant (Figure 1-4). The interaction of groundwater with rocks and minerals within these aquifers can influence the concentration of Appendix III constituents, for example via dissolution (ORSANCO 1984).

Naturally occurring brine, which is known to have elevated levels of chloride, fluoride, sulfate, and other trace elements, exists in the subsurface in the Ohio River Valley (Stout et al. 1932; ORSANCO 1984; ODNR 1995). The Cow Run Sandstone is the shallowest bedrock unit where brine has been observed (Phalen 1919). Some of the brines also exist near the land surface. For example, 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 Fly Ash Reservoir that are consistently greater than 10,000 $\mu\text{S}/\text{cm}$ and reach as high as 39,000 $\mu\text{S}/\text{cm}$.

To account for natural and anthropogenic influences on Appendix III constituents on a regional scale, background groundwater data were obtained from USGS databases. The background groundwater data set is discussed further in Section 4.

2.3 Kyger Creek Generating Station

The Kyger Creek Generating Station is located along the Ohio River in Gallia County, south of the Plant (Figure 2-1). The Kyger Creek Fly Ash Pond complex consists of the 110-acre NFAP (closed) and 60-acre South Fly Ash Pond (SFAP). The construction history and groundwater monitoring results of these ponds are summarized in the first ASD Report (ERM 2018b). According to the approved OEPA Permit-to-Install (PTI), construction activities to close the NFAP were initiated in March 1998 and concluded in October 2000 (OVEC 2017). Semi-annual groundwater sampling for PTI compliance at the NFAP has been performed since October 1997 (OEPA 1997). Groundwater monitoring for federal CCR compliance is performed at the SFAP only.

The Kyger Creek NFAP is located less than 300 feet from the BAP and the units share an approximately 2,000-foot-long southern border (Figure 2-1). BAC-06 and BAC-07 were installed along the top of the berm along this boundary and screened within the alluvial aquifer and B-0904 is installed at the base of the berm on Kyger Creek property and is screened within the silt and clay confining unit and the alluvial aquifer. The direction of groundwater flow at the BAP is influenced by the stage of the Ohio River and groundwater extraction at the Gavin plant. Groundwater flow on 21 March 2022 was from the west-southwest, including groundwater from the area of the Kyger Creek NFAP to the northeast (Figure 2-2). 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 tendency 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 1997; 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 berm and as cover material (OEPA 1997).

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). A summary of each of these connections is provided below.

3.1 Ohio River

Both the Gavin BAP and the Kyger Creek NFAP are located above the alluvial aquifer (Geosyntec 2016; AGES 2016; ERM 2018b, ERM 2021a). Groundwater in the alluvial aquifer typically flows to the northeast from the vicinity of the BAP and Kyger Creek NFAP toward the Ohio River (ERM 2018b; ERM 2021a). Groundwater contours and flow directions under the BAP are affected by two water supply wells located approximately 400 feet north of BAC-02. Intermittent pumping at these wells contributes to the average flow direction to the northeast.

Data evaluation completed in 2018 and 2021 shows that exceptions to this flow direction occur when the elevation of the surface water in the Ohio River exceeds approximately 542 feet above mean sea level (ERM 2018b; ERM 2021a). When this water level condition occurs, groundwater flow reverses and generally flows westward from the Ohio River toward the BAP and Kyger Creek NFAP (ERM 2018b). The longest duration of flow reversal observed since the start of background sampling in 2016 was 22 days (in February 2018). During this period, groundwater could have flowed 4 to 66 feet to the west (Gavin 2022). The correlation of the flow reversals with Ohio River flooding is strong evidence that the alluvial aquifer is hydraulically connected to the Ohio River (ERM 2018b; ERM 2021a).

3.2 Regional Background

Regional groundwater within the fractured sedimentary bedrock flows from northwest to southeast toward the Ohio River (ORSANCO 1984). Precipitation that falls in areas of higher topographic elevation northwest of the Plant infiltrates the land surface and recharges the underlying aquifers. Groundwater then flows from areas of higher topographic elevation (which correspond to higher hydraulic head) to areas of lower topographic elevation (which correspond to lower hydraulic head). As groundwater flows from northwest to southeast, it migrates both horizontally and vertically through a network of fractures within the sedimentary bedrock. Near the Plant, groundwater in the bedrock aquifer discharges to the alluvial aquifer and mixes with groundwater in the alluvial aquifer, which then discharges to the Ohio River (Figure 3-1). Thus, regional groundwater is hydraulically connected to the downgradient BAP monitoring wells (ERM 2018b).

3.3 Kyger Creek Generating Station

The Ohio River stage elevation records were used to identify the frequency and duration of typical flow reversals as discussed in Section 3.1. This information was combined with the groundwater velocity estimates to develop long-term average groundwater flow paths under the BAP (ERM 2018b; ERM 2021a). The following four key points are associated with the interpreted groundwater flow paths:

- The Kyger Creek NFAP is hydraulically upgradient of the four monitoring wells (BAC-02, BAC-03, BAC-04, and BAC-05) that are downgradient of the Gavin BAP.
- Due to the prevailing northeast flow direction, the Kyger Creek NFAP is not situated upgradient of the western edge of the BAP where upgradient monitoring wells MW-1, BAC-01, and MW-6 are located.
- Monitoring wells BAC-06 and BAC-07 are located downgradient of the Kyger Creek NFAP and upgradient of the BAP. These wells are screened within the alluvial aquifer and monitor groundwater flowing from the NFAP.

- Monitoring well B-0904 is screened in both the silt and clay confining layer and the underlying alluvial aquifer, is directly downgradient of the Kyger Creek NFAP and is upgradient of the BAP.

It is evident that the Kyger Creek NFAP is hydraulically connected to the downgradient BAP monitoring wells (ERM 2018b; ERM 2021a) based on the prevalent northeastern direction of groundwater flow and the presence of the same alluvial aquifer beneath both the Kyger Creek NFAP and the Gavin BAP.

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

4.1 Ohio River

Recent measurements show the pH of the Ohio River is near neutral and the pH of groundwater emanating from the Kyger Creek NFAP, as observed in well B-0904, is historically slightly acidic (ERM 2018b). As identified by OEPA in 1998 and measured in Kyger Creek well KC-9502 (located at the northeast corner of Kyger Creek property), historical groundwater results have also indicated that groundwater under the Kyger Creek NFAP was observed to be slightly acidic (Appendix A). As described in Section 3, the hydrogeologic data indicate that water from the Ohio River mixes with groundwater in the alluvial aquifer during times of river flooding. This mixing process results in an intermediate pH that is between the pH of the Ohio River and the pH of the Kyger Creek NFAP. Table 4-1 and Figure 4-1 summarize the pH data.

Table 4-1: Groundwater and Surface Water pH Values

Location	pH
Kyger Creek NFAP: Upgradient BAP Groundwater (KC-9502; 1997-2001)	5.19-5.9
Kyger Creek NFAP: Upgradient BAP Groundwater (B-0904; March 2020)	5.26
BAP: Upgradient Groundwater – Northwest (BAC-01, MW-1, and MW-6; March 2022)	6.82-7.01
BAP: Upgradient Groundwater – Southwest (BAC-06 and BAC-07; March 2022)	6.23-6.58
BAP: Downgradient Groundwater (BAC-02 through BAC-05; March and April 2022)	5.97-6.25
Ohio River (March 2022)	7.09

Notes: BAP = Bottom Ash Pond; NFAP = North Fly Ash Pond

The March and April 2022 results remain consistent with previous ASD Reports for the BAP (ERM 2018b, 2018c, 2019a, 2019b, 2020a, 2020b, 2021b, 2021c, and 2022). These results demonstrate that the pH of the Ohio River water is higher than Kyger Creek groundwater; the mixing of these waters results in the intermediate pH observed in groundwater downgradient of the BAP. Monitoring wells BAC-06 and BAC-07 are not similarly impacted by acidic groundwater migrating from Kyger Creek, as evidenced by higher pH, because the well screens are deeper than the well screen at B-0904, and are more influenced by the regional discharge of groundwater from bedrock to the alluvial aquifer, as described further in Section 6 (Figure 4-1).

4.2 Regional Background

Regional background groundwater quality data were obtained from the USGS National Water Information System database. Groundwater results were selected for monitoring wells constructed within the alluvial, Monongahela Group, and Conemaugh Group aquifers located within 50 miles of the Plant (Figure 4-2). The USGS background data were compared to downgradient BAP data (Wells BAC-02, BAC-03, BAC-04, and BAC-05) and Ohio River data collected in March and April 2022. As presented in Table 4-2, the concentrations of calcium, chloride, fluoride, sulfate, and TDS in groundwater downgradient of the BAP are generally between the concentrations in upgradient background and USGS background data for regional groundwater (within 50 miles of the Plant) and the Ohio River. These results are consistent with previous ASD Reports for the BAP (ERM 2018b, 2018c, 2019a, 2019b, 2020a, 2020b, 2021b, 2021c, and 2022) and, along with Figure 3-1, demonstrate that calcium, chloride, fluoride, sulfate, and TDS are present along flow pathways from the sedimentary bedrock aquifers to the alluvial aquifer beneath the BAP.

Table 4-2: Comparison of USGS Regional Background and Upgradient Site Background to BAP and Ohio River

Analyte	Units	USGS Background (Max)	Upgradient Site Background ^a (Max)	Downgradient BAP ^b	Ohio River ^b
Calcium	mg/L	520	730	80-170	37
Chloride	mg/L	9,900	19,000	22-78	29
Fluoride	mg/L	8.8	5.00	0.063-0.19	0.11
Sulfate	mg/L	2,700	1,700	190-400	61
TDS	mg/L	9,910	37,000	420-900	190

Notes: BAP = Bottom Ash Pond; mg/L = milligrams per liter; TDS = total dissolved solids; USGS = United States Geological Survey.

^a Maximum results from upgradient site wells 2016-08, 2016-09, 2016-10, 96152, 96153R, 96154R, and 96156 from March 2018 to September 2021

^b Results from samples collected in March and April 2022.

4.3 Kyger Creek Generating Station

Figure 4-3 and Figure 4-4 depict the distribution of boron from the northern boundary of the Kyger Creek NFAP and along the flow pathways in map view (Figure 4-3) and cross section view (Figure 4-4), as summarized by the following points:

- The concentration of boron in groundwater downgradient of the BAP (Figure 4-3 and Figure 4-4) ranges from 1.9 milligrams per liter (mg/L) to 2.8 mg/L in the March and April 2022 samples. The concentration of boron in surface water contained in the BAP was 0.46 mg/L in March 2022, and at upgradient wells BAC-01, MW-1, and MW-6 boron was less than 0.2 mg/L.
- The highest boron concentrations in BAP downgradient wells were measured at wells BAC-04 and BAC-05, which are located downgradient of the Kyger Creek NFAP.
- Monitoring well B-0904 is situated on Kyger Creek property downgradient of the Kyger Creek NFAP and upgradient of the BAP. B-0904 historically has a higher boron concentration than any BAP well.
- 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 slightly lower concentrations than measured in groundwater from monitoring well B-0904, likely due to the slightly deeper position of the well screens and the greater influence of regional groundwater discharge from the underlying bedrock aquifer to the alluvial aquifer.

In addition to the OEPA correspondence that concluded that groundwater below the Kyger Creek NFAP appears to be impacted by a release from the Kyger Creek NFAP (Appendix A and Appendix B), the Kyger Creek SFAP data also suggest that boron is present in groundwater below both Kyger Creek fly ash ponds. Table 4-3 summarizes boron analytical results from two groundwater sampling events conducted in March and September 2021 at Kyger Creek SFAP downgradient monitoring wells (AGES 2022). The highest concentrations were observed on the northeastern and southeastern boundaries of the SFAP. The northeastern boundary was interpreted to be downgradient from the Kyger Creek NFAP in 2020 (AGES 2021). The Kyger Creek NFAP was capped and closed in 2000 (OVEC 2017). Per the PTI, samples are collected semiannually for:

- Groundwater Contamination Indicator Parameters – alkalinity, specific conductivity, sulfate, and total dissolved solids

- Groundwater Quality Parameters – barium, calcium, chloride, iron, lead, magnesium, manganese, selenium, sodium, gross alpha and gross beta, and pH

Periodic reviews of the monitoring reports by the OEPA have identified impacts to groundwater with the conclusion that an assessment of groundwater should be conducted (Appendix A and Appendix B).

Table 4-3: Kyger Creek SFAP Boron 2021 Results

Analyte	Units	Maximum	Average
Boron	mg/L	19	7.4

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

The average concentration of boron (7.4 mg/L) in the Kyger Creek SFAP for 2021 is higher than the highest concentration of boron measured in groundwater beneath the BAP (2.8 mg/L) in March 2022. The Kyger Creek SFAP and the now-closed NFAP both contain fly ash generated at the Kyger Creek Generating Station; thus, 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 Kyger Creek Generating Station.

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

5.1 Ohio River

As described in Section 3 and in the first ASD Report for the BAP (ERM 2018b) and the *Updated Groundwater Monitoring System Evaluation and Certification* (ERM 2021a), the measured groundwater elevations around the BAP and the interpreted flow directions provide clear evidence of groundwater flow reversals and the mixing of Ohio River surface water and groundwater. The intermediate pH of groundwater downgradient of the BAP (i.e., pH value between the pH of Kyger Creek groundwater and the pH of the Ohio River) is consistent with the mixing of river water and groundwater beneath the BAP. This evidence suggests there is a linkage between groundwater downgradient of the BAP and the Ohio River.

5.2 Regional Background

As described in Section 3.2 and illustrated on Figure 3-1, groundwater flowing in the sedimentary bedrock aquifers discharges to the alluvial aquifer along the Ohio River, including the portion beneath the BAP. As described in Section 4.2, regional concentrations of calcium, chloride, fluoride, sulfate, and TDS are higher than respective groundwater concentrations downgradient of the BAP. Based on these observations, it is likely that the discharge of groundwater from the sedimentary bedrock aquifers to the alluvial aquifer under the BAP (Figure 5-1 and Figure 5-2) is an alternate source for these constituents. This evidence suggests that there is a linkage between groundwater downgradient of the BAP and regional background.

5.3 Kyger Creek Generating Station

When the river stage is low (Figure 5-1), groundwater in the alluvial aquifer migrates in a northeasterly direction from the Kyger Creek NFAP, under the BAP, and eventually discharges to the Ohio River. During times of higher river stage (Figure 5-2), groundwater in the alluvial aquifer temporarily reverses flow direction and river water flows into the alluvial aquifer. Despite the temporary reversals of groundwater flow caused by flooding of the Ohio River, the overall, long-term flow direction is to the northeast. This indicates that the source of boron detected in the monitoring wells downgradient of the BAP is the Kyger Creek NFAP.

6. RELEASES FROM THE BAP ARE NOT SUPPORTED AS THE SOURCES

6.1 Measured Boron Concentrations

Surface water samples at the BAP and Reclaim Pond have been collected during each groundwater sampling event since 2016. Boron has consistently been detected 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 summarizes the boron concentrations measured in April 2022. Based on this data, the boron concentration in the BAP is too low to be the source of boron to the downgradient BAP wells. The average concentration at B-0904 is 3.95 mg/L, making the NFAP the most likely source.

Table 6-1: Bottom Ash Pond Boron Results

Analyte	Units	Bottom Ash Pond ^a	Reclaim Pond ^a	Downgradient BAP Wells (Average) ^a
Boron	mg/L	0.46	0.46	2.7

^a Sample results from April 2022

6.2 Chemical Fingerprints

The geochemical fingerprints of surface water from the BAP, groundwater under the BAP, groundwater under the Kyger Creek NFAP, and surface water from the Ohio River were determined using a Piper diagram. The Piper diagram is a graphical procedure commonly used to interpret sources of dissolved constituents in water and evaluate the potential for mixing of waters from different sources (Piper 1944), and is commonly used to evaluate the impacts of coal combustion residuals (Doss et al. 2008, Khan and Rashid 2019, Kuo et al. 2018).

In response to USEPA feedback, Gavin has reviewed the validity of using Piper diagrams to evaluate groundwater at the Plant (Gavin 2022). Concentrations of second-rank constituents were evaluated against the primary constituents presented in a Piper diagram. Potassium was determined to be the only second-rank constituent that significantly contributes to total cation/anion concentrations, and is the only second-rank constituent to be included in the plot. The potential for chemical reactions to affect analyte concentrations in groundwater at the BAP during mixing of different sources was modeled and significant impacts due to mineral precipitation were not observed. In addition, only samples with a charge balance within 10% are included in the plot. Therefore, it was determined that the use of Piper diagrams to evaluate geochemical conditions in groundwater at the BAP is valid.

The samples presented on the diagram were collected from 2012 through 2022. The primary observations and conclusions based on the BAP Piper diagram (Figure 6-1) are the following:

- Multiple samples collected from a single location (e.g., the Ohio River or Well B-0904) tended to be tightly clustered, indicating that the chemical signatures of individual locations were consistent over time.
- Groundwater from BAP upgradient wells MW-1, BAC-01, and MW-6 has a unique geochemical signature dominated by calcium and bicarbonate. This groundwater flows under the west-northwest portion of the BAP and does not appear to be influenced by the Ohio River or Kyger Creek NFAP based on the differences in their geochemical signatures.
- Groundwater from monitoring wells BAC-06 and BAC-07 is dominated by calcium with lesser proportions of carbonate and sulfate, and has an intermediate signature between the upgradient wells (BAC-01, MW-1 and MW-06) and groundwater from B-0904. These results, and the boron results discussed in Section 4.3, indicate groundwater from BAC-06 and BAC-07 may be a mixture of

deeper non-impacted alluvial groundwater and shallower alluvial groundwater migrating from Kyger Creek.

- Groundwater from well B-0904, which is downgradient of the Kyger Creek NFAP and upgradient of the BAP, is dominated by calcium and sulfate and has a signature that is distinct from all other chemical signatures on the diagram.
- Surface water from the Ohio River exhibits a distinct signature that plots closer to the center of the Piper diagram.
- Groundwater from BAP downgradient wells BAC-02, BAC-03, BAC-04, and BAC-05 plots on the Piper diagram between the Ohio River and Kyger Creek NFAP groundwater. This is an independent line of evidence that groundwater under a majority of the BAP is a mixture of groundwater from the Kyger Creek NFAP (represented by well B-0904, which is upgradient of the BAP) and the Ohio River.

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

7. ALTERNATE SOURCE DATA ARE HISTORICALLY CONSISTENT WITH HYDROGEOLOGIC CONDITIONS

7.1 Ohio River

The hydraulic connection of the Ohio River to the alluvial aquifer was established after the last deglaciation (Kozar and McCoy 2004). Seasonal flooding events of the Ohio River, which has occurred periodically over the period that the Plant has existed, is the driving force behind the mixing of surface water and groundwater. Thus, source data for the Ohio River are historically consistent with the hydrogeologic conditions and findings of the monitoring program.

7.2 Regional Background

This ASD Report provides background groundwater quality data for the fractured sedimentary bedrock aquifers found within and beyond the boundary of the Plant. Flow patterns of regional groundwater through fractured bedrock near the BAP were established after the last deglaciation, which occurred approximately 14,000 years ago (Hansen 2017). Assuming a conservatively high effective porosity of 1 percent results in an estimated groundwater velocity of 80 feet per year for the Morgantown Sandstone and 50 feet per year for the Cow Run Sandstone (ERM 2020b). These rates would allow ample time for groundwater to migrate from upgradient regional background sources onto Plant property since the end of the last glaciation. The data supporting these conclusions are historically consistent with hydrogeologic conditions and findings of the BAP monitoring program.

7.3 Kyger Creek Generating Station

The Kyger Creek NFAP was constructed in 1955 with its base on native soil, without an engineered liner system to contain leachate. The unit was used to manage fly ash until it was drained and closed from 1998 to 2000, although dewatered ash is still present within the Kyger Creek NFAP (AEP 1994). The NFAP was not capped with a low permeability barrier at the land surface; therefore, there is no barrier to prevent the infiltration of precipitation, the migration of water through CCR materials in the subsurface and the subsequent recharge of 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 (OVEC 1997).

Groundwater in the alluvial aquifer flows under the Kyger Creek NFAP in a northeasterly direction toward and under the Gavin BAP. Given the six decades that this unit has contained fly ash and the alluvial aquifer groundwater velocity estimates of 1,200 to 1,800 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 and low pH:

- The low concentration of boron in water from the BAP and the distribution of boron in groundwater beneath the BAP (Section 4 and Section 6).
- Analytical results from groundwater samples collected below the Kyger Creek SFAP suggest boron is 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 data as representative of Kyger Creek NFAP groundwater quality (Section 4).
- The chemical fingerprinting evidence suggests groundwater from Kyger Creek mixes with Ohio River water under 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).

In addition, a comparison of the materials managed provides evidence that the BAP is not the source of boron – 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 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 samples from monitoring wells downgradient of the BAP collected in March and April 2022. Review of data for quality assurance and statistical comparison was complete on 14 June 2022. In response to the SSIs, this ASD Report was prepared within the required 90-day period in accordance with 40 CFR § 257.94(e)(2).

All SSIs in the downgradient BAP monitoring wells have been determined to result from alternate sources: mixing of upgradient groundwater with the Ohio River, regional groundwater discharge to the alluvial aquifer, and the Kyger Creek Power Plant NFAP. Table 8-1 summarizes the six lines of evidence for each of the SSIs.

Table 8-1: BAP ASD Summary

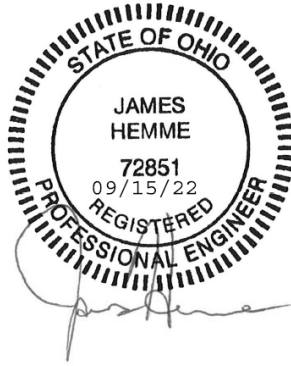
Analyte	SSI Location	Six Lines of Evidence from USEPA Guidance					
		Alternate Source	Hydraulic Connection	Constituent Present at Source or along Flow Path	Constituent Distribution More Strongly Linked to Alternate Source	Constituent Could Not Have Resulted from the BAP	Data Are Historically Consistent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

In conclusion, the BAP is not the source of the SSIs associated with the second semiannual sampling event groundwater results for 2022. Thus, Gavin will continue detection monitoring at the BAP in accordance with 40 CFR § 257.94(e)(2).

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: 9/15/2022

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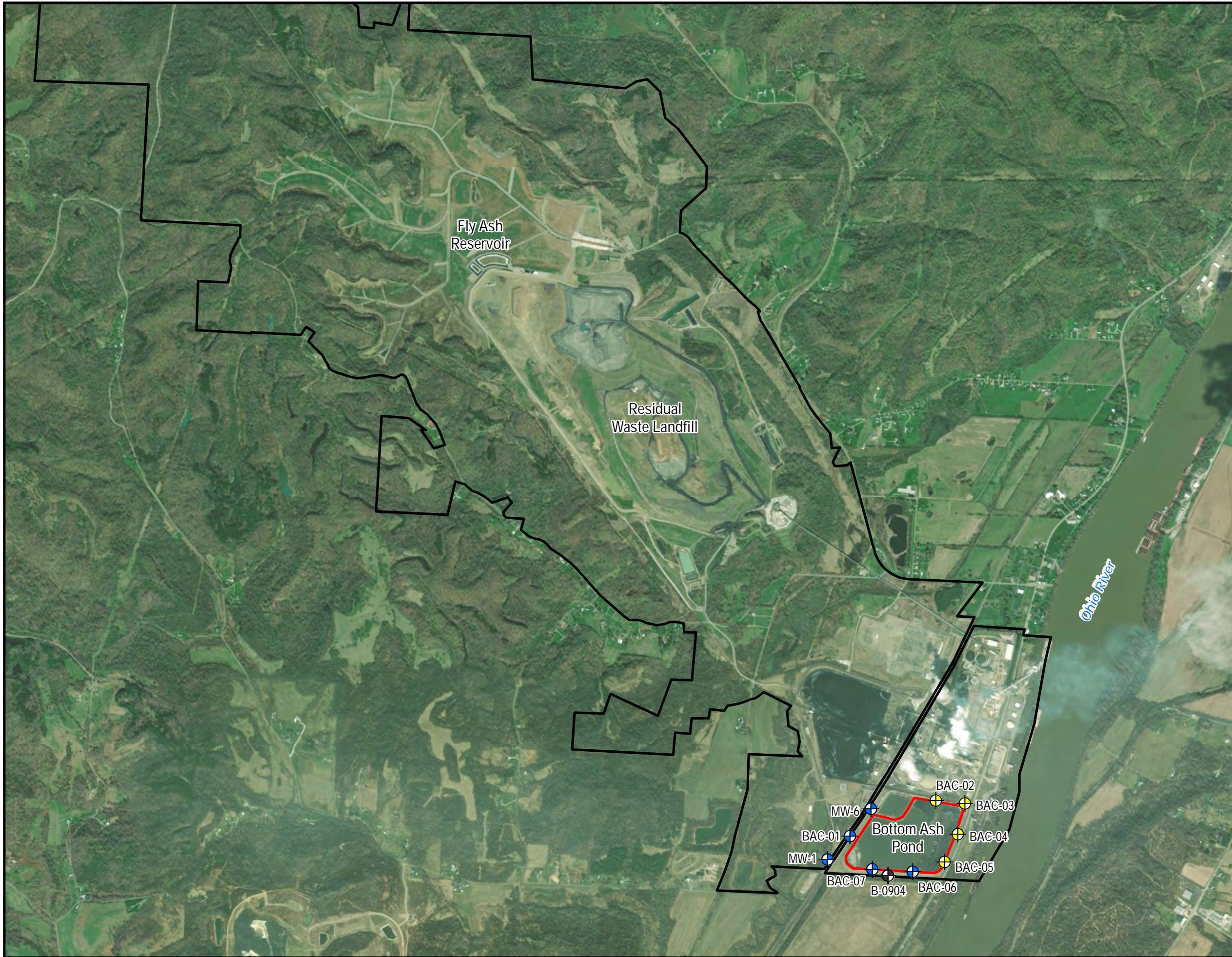
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FIGURES



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





Legend

- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Upgradient Monitoring Well (Not in Federal Program)
- Bottom Ash Pond
- Gavin Property Boundary

NOTES:

1. Aerial Imagery: ESRI World Imagery
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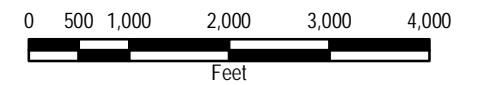
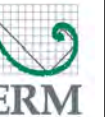


Figure 1-2: Bottom Ash Pond Location
Gavin Generating Station
Cheshire, Ohio



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Legend

- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Upgradient Monitoring Well (Not in Federal Program)
- Approximate location of Bottom Ash Pond boundary

NOTES:

1. Locations are approximate
2. Aerial Imagery: ESRI World Imagery
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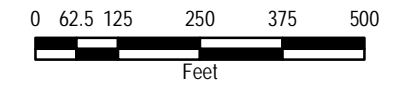
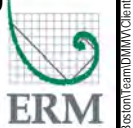
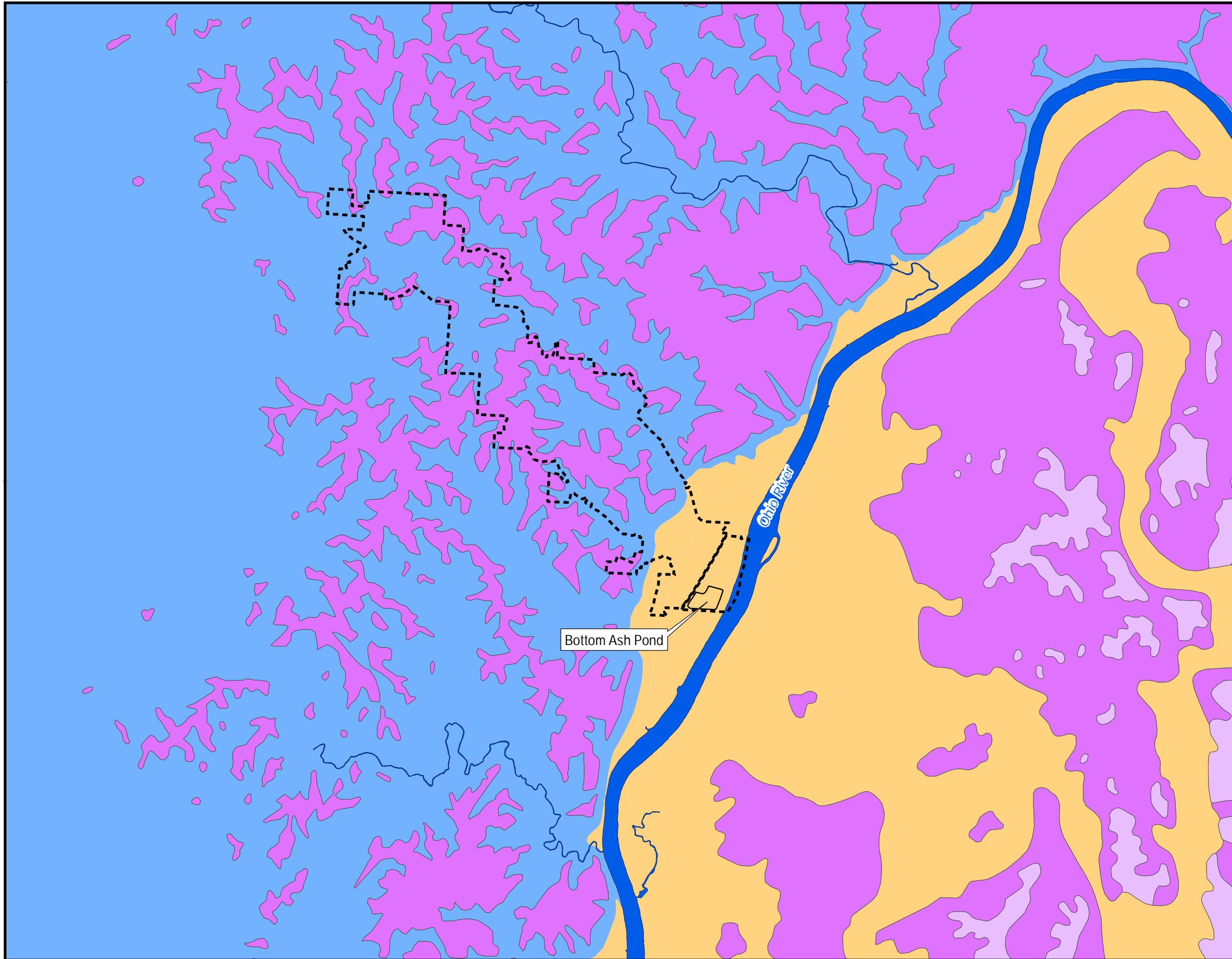


Figure 1-3: Existing Monitoring Well Network
Gavin Generating Station
Cheshire, Ohio



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Legend

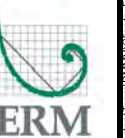
-  Gavin Property Boundary
-  Alluvial Aquifer
- Sedimentary Aquifers
 -  Dunkard Group
 -  Monongahela Group
 -  Conemaugh Group

NOTES:

1. Alluvial aquifer data from Ohio EPA and Sedimentary aquifer data from USGS








Figure 1-4: Sedimentary and Alluvial Aquifers
Gavin Generating Station
Cheshire, Ohio



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Legend

-  Federal Upgradient Monitoring Well
-  Federal Downgradient Monitoring Well
-  Upgradient Monitoring Well (Not in Federal Program)
-  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: ESRI World Imagery
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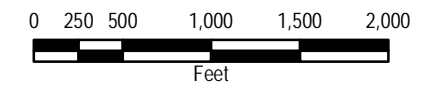
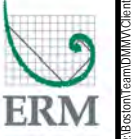
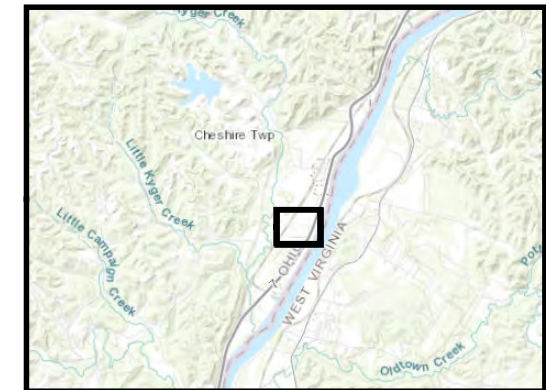
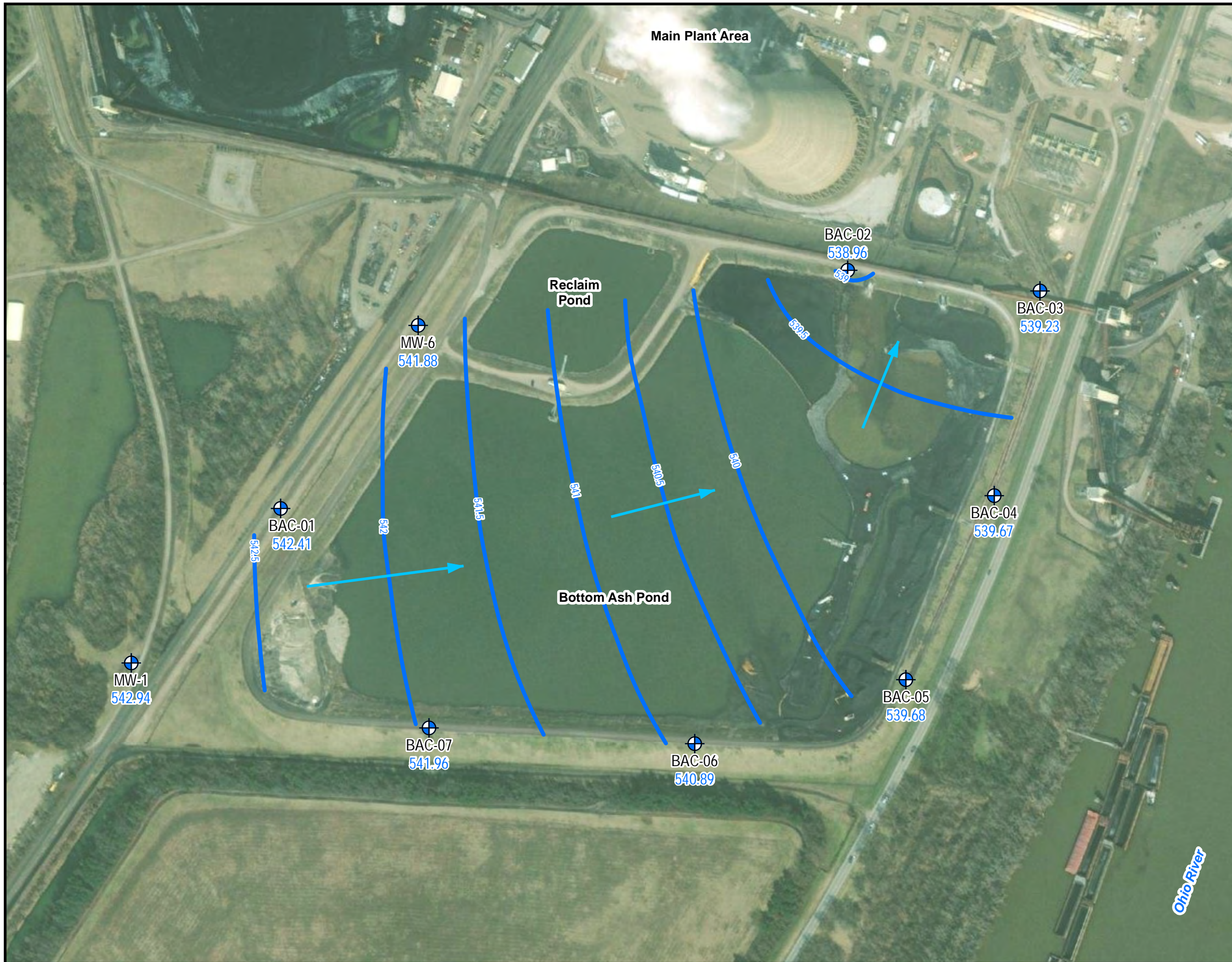


Figure 2-1: Location of Kyger Creek Generating Station
Gavin Generating Station
Cheshire, Ohio



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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 3/21/2022
3. Aerial Imagery: ESRI World Imagery
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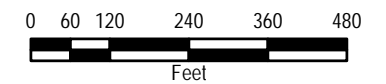
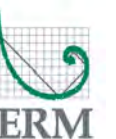
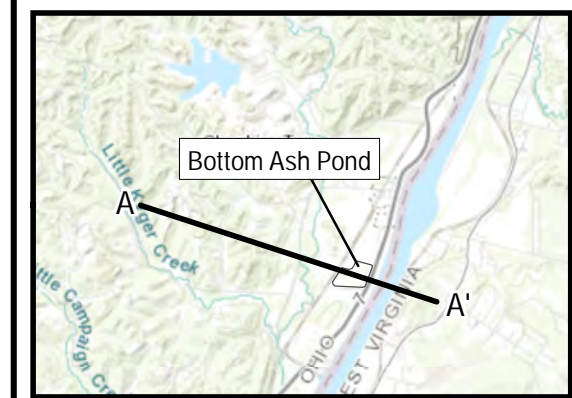
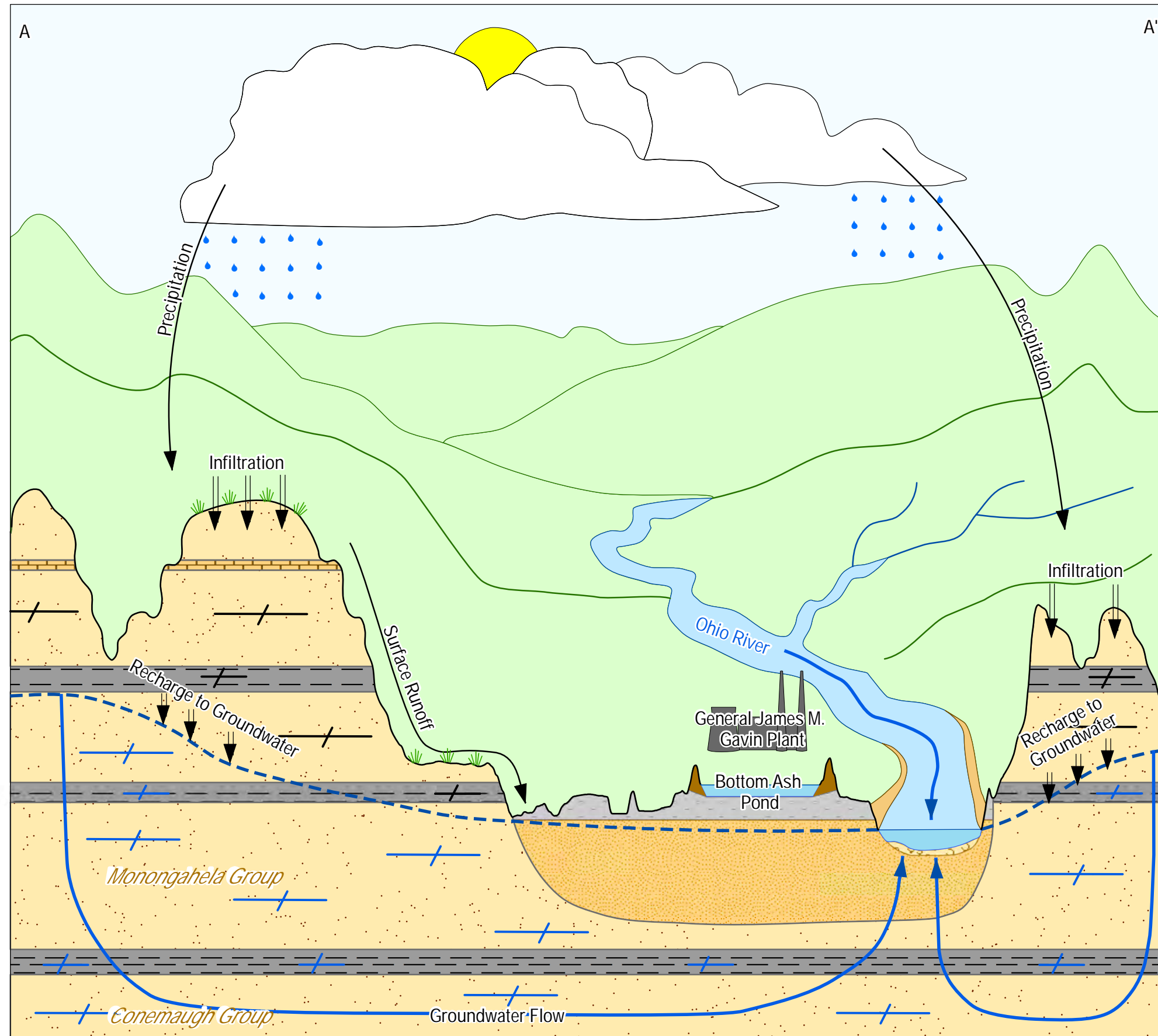


Figure 2-2: Interpreted Groundwater Potentiometric Contour
 March 2022
 Gavin Power Plant
 Cheshire, Ohio



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Legend

- Groundwater Flow Direction
- Water Table
- Saturated Fractures
- Unsaturated Fractures
- Fill
- Interbedded Silt/Clay
- Sand
- Coarse Sand Deposits
- Sandstone
- Fractured Limestone
- Fractured Shale

NOTES:

1. Sandstone bedrock units represent the Conemaugh Group and Monongahela Group Sedimentary Aquifers

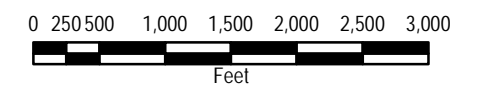
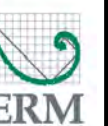


Figure 3-1: Regional Groundwater Flow Patterns
 Gavin Generating Station
 Cheshire, Ohio



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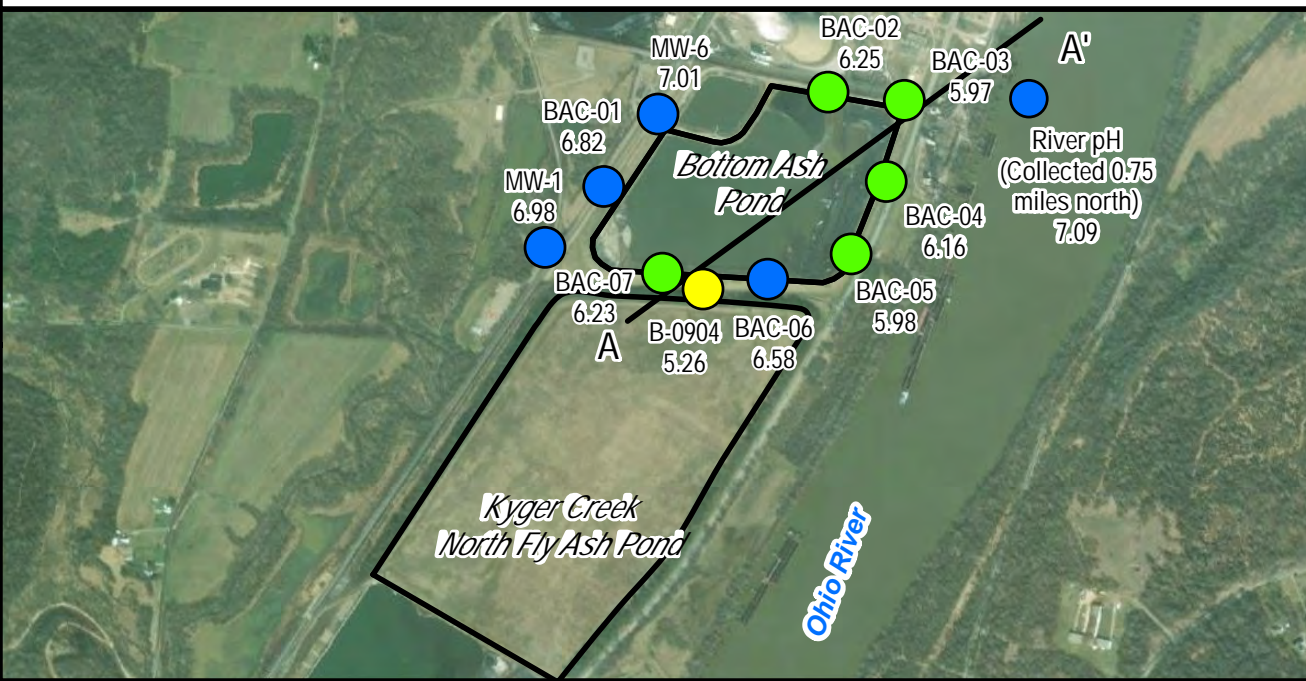
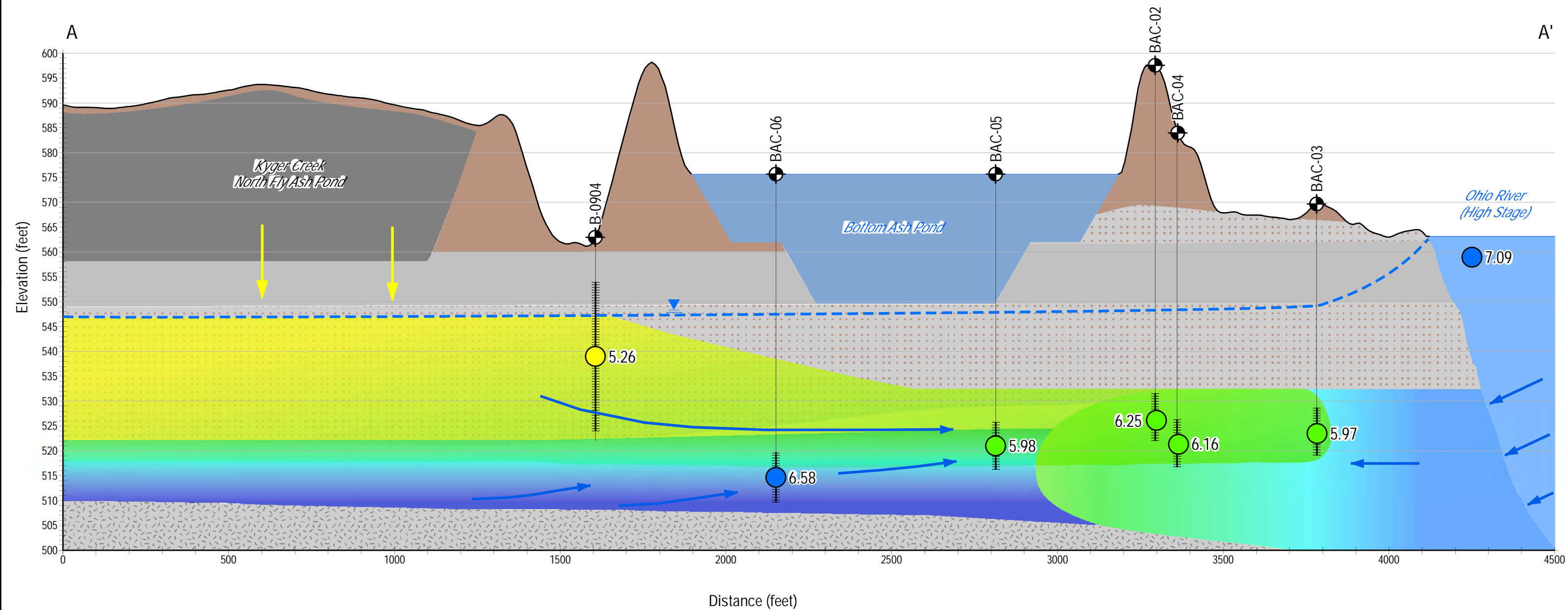
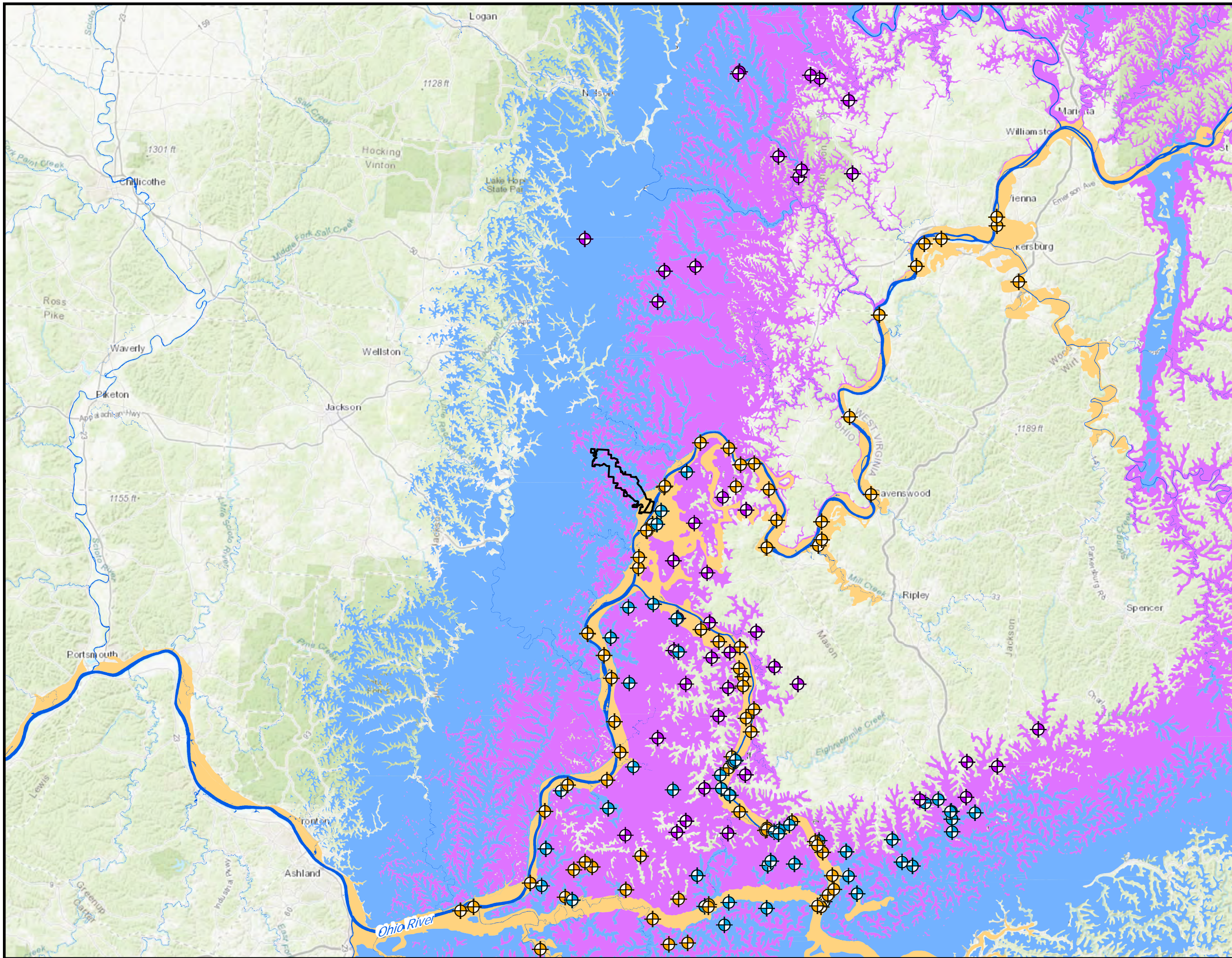


Figure 4-1: pH of the Ohio River and BAP Groundwater
Gavin Generating Station
Cheshire, Ohio





Legend

- Alluvial Aquifer
- Gavin Property Boundary
- Sedimentary Aquifers**
- Monongahela Group
- Conemaugh Group
- USGS Groundwater Monitoring Wells**
- + Alluvial Aquifer
- + Monongahela Group (Sedimentary Aquifer)
- + Conemaugh Group (Sedimentary Aquifer)

NOTES:

1. Alluvial aquifer data from Ohio EPA and Sedimentary aquifer data from USGS

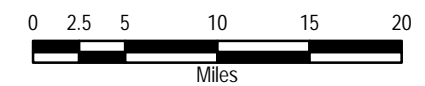
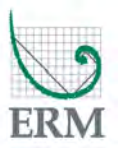
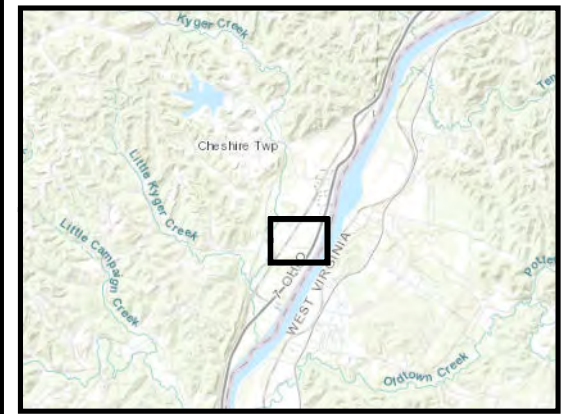
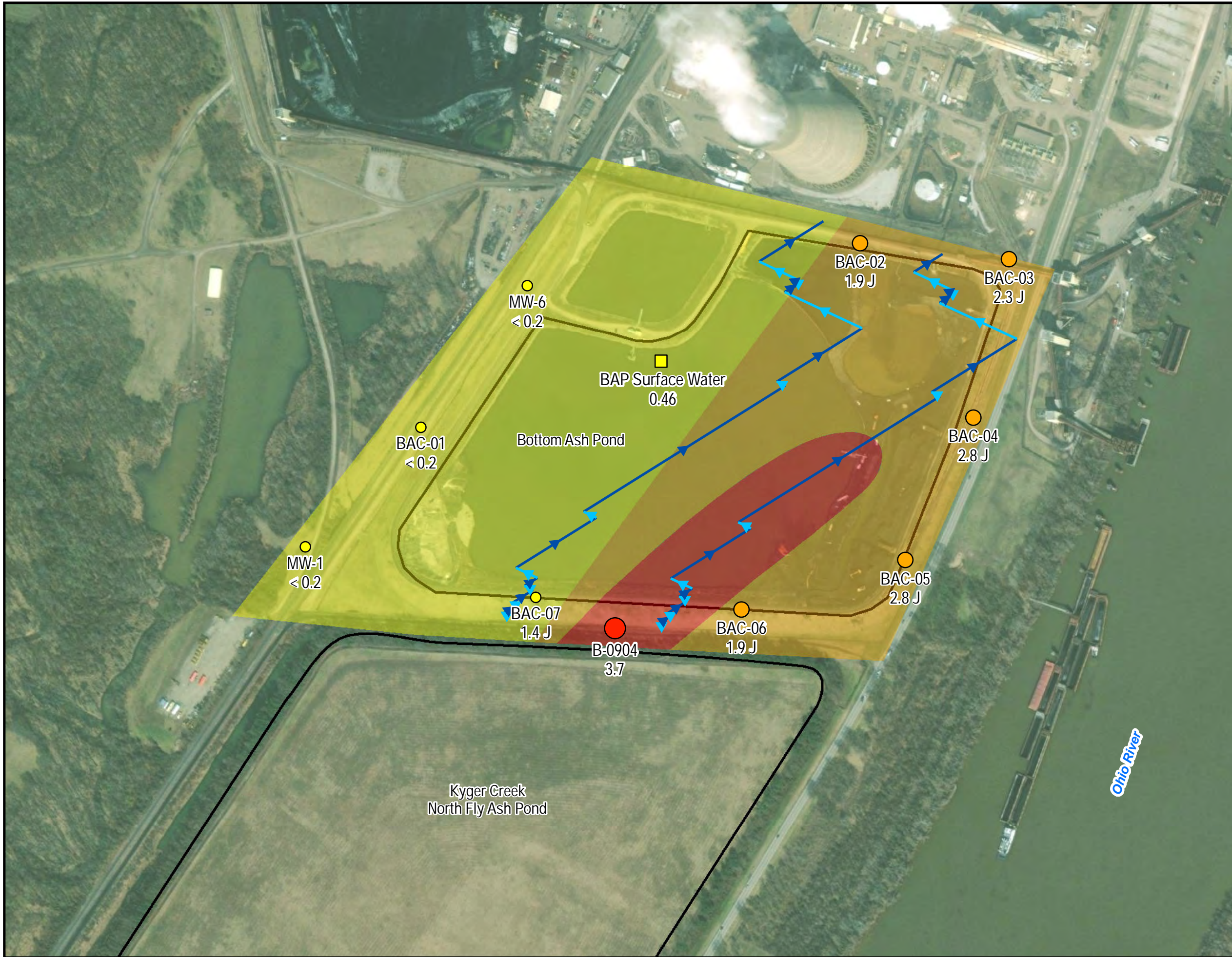


Figure 4-2: Locations of Background Groundwater Monitoring Wells Gavin Generating Station Cheshire, Ohio



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Legend

- 0.054 Boron Concentration (mg/L)
- Low (Typical) River State Groundwater Flow Direction to the Northeast*
- High River Stage Groundwater Flow Direction to the Northwest*
- Coal Combustion Residuals Unit
- Boron Concentration in Groundwater**
- <1.5 mg/L
- 1.5-3 mg/L
- >3 mg/L
- Sample Type**
- Groundwater
- Surface Water

NOTES:

1. All boron data are from samples collected in March and April 2022 except for B-0904, which was collected in March 2020.
2. * Arrow length is relative to duration of low, high river stage.
3. mg/L = milligrams per liter
4. J = Estimated value.
5. Aerial Imagery: ESRI World Imagery
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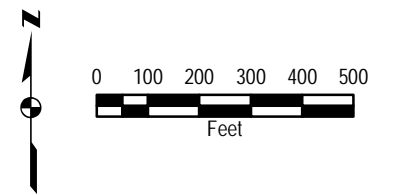
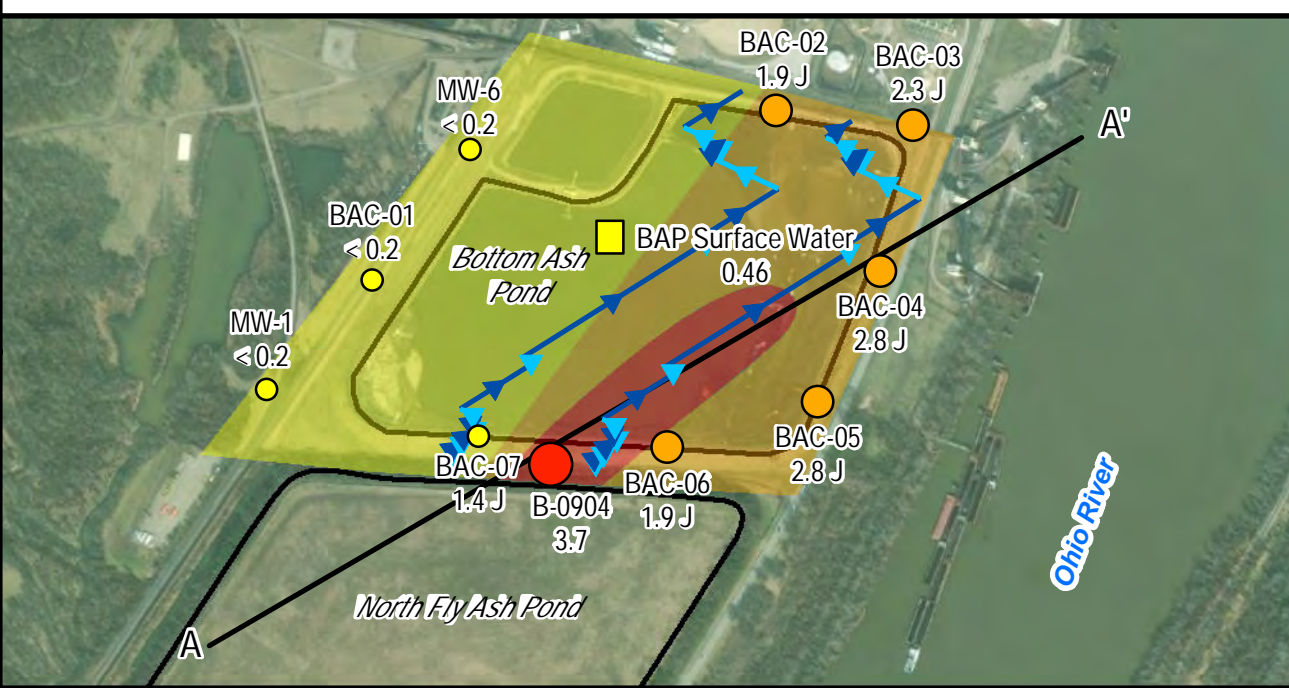
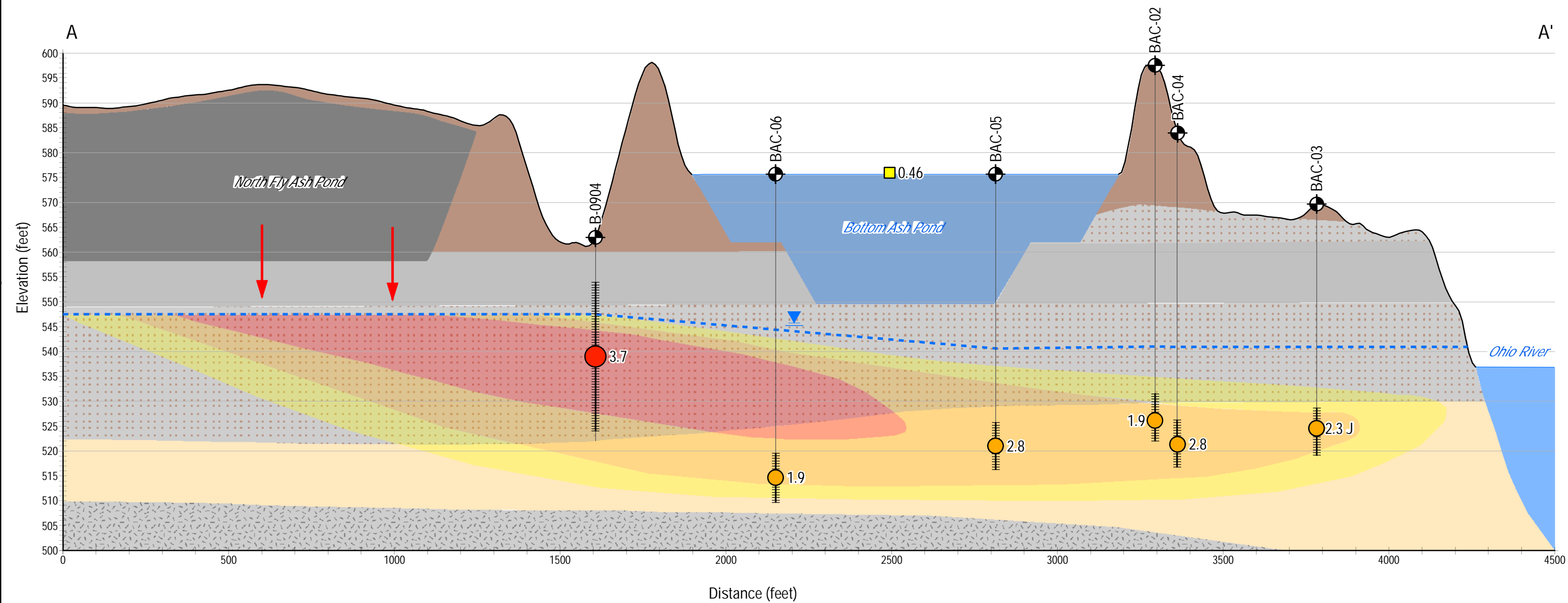


Figure 4-3: Boron Distribution in Groundwater
Gavin Generating Station
Cheshire, Ohio





Legend

- Monitoring Well (Symbol: Well with crosshair)
- Groundwater (Symbol: Circle)
- Surface Water (Symbol: Square)
- Cross Section Location (Symbol: Solid line)
- Borehole (Symbol: Dashed line)
- Well Screen (Symbol: Vertical lines)
- Interpreted Piezometric Surface (Symbol: Dashed blue line with triangle)

Boron Concentrations in Groundwater (mg/L)

- <1.5 (Yellow circle)
- 1.5-3 (Orange circle)
- >3 (Red circle)

Interpreted Boron Concentrations (mg/L)

- <1.5 (Light yellow)
- 1.5-3 (Light orange)
- >3 (Light red)

Interpreted Geology

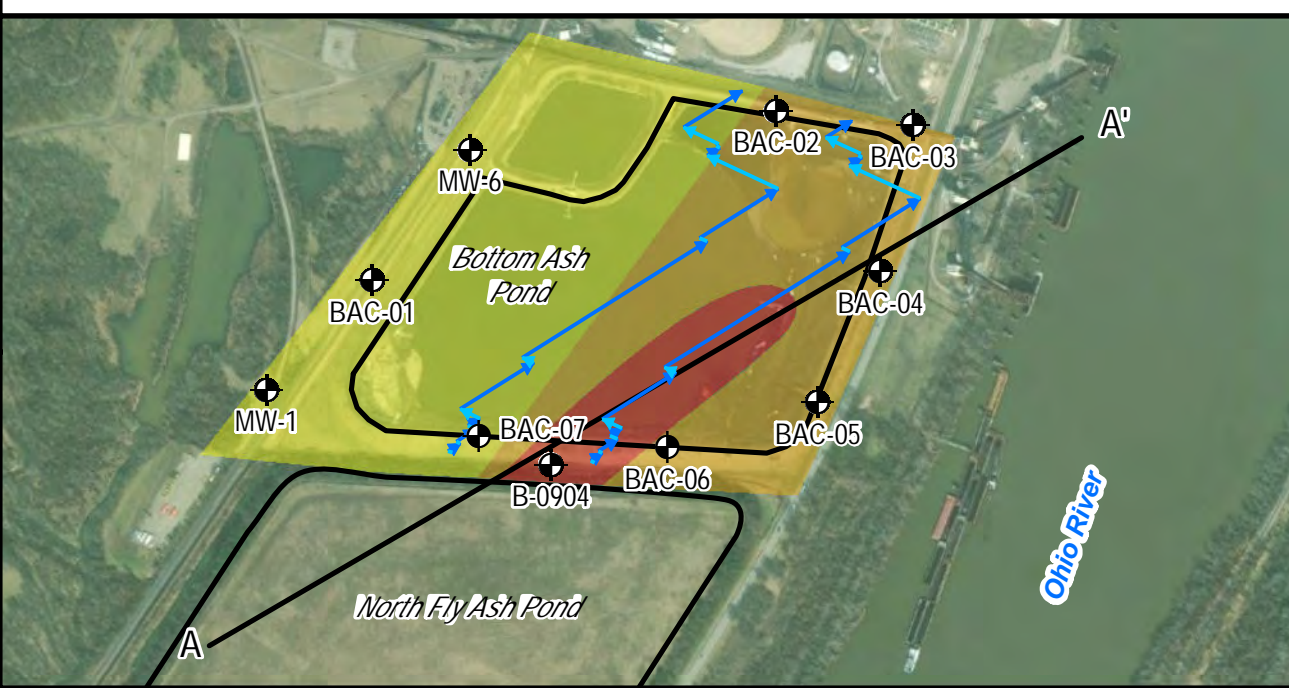
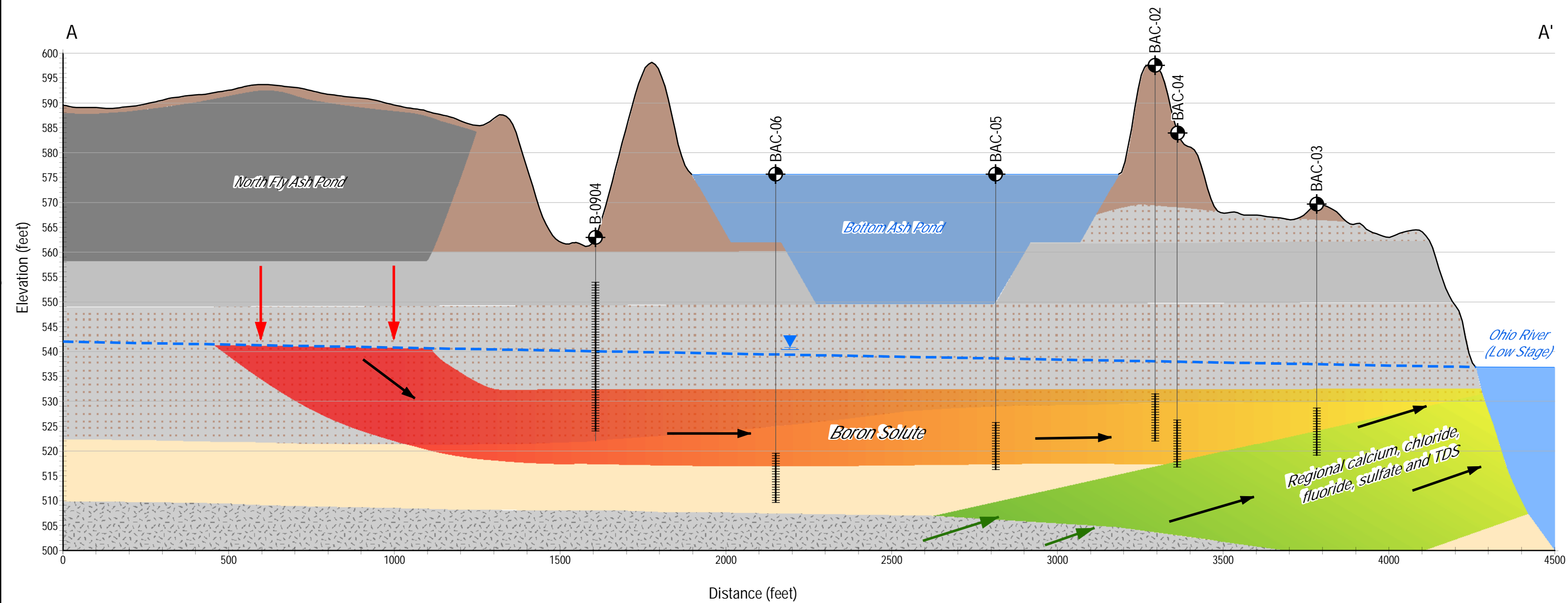
- Sandy Clayey Gravel with Bottom Ash (Brown)
- Silt/Clay (Grey)
- Silt/Clay Interbedded with Fine Sand (Dotted grey)
- Sand (Light orange)
- Bedrock (Stippled grey)

Notes:

- Groundwater elevations and Boron data from March and April 2022, except B-0904 from Spring 2020.
- Wells are truncated at water or land surface.
- Aerial Imagery: ESRI World Imagery
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Figure 4-4: Boron Distribution in Groundwater (Section View)
Gavin Generating Station
Cheshire, Ohio





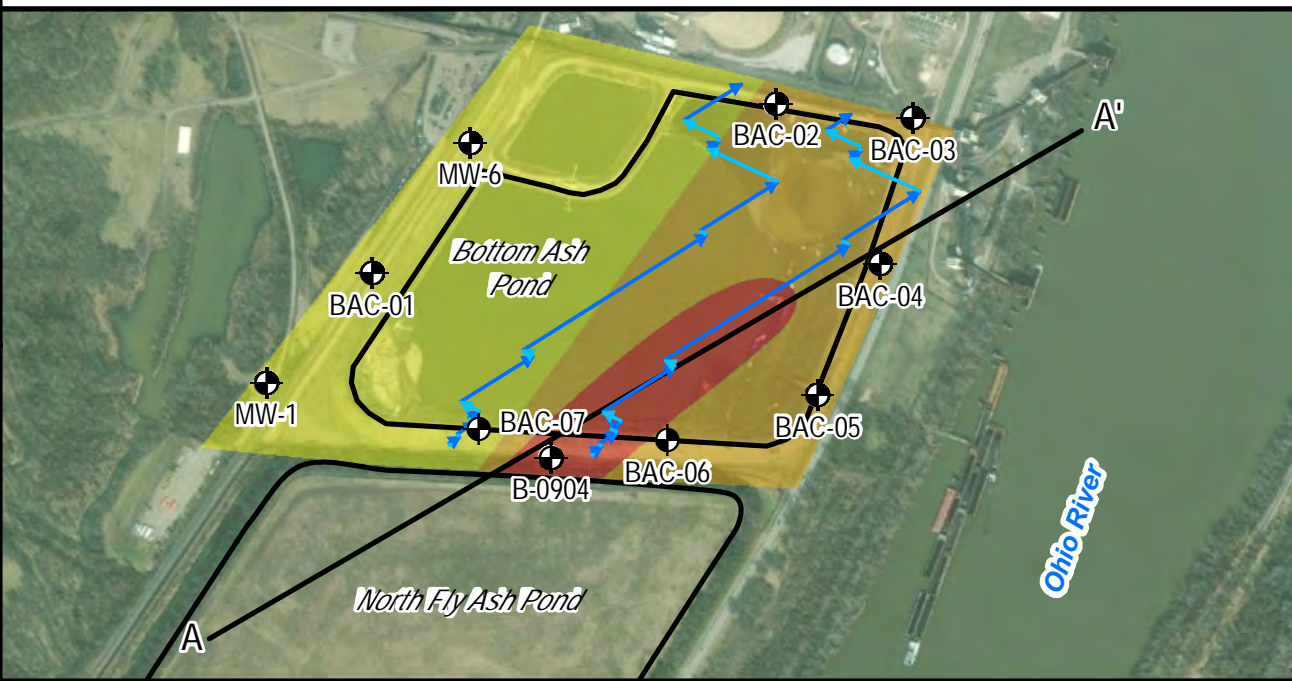
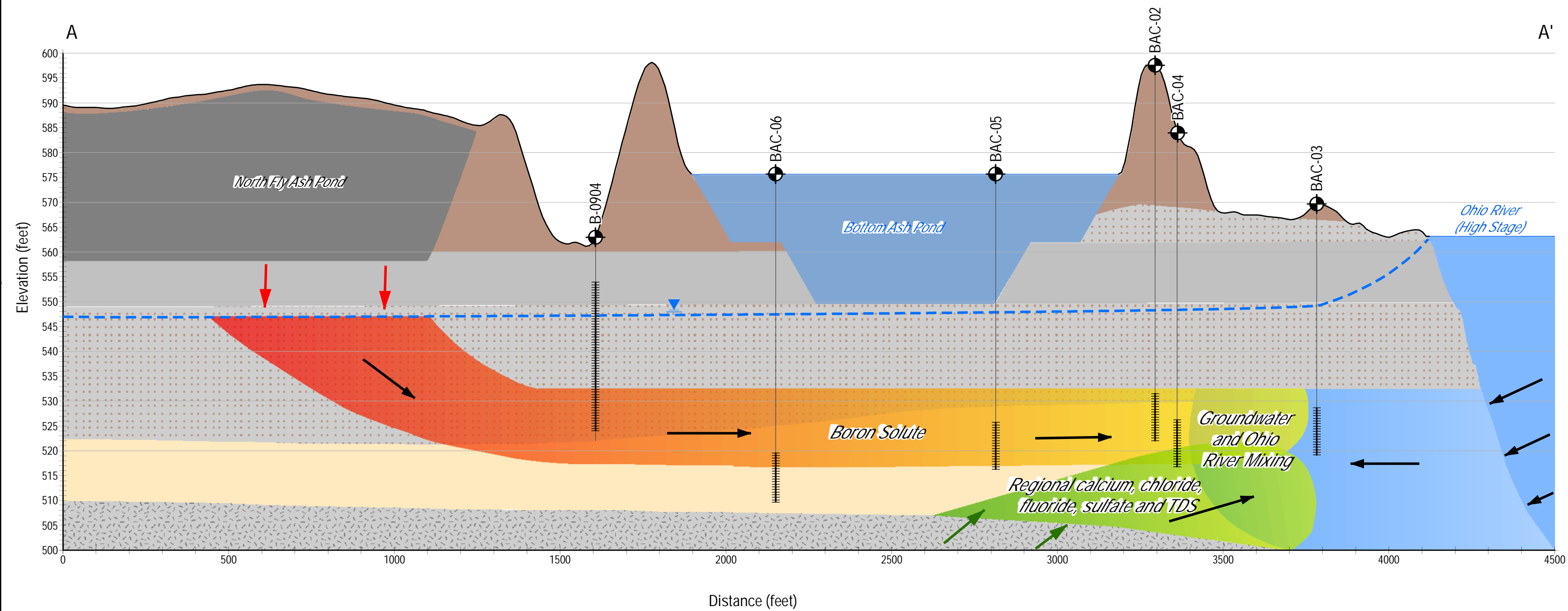
- Legend**
- Monitoring Well
 - Cross Section Location
 - Borehole
 - Well Screen
 - Interpreted Low River Piezometric Surface
 - Low River Stage Flow Direction
 - High River Stage Flow Direction
 - Interpreted Groundwater Flow Direction
 - Interpreted Leachate from NFAP
 - Interpreted Regional Source of Ca²⁺, Cl⁻, F⁻, SO₄²⁻, and TDS

- Interpreted Geology**
- Sandy Clayey Gravel with Bottom Ash
 - Silt/Clay
 - Silt/Clay Interbedded with Fine Sand
 - Sand
 - Bedrock

Notes:
 1. Aerial Imagery: ESRI World Imagery
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Figure 5-1: Low River Stage Cross Section
 Gavin Generating Station
 Cheshire, Ohio





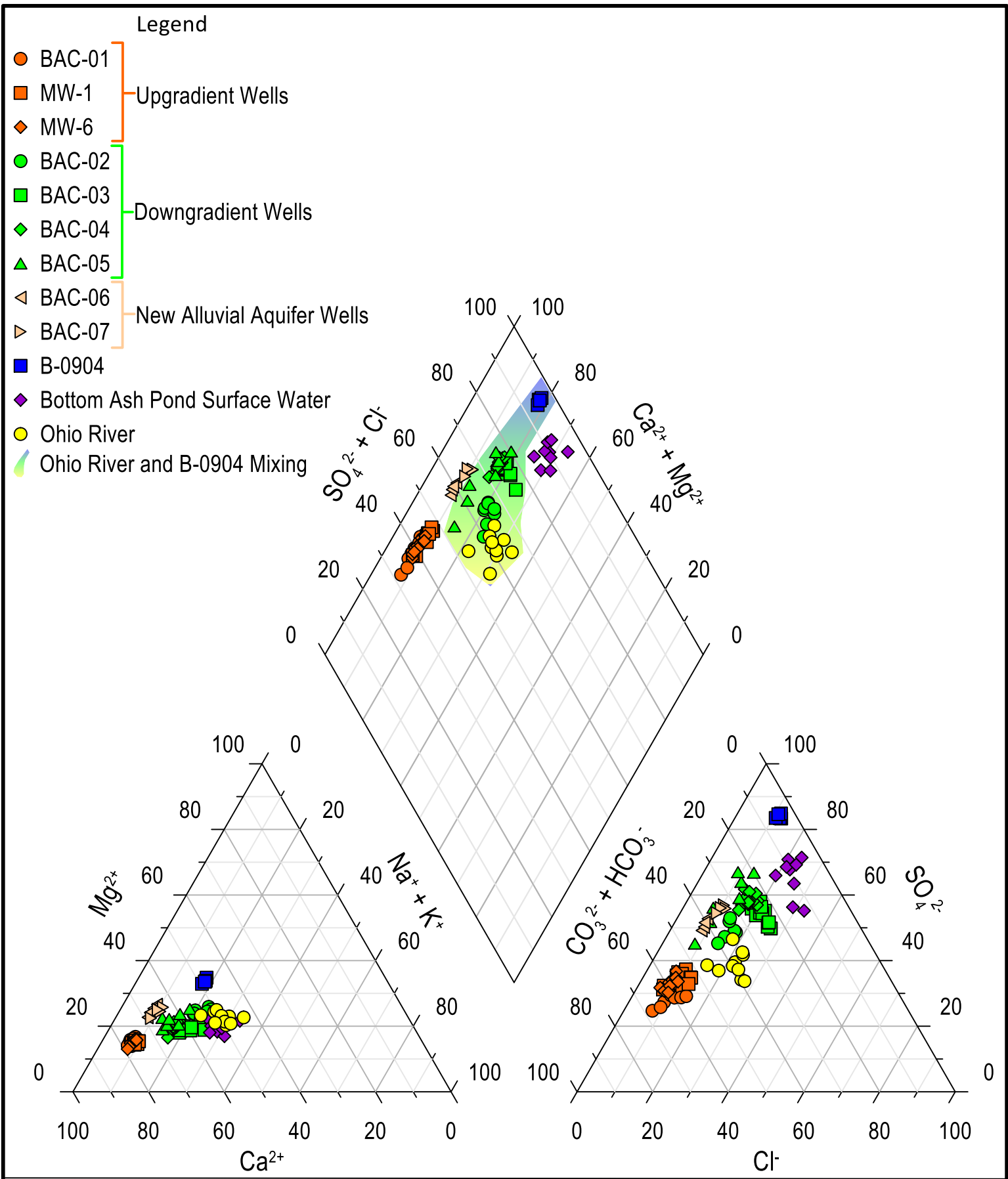
- Legend**
- Monitoring Well
 - Cross Section Location
 - Borehole
 - Well Screen
 - Interpreted High River Piezometric Surface
 - Low River Stage Flow Direction
 - High River Stage Flow Direction
 - Interpreted Groundwater Flow Direction
 - Interpreted Leachate from NFAP
 - Interpreted Regional Source of Ca^{2+} , Cl^- , F^- , SO_4^{2-} , and TDS

- Interpreted Geology**
- Sandy Clayey Gravel with Bottom Ash
 - Silt/Clay
 - Silt/Clay Interbedded with Fine Sand
 - Sand
 - Bedrock

Notes:
 1. Aerial Imagery: ESRI World Imagery
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Figure 5-2: High River Stage Cross Section
 Gavin Generating Station
 Cheshire, Ohio





NOTES:

1. Date Range: March 2012 to March 2022
2. Only samples with complete data including all 8 piper diagram analytes are presented
3. Only samples with a charge imbalance error of less than 10% are presented

Figure 6-1: BAP Piper Diagram
 Gavin Generating Station
 Cheshire, Ohio



APPENDIX A



State of Ohio Environmental Protection Agency

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George V. Voinovich
Governor

To: Dan Messerly through Bruce Goff, DSW-SEDO ✓

From: David ^{DH}Hunt through Mike ^{MMP}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.

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 three 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 that 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 observations

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 Sutcliffe, DDAGW-CO

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DDAGW #: 07/22/98-04-3-05-0 3757

APPENDIX B



Gallia Co, OIB00005*DD

Ohio Valley Electric Corp Kyger Creek

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 an 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 D GAVIN BOTTOM ASH POND SECOND SEMIANNUAL
 SAMPLING EVENT OF 2022 ALTERNATE SOURCE
 DEMONSTRATION REPORT**

Gavin Bottom Ash Pond

Gavin Power, LLC

Second Semiannual Sampling Event of 2022
Alternate Source Demonstration Report

Gavin Power Plant
Cheshire, Ohio

31 January 2023

Project No.: 0632695


Signature Page

31 January 2023

Gavin Bottom Ash Pond

Second Semiannual Sampling Event of 2022 Alternate Source
Demonstration Report

Gavin Power Plant
Cheshire, Ohio



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PROFESSIONAL ENGINEER CERTIFICATION

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Appendices

Appendix A: 2022 Kyger Creek <i>Closed North Fly Ash Pond Groundwater Semiannual Data Analysis</i> ,
Appendix B: 1998 and 2017 OEPA Interoffice Memorandum

Acronyms and Abbreviations

Name	Description
ASD	Alternate Source Demonstration
BAC	Bottom Ash Complex
BAP	Bottom Ash Pond
CCR	Coal Combustion Residuals
CCR Rule	Coal Combustion Residuals in Landfills and Surface Impoundments
CFR	Code of Federal Regulations
ERM	Environmental Resources Management
Gavin	Gavin Power, LLC
H2	Second Semiannual
mg/L	milligrams per liter
NFAP	North Fly Ash Pond
OEPA	Ohio Environmental Protection Agency
ORSANCO	Ohio River Valley Water Sanitation Commission
OVEC	Ohio Valley Electric Corporation
Plant	General James M. Gavin Power Plant
SFAP	South Fly Ash Pond
SSI	Statistically significant increase
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 Appendix III constituents for the second semiannual (H2) groundwater sampling event of 2022 and are explained in this Alternate Source Demonstration (ASD) Report.

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 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.
- The data supporting conclusions regarding the alternative source are historically consistent with the hydrogeologic conditions and findings of the monitoring program.

This ASD Report addresses 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 both site specific and regional information in their development. In 2022, Gavin responded to feedback from the USEPA concerning the groundwater monitoring program at the BAP (USEPA 2022). In consideration of this feedback, Gavin has

installed additional monitoring wells and is conducting supplemental characterization at the BAP to refine the conceptual site model. Findings and updates are provided in the 2022 Annual Groundwater Monitoring and Corrective Action Report as well as discussed below.

1.2 Background

The Plant is a coal-fired generating station located in Gallia County in Cheshire, 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 has operated since 1974.

The certified groundwater monitoring well network 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). In addition, monitoring well B-0904 is located south of the BAP and has been used in previous ASD reports to define the shallow groundwater quality migrating from Ohio Valley Electric Corporation's (OVEC) Kyger Creek North Fly Ash Pond (NFAP) toward the BAP. Monitoring wells BAC-06 and BAC-07 were installed in 2020 to provide two additional upgradient monitoring wells screened in the uppermost aquifer.

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 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 semi-annual 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 2018c; ERM 2019a; ERM 2019b; ERM 2020a; ERM 2020b; ERM 2021b; ERM 2021c; ERM 2022a; ERM 2022b) were prepared to address SSIs that were identified during the initial and subsequent reporting periods.

1.3 Geology

Observation of bedrock cores collected around the BAP in 2022 indicates the uppermost bedrock layers are claystone/siltstone (interpreted to be the Round Knob) and an underlying sandstone stratum (interpreted to be the Cow Run). A sharp contact exists between the bedrock units and the overlying coarser-grained glacial sands and gravels. These coarser sediments, consisting primarily of medium to coarse sands and gravels, are buried by the younger, finer-grained unit, which exists as a laterally extensive layer of clays and silts. This younger, finer-grained unit is also known as the separation layer and exists between the base of the BAP and the coarser sediments below, which comprise the uppermost aquifer. Some fine-grained sands are also observed within the separation layer, though they are primarily intermixed within the clay and silt matrix and generally found at depth, closer to the alluvial aquifer. Two instances of interbedded fine sands have been described in borings advanced around the BAP; one at boring B-0904 which was installed in 2009 on the northern border of the neighboring Kyger Creek property and the other at boring BAC-13, which was installed in 2022 on the eastern berm of the BAP in 2022. The interbedding at B-0904 and BAC-13 were both described at the base of the separation layer where contact exists with the deeper, coarser sands and gravels. These intervals of interbedding are not laterally or vertically extensive, as evidenced by lithologic observations in adjacent borings. As such, these limited descriptions of interbedding are not considered to be representative of the clay and silt

separation layer located above the uppermost aquifer. Rather these may be isolated depositional instances. The wells installed in 2022 around the BAP area show general agreement in Site lithology and provide more detailed geologic descriptions of the sediments beneath the BAP than did historical borings/wells installed in the area.

1.4 Site Hydrology and Hydrogeology

The uppermost aquifer beneath the BAP area is approximately 20 to 40 feet thick and consists primarily of the 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 units below (Figure 1-4). The Ohio River acts as a hydraulic boundary condition to the east that is dynamic in nature due to fluctuations in river stage. Two water supply wells operated by the Gavin 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 established within the alluvial aquifer and have a significant influence on groundwater at the BAP, which is discussed further in later sections. 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. A wetland area exists to the west of the BAP, which contains naturally occurring ponds and wetland vegetation.

Five undisturbed Shelby tube samples of the separation layer were collected from a barge within the BAP in 2020 for laboratory grain size distribution and permeameter testing (ERM 2021a). 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 values (K values) ranging from 1.44E-08 cm/sec to 1.18E-07 cm/sec. Thus, even the samples with the highest amount of sand yielded very low K values. These data are direct evidence that the separation layer beneath the BAP is not transmissive enough for significant quantities of water to flow from the BAP through the separation layer to the uppermost aquifer, and the separation layer acts as an aquitard to downward migration of water stored in the BAP.

1.5 Monitoring Well Installation

Sixteen monitoring wells were proposed and successfully installed in key areas around the BAP in 2022 (Figure 1-3). Well construction details and boring logs are provided in the 2022 BAP Annual Groundwater Monitoring and Corrective Action Report.

- Alluvial Aquifer – Nine wells 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).
- Separation Layer – Two wells installed in the primarily fine-grained silt and clay layer (BAC-15 and BAC-20).
- Bedrock – Four wells installed in shallow bedrock (BAC-09, BAC-11, BAC-13, and BAC-19).
- Alluvial Aquifer and Separation Layer – One well installed to span the alluvial aquifer and the separation layer (BAC-17). 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. Well BAC-17 will be used going forward to replace B-0904 in alternate source evaluations.

1.6 2022 H2 Groundwater Sampling Event

The second semiannual groundwater sampling event of 2022 was performed in October 2022. The data from this sampling event were compared to the upper and lower prediction limits, and SSIs for Appendix III analytes were identified. Table 1-1 summarizes occurrences of SSIs from the October 2022 sampling event.

Table 1-1: SSIs in Groundwater beneath the BAP

Analyte	Monitoring Well			
	BAC-02	BAC-03	BAC-04	BAC-05
Boron	X	X	X	X
Calcium	X	φ	φ	φ
Chloride	X	X	X	X
Fluoride	φ	φ	φ	φ
pH	X	X	X	X
Sulfate	X	X	X	X
Total Dissolved Solids	X	φ	φ	φ

Notes: φ = No SSI; X = SSI; BAP = Bottom Ash Pond; SSI = statistically significant increase. Results are for the downgradient wells sampled in September and October 2022.

This ASD Report identifies the regional discharge of bedrock groundwater as the source of calcium, chloride, and total dissolved solids (TDS), and the Kyger Creek NFAP is identified as the source of boron, sulfate, and low pH. Previous ASDs have identified bedrock as the alternate source of sulfate; however, the alternate source identified for sulfate was changed in this report due to new information obtained from the *Ohio Valley Electric Corporation Kyger Creek Station – Closed North Fly Ash Pond Groundwater Semiannual Data Analysis* (OVEC 2022). 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

The first ASD Report for the BAP (ERM 2018b) identified and described alternate sources for the Appendix III constituents that are observed at the BAP. The upgradient alternate sources include:

- Regional Brine – Naturally occurring brine originating from bedrock (i.e., Cow Run Sandstone) as observed in shallow groundwater in and around Gavin. This is the alternate source of calcium, chloride, and TDS.
- Kyger Creek Generating Station Closed North Fly Ash Pond – CCR-impacted groundwater migrating from the Closed North Fly Ash Pond. This is 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 to have elevated levels of chloride, fluoride, and other trace elements, exists in the subsurface in the Ohio River Valley (Stout et al. 1932; ORSANCO 1984; ODNR 1995). The discharge of brines is seen at a regional scale, with shallow wells near to 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 Fly Ash Reservoir that are consistently greater than 10,000 $\mu\text{S}/\text{cm}$ and reach as high as 39,000 $\mu\text{S}/\text{cm}$. A brine signature was also observed at new BAP monitoring well BAC-11 during sampling in October 2022. This signature included a specific conductivity field measurement of 59,168 $\mu\text{S}/\text{cm}$, TDS of 41,000 mg/L, and chloride levels of 27,000 mg/L. For reference, the approximate specific conductivity of seawater is 50,000 $\mu\text{S}/\text{cm}$ (USGS 2019).

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

2.2 Kyger Creek Generating Station

The Kyger Creek Generating Station is located along the Ohio River in Gallia County, south of the Plant (Figure 2-1). The Kyger Creek Fly Ash Pond complex consists of the 110-acre NFAP (closed) and 60-acre South Fly Ash Pond (SFAP). The construction history and groundwater monitoring results of these ponds are summarized in the first ASD Report (ERM 2018b). 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). Semi-annual groundwater sampling for PTI compliance at the NFAP has been performed since October 1997 and currently includes sampling of six monitoring wells (OEPA 1997). Per the PTI, samples are collected semiannually for:

- Groundwater Contamination Indicator Parameters – alkalinity, specific conductivity, sulfate, and total dissolved solids
- 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 Kyger Creek NFAP is located less than 300 feet from the BAP and the units share an approximately 2,000-foot-long southern border (Figure 2-1). Network wells BAC-06 and BAC-07 were installed in 2020 along the top of the south berm along this boundary and screened within the alluvial aquifer. New monitoring wells were installed in 2022 along the south berm between the BAP and the Kyger Creek NFAP, including alluvial aquifer wells BAC-16, BAC-18, separation layer wells BAC-15 and BAC-20, bedrock well BAC-19, and alluvial aquifer and separation layer well BAC-17. BAC-17 was installed with the intent to replicate results from B-0904, which is installed at the outer base of the berm on Kyger Creek property, is also screened within the alluvial aquifer and separation layer and is no longer accessible for monitoring.

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 1997; 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 berm and as cover material (OEPA 1997).

2.3 Upgradient Alluvial Aquifer Groundwater

Upgradient groundwater quality from west of the BAP is observed at the upgradient wells MW-1, MW-6, and BAC-01 and the new 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 groundwater elevations west of the BAP than in wells north or east of the BAP. Potentiometric surface maps are 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 from Kyger Creek, groundwater discharging 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 an area of 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 due to effect of bank storage that occurs during periods of high river stage (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, near the Ohio River (ORSANCO 1984). Precipitation that falls in areas of higher topographic elevation northwest of the Plant infiltrates the land surface and recharges the underlying aquifers. Groundwater within these aquifer moves from areas of higher elevation to areas of lower elevation, driven by the gravitational force on groundwater (differences in elevation head) within the bedrock.

Groundwater flow within bedrock is primarily driven by 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 does 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 and direction at a particular location. 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 (USGS, 1981). 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. Such is the case of the Gavin plant BAP, where the Ohio River acts as a major regional discharge boundary, driving shallow brines towards the surface.

At the BAP, groundwater discharges upward from fractured bedrock into the overlying alluvial aquifer. Calculated vertical gradients for three gauging events are provided in Figures 3-1, 3-2, and 3-3. The figures demonstrate consistent upward gradients in each of the four monitoring well couplet pairs around the BAP, under both pumping and non-pumping conditions. The results indicate that the upward gradient closest to the river (east berm) is the steepest under both pumping and non-pumping conditions. The upward gradient at the north berm was also relatively steep under pumping conditions but was significantly less steep under non-pumping conditions due to less drawdown in the alluvial aquifer. Both the south berm and west berm had relatively shallow upward gradients, and the difference between pumping and non-pumping observations was minimal.

The hydraulic conductivity at bedrock well BAC-11, where observations of significant fractures were made during drilling and geophysical logging, was measured to be $4.17 \text{ E-}02 \text{ cm/sec}$. This high hydraulic conductivity value (K value) in BAC-11 is similar to K values measured for the alluvial aquifer. Conversely, substantially lower K values were measured at bedrock wells BAC-09 ($1.23 \text{ E-}06 \text{ cm/sec}$) and BAC-19 ($2.65 \text{ E-}08 \text{ cm/sec}$), where fewer instances of fracturing were observed. This stark difference in hydraulic conductivity values between wells screened within the same bedrock unit exemplifies the effect of fracture network connectivity on hydraulic conductivity and explains why some portions of the alluvial aquifer can be impacted by regional discharge (i.e., near BAC-02) while other areas may not be significantly influenced (i.e., near BAC-01 and BAC-18).

As water is removed from the alluvial aquifer via pumping, it reduces the pressure that water within the aquifer exerts on the surrounding system. Under non-pumping conditions, the pressure head in the alluvial aquifer counteracts the pressure head in bedrock, decreasing upward vertical gradients and limiting upward migration of groundwater from bedrock. This relationship is more pronounced at couplet pairs BAC-02/BAC-11 and BAC-04/BAC-13 to the north and east, and less pronounced at couplet pairs BAC-01/BAC-09 and BAC-18/BAC-19 on the western and southern sides of the BAP where the effects of pumping are less noticeable due to their further distance from the water supply wells. When the water supply wells are actively pumping, the pressure head in the alluvial aquifer is diminished, allowing for a stronger upward migration of groundwater from bedrock to the alluvial aquifer, as observed at couplet BAC-02/BAC-11 under pumping conditions. A similar observation was made in wells BAC-04/BAC-13 along the eastern portion of the BAP, despite a smaller magnitude change in the resulting vertical gradient.

In summary, the fractured sedimentary bedrock and alluvial aquifers are hydraulically connected, and groundwater is discharging from bedrock upward into the overlying alluvial aquifer (uppermost aquifer). This hydraulic connection varies spatially due to the heterogeneity and anisotropy of the fracture system, though it is evident that a stronger hydraulic connection exists in the northern and eastern areas of the BAP, closer to the Ohio River. The bedrock units beneath the BAP include the Round Knob and deeper Cow Run sandstone, which is known to contain regional brine (as described in Section 2.1), and upward vertical migration of water from the Cow Run sandstone to the alluvial aquifer beneath the BAP discharges brine to the alluvial aquifer.

3.2 Hydraulic Connection to Kyger Creek Generating Station

The installation of new monitoring wells around the BAP in 2022 has provided a higher resolution data set, which contributed to an updated understanding of groundwater flow conditions local to the BAP and along the northern portion of the Kyger Creek NFAP. Although the prevailing regional groundwater flow direction is toward the Ohio River, groundwater flow directions around the BAP are heavily influenced by pumping activity of water supply wells FW-15 and FW-1101 to the north of the BAP. Local groundwater flow directions change from a primarily eastward flow toward the Ohio River during non-pumping conditions (Figure 3-4) to a stronger northward flow direction toward the water supply wells during pumping conditions (Figure 3-5). Groundwater elevations in alluvial aquifer wells BAC-16 and BAC-18 along the southern boundary of the BAP near the NFAP were observed to draw down by up to 0.50 feet during pumping.

The following key points are associated with the interpreted groundwater flow paths:

- Due to the prevailing east-northeast regional 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.
- Monitoring wells on the south side of the BAP are located downgradient of the Kyger Creek NFAP and upgradient of the BAP.
- 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.
- During pumping conditions, the Kyger Creek NFAP is hydraulically upgradient of the monitoring wells along the southern, eastern, and northeastern areas of the BAP.

It is evident that the Kyger Creek NFAP is hydraulically connected to the downgradient BAP monitoring wells (ERM 2018b; ERM 2021a) based on the prevalent northeastern direction of groundwater flow and the presence of the same alluvial aquifer beneath both the Kyger Creek NFAP and the Gavin BAP.

Pumping activity of water supply wells FW-15 and FW-1101 creates an anthropogenic 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 further 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 Gavin BAP.

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

Groundwater 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, and TDS in BAP downgradient groundwater. Although not sources of these constituents, upgradient alluvial groundwater and the Ohio River also affect 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 Gavin Plant and locally in bedrock under the BAP. Newly installed monitoring wells BAC-09, BAC-11, BAC-13, and BAC-19 were installed in the Cow Run Sandstone at the BAP and have chemical signatures indicating the presence of brine. The ranges for calcium, chloride, and TDS in bedrock groundwater and downgradient alluvial groundwater (BAC-02, BAC-03, BAC-04 and BAC-05) at the BAP is 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	78-2,900	80-130
Chloride	mg/L	780-27,000	26-69
TDS	mg/L	930-41,000	460-940

Notes: BAP = Bottom Ash Pond; mg/L = milligrams per liter; TDS = total dissolved solids. Results from samples collected in September and October 2022.

Cross section view figures for calcium (Figure 4-1a and 4-1b), chloride (Figure 4-2a and 4-2b), and TDS (Figure 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 calcium, chloride and TDS are generally one to two orders of magnitude higher in bedrock than in the overlying alluvial aquifer, consistent with a regional brine signature. Considering the upward hydraulic gradients observed at the bedrock/alluvium couplets and the higher concentrations of calcium, chloride and TDS in the bedrock groundwater, the SSIs in the alluvial aquifer 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 under pumping conditions. Boron concentrations and the approximated extent of boron impacts along the two primary flow directions (northeast and northward) from the Kyger Creek NFAP are also presented in cross section views (Figures 4-5a and 4-5b), as summarized by the following points:

- Monitoring well B-0904 is situated on Kyger Creek property downgradient of the Kyger Creek NFAP and upgradient of the BAP. Monitoring well B-0904 has historically had a higher boron concentration than any BAP well.

- BAC-17 was installed in 2022 as a replicant monitoring point for B-0904, which is located on Kyger Creek property and inaccessible for sampling. BAC-17 is located downgradient of the Kyger Creek NFAP, 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 4.2 mg/L in October 2022, a higher concentration than was observed in any downgradient well at the BAP. This concentration is consistent with the range historically observed at B-0904 of 3.7-4.2 mg/L boron.
- The concentration of boron in groundwater downgradient of the BAP ranged from 1.9 milligrams per liter (mg/L) to 2.8 mg/L in the October 2022 samples. Contrarily, the concentration of boron in surface water contained in the BAP was 0.44 mg/L in October 2022, and at upgradient wells BAC-01, MW-1, and MW-6 boron concentrations were less than 0.1 mg/L.
- 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 slightly 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 combined with the mixing of water discharged from the underlying bedrock aquifer into the alluvial aquifer (Figures 4-5a and 4-5b).

OEPA correspondence concluded that groundwater below the Kyger Creek 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). The Kyger Creek SFAP data also 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 and September 2021 at monitoring wells downgradient of the Kyger Creek SFAP (AGES 2022). The highest concentrations were observed on the northeastern and southeastern boundaries of the 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 2021 Results

Analyte	Units	Maximum	Average
Boron	mg/L	19	7.4

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

The average concentration of boron (7.4 mg/L) in the Kyger Creek SFAP for 2021 is substantially higher than the maximum concentration of boron measured in groundwater beneath the BAP (2.9 mg/L) in October 2022. 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 Kyger Creek Generating Station.

4.2.2 Sulfate

Figure 4-6 depicts the distribution of sulfate concentrations across the BAP monitoring well network and includes results from four Kyger Creek NFAP monitoring wells screened in the alluvial aquifer. 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 and around the BAP.

According to the December 2022 Kyger Creek Generating Station *Closed North Fly Ash Pond Groundwater Semiannual Data Analysis* (OVEC 2022), sulfate is present in wells surrounding the NFAP at concentrations exceeding those observed in groundwater around the BAP. Sulfate was present in monitoring well KC-9507 (located to the southeast of NFAP) at 777 mg/L and monitoring well KC-9502 (located to the northeast of the NFAP adjacent to the Gavin property boundary) at 355 mg/L.

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). Similar pH results of 5.74 and 5.63 were measured at B-0904 emulation well BAC-17 and Kyger Creek well KC-5902 (located at the northeast corner of Kyger Creek property), in October 2022, respectively (OVEC 2022; 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 4-33: Groundwater and Surface Water pH Values

Location	pH (SU)
Kyger Creek NFAP: Upgradient BAP Groundwater (KC-9502; 25 October 2022)	5.63
Kyger Creek NFAP: Upgradient BAP Groundwater (B-0904; March 2020)	5.26
Kyger Creek NFAP: Upgradient BAP Groundwater (BAC-17; October 2022)	5.74
BAP: Upgradient Groundwater – Northwest (BAC-01, MW-1, and MW-6; October 2022)	6.79-7.32
BAP: Upgradient Groundwater – Southwest (BAC-06 and BAC-07; October 2022)	6.29-6.56
BAP: Downgradient Groundwater (BAC-02 through BAC-05; October 2022)	6.14-6.59
BAP: Bedrock Groundwater (BAC-09, BAC-11, BAC-13, and BAC-19; October 2022)	7.08-7.45
Ohio River (October 2022)	6.89

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

The October 2022 results remain consistent with previous ASD Reports for the BAP (ERM 2018b, 2018c, 2019a, 2019b, 2020a, 2020b, 2021b, 2021c, 2022a, 2022b). As shown in Figure 4-7, the distribution of pH and the northward 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 similarly impacted by acidic groundwater migrating from Kyger Creek, as evidenced by their higher pH, because the well screens are deeper than the well screen at B-0904 and BAC-17, and are more influenced 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 described in Section 3.1 and illustrated on Figures 3-1 to 3-3, groundwater within the shallow bedrock discharges to the alluvial aquifer beneath the BAP due to steep upward gradients driven by groundwater pumping and the Ohio River. Upward vertical gradients were observed in all four monitoring wells installed in the bedrock surrounding the BAP; however, the gradients were the steepest close to the Ohio River and close to the Gavin water supply wells.

Concentrations of calcium, chloride, and TDS in bedrock groundwater at the BAP as observed at BAC-11 are significantly higher than those observed in downgradient monitoring wells (Table 5-1). While the relative concentrations were lower at BAC-13 on the eastern side of the BAP, this may be due to lower connectivity and conductivity of the fracture sets. The measured hydraulic conductivity at BAC-11 was 4.17E-02 cm/sec which is relatively high for bedrock and suggests that this well has a high degree of connectivity. Therefore, the relative concentrations observed in the downgradient monitoring wells are consistent with mixing of bedrock groundwater and groundwater from the alluvial aquifer.

Table 5-1: Ratio of Bedrock Groundwater to Downgradient BAP Groundwater for Regional Brine

Analyte	Units	Brine Concentration Beneath BAP (As measured at BAC-11)	Maximum Downgradient Well at BAP (As measured at BAC-02)	Bedrock to Alluvial Aquifer Ratio
Calcium	mg/L	2,900	130	22:1
Chloride	mg/L	27,000	69	391:1
TDS	mg/L	41,000	940	44:1

Notes: BAP = Bottom Ash Pond; mg/L = milligrams per liter; TDS = total dissolved solids.
 Results from sample collected in October 2022.

5.2 Kyger Creek Generating Station

As described in Section 3.2 and illustrated on Figure 3-5, under pumping conditions groundwater in the alluvial aquifer flows northeast from Kyger Creek across the eastern side of the BAP towards the water supply wells. Figures 4-4 and 4-6 show how boron and sulfate are transported from the alternate source to the downgradient monitoring wells. In addition, under non-pumping conditions (Figure 3-4), groundwater reverts to the eastward flow and dissolved constituents migrate towards the Ohio River.

5.2.1 Boron and Sulfate

The maximum boron concentration measured in onsite groundwater monitoring wells at the BAP was 4.2 mg/L at BAC-17. The average boron concentration observed at the adjacent SFAP in 2021 was 7.4 mg/L, with a maximum boron concentration reported to be 19 mg/L. The maximum sulfate concentration measured in upgradient onsite groundwater monitoring wells at the BAP was 220 mg/L at BAC-22 in fall 2022, while the maximum sulfate concentrations observed at the NFAP in fall 2022 were 355 mg/L in well KC-9502 located in the northeast corner of the NFAP and 777 mg/L in well KC-9507 located in the southeast corner of the NFAP. Both Kyger Creek sulfate concentrations exceed all concentrations observed in groundwater around the BAP. The ratio of the maximum Kyger Creek concentrations to the maximum downgradient BAP well is provided in Table 5-2. These ratios, and the observed flow directions

under pumping conditions demonstrate the linkage between boron and sulfate observed in downgradient BAP wells and Kyger Creek, the alternate source.

Table 5-2: Ratio of Bedrock Groundwater to Downgradient BAP Groundwater for Boron and Sulfate

Analyte	Units	Maximum Concentration			Ratio: Onsite to Downgradient BAP	Ratio: Kyger Creek to Downgradient BAP
		Onsite (BAC-17)	Kyger Creek NFAP/SFAP (2021/2022)	Downgradient BAP Well (BAC-02/BAC-05)		
Boron	mg/L	4.2	19	2.7	1.6	7:1
Sulfate	mg/L	240	777	340	0.7	2:1

Notes: BAP = Bottom Ash Pond; mg/L = milligrams per liter.
 Results from Gavin samples collected in October 2022 and Kyger Creek samples collected in 2021 and 2022.

5.2.2 pH

Table 5-3 summarizes the measured range of pH values measured at Kyger Creek, 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 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 pH. Groundwater migrating from Kyger Creek NFAP has an acidic pH, as confirmed by the October 2022 pH measurement of 5.63 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 (Appendix A) and was identified by OEPA in 1998 (Appendix B). As discussed in Section 3, groundwater migrating northward from Kyger Creek mixes with groundwater migrating from the west and can mix with Ohio River water during flooding events. This mixing of neutral and acid waters 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 Kyger Creek, the alternate source.

Table 5-3: Ratio of Bedrock Groundwater to 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-17)	Kyger Creek NFAP (KC-9502)				
pH	SU	5.74	5.63	6.7 - 7.3	7.08 – 7.47	6.89	6.00 – 6.59

Notes: BAP = Bottom Ash Pond; SU = Standard pH Units.
 Results from Gavin samples collected in October 2022 and Kyger Creek samples collected in October 2022.

6. RELEASES FROM THE BAP ARE NOT SUPPORTED AS THE SOURCES

6.1 Evaluation of Groundwater Mounding at the BAP

Programmable electronic data loggers equipped with a pressure-sensitive water level transducer were installed at four alluvial aquifer monitoring well transects (eight monitoring wells) at the southern, western, northern, and eastern boundaries of the BAP to evaluate the potential for groundwater mounding. These monitoring well couplets were chosen based on their proximity to one another, and to the BAP. Each well couplet included a well on top of the berm directly adjacent to the BAP, and the other at the exterior base of the berm, 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 groundwater elevations at the well located at the top of the berm (closer to the BAP) compared to its counterpart at the base of the berm (further from the BAP). The four well couplet pairs included:

- BAC-01 (base of berm) and BAC-08 (top of berm), installed at the western boundary of the BAP
- BAC-10 (base of berm) and BAC-02 (top of berm), installed at the northern boundary of the BAP
- BAC-12 (base of berm) and BAC-04 (top of berm), installed at the eastern boundary of the BAP
- BAC-16 (base of berm) and BAC-18 (top of berm), installed at the southern boundary of the BAP

Groundwater elevations were compared over time for each well couplet to evaluate whether mounding was occurring. As a measure of data quality, transducer data were reviewed against corresponding manual water level measurements to ensure accuracy and consistency between the two datasets. In addition, a stilling well was installed in the Ohio River by permanently securing a steel pipe to a pier located in the river adjacent to the BAP. The top of the stilling well was surveyed which allowed manually and electronically recorded data to be converted to river stage elevation data, which was also reviewed against manual and transducer-based groundwater elevations. Transducers were deployed at the eight couplet wells between August and December, with an intermittent period where data was not collected to allow for data download and other field activities. During the transducer deployment periods, water supply wells FW-15 and FW-1101 (located north of the BAP) were periodically cycled on and off to evaluate groundwater elevations under both pumping and non-pumping conditions.

As shown in Figure 6-1, at the western boundary of the BAP, groundwater elevations in BAC-01 were consistently higher than at couplet well BAC-08, indicating that mounding is not occurring at the western boundary of the BAP over the period of observation. Groundwater elevations appear to be influenced by trends occurring over several weeks (e.g., groundwater elevations generally decreased during a decline in river stage through September). Interestingly, increased groundwater elevations were not observed at BAC-01 or BAC-08 during a peak in river elevation in early November. In addition, there was no significant response related to the operation of the water supply wells.

As shown in Figure 6-2, at the northern boundary of the BAP, groundwater elevations were strongly affected by operation of water supply wells FW-15 and FW-1101, which are located directly north of BAC-02 and BAC-10. Comparison of groundwater elevation data from the pumping and non-pumping periods reveal a direct drawdown effect on these two wells, and especially on the groundwater elevations at BAC-10 due to its closer proximity to the water supply wells. As such, groundwater elevations at BAC-02 were consistently higher than at BAC-10 under pumping conditions, as would be expected due to the drawdown effect of the water supply wells on BAC-10. When pumping was not occurring, groundwater elevations were generally very similar at both wells and thus no evidence of mounding was observed. Similar to the BAC-01/BAC-08 couplet, wells BAC-10 and BAC-02 appear to be influenced by longer term trends (i.e., weeks in duration) in the river elevation, and less so by short-term (i.e., days) fluctuations.

As shown in Figure 6-3, at the eastern boundary of the BAP, groundwater elevations are moderately affected by operation of water supply wells FW-15 and FW-1101 north of the BAP. Groundwater elevations were either the same, or higher at BAC-12 than at BAC-04, and thus no evidence of groundwater mounding was observed at this couplet during any of the monitoring periods. Water levels in wells BAC-12 and BAC-04 are highly correlated with the river elevations over both longer-term and short-term trends (BAC-12 and BAC-04 both responded immediately to the increase in river stage in early November).

As shown in Figure 6-4, at the southern boundary of the BAP, groundwater elevations at BAC-16 (located at the base of the berm) were generally higher than groundwater elevations at BAC-18 through the majority of monitoring. For a duration of approximately one week in mid-September, groundwater elevations were observed to be higher in BAC-18 than in BAC-16. However, the short duration of this change in groundwater elevations and the relatively small difference in groundwater elevations is insufficient to indicate mounding. No significant response related to the operation of the water supply wells was observed. This couplet shows a strong correlation with longer-term trends in the river stage and showed an immediate response to the early November increase in river stage, although it was not as significant as the response at BAC-12 and BAC-04.

These transducer data sets from August through December 2022 are not indicative of mounding at the BAP. Additional groundwater elevation data are being collected at the BAP, and a more comprehensive evaluation of the potential for groundwater mounding will be completed when long-term groundwater elevation trends become available.

6.2 Observed Boron Concentrations

Surface water samples at the BAP and Reclaim Pond have been collected during each groundwater sampling event since 2016. Boron has consistently been 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 summarizes the boron concentrations measured in October 2022. Based on this data, the boron concentration in the BAP surface water is 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 a boron concentration of 4.2 mg/L in October 2022, making the 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 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 water.

Table 6-1: Bottom Ash Pond Boron Results

Analyte	Units	Bottom Ash Pond ^a	Reclaim Pond ^a	Downgradient BAP Wells (Average) ^a
Boron	mg/L	0.44	0.46	2.0

^a Sample results from October 2022

6.3 Chemical Fingerprints

The geochemical fingerprints of surface water from the BAP, from upgradient groundwater west of the BAP, from groundwater flowing from the Kyger Creek NFAP, and from 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 high water solubility, limited redox chemistry, and presence in groundwater around the BAP. Boron-chloride and boron-potassium plots are shown in Figure 6-5 and Figure 6-6, respectively.

The samples presented on the concentration plots were collected from 2012 through 2022. The primary observations based on the concentration plots (Figures 6-5 and 6-6) 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 (i.e., 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 captured by 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, though potassium concentrations are slightly higher at BAC-17. 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 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 groundwater due to the influence of bedrock groundwater. Newly installed downgradient monitoring wells BAC-12 and BAC-14 have chemical fingerprints consistent with other BAP downgradient wells. Groundwater at the newly installed monitoring well BAC-10 has slightly lower concentrations of boron, consistent with the attenuation of boron as groundwater flows away from the Kyger Creek NFAP.
- Groundwater from monitoring wells BAC-06 and BAC-07 show a distinct signature with similar concentrations of chloride and potassium to Kyger Creek 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 shallower groundwater. Newly installed monitoring wells BAC-16 and BAC-18 have chemical fingerprints consistent with those at BAC-06 and BAC-07.
- Groundwater from newly installed bedrock wells BAC-09, BAC-11, BAC-13, and BAC-19 have a unique signature with moderate concentrations of boron (comparable to those observed at some upgradient locations) and very high chloride. Chloride concentrations in bedrock are up to three orders of magnitude higher in bedrock groundwater than in alluvial background groundwater.
- Groundwater from newly installed upgradient monitoring wells located farther to west (BAC-21 and BAC-22) or to the northwest of the BAP (BAC-23) have a signature distinct from upgradient groundwater collected from the historical locations. Concentrations of boron, chloride, and potassium are slightly higher in these locations than in the historical upgradient wells.

- Groundwater from newly installed 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 low hydraulic conductivity.

Based on the data summarized above and the chemical fingerprints of the groundwater at issue, the BAP is not deemed to be 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

This ASD Report provides background groundwater quality data for the fractured sedimentary bedrock aquifers found within and beyond the boundary of the Plant. Flow patterns of regional groundwater through fractured bedrock near the BAP were established after the last deglaciation, which occurred approximately 14,000 years ago (Hansen 2017). Assuming a conservatively high effective porosity of 1 percent results in an estimated groundwater velocity of 78 feet per year for the Morgantown Sandstone and 45 feet per year for the Cow Run Sandstone. These rates would allow ample time for groundwater to migrate from upgradient regional background sources onto Plant property since the end of the last glaciation. The data supporting these conclusions are historically consistent with hydrogeologic conditions and findings of the BAP monitoring program.

Enhancement of transmissivity in 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). The discharge of brines is seen at a regional scale along the Ohio River with shallow wells near to the Ohio River observing saltwater impacts close to the Ohio River; 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 are observed along the BAP and locations with strong upward gradients have high hydraulic conductivities, which supports the conclusion that on-site, bedrock and alluvial aquifers are hydraulically connected with overall flow being upward. The lines of evidence continue as bedrock wells around the BAP report total dissolved concentrations on the magnitude of the reported brine-freshwater mixing zone regionally confirming the presence of regional brine impacts on site (Yager et al. 2017). Therefore, the regional and site-scale data are in strong agreement, and lead to the conclusion that regional brines are discharging under the BAP and mixing with alluvial groundwater underneath the BAP.

7.2 Kyger Creek Generating Station

The Kyger Creek NFAP was constructed in 1955 with its base on native soil, without an engineered liner system to contain leachate. The unit was used to manage fly ash until it was drained and closed from 1998 to 2000, although dewatered ash is still present within the Kyger Creek NFAP (AEP 1994). The NFAP was not capped with a low permeability barrier at the land surface; therefore, there is no barrier to prevent the infiltration of precipitation, the migration of water through CCR materials in the subsurface and the subsequent recharge of 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 1997).

Groundwater in the alluvial aquifer flows under the Kyger Creek NFAP in a northeasterly direction toward and under the Gavin BAP. Given the six decades that this unit has contained fly ash and the alluvial aquifer groundwater velocity estimates of 140 to 290 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 and the distribution 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 is 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 is also representative of Kyger Creek NFAP groundwater quality (Section 4).
- The chemical fingerprinting evidence suggests groundwater from Kyger Creek 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).

In addition, a comparison of the materials managed provides evidence that the BAP is not the source of boron – 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 samples from monitoring wells downgradient of the BAP collected in October 2022. Review of data for quality assurance and statistical comparison was complete on 8 December 2022. In response to the SSIs, this ASD Report was prepared within the required 90--day period in accordance with 40 CFR § 257.94(e)(2).

All SSIs in the downgradient BAP monitoring wells have been determined to result from alternate sources: 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 2022. 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
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	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.

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: 1/31/23

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FIGURES

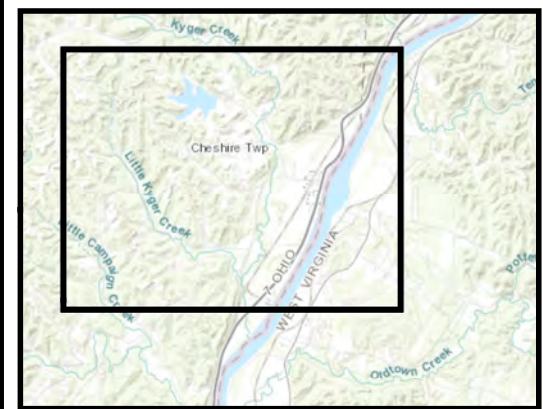
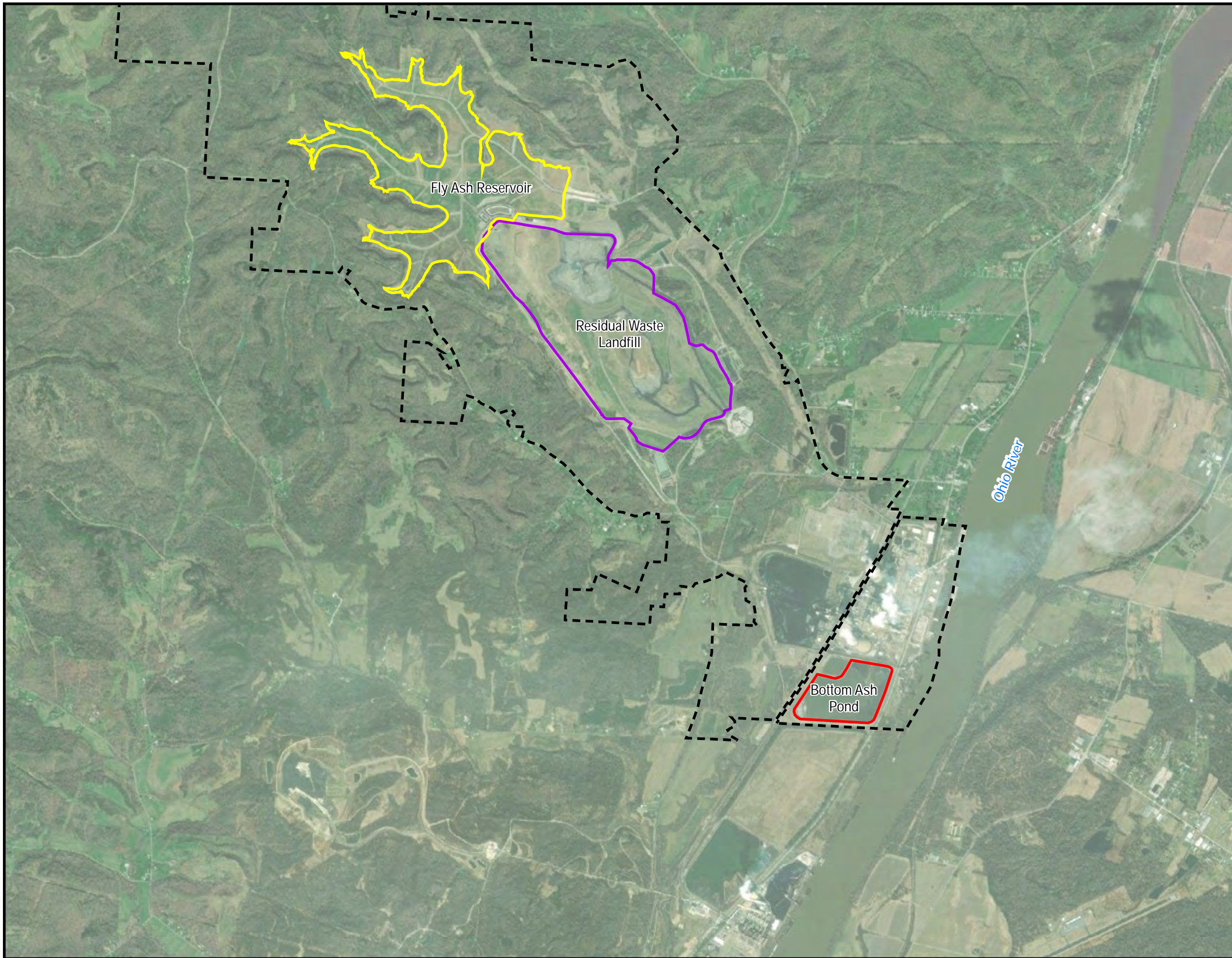


General James M. Gavin Plant

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



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Legend

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

NOTES:

1. Aerial Imagery: ESRI World Imagery
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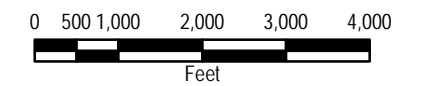


Figure 1-2: Bottom Ash Pond Location
Gavin Generating Station
Cheshire, Ohio



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Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Upgradient Monitoring Well (Not in Federal Program)
- Water Supply Well
- Piezometer
- BAC Alluvial Aquifer Well
- Alluvial Aquifer/Separation Layer Well
- Separation Layer Well
- Bedrock Well
- Approximate location of Bottom Ash Pond boundary
- Gavin Property Boundary

NOTES:

1. Aerial Imagery: ESRI World Imagery
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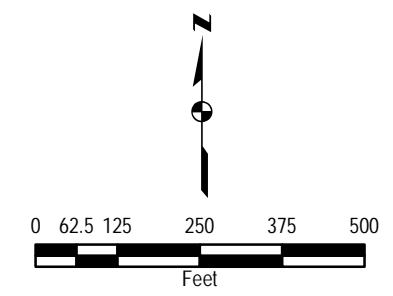


Figure 1-3: Bottom Ash Pond Monitoring Well Network
Gavin Generating Station
Cheshire, Ohio



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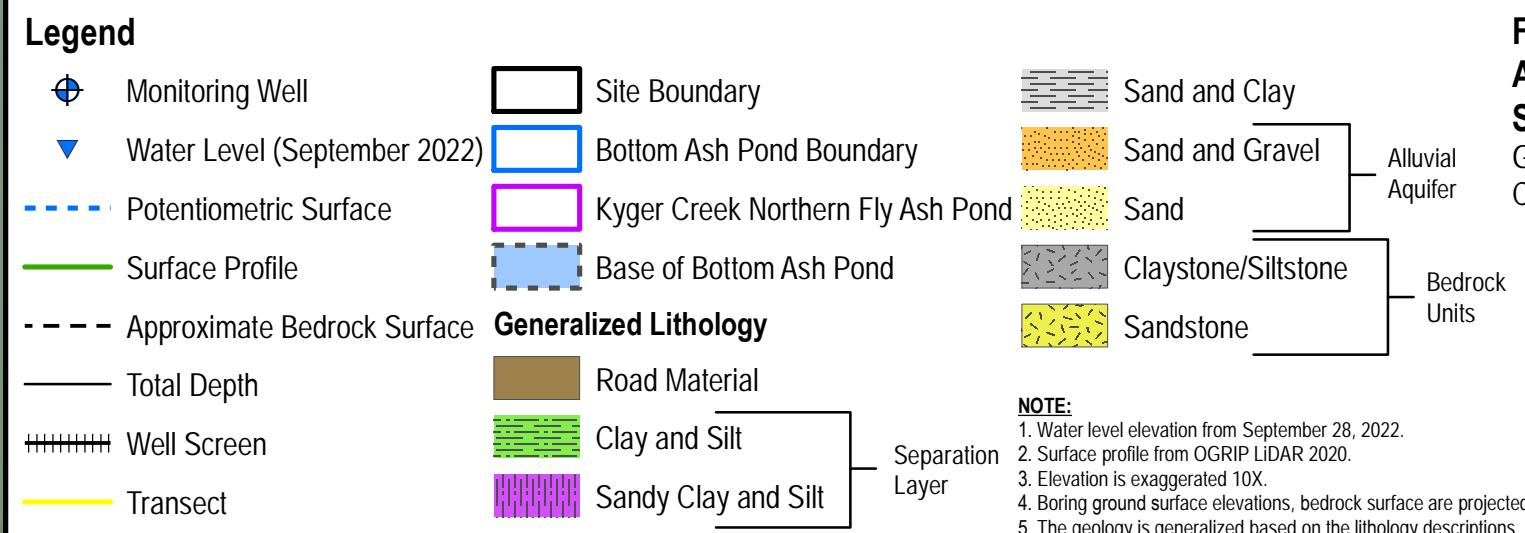
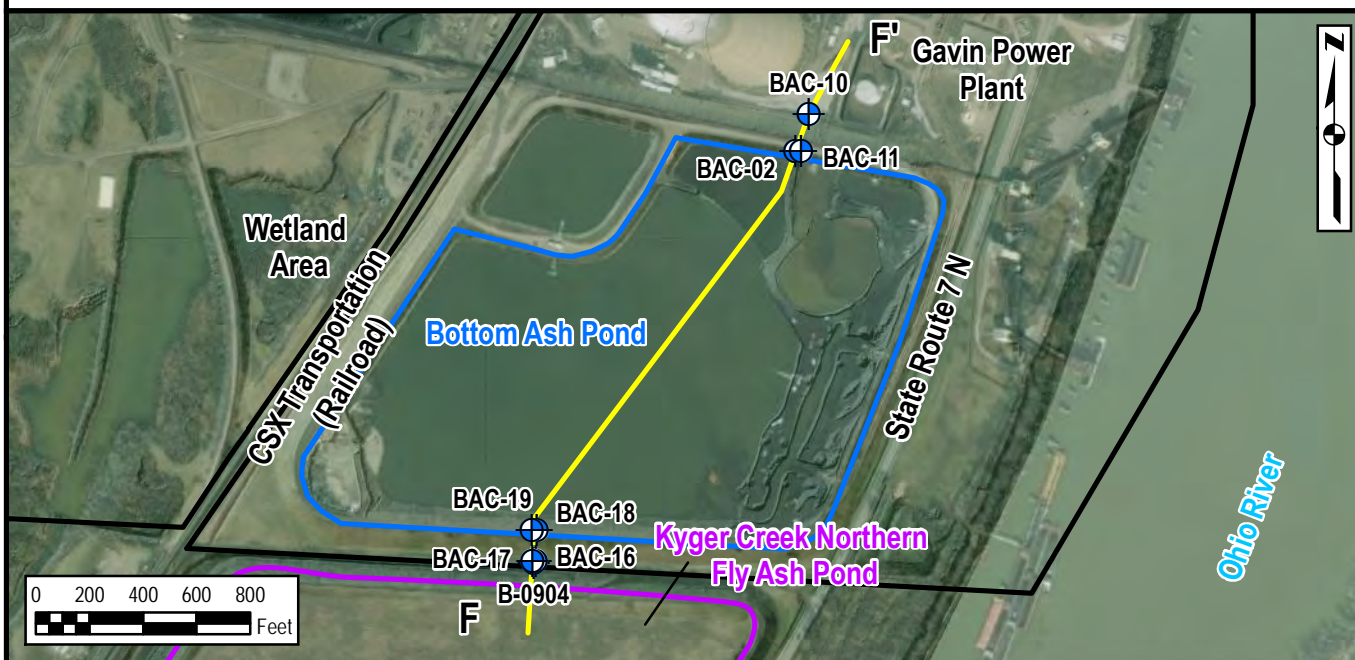
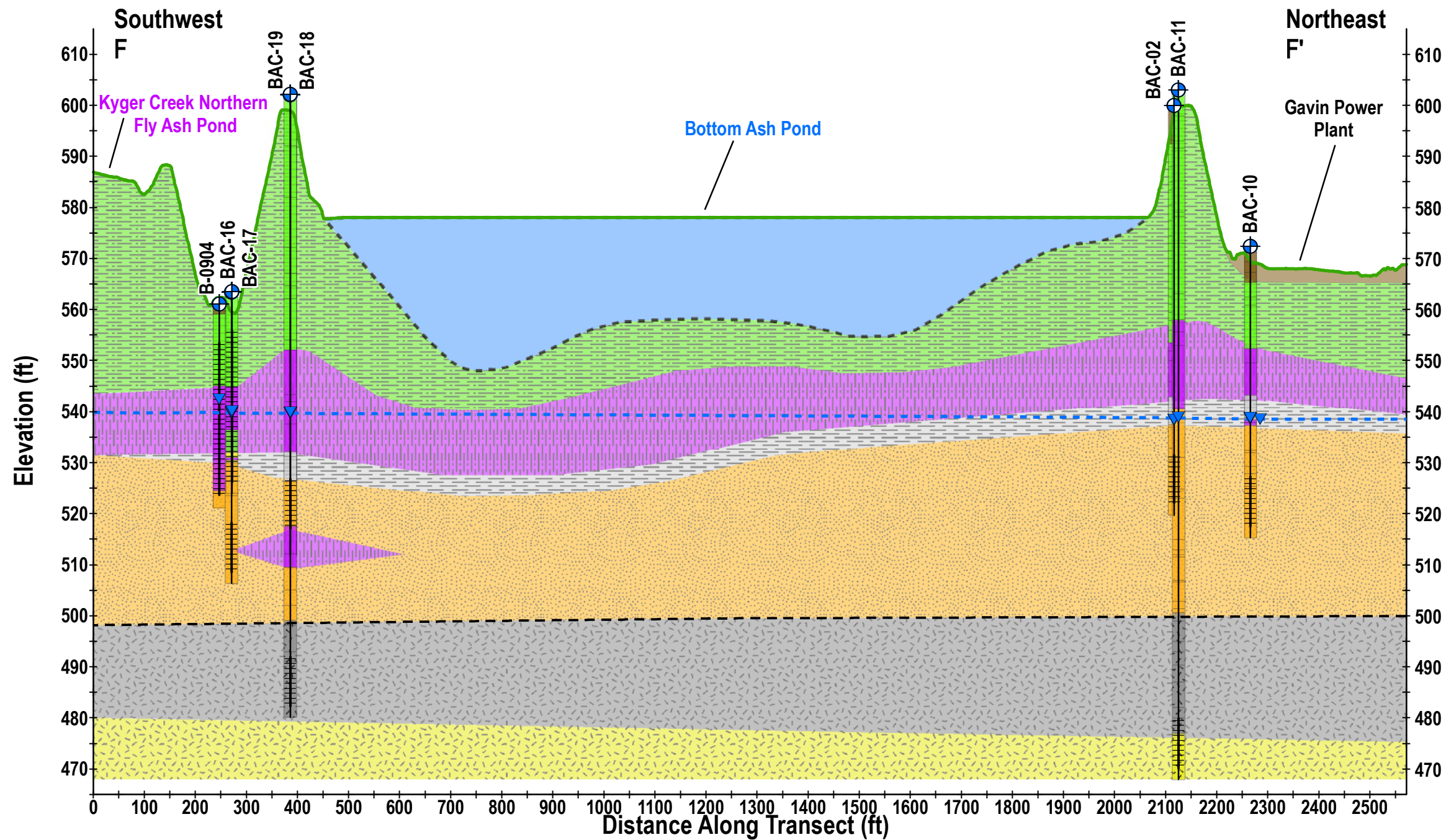
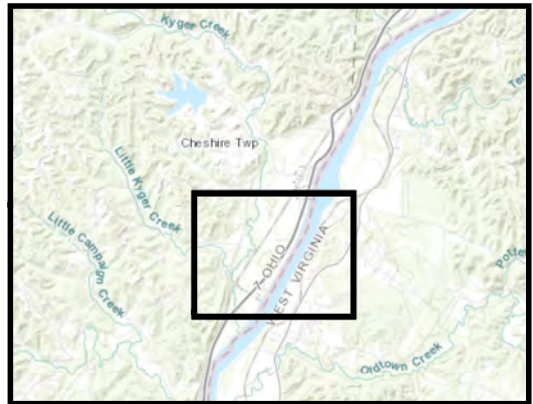






Figure 1-4: Bottom Ash Pond Cross Section
Gavin Power, LLC
Cheshire, Ohio



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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: ESRI World Imagery
Reproduced under license in ArcGIS 10.8

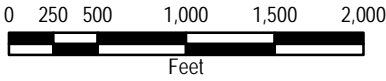


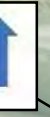
Figure 2-1: Kyger Creek Generating Station Location
Gavin Generating Station
Cheshire, Ohio



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Head Difference: 2.44 ft
 Vertical Gradient = 0.044 ft/ft
 Flow Direction: **Upward**



Head Difference: 0.66 ft
 Vertical Gradient = 0.014 ft/ft
 Flow Direction: **Upward**



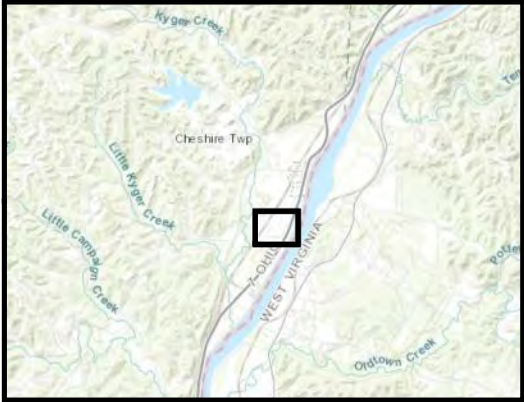
Head Difference: 3.20 ft
 Vertical Gradient = 0.078 ft/ft
 Flow Direction: **Upward**



Head Difference: 0.53 ft
 Vertical Gradient = 0.015 ft/ft
 Flow Direction: **Upward**



Vertical Gradient	
	0.0 - 0.02 ft/ft
	0.02 - 0.04 ft/ft
	0.04 - 0.06 ft/ft
	0.06 - 0.08 ft/ft
	0.08 - 0.10 ft/ft



- Legend**
- New 2022 Monitoring Well
 - Federal Upgradient Monitoring Well
 - Federal Downgradient Monitoring Well
 - Upgradient Monitoring Well (Not in Federal Program)
 - Water Supply Well
 - Piezometer
 - BAC Alluvium Well
 - BAC Bedrock Well
 - Approximate Location of Bottom Ash Pond Boundary
 - Gavin Property Boundary

NOTES:

- Water level measurements collected 9 September 2022 while water supply wells were active.
- Aerial Imagery: ESRI World Imagery
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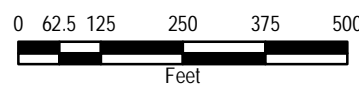
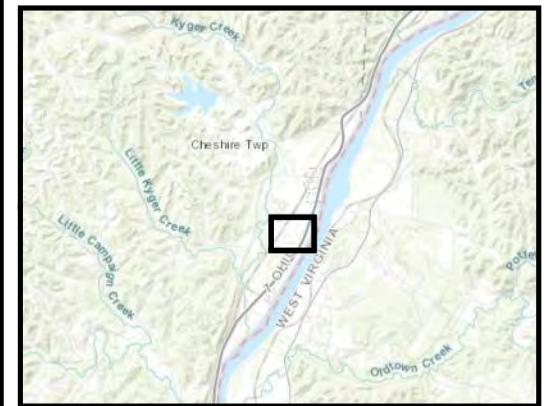


Figure 3-1: Bottom Ash Pond Vertical Gradient Assessment (9 September 2022 - Pumping)
 Gavin Generating Station
 Cheshire, Ohio



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Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Upgradient Monitoring Well (Not in Federal Program)
- Water Supply Well
- Piezometer
- BAC Alluvium Well
- BAC Bedrock Well
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary

NOTES:

1. Water level measurements collected 15 September 2022 while water supply wells were active.
2. Aerial Imagery: ESRI World Imagery
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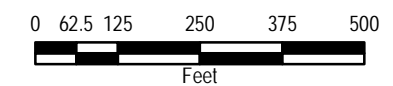
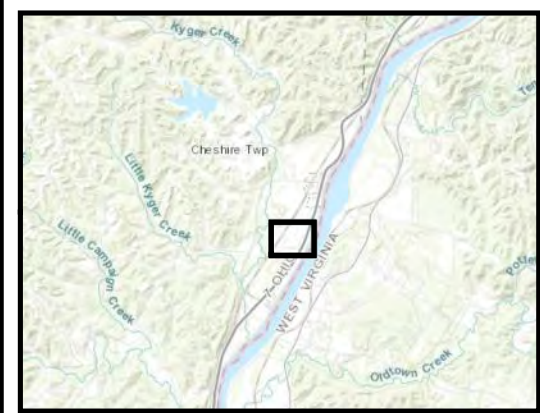


Figure 3-2: Bottom Ash Pond Vertical Gradient Assessment (15 September 2022 - Pumping)
Gavin Generating Station
Cheshire, Ohio





Legend

- New 2022 Monitoring Well
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Upgradient Monitoring Well (Not in Federal Program)
- Water Supply Well
- Piezometer
- BAC Alluvium Well
- BAC Bedrock Well
- Approximate Location of Bottom Ash Pond Boundary
- Gavin Property Boundary

NOTES:
 1. Water level measurements collected 28 September 2022 while water supply wells were not active.
 2. Aerial Imagery: ESRI World Imagery
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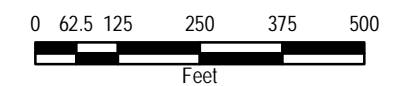
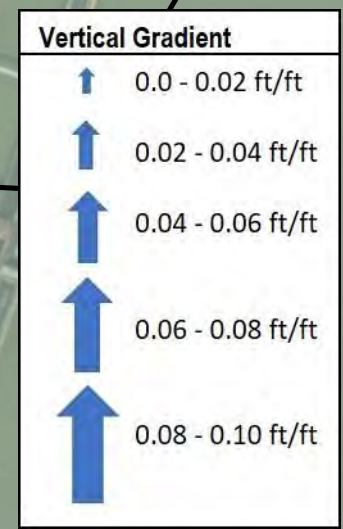
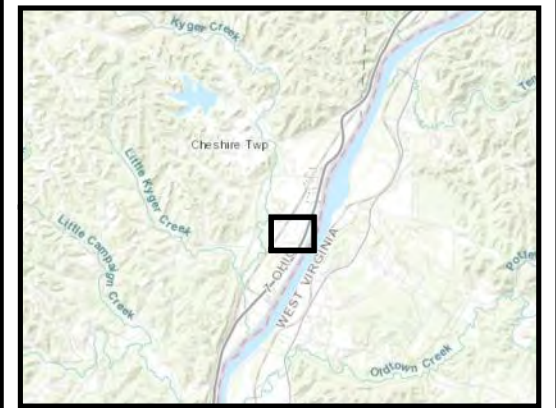
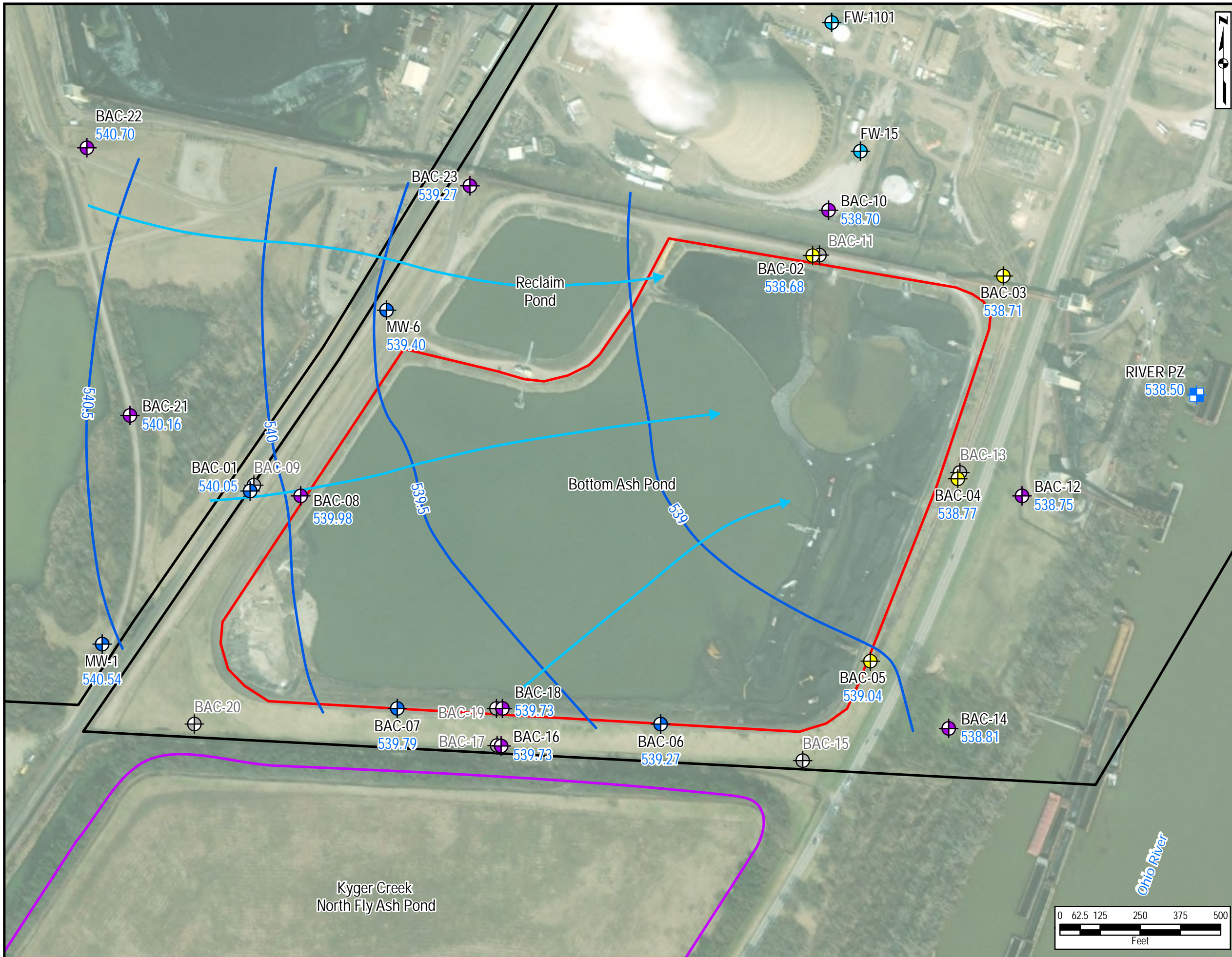


Figure 3-3: Bottom Ash Pond Vertical Gradient Assessment (28 September 2022 - Non-Pumping)
 Gavin Generating Station
 Cheshire, Ohio






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
- Approximate Location of Kyger Creek North Fly Ash Pond Boundary

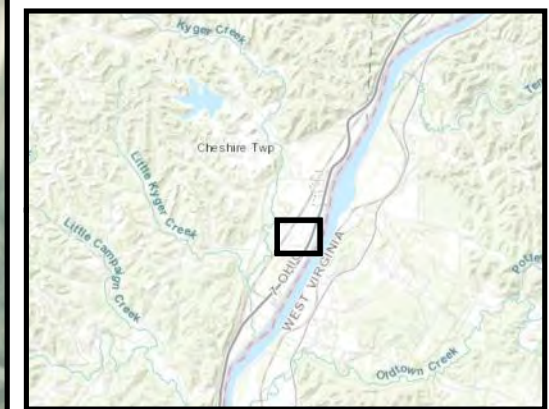
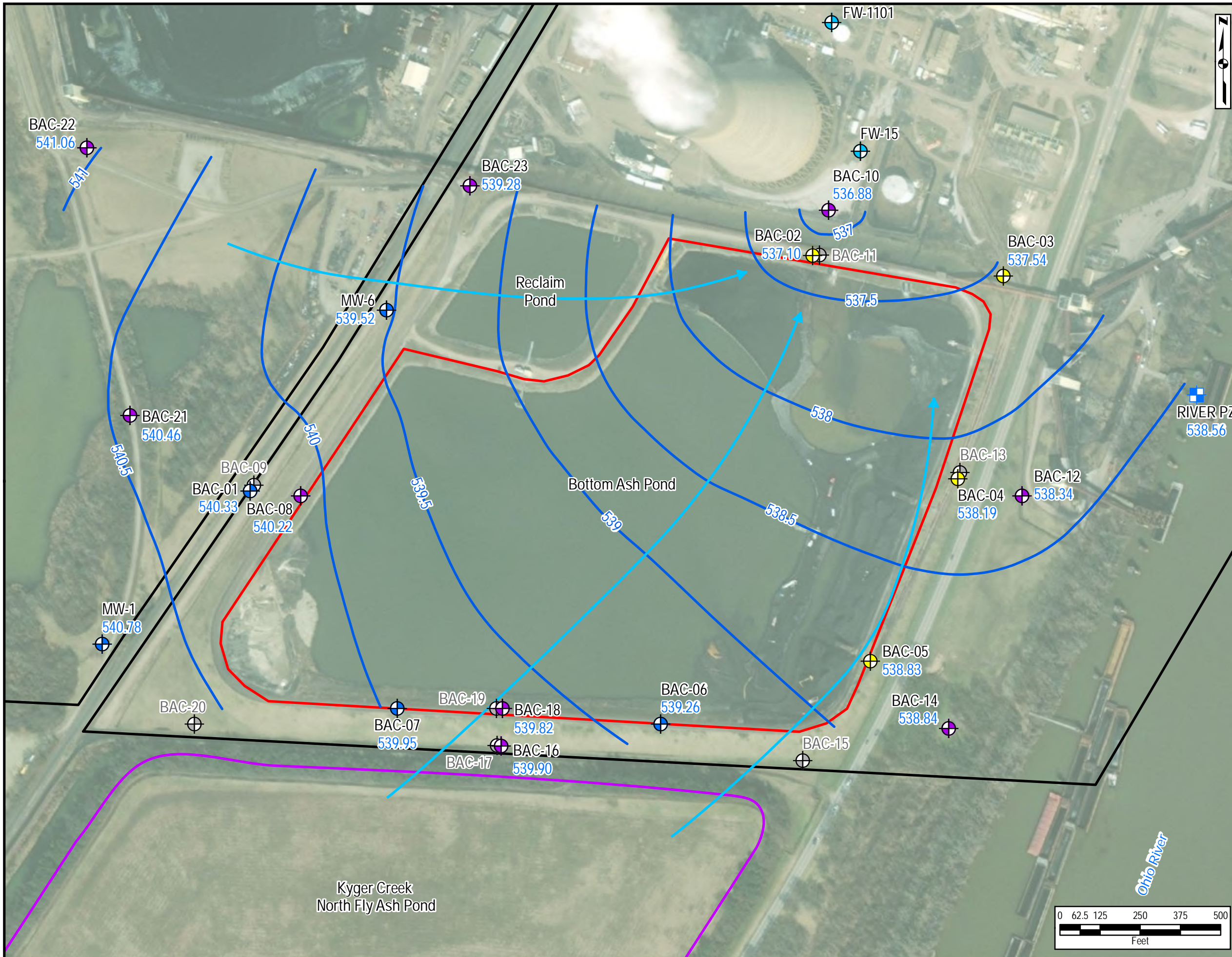
NOTES:

1. Monitoring wells were gauged on 29 September 2022.
2. Wells not used for contouring of the Alluvium include wells screened in silt/clay and bedrock materials.
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. BAC-17 is not included in contouring, as it represents a blended head condition due to its screen placement across the separation layer and into the alluvial aquifer.
5. Aerial Imagery: ESRI World Imagery
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Figure 3-4: Interpreted Groundwater Potentiometric Contour Map
 September 2022 - Non-Pumping Conditions
 Gavin Generating Station
 Cheshire, Ohio



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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

Approximate Location of Kyger Creek North Fly Ash Pond Boundary

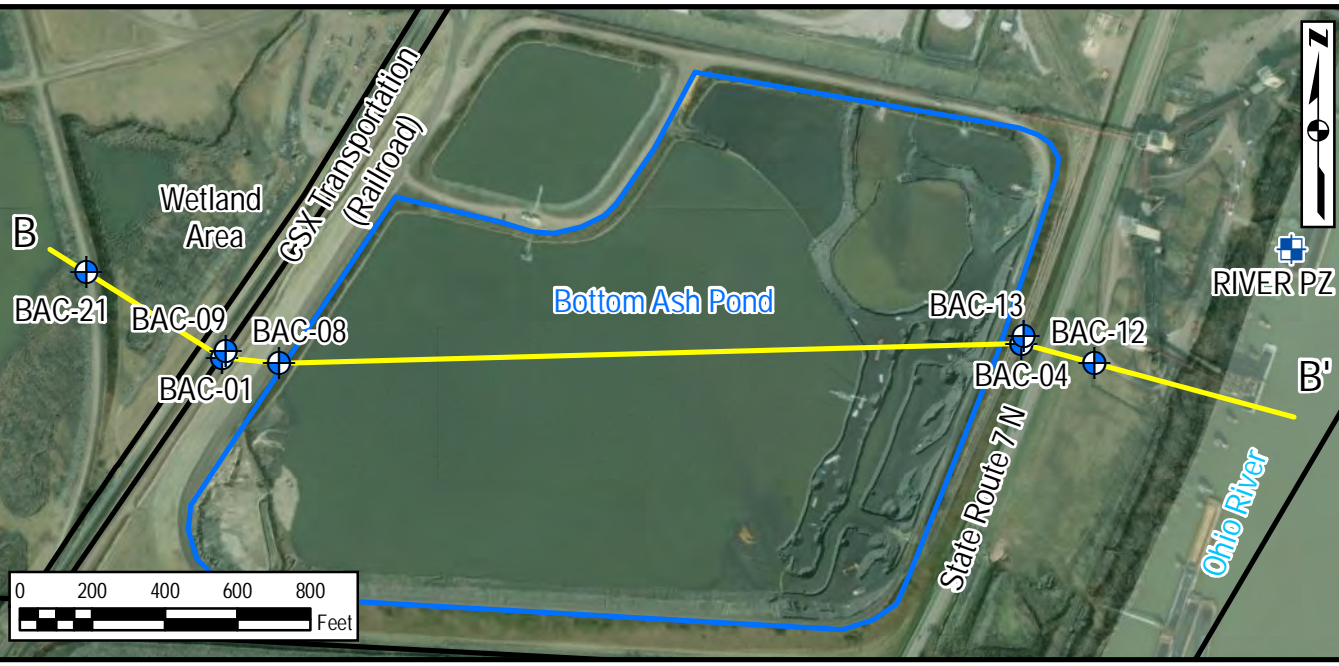
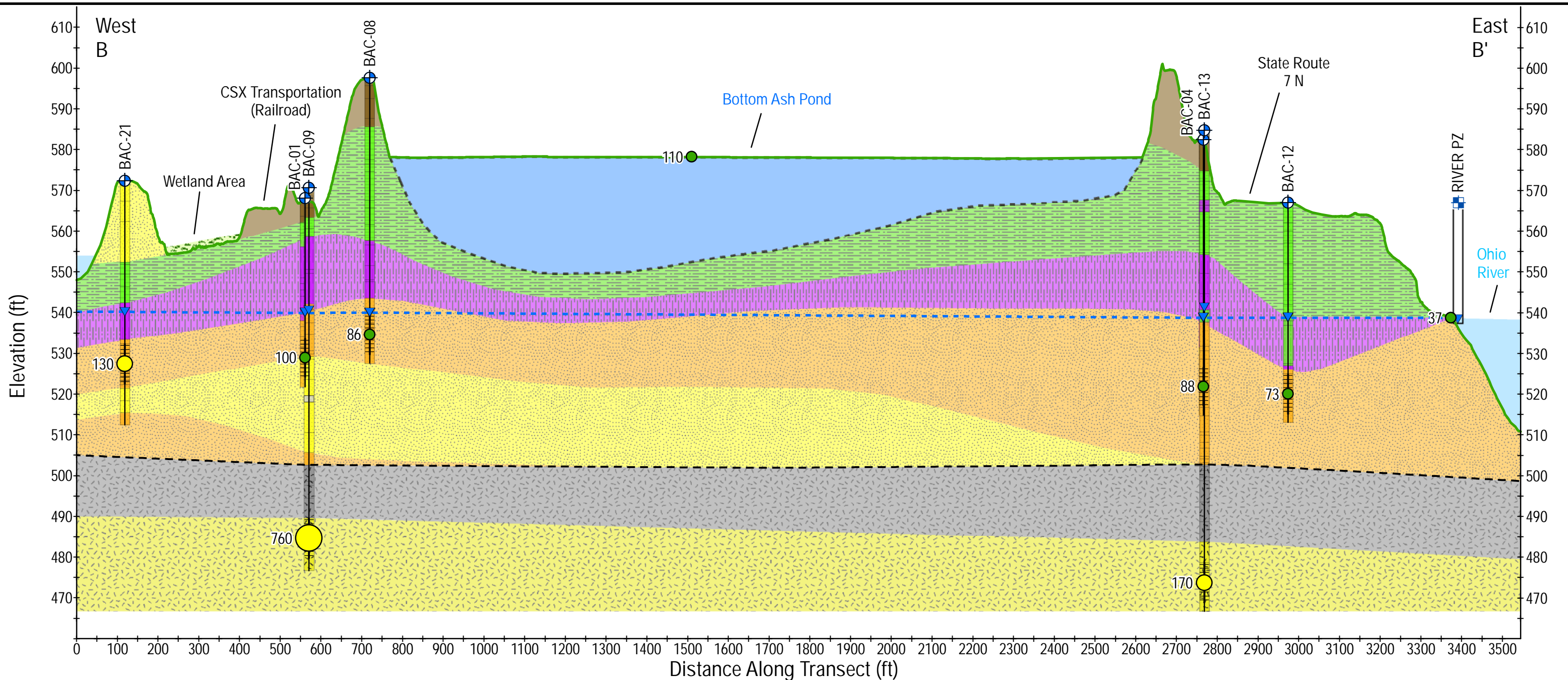
NOTES:

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. BAC-17 is not included in contouring, as it represents a blended head condition due to its screen placement across the separation layer and into the alluvial aquifer.
6. Aerial Imagery: ESRI World Imagery
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Figure 3-5: Interpreted Groundwater Potentiometric Contour Map September 2022 - Pumping Conditions
Gavin Generating Station
Cheshire, Ohio



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Legend

- Monitoring Well
- Piezometer
- Water Level (September 2022)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond
- Base of Bottom Ash
- Wetland Area

Calcium Concentrations in Groundwater (mg/L)

- <129
- 129 - 200
- 200 - 500
- 500 - 1,000
- >1,000

Generalized Lithology

- Road Material
- Clay and Silt
- Sandy Clay and Silt
- Sand and Clay
- Sand and Gravel
- Sand
- Claystone/Siltstone
- Sandstone

Separation Layer

- Clay and Silt
- Sandy Clay and Silt

Alluvial Aquifer

- Sand and Gravel
- Sand

Bedrock Units

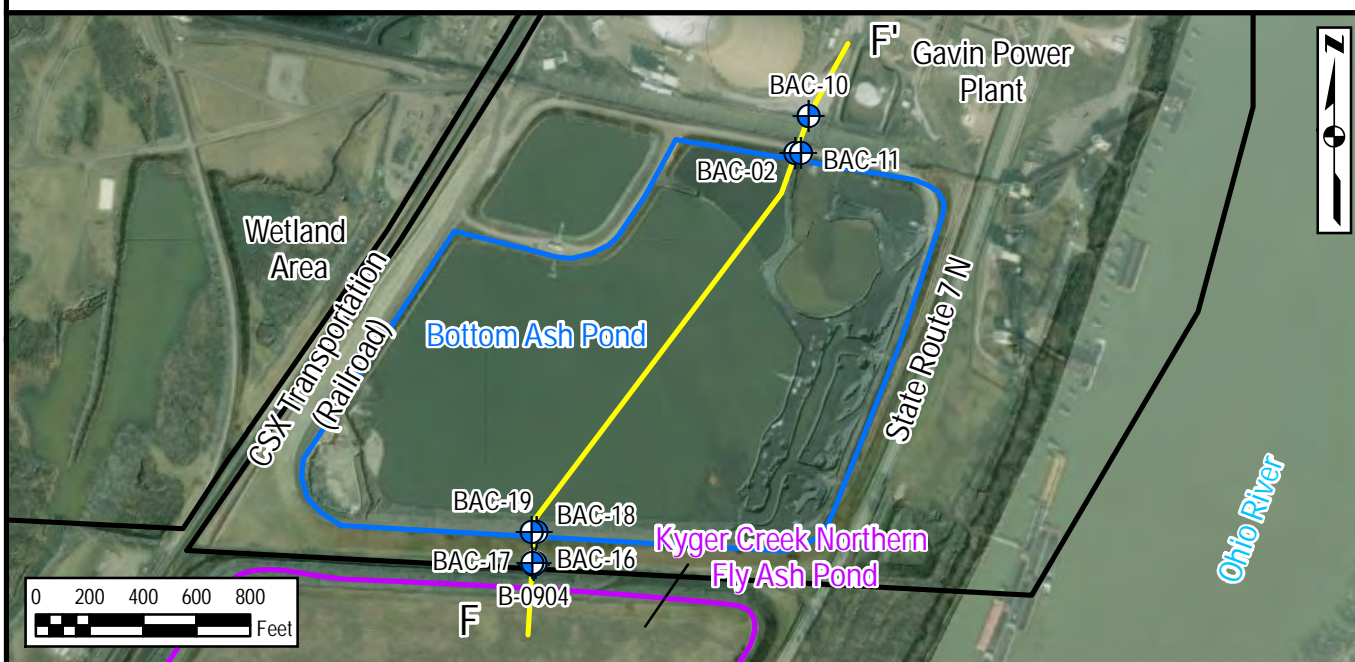
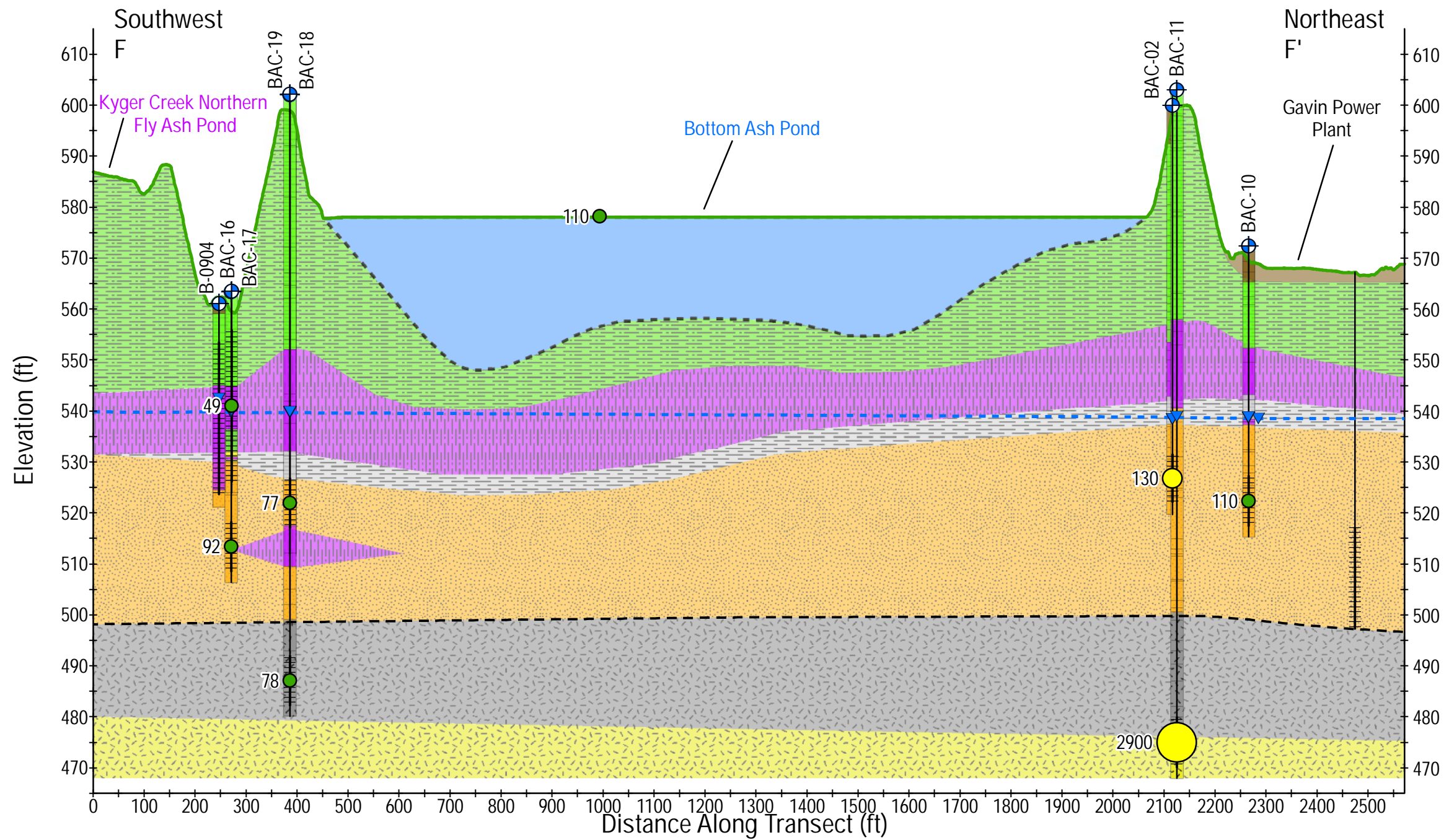
- Claystone/Siltstone
- Sandstone

Figure 4-1a: Calcium Concentrations - Cross Section View 1
Gavin Power, LLC
Cheshire, Ohio

NOTE:

1. Water level elevation from September 28, 2022.
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



Legend

- Monitoring Well
- Water Level (September 2022)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond

Base of Bottom Ash Pond

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
- Sandy Clay and Silt
- Sand and Clay
- Sand and Gravel
- Sand
- Claystone/Siltstone
- Sandstone

Separation Layer

Alluvial Aquifer

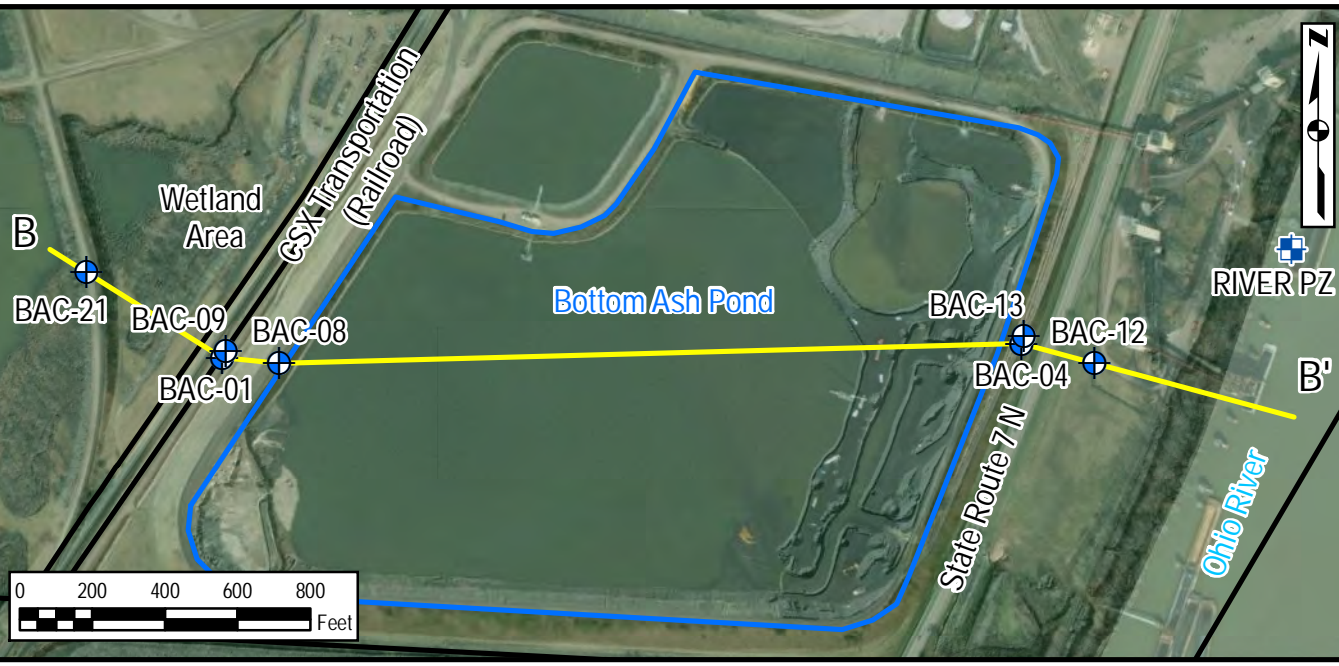
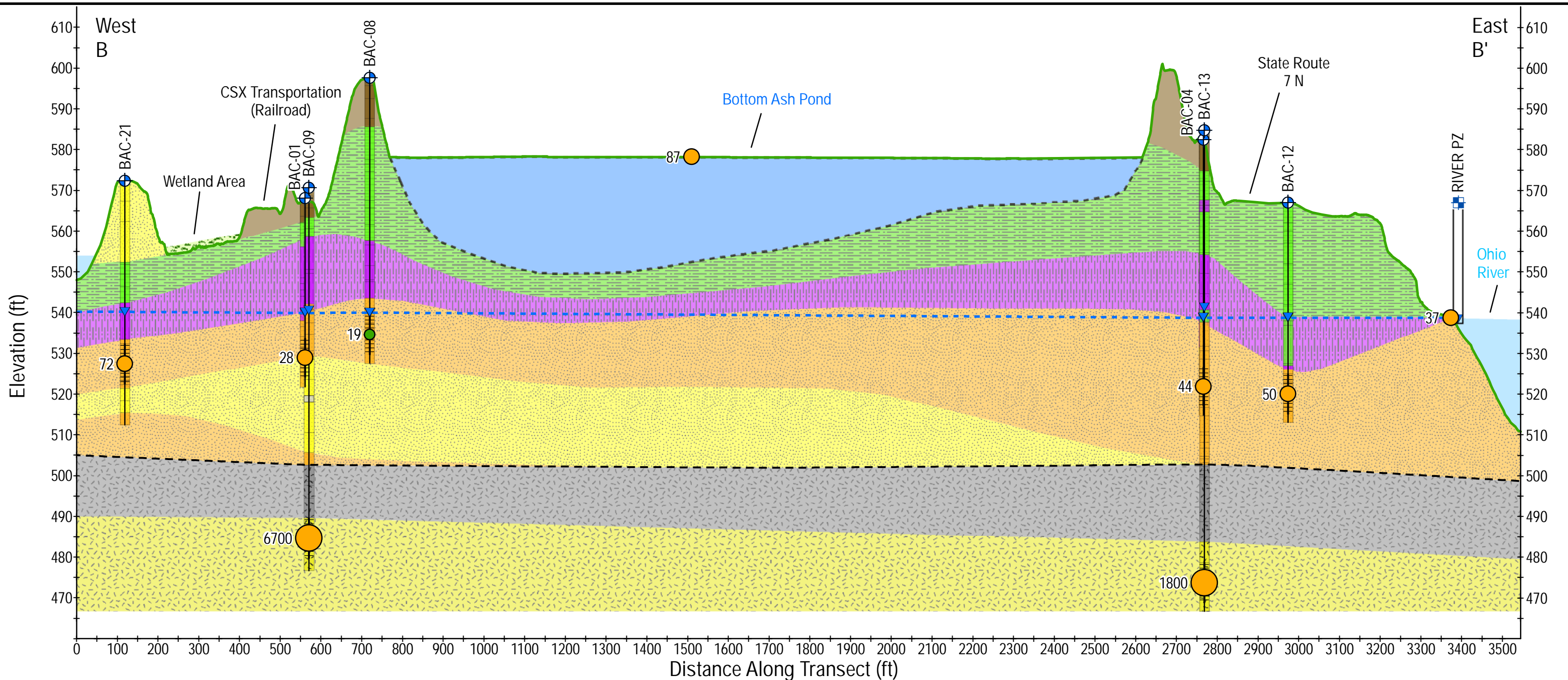
Bedrock Units

Figure 4-1b: Calcium Concentrations - Cross Section View 2 Gavin Power, LLC Cheshire, Ohio

NOTE:

1. Water level elevation from September 28, 2022.
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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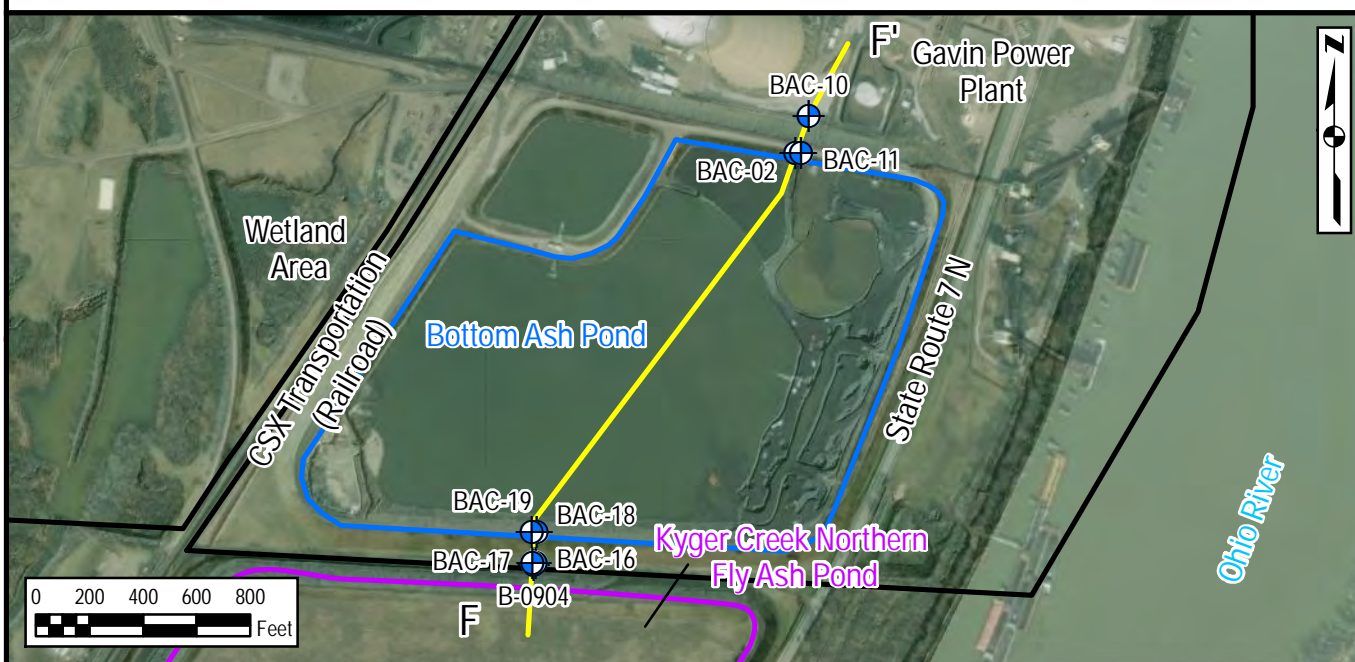
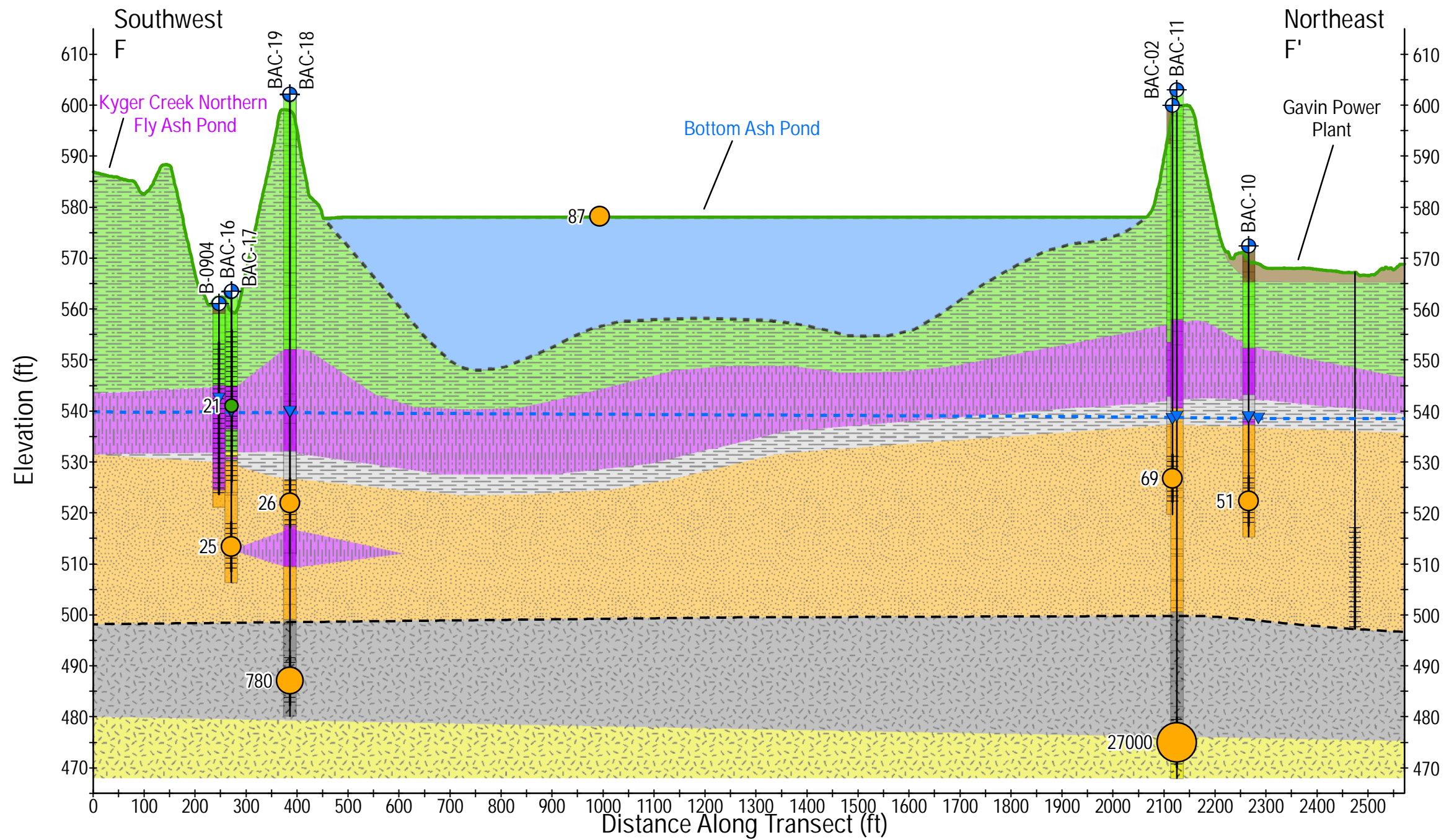
Legend

- Monitoring Well
- Piezometer
- Water Level (September 2022)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Base of Bottom Ash Pond
- Wetland Area
- Chloride Concentrations in Groundwater (mg/L)
 - <24.7
 - 24.7 - 100
 - 100 - 1,000
 - 1,000 - 10,000
 - >10,000
- Surface Water
- Generalized Lithology
 - Road Material
 - Clay and Silt
 - Sandy Clay and Silt
 - Sand and Clay
 - Sand and Gravel
 - Sand
 - Claystone/Siltstone
 - Sandstone
- Separation Layer
- Alluvial Aquifer
- Bedrock Units

NOTE:

- Water level elevation from September 28, 2022.
- Surface profile from OGRIP LIDAR 2020.
- Elevation is exaggerated 10X.
- Boring surface elevations, ground surface elevations and estimated bedrock surface are projected along transect line.
- The geology is generalized based on the lithology descriptions.
- 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.

Figure 4-2a: Chloride Concentrations - Cross Section View 1
Gavin Power, LLC
Cheshire, Ohio



Legend

- Monitoring Well
- Water Level (September 2022)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond
- Base of Bottom Ash Pond
- 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
- Sandy Clay and Silt
- Sand and Clay
- Sand and Gravel
- Sand
- Claystone/Siltstone
- Sandstone

Separation Layer

- Clay and Silt
- Sandy Clay and Silt

Alluvial Aquifer

- Sand and Clay
- Sand and Gravel
- Sand

Bedrock Units

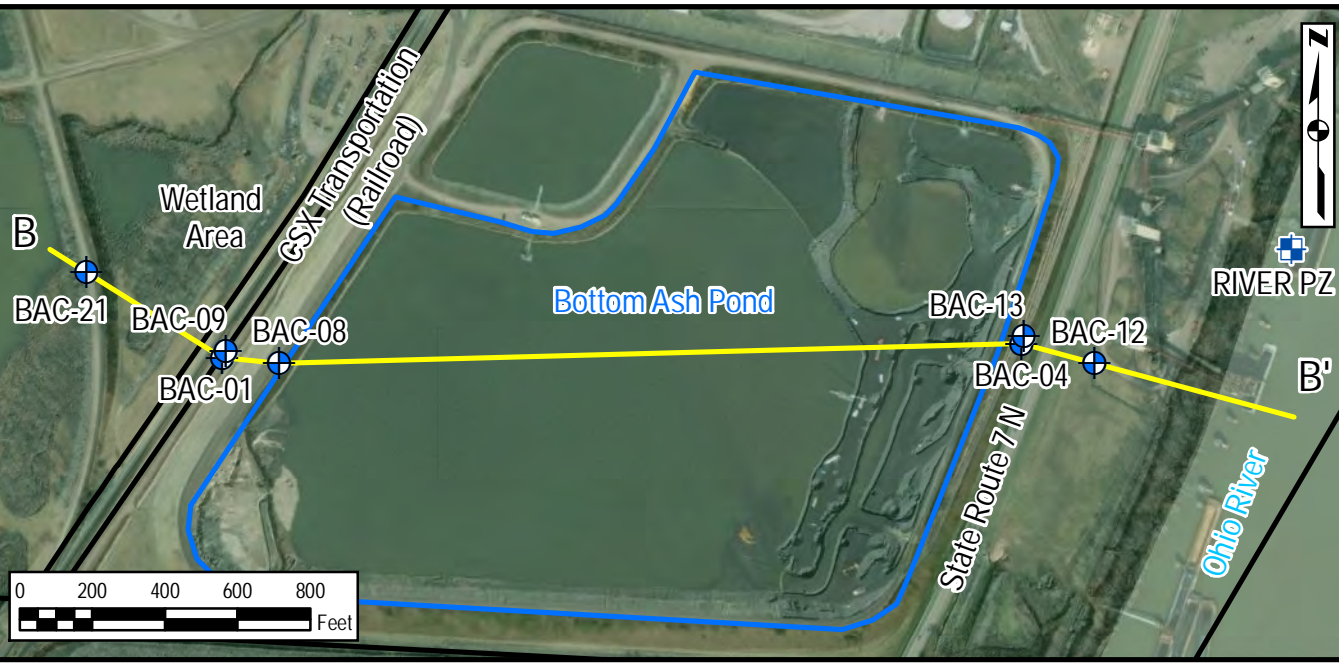
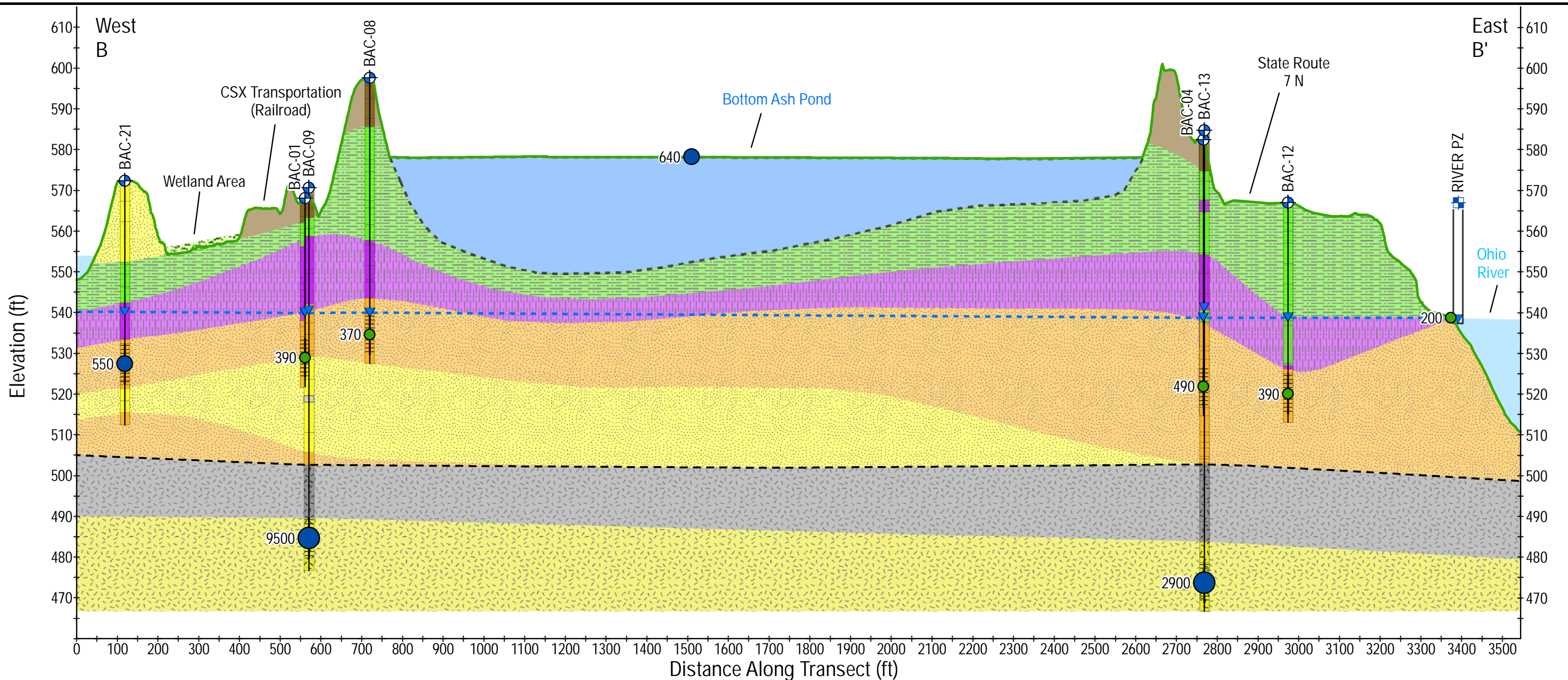
- Claystone/Siltstone
- Sandstone

Figure 4-2b: Chloride Concentrations - Cross Section View 2
Gavin Power, LLC
Cheshire, Ohio

NOTE:

1. Water level elevation from September 28, 2022.
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

- Monitoring Well
- Piezometer
- Water Level (September 2022)
- Potentiometric Surface
- Surface Profile
- Approximate Bedrock Surface
- Total Depth
- Well Screen
- Transect
- Site Boundary
- Bottom Ash Pond Boundary
- Base of Bottom Ash

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
- Sand and Clay
- Sand and Gravel
- Sand
- Claystone/Siltstone
- Sandstone

Other Symbols

- Wetland Area
- Surface Water

Separation Layer

- Clay and Silt
- Sandy Clay and Silt

Alluvial Aquifer

- Sand and Clay
- Sand and Gravel
- Sand

Bedrock Units

- Claystone/Siltstone
- Sandstone

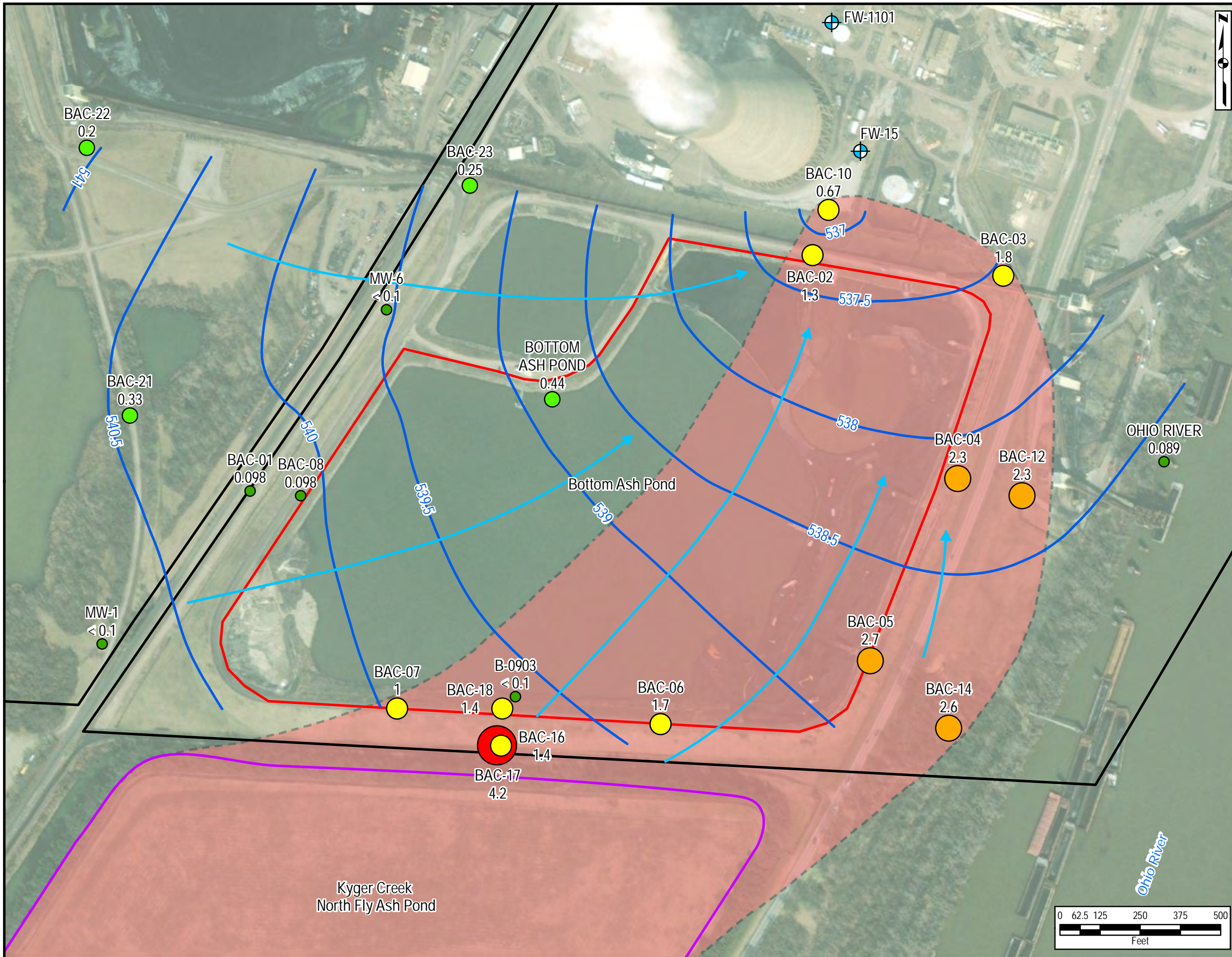
Figure 4-3a: TDS Concentrations - Cross Section View 1
Gavin Power, LLC
Cheshire, Ohio

NOTE:

1. Water level elevation from September 28, 2022.
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.



M:\US\Projects\Cheshire\CD\Checkstone_Cop\GavinPowerPlant\MM\BAP_CrossSections_2022\Figure 4-3a_B_Bottom Ash Pond Concentrations_2022\Figure 4-3a_B_Bottom Ash Pond Concentrations_2022\Figure 4-3a_B_Bottom Ash Pond Concentrations_2022.mxd - Jonathan Mills - 1/26/2023



Legend

Boron Concentrations in Groundwater (mg/L)

- <0.177
- 0.177 - 0.5
- 0.5 - 2
- 2 - 3
- <3

⊕ Water Supply Well Location

538 Groundwater Elevation (ft)

— Interpreted Groundwater Elevation Contours (9 September 2022 - Under Pumping Conditions)

→ Interpreted Groundwater Flow Direction

⬭ Approximated Boron Plume

⬭ Approximate Location of Bottom Ash Pond Boundary

⬭ Gavin Property Boundary

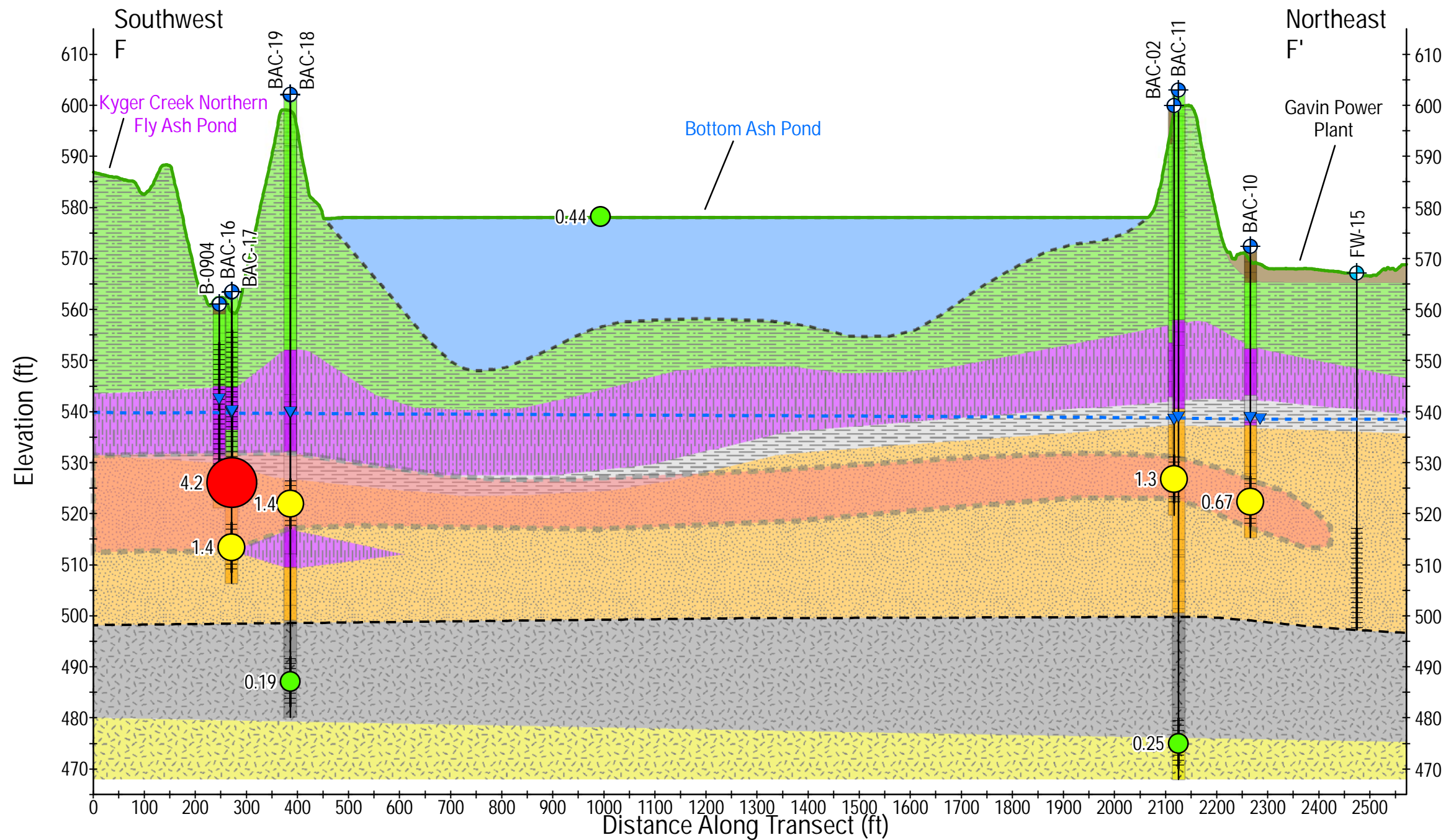
⬭ Approximate Location of Kyger Creek North Fly Ash Pond Boundary

NOTES:

1. mg/L = milligrams per liter
2. Groundwater samples collected October 2022.
3. Groundwater contours and interpreted groundwater flow directions shown from 9 September 2022 under pumping conditions.
4. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.8

Figure 4-4: Boron Distribution in Groundwater (Map View)
 Gavin Generating Station
 Cheshire, Ohio

Y:\GIS\Projects\EA\Backstore_Epi\GavinPowerPlant\MXD\2022_BAC_ASD_Report\Figure4_BoronConcentrations_20220126.mxd - Onvia.tbling - 1/2/2023

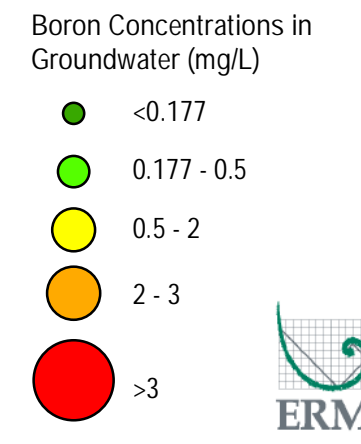


- Legend**
- Monitoring Well
 - Water Supply Well
 - Water Level (September 2022)
 - Potentiometric Surface
 - Surface Profile
 - Approximate Bedrock Surface
 - Total Depth
 - Well Screen
 - Transect
 - Site Boundary

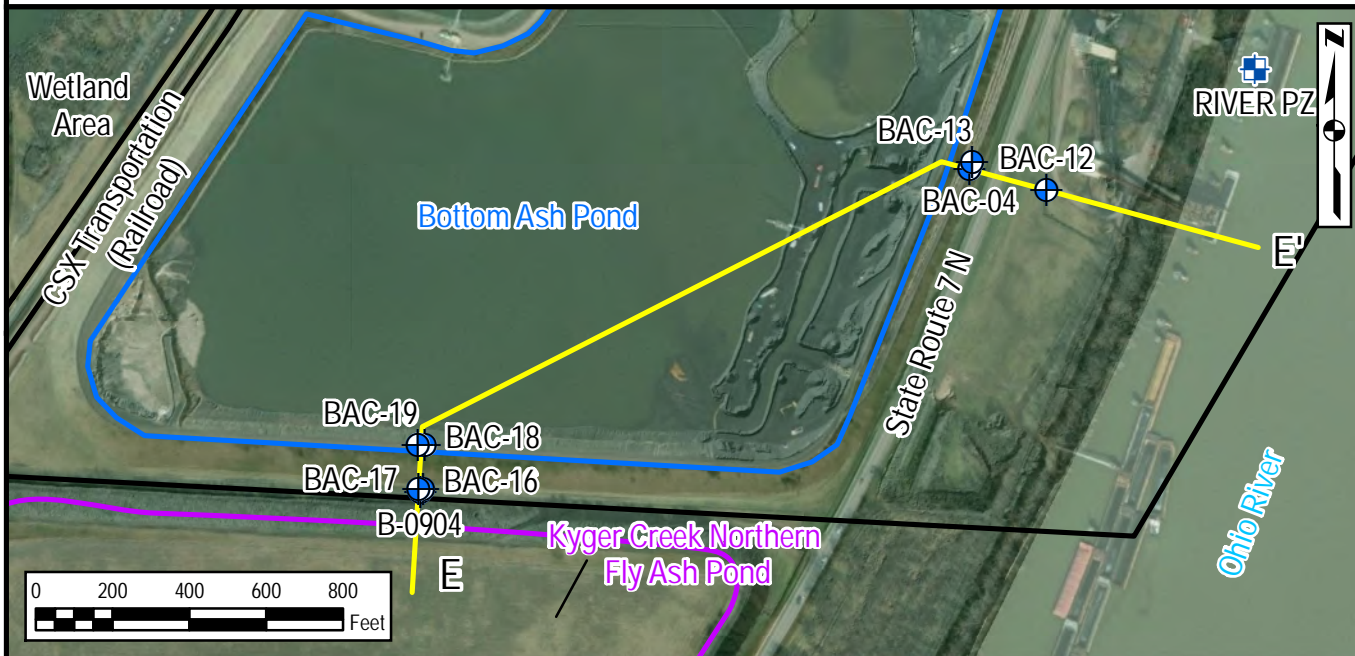
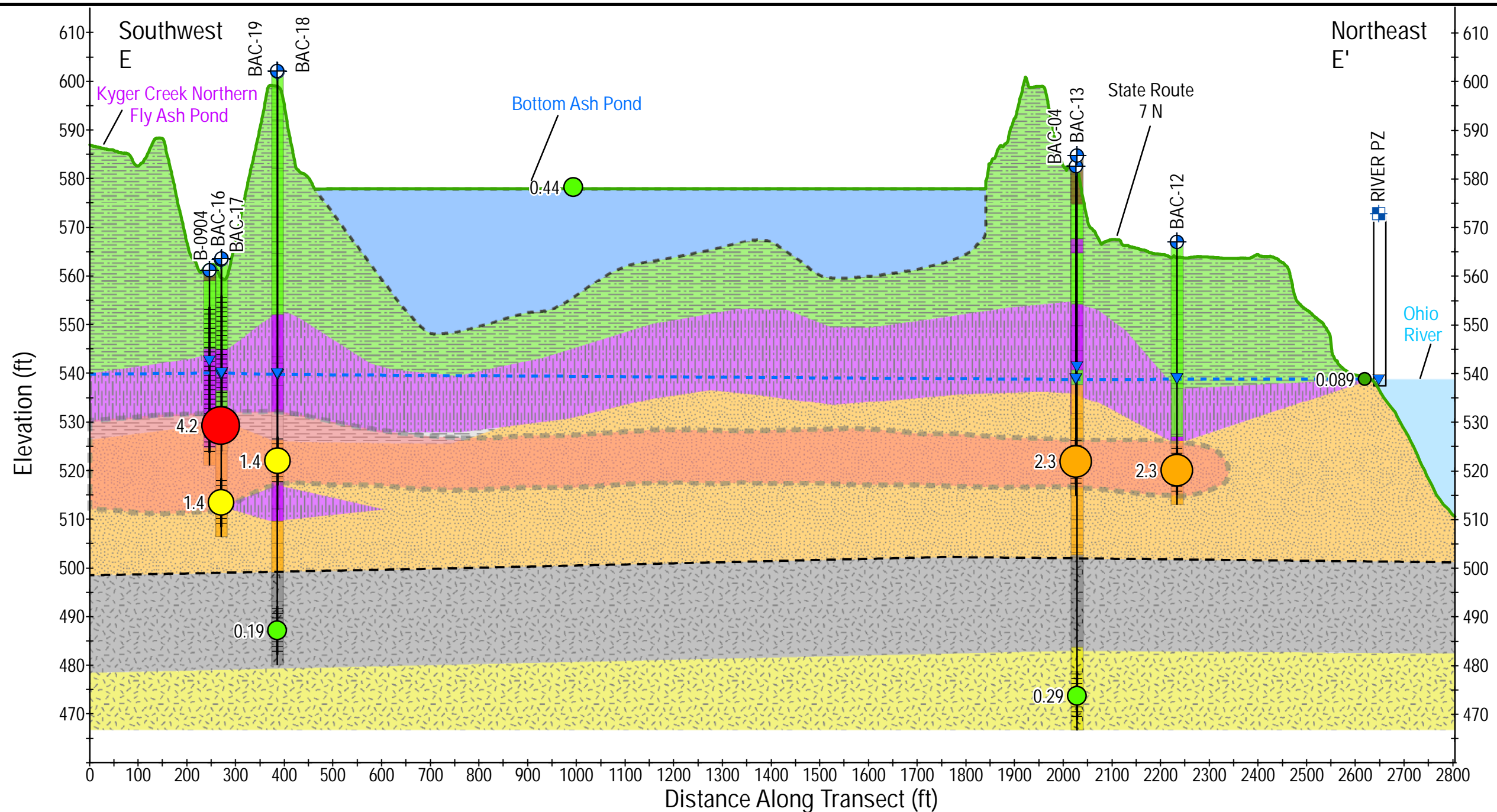
- Bottom Ash Pond Boundary
 - Base of Bottom Ash Pond
 - Kyger Creek Northern Fly Ash Pond
 - Approximated Boron Plume
- NOTE:**
1. Water level elevation from September 28, 2022.
 2. Surface profile from OGRIP LiDAR 2020.
 3. Elevation is exaggerated 10X.
 4. Boring surface elevations, ground surface 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.

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

Figure 4-5a: Boron Distribution in Groundwater (Cross-Section View 1)
Gavin Power, LLC
Cheshire, Ohio



M:\US\Projects\SV\CD\checklists\Corp\GavinPowerPlant\MM\BAP\CrossSections_2022\Figure 4-5a_BoronDistributionGroundwater_20220126.mxd - Olivia Bolling - 1/26/2023



- Legend**
- Monitoring Well
 - Piezometer
 - Water Level (September 2022)
 - Potentiometric Surface
 - Surface Profile
 - Approximate Bedrock Surface
 - Total Depth
 - Well Screen
 - Transect
 - Site Boundary

- Kyger Creek Northern Fly Ash Pond
 - Base of Bottom Ash
 - Surface Water
 - Bottom Ash Pond
 - Approximated Boron Plume
- NOTE:**
1. Water level elevation from September 28, 2022.
 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.

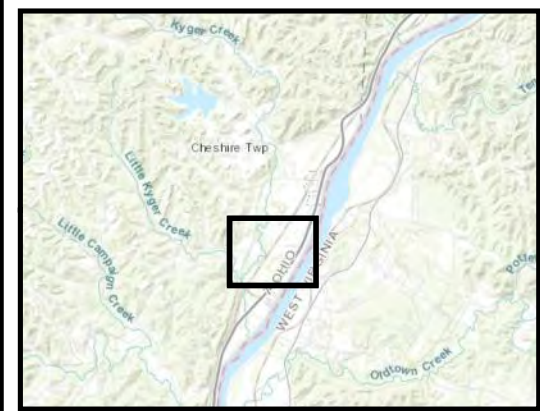
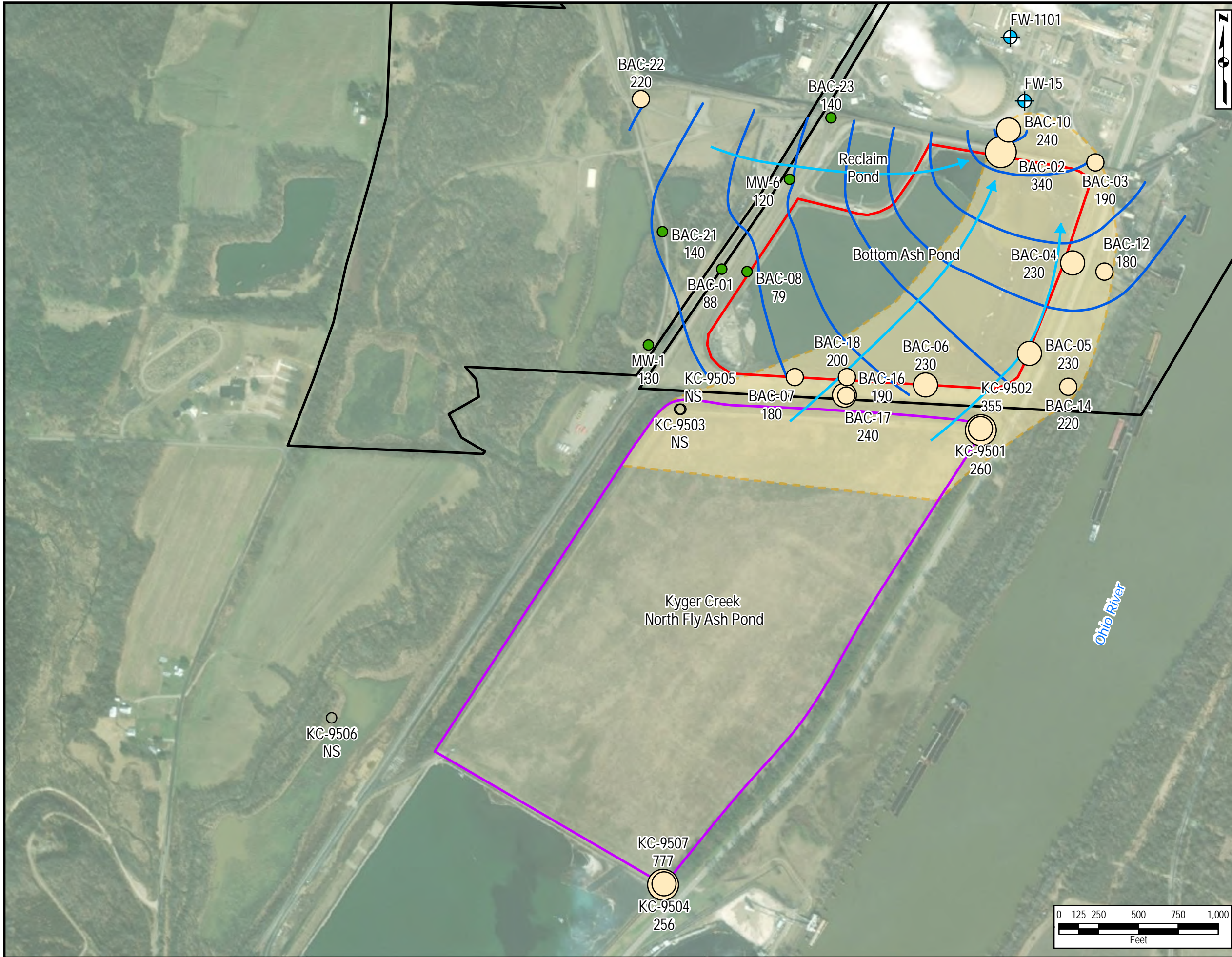
- Generalized Lithology**
- Road Material
 - Clay and Silt
 - Sandy Clay and Silt
 - Sand and Clay
 - Sand and Gravel
 - Sand
 - Claystone/Siltstone
 - Sandstone
- Separation Layer**
- Clay and Silt
 - Sandy Clay and Silt
- Alluvial Aquifer**
- Sand and Clay
 - Sand and Gravel
 - Sand
- Bedrock Units**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

Figure 4-5b: Boron Distribution in Groundwater (Cross-Section View 2)
Gavin Power, LLC
Cheshire, Ohio

Boron Concentrations in Groundwater (mg/L)

- <0.177
- 0.177 - 1
- 1 - 2
- 2 - 3
- >3

M:\US\Projects\SV\CD\locks\one_cop\GavinPower\Plan\MD\BAP_CrossSections_2022\Figure 4-5b_BoronDistributionGroundwater_2022_0126.mxd - Jonathan Mills - 11/26/2023



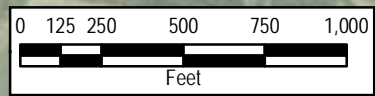
Legend

Sulfate Concentrations in Groundwater (mg/L)

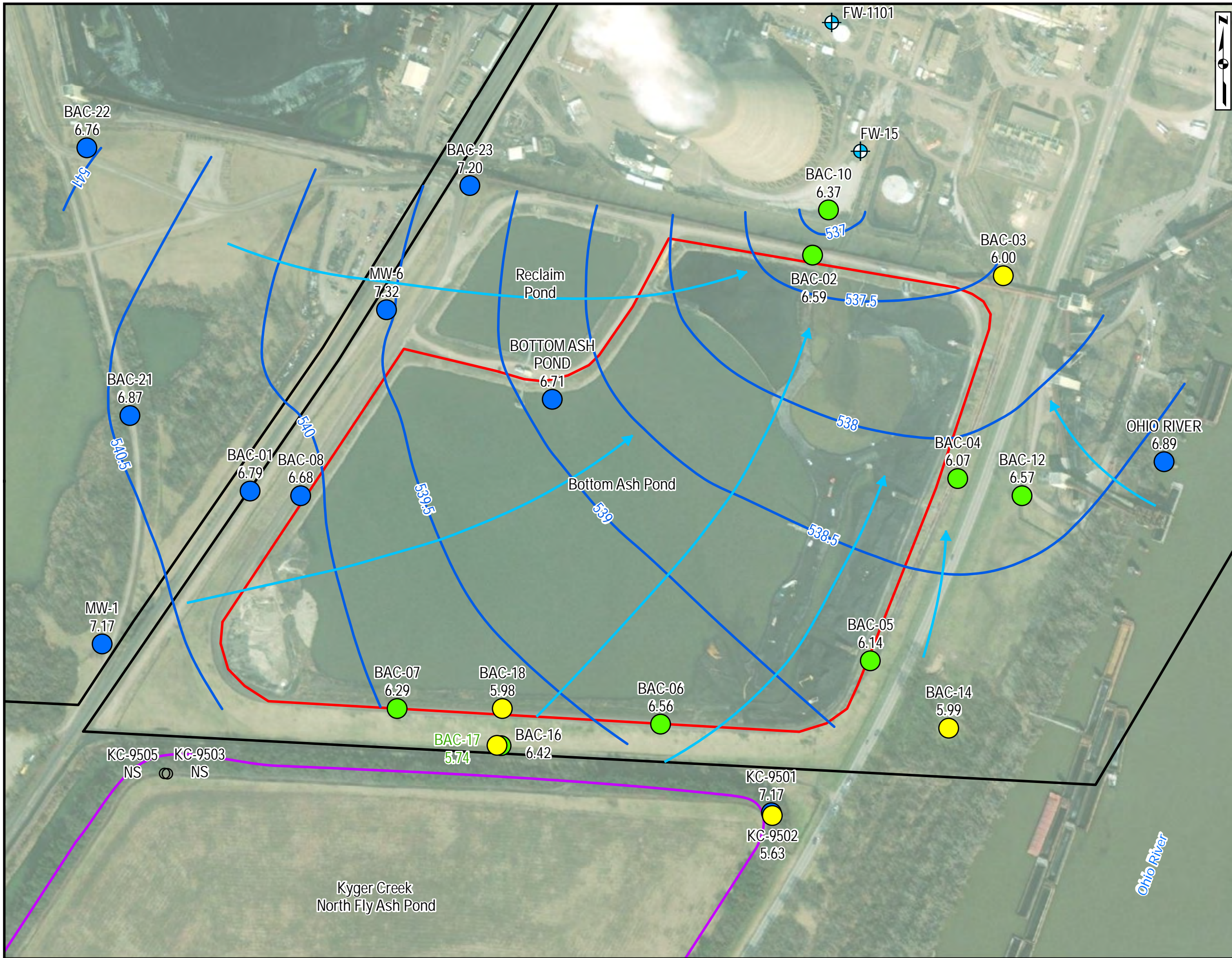
- <140
- 140 - 220
- 220 - 300
- >300
- Not Sampled
- ⊕ Water Supply Well Location
- Interpreted Groundwater Elevation Contours (9 September 2022 - Under Pumping Conditions)
- Interpreted Groundwater Flow Direction
- Approximated Sulfate Plume
- Approximate Location of Bottom Ash Pond Boundary
- Gavin 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 samples were collected October 2022
 4. Kyger Creek groundwater samples results collected 10/25/2022 (OVEC 2022).
 5. Groundwater contours and interpreted groundwater flow directions shown from 9 September 2022 under pumping conditions.
 6. Aerial Imagery: ESRI World Imagery
Reproduced under license in ArcGIS 10.8

Figure 4-6: Sulfate Distribution in Groundwater (Map View)
Gavin Generating Station
Cheshire, Ohio



Y:\GIS\Projects\EA\Backstore_Epic\GavinPowerPlant\MW\02022_BAC_ASD_Report\Figure_BAP_MW\Map_SulfateConcentrations_20230126.mxd - Oliva,Boling - 1/2/23



- Legend**
- pH Concentrations in Groundwater (SU)
- <6.0
 - 6.0 - 6.6
 - >6.6
 - Not Sampled
 - ⊕ Water Supply Well
 - 538 Groundwater Elevation (ft)
 - BAC Alluvial Aquifer Well
 - BAC Separation Layer and Alluvial Aquifer Well
 - Interpreted Groundwater Elevation Contours (9 September 2022 - Under Pumping Conditions)
 - 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. SU = standard units
 2. Groundwater samples collected October 2022.
 3. Aerial Imagery: ESRI World Imagery
Reproduced under license in ArcGIS 10.8

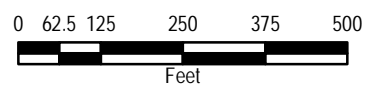


Figure 4-7: pH Distribution in Groundwater (Map View)
Gavin Generating Station
Cheshire, Ohio



Y:\GIS\Projects\SA-4\Backstore_Epi\GavinPowerPlant\MXD\2022_BAC_ASD_Report\Figure_BAP_MWNetwork_pHConcentrations_20221012.mxd - Online Printing - 10/20/2023

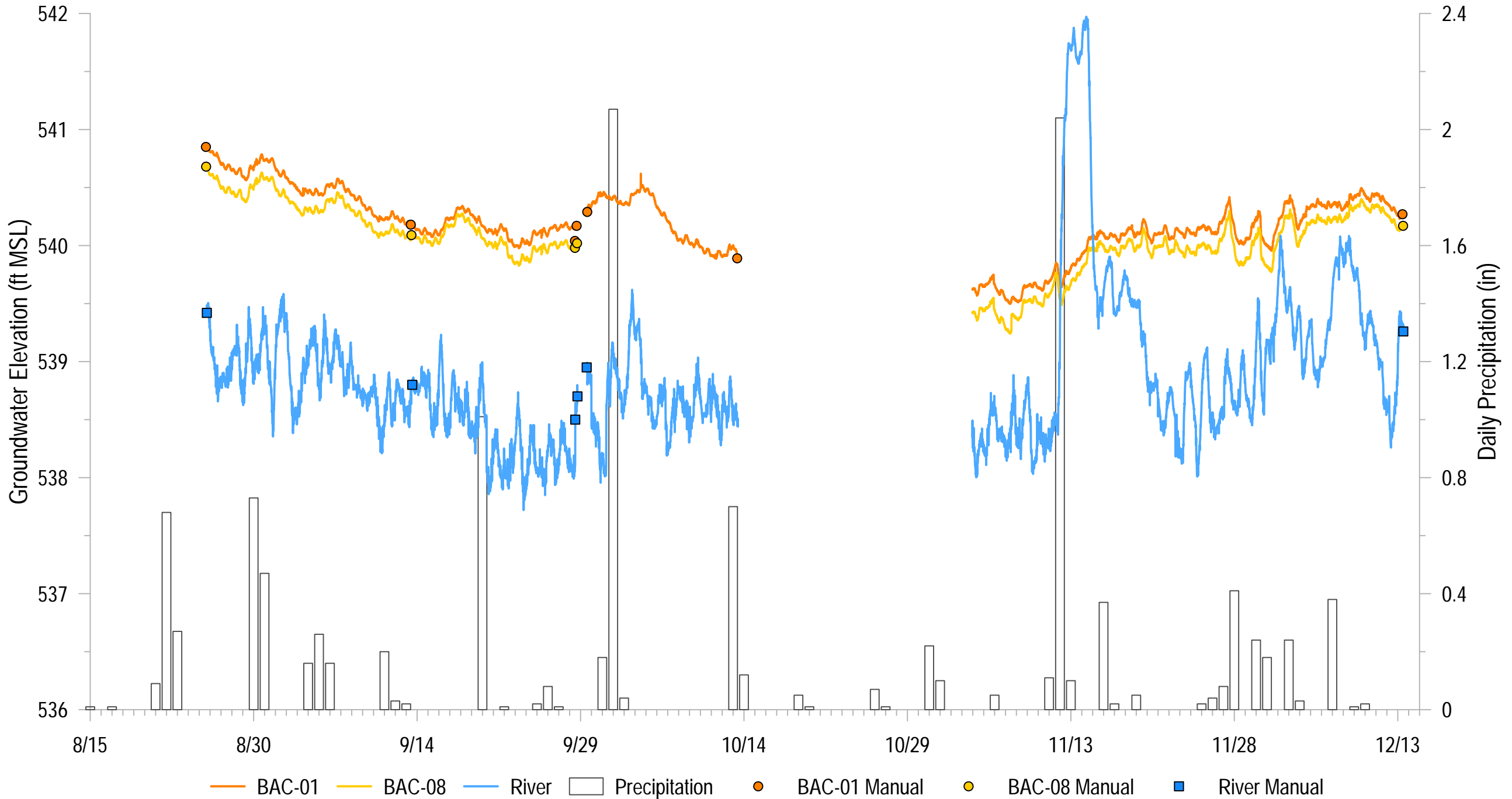


Figure 6-1. Bottom Ash Pond Transducer Time-Series, West Couplet
 Gavin Generating Station
 Cheshire, Ohio

Notes:
 1.) River data from on-site stilling well
 2.) Transducer reading frequency was set to 15min
 3.) All data is from 2022

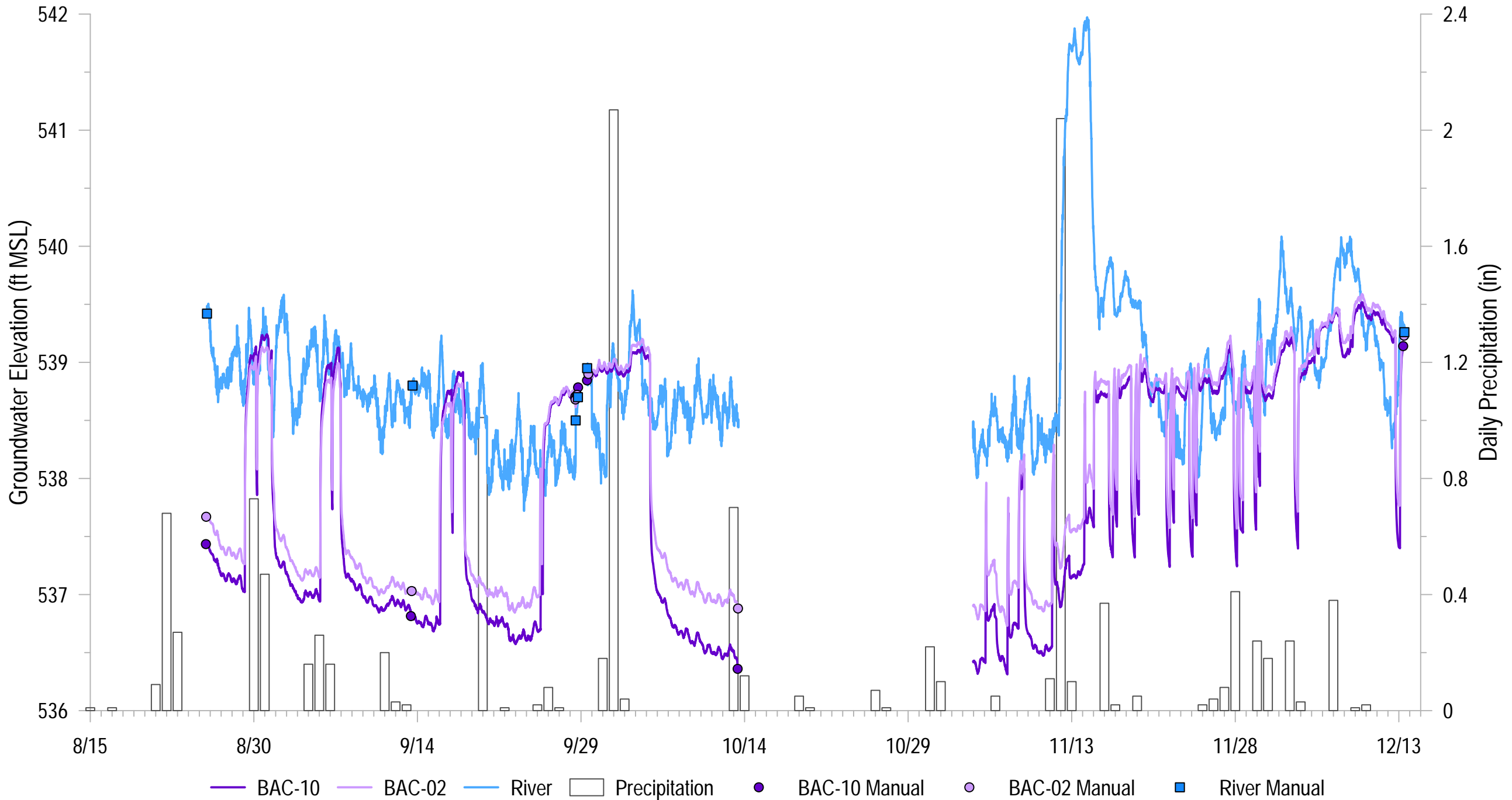
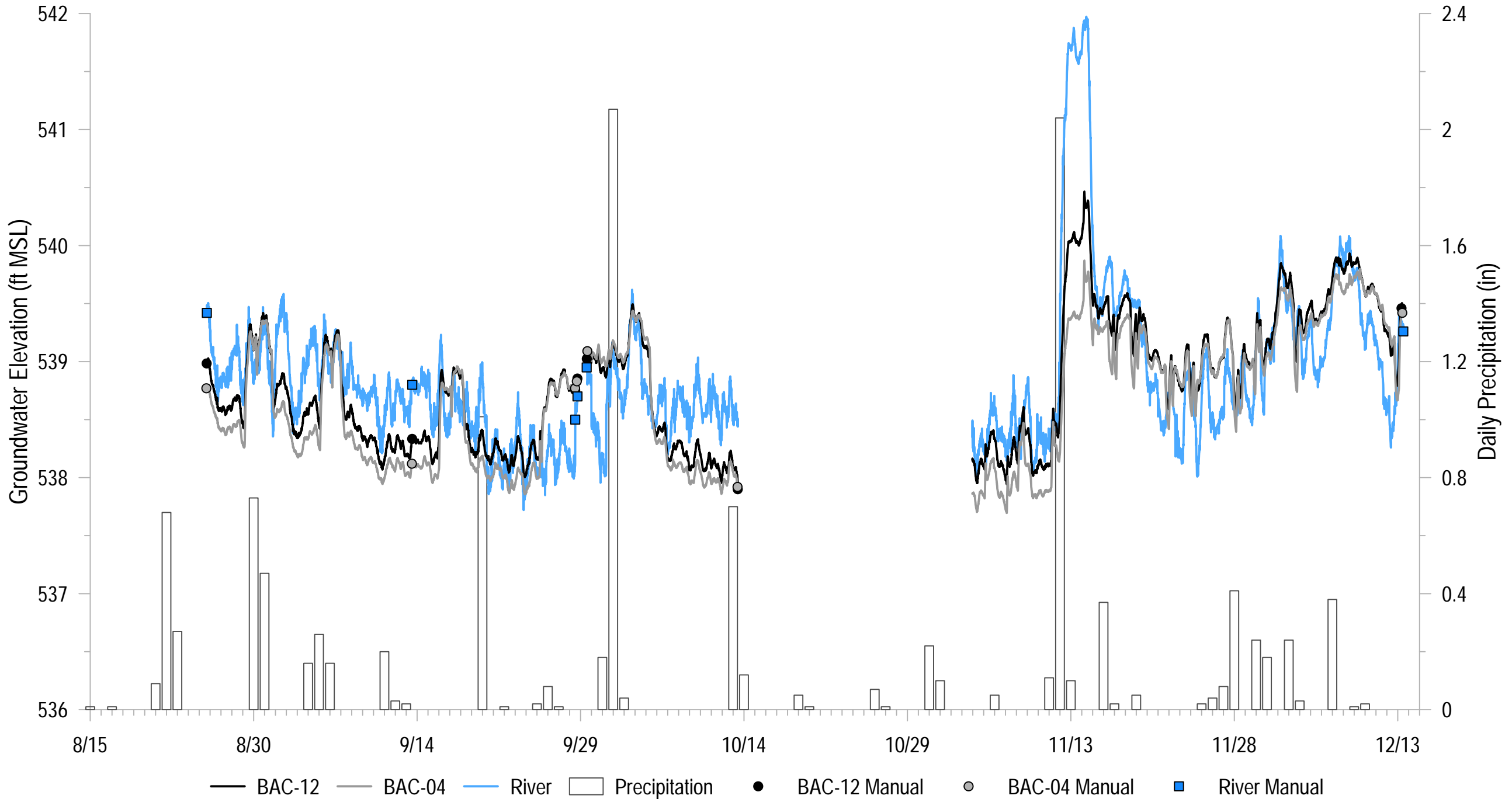


Figure 6-2. Bottom Ash Pond Transducer Time-Series, North Couplet
 Gavin Generating Station
 Cheshire, Ohio

Notes:

- 1.) River data from on-site stilling well
- 2.) Transducer reading frequency was set to 15min
- 3.) All data is from 2022



BAC-12
 BAC-04
 River
 Precipitation
 BAC-12 Manual
 BAC-04 Manual
 River Manual



Figure 6-3. Bottom Ash Pond Transducer Time-Series, East Couplet
 Gavin Generating Station
 Cheshire, Ohio

Notes:
 1.) River data from on-site stilling well
 2.) Transducer reading frequency was set to 15min
 3.) All data is from 2022

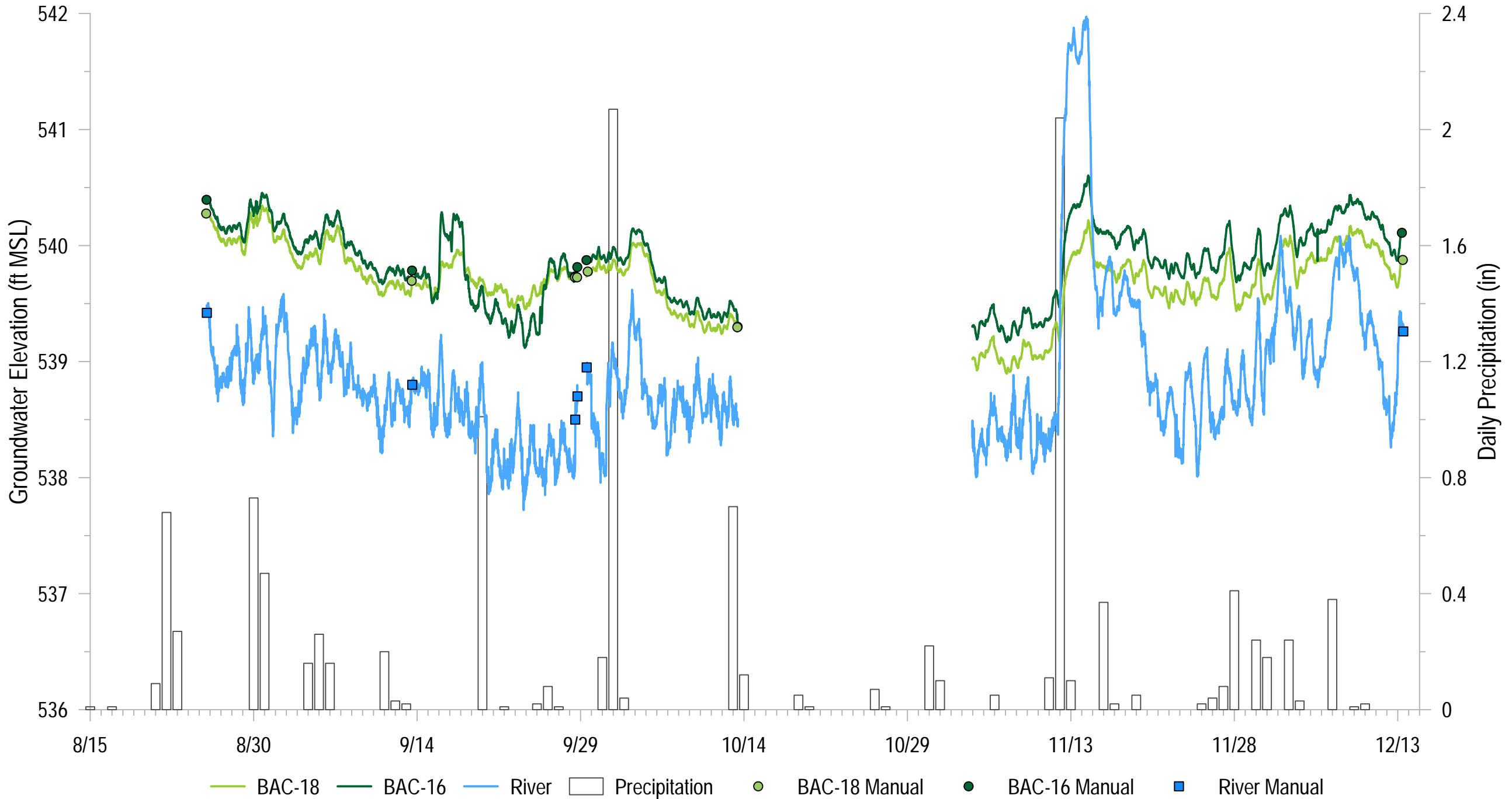
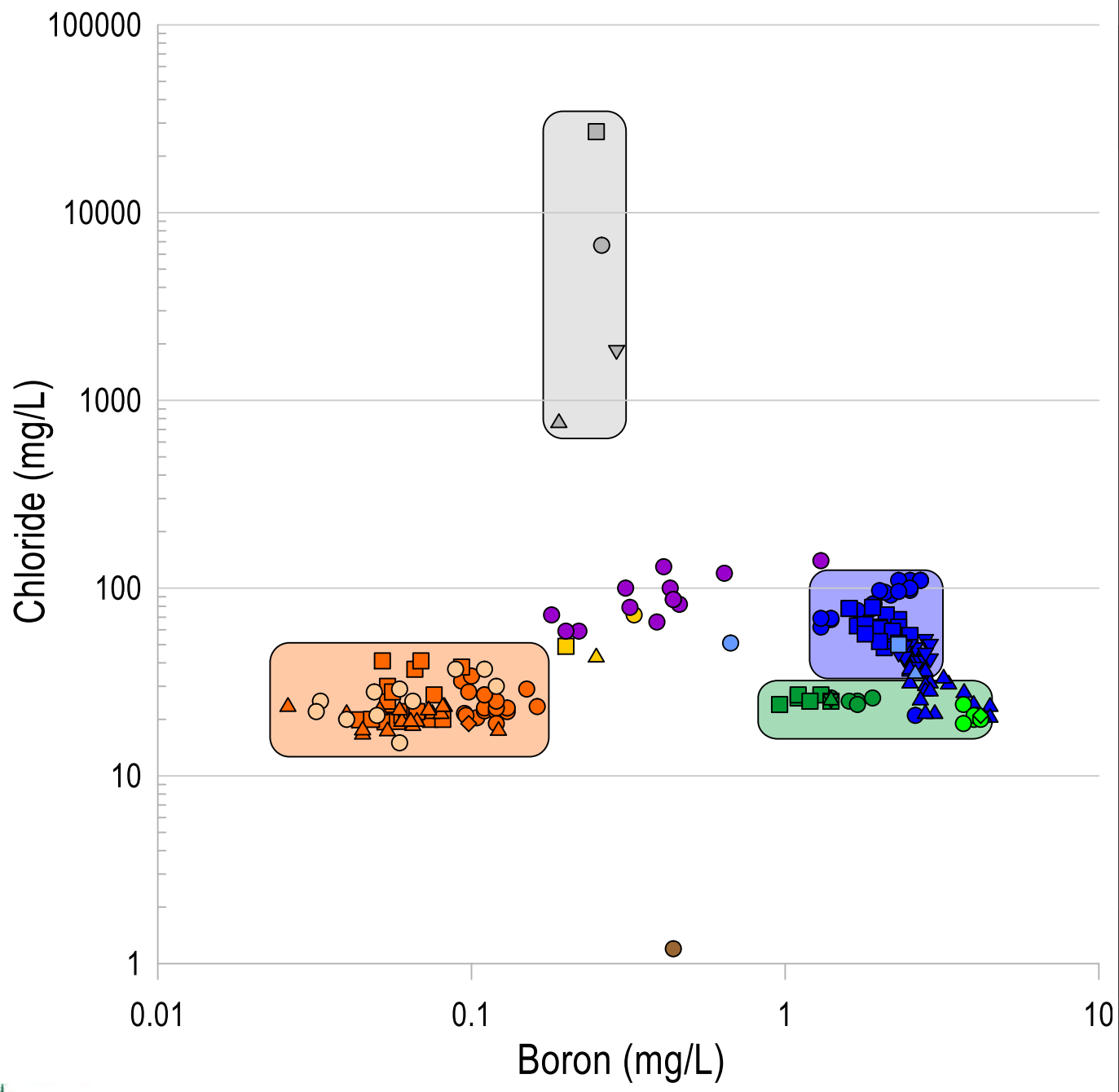


Figure 6-4. Bottom Ash Pond Transducer Time-Series, South Couplet
 Gavin Generating Station
 Cheshire, Ohio

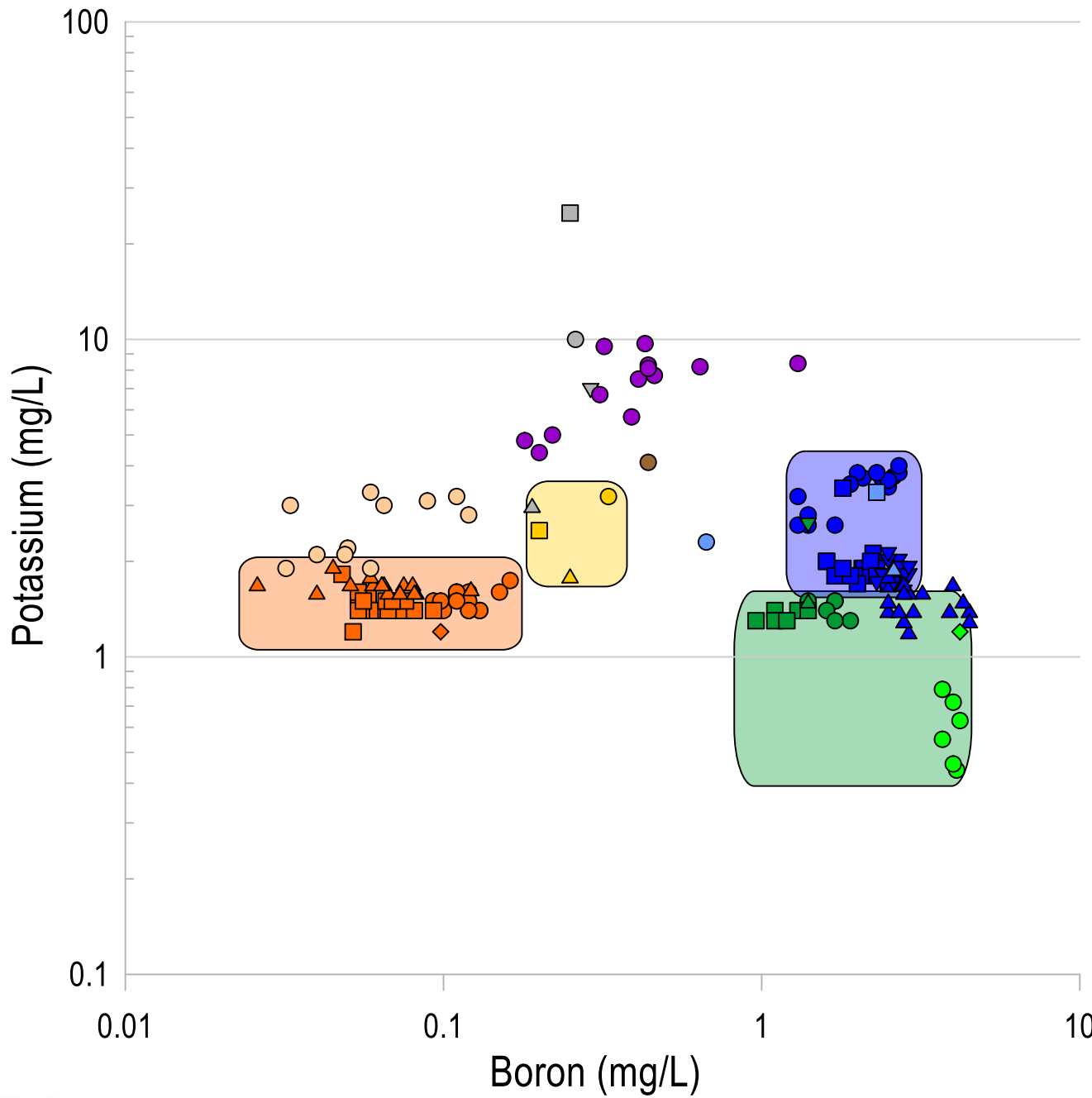
Notes:
 1.) River data from on-site stilling well
 2.) Transducer reading frequency was set to 15min
 3.) All data is from 2022



Legend	
● BAC-01	Historical Upgradient Wells
■ MW-1	
▲ MW-6	
● BAC-02	Historical Downgradient Wells
■ BAC-03	
▼ BAC-04	
▲ BAC-05	
● B-0904	Historical Kyger Creek Groundwater
● BAC-06	2020 Southern Boundary Wells
■ BAC-07	
○ BAC-09	2022 Bedrock Wells
■ BAC-11	
▼ BAC-13	
△ BAC-19	
● BAC-21	2022 Northwestern Wells
■ BAC-22	
▲ BAC-23	
◆ BAC-08	2022 Upgradient Well
● BAC-10	2022 Downgradient Wells
■ BAC-12	
▲ BAC-14	
▼ BAC-16	2022 Southern Boundary Wells
▲ BAC-18	
◆ BAC-17	2022 Kyger Creek Groundwater
● BAC-15	2022 Silt and Clay Well
○ Ohio River	
● Bottom Ash Pond	

Figure 6-5. Boron-Chloride Concentration Plot
 Gavin Generating Station
 Cheshire, Ohio





Legend	
● BAC-01	Historical Upgradient Wells
■ MW-1	
▲ MW-6	
● BAC-02	Historical Downgradient Wells
■ BAC-03	
▼ BAC-04	
▲ BAC-05	
● B-0904	Historical Kyger Creek Groundwater
● BAC-06	2020 Southern Boundary Wells
■ BAC-07	
○ BAC-09	2022 Bedrock Wells
■ BAC-11	
▼ BAC-13	
▲ BAC-19	2022 Northwestern Wells
● BAC-21	
■ BAC-22	
▲ BAC-23	2022 Upgradient Well
◆ BAC-08	
● BAC-10	2022 Downgradient Wells
■ BAC-12	
▲ BAC-14	
▼ BAC-16	2022 Southern Boundary Wells
▲ BAC-18	
◆ BAC-17	2022 Kyger Creek Groundwater
● BAC-15	2022 Silt and Clay Well
○ Ohio River	
● Bottom Ash Pond	

Figure 6-6. Boron-Potassium Concentration Plot
 Gavin Generating Station
 Cheshire, Ohio



APPENDIX A



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 8, 2022

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 Semiannual Data Analysis**

Attached are field data (Attachment I) and laboratory analytical data (Attachment II) for the forty seventh set of semiannual samples collected in October, 2022, 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.

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 semiannual 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 was provided to you via voicemail on December 8, 2022, 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, KC-9508, and KC-9509; the concentration for the parameter conductivity exceeded the upper tolerance limit at well KC-9502; 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 contact me at (740) 289-7259.

Sincerely,

A handwritten signature in black ink that reads "Jeremy Galloway". The signature is written in a cursive style with a large, looping "J" and "G".

Jeremy Galloway
Environmental Specialist

JDG:tlf

Attachments

Attachment I

MONITORING WELL SAMPLING

	KC-9501	KC-9502	KC-9504	KC-9507	KC-9508	KC-9509
DATE	10/25/2022	10/25/2022	10/25/2022	10/25/2022	10/25/2022	10/25/2022
PUMP TIME	5	4	5	6	4	5
FLOW (ml/min)	740	780	840	990	600	1200
VOL. PUMPED	3700	3120	4200	5940	2400	6000
TIME	1100	1116	1024	1036	936	1004
TEMPERATURE(C)	14.8	14.9	16.9	17.1	16.4	17.3
COND. (uS/cm)	946	790	776	1615	966	952
pH(S.U.)	7.17	5.63	6.71	6.96	6.83	6.58
TIME	1102	1117	1025	1037	937	1005
TEMPERATURE(C)	14.7	14.7	16.8	17	16.4	17.4
COND. (uS/cm)	962	791	753	1604	970	949
pH(S.U.)	7.17	5.61	6.56	6.96	6.86	6.51
TIME	1103	1118	1026	1038	938	1006
TEMPERATURE(C)	14.60	14.60	16.60	17.00	16.40	17.30
COND. (uS/cm)	963	792	752	1598	971	950
pH(S.U.)	7.16	5.59	6.38	6.97	6.86	6.48
TIME			1027	1039		1007
TEMPERATURE(C)			16.60	16.90		17.30
COND. (uS/cm)			755	1597		950
pH(S.U.)			6.35	6.89		6.48
TIME				1040		
TEMPERATURE(C)				16.90		
COND. (uS/cm)				1598		
pH(S.U.)				6.88		
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 TIME	1104	1119	1028	1041	0938	1008
APPEARANCE	clear	clear	turbid	turbid	clear	turbid
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	52.90
KC-9502	52.80
KC-9503	
KC-9504	49.50
KC-9505	
KC-9506	
KC-9507	49.60
KC-9508	24.40
KC-9509	24.80
KC-9510	
KC-9511	
KC-9512	
KC-9513	
KC-9514	

DATE	RIVER LEVEL
10/25/2022	537.1
10/24/2022	537.4
10/23/2022	537.2
10/22/2022	537.3
10/21/2022	537.5
10/20/2022	537.6
10/19/2022	537.4
10/18/2022	537.5
10/17/2022	537.0
10/16/2022	537.0
10/15/2022	537.4
10/14/2022	537.3

CALIBRATION	
PARAMETER	TIME
pH	0755
CONDUCT.	0755

Attachment II



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

Customer Sample ID: KC-9501

Customer Description:

Lab Number: 223392-001

Preparation: Dissolved

Date Collected: 10/25/2022 11:04

Date Received: 10/26/2022 11:42

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	25.2	mg/L	10	0.2	0.1		CRJ	11/02/2022 05:36	EPA 300.1 -1997, Rev. 1.0
Sulfate	260	mg/L	10	2.0	0.3		CRJ	11/02/2022 05:36	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	82.8	µg/L	1	0.20	0.05		GES	11/08/2022 12:14	EPA 200.8-1994, Rev. 5.4
Calcium	129	mg/L	1	0.05	0.02	M1, P3	GES	11/08/2022 12:14	EPA 200.8-1994, Rev. 5.4
Iron	0.729	mg/L	1	0.020	0.006		GES	11/08/2022 12:14	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 12:14	EPA 200.8-1994, Rev. 5.4
Magnesium	27.1	mg/L	1	0.10	0.02	M1, P3	GES	11/08/2022 12:14	EPA 200.8-1994, Rev. 5.4
Manganese	0.730	mg/L	1	0.0010	0.0002	M1, P3	GES	11/08/2022 12:14	EPA 200.8-1994, Rev. 5.4
Selenium	<0.09	µg/L	1	0.50	0.09	U1	GES	11/08/2022 12:14	EPA 200.8-1994, Rev. 5.4
Sodium	18.7	mg/L	1	0.20	0.05	M1, P3	GES	11/08/2022 12:14	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	250	mg/L	1	20	5		MGK	10/28/2022 11:15	SM 2320B-2011
TDS, Filterable Residue	670	mg/L	1	50	20		SDW	10/28/2022 06:25	SM 2540C-2015



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

Customer Sample ID: KC-9502

Customer Description:

Lab Number: 223392-002

Preparation: Dissolved

Date Collected: 10/25/2022 11:19

Date Received: 10/26/2022 11:42

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	27.0	mg/L	10	0.2	0.1		CRJ	11/02/2022 04:30	EPA 300.1 -1997, Rev. 1.0
Sulfate	355	mg/L	10	2.0	0.3		CRJ	11/02/2022 04:30	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	28.0	µg/L	1	0.20	0.05		GES	11/08/2022 12:45	EPA 200.8-1994, Rev. 5.4
Calcium	74.4	mg/L	1	0.05	0.02		GES	11/08/2022 12:45	EPA 200.8-1994, Rev. 5.4
Iron	0.041	mg/L	1	0.020	0.006		GES	11/08/2022 12:45	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 12:45	EPA 200.8-1994, Rev. 5.4
Magnesium	24.4	mg/L	1	0.10	0.02		GES	11/08/2022 12:45	EPA 200.8-1994, Rev. 5.4
Manganese	26.0	mg/L	1	0.0010	0.0002		GES	11/08/2022 12:45	EPA 200.8-1994, Rev. 5.4
Selenium	<0.09	µg/L	1	0.50	0.09	U1	GES	11/08/2022 12:45	EPA 200.8-1994, Rev. 5.4
Sodium	23.5	mg/L	1	0.20	0.05		GES	11/08/2022 12:45	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	27	mg/L	1	20	5		MGK	10/28/2022 11:15	SM 2320B-2011
TDS, Filterable Residue	590	mg/L	1	50	20		SDW	10/28/2022 06:30	SM 2540C-2015



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

Customer Sample ID: KC-9504

Customer Description:

Lab Number: 223392-003

Preparation: Dissolved

Date Collected: 10/25/2022 10:28

Date Received: 10/26/2022 11:42

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	86.8	mg/L	10	0.2	0.1		CRJ	11/02/2022 03:57	EPA 300.1 -1997, Rev. 1.0
Sulfate	256	mg/L	10	2.0	0.3		CRJ	11/02/2022 03:57	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	21.3	µg/L	1	0.20	0.05		GES	11/08/2022 12:50	EPA 200.8-1994, Rev. 5.4
Calcium	81.9	mg/L	1	0.05	0.02		GES	11/08/2022 12:50	EPA 200.8-1994, Rev. 5.4
Iron	0.465	mg/L	1	0.020	0.006		GES	11/08/2022 12:50	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 12:50	EPA 200.8-1994, Rev. 5.4
Magnesium	8.41	mg/L	1	0.10	0.02		GES	11/08/2022 12:50	EPA 200.8-1994, Rev. 5.4
Manganese	0.169	mg/L	1	0.0010	0.0002		GES	11/08/2022 12:50	EPA 200.8-1994, Rev. 5.4
Selenium	<0.09	µg/L	1	0.50	0.09	U1	GES	11/08/2022 12:50	EPA 200.8-1994, Rev. 5.4
Sodium	54.7	mg/L	1	0.20	0.05		GES	11/08/2022 12:50	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	13	mg/L	1	20	5	J1	MGK	10/28/2022 11:15	SM 2320B-2011
TDS, Filterable Residue	540	mg/L	1	50	20		SDW	10/28/2022 06:37	SM 2540C-2015



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

Customer Sample ID: KC-9507

Customer Description:

Lab Number: 223392-004

Preparation: Dissolved

Date Collected: 10/25/2022 10:41

Date Received: 10/26/2022 11:42

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	87.6	mg/L	25	0.5	0.3		CRJ	11/02/2022 03:24	EPA 300.1 -1997, Rev. 1.0
Sulfate	777	mg/L	25	5.0	0.8		CRJ	11/02/2022 03:24	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	32.5	µg/L	1	0.20	0.05		GES	11/08/2022 12:55	EPA 200.8-1994, Rev. 5.4
Calcium	249	mg/L	5	0.3	0.1		GES	11/08/2022 13:00	EPA 200.8-1994, Rev. 5.4
Iron	3.05	mg/L	1	0.020	0.006		GES	11/08/2022 12:55	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 12:55	EPA 200.8-1994, Rev. 5.4
Magnesium	31.6	mg/L	1	0.10	0.02		GES	11/08/2022 12:55	EPA 200.8-1994, Rev. 5.4
Manganese	3.14	mg/L	1	0.0010	0.0002		GES	11/08/2022 12:55	EPA 200.8-1994, Rev. 5.4
Selenium	<0.09	µg/L	1	0.50	0.09	U1	GES	11/08/2022 12:55	EPA 200.8-1994, Rev. 5.4
Sodium	55.6	mg/L	1	0.20	0.05		GES	11/08/2022 12:55	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	83	mg/L	1	20	5		MGK	10/28/2022 11:15	SM 2320B-2011
TDS, Filterable Residue	1340	mg/L	1	50	20		SDW	10/28/2022 06:37	SM 2540C-2015



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

Customer Sample ID: KC-9508

Customer Description:

Lab Number: 223392-005

Preparation: Dissolved

Date Collected: 10/25/2022 09:38

Date Received: 10/26/2022 11:42

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	33.6	mg/L	10	0.2	0.1		CRJ	11/02/2022 02:18	EPA 300.1 -1997, Rev. 1.0
Sulfate	284	mg/L	10	2.0	0.3		CRJ	11/02/2022 02:18	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	63.1	µg/L	1	0.20	0.05		GES	11/08/2022 13:05	EPA 200.8-1994, Rev. 5.4
Calcium	134	mg/L	1	0.05	0.02		GES	11/08/2022 13:05	EPA 200.8-1994, Rev. 5.4
Iron	5.55	mg/L	1	0.020	0.006		GES	11/08/2022 13:05	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 13:05	EPA 200.8-1994, Rev. 5.4
Magnesium	21.3	mg/L	1	0.10	0.02		GES	11/08/2022 13:05	EPA 200.8-1994, Rev. 5.4
Manganese	1.81	mg/L	1	0.0010	0.0002		GES	11/08/2022 13:05	EPA 200.8-1994, Rev. 5.4
Selenium	<0.09	µg/L	1	0.50	0.09	U1	GES	11/08/2022 13:05	EPA 200.8-1994, Rev. 5.4
Sodium	16.0	mg/L	1	0.20	0.05		GES	11/08/2022 13:05	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	213	mg/L	1	20	5		MGK	10/28/2022 11:15	SM 2320B-2011
TDS, Filterable Residue	690	mg/L	1	50	20		SDW	10/28/2022 06:44	SM 2540C-2015



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

Customer Sample ID: KC-9509

Customer Description:

Lab Number: 223392-006

Preparation: Dissolved

Date Collected: 10/25/2022 10:08

Date Received: 10/26/2022 11:42

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	45.8	mg/L	10	0.2	0.1		CRJ	11/02/2022 01:45	EPA 300.1 -1997, Rev. 1.0
Sulfate	324	mg/L	10	2.0	0.3		CRJ	11/02/2022 01:45	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	67.5	µg/L	1	0.20	0.05		GES	11/08/2022 13:11	EPA 200.8-1994, Rev. 5.4
Calcium	119	mg/L	1	0.05	0.02		GES	11/08/2022 13:11	EPA 200.8-1994, Rev. 5.4
Iron	3.45	mg/L	1	0.020	0.006		GES	11/08/2022 13:11	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 13:11	EPA 200.8-1994, Rev. 5.4
Magnesium	22.0	mg/L	1	0.10	0.02		GES	11/08/2022 13:11	EPA 200.8-1994, Rev. 5.4
Manganese	19.0	mg/L	1	0.0010	0.0002		GES	11/08/2022 13:11	EPA 200.8-1994, Rev. 5.4
Selenium	<0.09	µg/L	1	0.50	0.09	U1	GES	11/08/2022 13:11	EPA 200.8-1994, Rev. 5.4
Sodium	17.6	mg/L	1	0.20	0.05		GES	11/08/2022 13:11	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	144	mg/L	1	20	5		MGK	10/28/2022 11:15	SM 2320B-2011
TDS, Filterable Residue	680	mg/L	1	50	20		SDW	10/28/2022 06:44	SM 2540C-2015



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

Customer Sample ID: Trip Blank

Customer Description:

Lab Number: 223392-007

Preparation: Dissolved

Date Collected: 10/25/2022 08:00

Date Received: 10/26/2022 11:42

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	<0.02	mg/L	2	0.04	0.02	U1	CRJ	11/02/2022 00:39	EPA 300.1 -1997, Rev. 1.0
Sulfate	0.18	mg/L	2	0.40	0.06	J1	CRJ	11/02/2022 00:39	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 13:21	EPA 200.8-1994, Rev. 5.4
Calcium	<0.02	mg/L	1	0.05	0.02	U1	GES	11/08/2022 13:21	EPA 200.8-1994, Rev. 5.4
Iron	<0.006	mg/L	1	0.020	0.006	U1	GES	11/08/2022 13:21	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 13:21	EPA 200.8-1994, Rev. 5.4
Magnesium	<0.02	mg/L	1	0.10	0.02	U1	GES	11/08/2022 13:21	EPA 200.8-1994, Rev. 5.4
Manganese	<0.0002	mg/L	1	0.0010	0.0002	U1	GES	11/08/2022 13:21	EPA 200.8-1994, Rev. 5.4
Selenium	<0.09	µg/L	1	0.50	0.09	U1	GES	11/08/2022 13:21	EPA 200.8-1994, Rev. 5.4
Sodium	<0.05	mg/L	1	0.20	0.05	U1	GES	11/08/2022 13:21	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	10/28/2022 11:15	SM 2320B-2011
TDS, Filterable Residue	<20	mg/L	1	50	20	U1	SDW	10/28/2022 06:50	SM 2540C-2015



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

Customer Sample ID: Duplicate

Customer Description:

Lab Number: 223392-008

Preparation: Dissolved

Date Collected: 10/25/2022 11:04

Date Received: 10/26/2022 11:42

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	25.8	mg/L	10	0.2	0.1		CRJ	11/02/2022 01:12	EPA 300.1 -1997, Rev. 1.0
Sulfate	258	mg/L	10	2.0	0.3		CRJ	11/02/2022 01:12	EPA 300.1 -1997, Rev. 1.0

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Barium	80.9	µg/L	1	0.20	0.05		GES	11/08/2022 14:27	EPA 200.8-1994, Rev. 5.4
Calcium	126	mg/L	1	0.05	0.02		GES	11/08/2022 14:27	EPA 200.8-1994, Rev. 5.4
Iron	0.636	mg/L	1	0.020	0.006		GES	11/08/2022 14:27	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	11/08/2022 14:27	EPA 200.8-1994, Rev. 5.4
Magnesium	25.9	mg/L	1	0.10	0.02		GES	11/08/2022 14:27	EPA 200.8-1994, Rev. 5.4
Manganese	0.747	mg/L	1	0.0010	0.0002		GES	11/08/2022 14:27	EPA 200.8-1994, Rev. 5.4
Selenium	<0.09	µg/L	1	0.50	0.09	U1	GES	11/08/2022 14:27	EPA 200.8-1994, Rev. 5.4
Sodium	19.0	mg/L	1	0.20	0.05		GES	11/08/2022 14:27	EPA 200.8-1994, Rev. 5.4

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	247	mg/L	1	20	5		MGK	10/28/2022 11:15	SM 2320B-2011
TDS, Filterable Residue	670	mg/L	1	50	20		SDW	10/28/2022 06:50	SM 2540C-2015



Water Analysis Report

Dolan Chemical Laboratory
4001 Bixby Road
Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Job ID: 223392

Customer: Kyger Creek Plant

Date Reported: 11/10/2022

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.

Data Qualifier Legend

- M1 - The associated matrix spike (MS) or matrix spike duplicate (MSD) recovery was outside acceptance limits.
- P3 - The precision on the matrix spike duplicate (MSD) was above acceptance limits.
- U1 - Not detected at or above method detection limit (MDL).
- J1 - Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

Attachment III

OHIO VALLEY ELECTRIC CORPORATION
 KYGER CREEK FLY ASH POND CLOSURE PROJECT
 MONITORING WELL KC-9501
 SAMPLING RESULTS

B A C K D R T O A U N D	Round	Date	Alkalinity	Barium	Calcium	Chloride	Gross Alpha	Gross Beta	Iron	Lead	Magnesium	Manganese	Residue, Filterable, TDS	Selenium	Sodium	Sulfate	Conductivity	Temperature	pH	Well	River
			(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.
C K D R T O A U N D	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	15.6	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	15.4	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	16.1	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	16.5	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	15.9	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	15.3	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	15.8	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	17.9	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
	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
S E N N U A L	1	10/13/99	160	61	117	41	5	6.6	0.56	<2	21.8	0.49	538	<5	21.8	222	818	18.4	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	16.5	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

OHIO VALLEY ELECTRIC CORPORATION
 KYGER CREEK FLY ASH POND CLOSURE PROJECT
 MONITORING WELL KC-9502
 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
B	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 umhos/cm	Field °C	Field S.U.	Elev. ft.	Elev. ft.
C K D G R T O O A U N D	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	15.7	5.7	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	5.7	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	15.9	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	5.5	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	15.9	5.5	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	15.6	5.2	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	16.3	5.2	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	17.9	5.4	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
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
S E N S I T I V E	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	17	5.5	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	16.5	5.2	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	10/19/05	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	19	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	20	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	20	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	22	67.9	26.3	7.3	1.6	0.09	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	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	68.4	27.1	0.6	1.7	0.53	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	0.4	<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	27	74.8	26.1	-0.49	2.46	0.16	<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	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	0.04	<0.05	24.4	26	590	<0.09	23.5	355	790	14.90	5.63	52.80	537.1	

OHIO VALLEY ELECTRIC CORPORATION
 KYGER CREEK FLY ASH POND CLOSURE PROJECT
 MONITORING WELL KC-9504
 SAMPLING RESULTS

B A C K D R T O A U N D	Round	Date	Alkalinity	Barium	Calcium	Chloride	Gross Alpha	Gross Beta	Iron	Lead	Magnesium	Manganese	Residue, Filterable, TDS	Selenium	Sodium	Sulfate	Conductivity	Temperature	pH	Well	River
			(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.
	95% Tol. 95% Tol.	Upper 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 N/A	N/A N/A	908 N/A	N/A N/A	N/A N/A	459 N/A	1528 N/A	N/A N/A	N/A N/A	N/A N/A
C K D R T O A U N D	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	46.8	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	46.9	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	47.9	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	<1	2.9	0.33	<2	17.4	0.69	716	<5	28.6	371	1198	17.1	5.19	46.4	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	47.2	540
S E N M U I A L	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
	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	48	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
	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	<0.3	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	

OHIO VALLEY ELECTRIC CORPORATION
 KYGER CREEK FLY ASH POND CLOSURE PROJECT
 MONITORING WELL KC-9507
 SAMPLING RESULTS

B A C K G R O U N D	Round	Date	Alkalinity	Barium	Calcium	Chloride	Gross Alpha	Gross Beta	Iron	Lead	Magnesium	Manganese	Residue, Filterable, TDS	Selenium	Sodium	Sulfate	Conductivity	Temperature	pH	Well	River
			(total)	(diss)	(diss)	mg/l	µCi/l	µCi/l	(diss)	(diss)	(diss)	(diss)	mg/l	(diss)	(diss)	mg/l	Field	Field	Field	Elev.	Elev.
			mg/l	ug/l	mg/l				mg/l	ug/l	mg/l	ug/l	mg/l	ug/l	mg/l	umhos/cm	°C	S.U.	ft.	ft.	
	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
S E N S I T I V E	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

OHIO VALLEY ELECTRIC CORPORATION
 KYGER CREEK FLY ASH POND CLOSURE PROJECT
 MONITORING WELL KC-9508
 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
BAK D GA R T O A U N D	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.
	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
SEN M U I A L	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

APPENDIX B



State of Ohio Environmental Protection Agency

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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.

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 three 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 that 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 observations

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 Sutcliffe, 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

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 an 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 ANALYTICAL DATA SUMMARY

Appendix E
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Analyte	Unit	Location Date Sample Type	BAC-01 2019-09-19 N	BAC-01 2020-03-11 N	BAC-01 2020-09-09 N	BAC-01 2021-03-13 N	BAC-01 2021-09-18 N	BAC-01 2022-03-31 N	BAC-01 2022-04-27 N	BAC-01 2022-06-28 N	BAC-01 2022-10-11 FD	BAC-01 2022-10-11 N	BAC-02 2016-08-25 N	BAC-02 2016-10-03 N	BAC-02 2016-11-28 N	BAC-02 2017-02-07 N	BAC-02 2017-03-28 N	BAC-02 2017-05-03 N	BAC-02 2017-06-13 FD	BAC-02 2017-06-13 N
Alkalinity, Total as CaCO3	mg/L		190	200	190	200	190	210	210	220	210	210			285	273				
Aluminum	mg/L							0.047 J									0.15	0.078	0.041 J	0.035 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	6E-05	3E-05 J	4E-05 J	2E-05 J	0.00035 JB	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.005 U	0.005 U	0.0022 J	0.00099 J	0.005 U	0.002 U	0.002 U	0.005 U	0.0082		0.0018 J	0.00159	0.00124	0.00146	0.00067	0.00072 J	0.00075 J	0.005 U	0.00075 J
Barium	mg/L	0.059	0.06	0.071	0.067	0.061	0.065	0.058	0.15			0.064	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 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	3.5E-05	2.3E-05	2.6E-05	7E-06 J	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	190	200	190	200	190	210	210	220	210	210									
Boron	mg/L	0.096 J	0.11	0.15 J	0.093 J	0.1	0.2 U				0.098 J	0.098 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 U	0.001 U	0.001 U	0.001 U	0.0001 U	0.001 U	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	96	100	96	100	100	110				100	100	149	156	168	161	170 JB	180	180	180
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									
Chloride	mg/L	21	27	29	32	34	21				28	28	82.8	91.8	95	97.3	100	21	110	110
Chromium	mg/L	0.002 U	0.002 U	0.002 U	0.001 J	0.005 U	0.005 U	0.005 U	0.005			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	0.001 U	0.00019 J	0.001	0.00067 J	0.00038 J	0.00023 J	0.001 U	0.0043			0.00071 J	0.00333	0.00257	0.00266	0.00178	0.0019	0.0018	0.0018	0.0017
Conductivity, Field	uS/cm		633	612	622	618	610	605.4			632	632	1279	1355	1436	1434				
Copper	mg/L						0.005 U										0.0014 JB	0.002 U	0.002 U	0.002 U
Dissolved Oxygen, Field	mg/L						0.33	1.02			0.9	0.9	0.63	0.39	0.94	1.18				
Dissolved Solids, Total	mg/L	350	380	360	440	420	360 J				400	390	824	858	896	860	1000	1000	1100 J	1000 J
Fluoride	mg/L	0.12	0.13	0.046 J	0.096	0.13	0.14	0.13	0.12	0.13	0.13	0.13	0.19	0.1 J	0.08 J	0.17	0.17	0.032 J	0.17	0.17
Iron	mg/L						0.11											0.39 B	0.27	0.15
Lead	mg/L	0.001 U	0.001 U	0.001	0.00058 J	0.001 U	0.0006 J	0.001 U	0.0056			0.00072 J	0.00284	0.00184	0.00158	0.000589	0.0008 J	0.00068 J	0.0006 J	0.00068 J
Lithium	mg/L	0.002 J	0.008 U^	0.004 J	0.0033 J	0.0026 J	0.0029 J	0.0024 J	0.0064 J			0.0038 J	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	13	13	13	13	12	12	13	13	13	13			43.9	43.9	46 B	51	51	52
Manganese	mg/L						0.12										4.1 JB	4.3	4.4	4.5
Mercury	mg/L						0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	3E-06 J	7E-06	5E-06 U	3E-06 J	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	0.002 U	0.005 U	0.0013 J			0.005 U	0.00109	0.00044	0.00081	0.00201	0.01 U	0.01 U	0.01 U	0.01 U
Nickel	mg/L						0.005 U										0.022 B	0.022	0.02	0.021
Oxidation-Reduction Potential, Field	mV						83.6					97.7								
pH, Field	pH units	6.94	6.96	6.97	6.82	6.81	6.82	6.82			6.79	6.79	6.2	6.19	6.14	6.1	6.18	6.13		6.08
Potassium	mg/L	1.4	1.5	1.6	1.5	1.4	1.5 J	1.4	2.3	1.6	1.6				3.66	3.43	3.6 B	3.7	3.6	3.6
Radium-226	pCi/L						0.0525 U	0.0643 U	0.19 U	0.194 U	0.11 U	0.934	0.233	0.12	0.204	0.0599 U	0.0438 U	0.113	0.072 U	0.072 U
Radium-226/228	pCi/L						-0.0522 U	0.371 U	1.56	1.22 U	1.33 U	1.073	0.855	0.0347	0.1452	0.298 U	0.375 U	0.29 U	0.305 U	0.305 U
Radium-228	pCi/L						-0.105 U	0.307 U	1.37	1.03 U	1.22 U	0.139	0.622	-0.0853	-0.0588	0.238 U	0.331 U	0.177 U	0.233 U	0.233 U
Redox Potential, Field	mV												112.3	164.6	115.3	143.3				
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 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	0.001 U
Sodium	mg/L	9.6	11	11	11	13	13	11	12	12	12				67.3	64.6	68 JB	74 B	73	74
Strontium	mg/L						0.18								0.499	0.479	0.55 B	0.56 B	0.51 B	0.53 B
Sulfate	mg/L	110	92	100	95	94	80				88	88	288	341	359	346	410	80	430	420
Temperature, Field	deg C		14	14	13	14	15	13.7			13.6	13.6	19.9	17.2	16	16.2				
Thallium	mg/L	0.001 U	0.001 U	0.00021 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.000128	3E-05 J	9.3E-05	3E-05 J	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	8	2	26.5	10.4	5.38	20.1	2.51			45.73	45.73	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	0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Millivolts
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 equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed

**Appendix E
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant**

Analyte	Location Date Sample Type	BAC-03 2016-11-28 N	BAC-03 2017-02-07 N	BAC-03 2017-03-28 N	BAC-03 2017-05-02 FD	BAC-03 2017-05-02 N	BAC-03 2017-06-13 N	BAC-03 2017-07-14 N	BAC-03 2018-02-28 N	BAC-03 2018-05-15 N	BAC-03 2018-09-18 N	BAC-03 2019-03-16 N	BAC-03 2019-09-19 N	BAC-03 2020-03-12 FD	BAC-03 2020-03-12 N	BAC-03 2020-09-10 N	BAC-03 2021-03-13 N	BAC-03 2021-09-18 FD	BAC-03 2021-09-18 N
	Unit																		
Alkalinity, Total as CaCO3	mg/L	96.6	88.2							100	93	91 B	85	100	100	86	89	85	86
Aluminum	mg/L			0.059	0.049 J	0.042 J	0.05 U	0.05 U											
Antimony	mg/L	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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	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	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium	mg/L	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	0.046	0.045	0.037	0.045	0.042	0.041
Beryllium	mg/L	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	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	100	100	86	89	85	86
Boron	mg/L	2.07	2.24	2.3 J	2.1	2.1	2 J	2 JB	2.3	2.5	2.2	2.2	2	1.6	1.6	1.7	1.9	1.8	1.8
Bromide	mg/L	0.151	0.1 J	0.17 J	0.15 J	0.15 J		0.16 J											
Cadmium	mg/L	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	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	90.4	95.7	97 JB	96	96	89	88	95	96	92	91	87	100	100	73	83	84	84
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	48.2	52.2	68	72	72	62	61	62	56	57	59	52	78	78	63	79	64	64
Chromium	mg/L	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	0.001 J	0.002 U	0.002 U	0.002 U	0.005 U	0.005 U
Cobalt	mg/L	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	0.001 U	0.001 U	0.0003 J	0.00052 J	0.00031 J	0.00029 J
Conductivity, Field	uS/cm	749	762							731				819	819	684	750	681	681
Copper	mg/L			0.0031 B	0.002 B	0.0019 JB	0.0017 JB	0.002 U											
Dissolved Oxygen, Field	mg/L	0.68	0.83						0.15										
Dissolved Solids, Total	mg/L	416	514	520	510	510	500 J	500 J	500	540	500	480	480	560	550	420	560	510	470
Fluoride	mg/L	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	0.068	0.081	0.037 J	0.045 J	0.066	0.065
Iron	mg/L			0.14 B	0.13	0.1	0.1 U	0.1 U											
Lead	mg/L	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	0.00081 J	0.00073 J	0.0016	0.0025	0.001	0.00096 J
Lithium	mg/L	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	0.0021 J [~]	0.0023 J [~]	0.0059 J	0.0057 J	0.0055 J	0.0062 J
Magnesium	mg/L	16.2	17.6	17 B	18	18	17	17	17	17	16	18	16	20	19	15	16	17	16
Manganese	mg/L			0.24 JB	0.23	0.22	0.19	0.15											
Mercury	mg/L	5E-06 U	5E-06 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U											
Molybdenum	mg/L	0.0005	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	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nickel	mg/L			0.0044 B	0.0042	0.048	0.0035	0.0035											
Oxidation-Reduction Potential, Field	mV																		
pH, Field	pH units	6.04	6.05	6.07		6.05	5.89	5.93		6.16	6.12	6.26	6.19	6.19	6.19	6.27	6.05	6.09	6.09
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	2	2	1.8	1.8	1.9	1.9
Radium-226	pCi/L	0.0518	0.281	0.0181 U	0.065 U	-0.0333 U	0.0442 U	0.235											
Radium-226/228	pCi/L	0.3818	0.17	0.102 U	0.345	0.271 U	0.0882 U	0.506											
Radium-228	pCi/L	0.33	-0.111	0.0838 U	0.28 U	0.304 U	0.044 U	0.272											
Redox Potential, Field	mV	192.3	248.5																
Selenium	mg/L	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	0.005 U	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	35	34	37	32	34	34
Strontium	mg/L	0.211	0.222	0.22 B	0.22 B	0.22 B	0.2 B	0.21											
Sulfate	mg/L	200	196	180	180	180	190	190 J	210	200	200	200	210	200	200	170	180	180	180
Temperature, Field	deg C	14.5	14.8							16.5				15	15	16	15	17	17
Thallium	mg/L	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	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	7.6	5.1	2.1		4.2	2.3	1.9		1.03	1.36		2	0.9	0.9	2.9	8	2.4	2.4
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 = Millivolts
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 equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed

Appendix E
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Analyte	Unit	Location Date Sample Type	BAC-03 2022-04-01 N	BAC-03 2022-04-28 N	BAC-03 2022-06-21 N	BAC-03 2022-10-13 N	BAC-04 2016-08-26 N	BAC-04 2016-10-03 N	BAC-04 2016-11-28 N	BAC-04 2017-02-07 N	BAC-04 2017-03-28 N	BAC-04 2017-05-02 N	BAC-04 2017-06-13 N	BAC-04 2017-07-19 N	BAC-04 2018-03-01 FD	BAC-04 2018-03-01 N	BAC-04 2018-05-15 N	BAC-04 2018-09-18 N	BAC-04 2019-03-16 FD	BAC-04 2019-03-16 N
Alkalinity, Total as CaCO3	mg/L		81	84	96	86			107	111					92	91	96	91	100 B	100 B
Aluminum	mg/L		0.04 J								0.041 J	0.76	0.63	1.6						
Antimony	mg/L		0.002 U	0.002 U	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	0.002 U	0.0013 J	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L		0.002 U	0.005 U	0.005 U	0.011	0.00183	0.00134	0.00212	0.0017	0.002 J	0.0033 J	0.0045 J	0.0086	0.00089 J	0.0018 J	0.0036 J	0.0034 J	0.0014 J	0.0021 J
Barium	mg/L		0.042	0.039	0.038	0.18	0.0624	0.0583	0.059	0.0597	0.06 B	0.07	0.065	0.077	0.041	0.04	0.052	0.049	0.041	0.042
Beryllium	mg/L		0.001 U	0.001 U	0.001 U	0.00064 J	2E-05 J	6E-06 J	9E-06 J	2.1E-05	0.001 U	0.001 U	0.00059 J	0.001 U	0.001 U	0.0004 J	0.001 U	0.001 U+	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		81	84	96	86								92	91	96	91	100 B	100 B	
Boron	mg/L		2.3			1.8	2.56	2.53	2.61	2.7	2.7 J	2.5	2.7 J	2.5 JB	2.8	2.8	2.9	2.8	3	2.9
Bromide	mg/L								0.1 J	0.1 J		0.17 J	0.16 J	0.17 J						
Cadmium	mg/L		0.0001 U	0.001 U	0.001 U	0.00022 J	0.00011	4E-05	2E-05	9E-05	0.001 U	0.001 U	0.00036 J	0.00022 J	0.00028 J	0.0004 J	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L		88			81	99.1	98.2	96.7	99.6	94 JB	94	83	86	94	94	95	92	95	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
Chloride	mg/L		51			57	42.6	44.5	40.9	40		48	47	49	52	52	49	40	41	41
Chromium	mg/L		0.0012 J	0.005 U	0.005 U	0.016	0.0006	0.0009	0.000238	0.00081	0.00034 JB	0.005	0.0029	0.0039	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	mg/L		0.00022 J	0.001 U	0.001 U	0.014	0.00807	0.00627	0.00577	0.00553	0.0066	0.0083	0.0087	0.0095	0.0018	0.0018	0.0044	0.0043	0.0018	0.0017
Conductivity, Field	uS/cm		730	684		695	696	761	751	765							721			
Copper	mg/L		0.0025 J								0.00037 JB	0.0088 B	0.0055 B	0.0064						
Dissolved Oxygen, Field	mg/L		0.27	0.39		1.46	0.77	0.4	0.67	0.98							0.93			
Dissolved Solids, Total	mg/L		440			460 J	516	488	448	498		530	520 J	520 J	500	490	540	490	520	520
Fluoride	mg/L		0.063	0.064	0.054	0.058	0.08 J	0.09 J	0.08 J	0.09 J		0.11	0.079	0.077	0.087	0.084	0.085	0.082	0.082	0.078
Iron	mg/L		0.1								1.8 B	3.8	4.6	8.7						
Lead	mg/L		0.00097	0.001 U	0.00052 J	0.026	0.00106	0.000367	0.000277	0.00102	0.00037 J	0.0035	0.0037	0.0064	0.001 U	0.001 U	0.0012	0.001 U	0.001 U	0.001 U
Lithium	mg/L		0.0068 J	0.0067 J	0.0031 J	0.013	0.007	0.006	0.01	0.006	0.0067 J	0.0068 J	0.0048 J	0.0082	0.0048 J	0.0058 J	0.0046 J	0.0085 *+^+	0.0049 J	0.005 J
Magnesium	mg/L		16	16	17	17			17.7	18	18 B	19	18	17	18	18	18	17	18	18
Manganese	mg/L		0.12								1.4 JB	2	1.4	1.4						
Mercury	mg/L		0.0002 U	0.0002 U	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	0.0002 U						
Molybdenum	mg/L		0.002 U	0.005 U	0.005 U	0.0011 J	0.00057	0.00465	0.00037	0.00365	0.00061 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		0.0024 J								0.012 B	0.013	0.0088	0.012						
Oxidation-Reduction Potential, Field	mV		118.5	81.1		129.7														
pH, Field	pH units		5.97	6.04		6	6.41	6.17	6.19	6.23	6.18	6.2	6.04	5.94			6.17	6.24		6.46
Potassium	mg/L		1.8	1.8	1.9	4.3			1.95	2	1.9 B	2	1.8	2.1	1.8	1.8	1.8	1.8	1.9	2
Radium-226	pCi/L		0.0737 U	0.0646 U	0.0577 U	0.586 U	0.764	0.226	0.235	0.19		0.17	0.152	0.274						
Radium-226/228	pCi/L		0.244 U	0.275 U	0.711	2.44 U	0.8152	0.467	0.34	0.017		0.641	0.178 U	0.576						
Radium-228	pCi/L		0.171 U	0.21 U	0.653	1.85 U	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 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	0.005 U	0.00089 J	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L		0.001 U								0.00011 J	0.002	0.00026 J	0.00042 J						
Sodium	mg/L		29	28	30	29			28.7	27.9	27 JB	29 B	27	27 JB	29	28	28	27	28	28
Strontium	mg/L		0.23						0.218	0.218	0.21 B	0.21 B	0.16 B	0.19						
Sulfate	mg/L		190			190	215	214	209	200	220 J	230	220	210	220	220	220	220	220	220
Temperature, Field	deg C		14	15.2		15.2	19.35	16.6	15.1	15							19.6			
Thallium	mg/L		0.001 U	0.001 U	0.001 U	0.0002 J	7.2E-05	4E-05 J	3E-05 J	5.3E-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
Turbidity, Field	NTU		6.7	1.1		632.99	9.1	5	9	9.2	0.8	44.7	58.9	108.1			33.2	21.5		
Vanadium	mg/L																			
Zinc	mg/L		0.01 J								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 = Millivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
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B: Compound was found in the blank and sample.
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F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed

Appendix E
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location Date Sample Type		BAC-05 2017-07-19 N	BAC-05 2018-03-01 N	BAC-05 2018-05-16 N	BAC-05 2018-06-20 N	BAC-05 2018-09-18 N	BAC-05 2019-03-16 N	BAC-05 2019-09-18 N	BAC-05 2020-03-11 N	BAC-05 2020-09-10 N	BAC-05 2021-03-13 N	BAC-05 2021-09-18 N	BAC-05 2022-04-01 N	BAC-05 2022-04-28 N	BAC-05 2022-06-21 N	BAC-05 2022-10-12 N	BAC-06 2020-09-10 N	BAC-06 2021-03-13 N	BAC-06 2021-09-18 N
Analyte	Unit																		
Alkalinity, Total as CaCO3	mg/L		160	90	65	79	64 B	84	88	61	93	140	82	66	64	110	180	140	170
Aluminum	mg/L	0.43											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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	mg/L	0.00084 J	0.0013 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	0.00081 J	0.002 U	0.005 U	0.005 U	0.005 U	0.00091 J	0.00091 J	0.00093 J
Barium	mg/L	0.041	0.038	0.057	0.053	0.053	0.048	0.04	0.04	0.039	0.031	0.031	0.034	0.031	0.041	0.032	0.09	0.084	0.097
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	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	88	61	93	140	82	66	64	110	180	140	170
Boron	mg/L	4.3 JB	3.9	2.9	2.8	2.8	2.5	2.5	2.8	2.5	2.9	3	2.8 J			2.7	1.7	1.4	1.7
Bromide	mg/L	0.1 J																	
Cadmium	mg/L	0.001 U	0.001 U	0.00031 J	0.00029 J	0.00044 J	0.00041 J	0.00023 J	0.00038 J	0.00038 J	0.001 U	0.001 U	0.00025	0.00025 J	0.00046 J	0.00023 J	0.001 U	0.001 U	0.001 U
Calcium	mg/L	87	84	74	70	76	70	69	79	68	73	100	80			80	100	84	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	5 U	5 U	5 U	5 U
Chloride	mg/L	21	21	32	31	37	37	32	29	38	29	22	22			26	25	26	25
Chromium	mg/L	0.0092	0.0034	0.0013 J	0.0022	0.002 U	0.0011 J	0.002 U	0.0015 J	0.002 U	0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0017 J	0.002 U	0.005 U
Cobalt	mg/L	0.0037	0.0031	0.013	0.01	0.012	0.0092	0.0076	0.0056	0.0071	0.0038	0.0028	0.0045	0.005	0.0074	0.006	0.0054	0.0043	0.0047
Conductivity, Field	uS/cm			673					694	709	674	699	667	651		720	772	747	768
Copper	mg/L	0.0042											0.005 U						
Dissolved Oxygen, Field	mg/L			0.5									0.55	0.57		0.57			
Dissolved Solids, Total	mg/L	460 J	420	470	470	480	470	450	440	480	540	520	420 J			470 J	510	560	570
Fluoride	mg/L	0.21	0.22	0.11	0.091	0.092	0.084	0.094	0.13	0.041 J	0.1	0.2	0.12	0.1	0.087	0.12	0.048 J	0.067	0.11
Iron	mg/L	1.4											0.91						
Lead	mg/L	0.0015	0.002	0.0011	0.0013	0.00058 J	0.001 U	0.00064 J	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium	mg/L	0.0045 J	0.0033 J	0.0072 J	0.011	0.0095 *^+	0.0084	0.0066 J	0.0029 J^	0.0091	0.0055 J	0.0036 J	0.0056 J	0.0072 J	0.0072 J	0.0078 J	0.007 J	0.0049 J	0.006 J
Magnesium	mg/L	15	16	18	19	19	20	19	19	20	17	21	17	15	22	21	25	20	28
Manganese	mg/L	2											7.2						
Mercury	mg/L	0.0002 U											0.0002 U		0.00021	0.0002 U	0.0002 U		
Molybdenum	mg/L	0.01 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	0.005 U	0.005 U	0.002 U	0.005 U	0.005 U	0.005 U	0.0012 J	0.005 U	0.005 U
Nickel	mg/L	0.012											0.029						
Oxidation-Reduction Potential, Field	mV												99.1	89.2		44.2			
pH, Field	pH units	6.53		6.06		6.09	6.1	6.31	6.33	6.15	6.26	6.69	5.98	5.98		6.14	6.81	6.66	6.76
Potassium	mg/L	1.5	1.4	1.6	1.7	1.6	1.8	1.4	1.6	1.5	1.2	1.4	1.3	1.3	1.6	1.4	1.5	1.5	1.5
Radium-226	pCi/L	0.0901 U											0.05 U	0.125	0.0585 U	0.126 U			
Radium-226/228	pCi/L	0.13 U											0.276 U	0.255 U	1.01	0.495 U			
Radium-228	pCi/L	0.0398 U											0.226 U	0.131 U	0.953	0.369 U			
Redox Potential, Field	mV																		
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.00091 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	0.005 U	0.005 U	0.005 U
Silver	mg/L	0.00013 J											0.001 U						
Sodium	mg/L	21 JB	21	25	25	25	26	23	24	26	21	21	20	19	26	20	15	13	17
Strontium	mg/L	0.13											0.15						
Sulfate	mg/L	160	150	220	210	230	240	230	220	250	240	210	220			230 J	200	190	220
Temperature, Field	deg C			16.6					15	16	15	17	14	14.9		16	16	14	15
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	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	25.1		21.3		16.1			37	9.6	7.5	7.2	10.2	6.7	3.84	14.23	15	7.4	3.5
Vanadium	mg/L																		
Zinc	mg/L	0.031											0.02 U						

Notes:

- FD = Field duplicate sample
- N = Normal environmental sample
- deg C = Degree Celcius
- mg/L = Milligrams per liter
- mV = Millivolts
- 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 equal to the method detection limit and the concentration is an approximate value.
- U: Indicates the analyte was analyzed for but not detected.
- F1 = MS and/or MSD Recovery is outside acceptance limits.
- Empty cells = Not analyzed

Appendix E
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Location Date Sample Type	MW-1 2017-07-14 FD	MW-1 2017-07-14 N	MW-1 2018-02-28 N	MW-1 2018-05-15 N	MW-1 2018-09-18 N	MW-1 2019-03-16 N	MW-1 2019-09-17 N	MW-1 2020-03-11 N	MW-1 2020-09-10 N	MW-1 2021-03-13 N	MW-1 2021-09-20 N	MW-1 2022-03-31 FD	MW-1 2022-03-31 N	MW-1 2022-04-27 FD	MW-1 2022-04-27 N	MW-1 2022-06-21 N	MW-1 2022-10-10 N	MW-6 2016-08-26 N	
Analyte	Unit																		
Alkalinity, Total as CaCO3	mg/L				230	220	220 B	220	220	220	230	240	230	230	230	230	240		
Aluminum	mg/L	0.05 U	0.05 U										0.037 J	0.026 J					
Antimony	mg/L	0.002 U	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	2E-05 J	
Arsenic	mg/L	0.005 U	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	0.00029	
Barium	mg/L	0.1	0.1	0.11	0.11	0.12	0.11	0.11	0.11	0.11	0.11	0.12	0.13	0.13	0.12	0.11	0.12	0.093	
Beryllium	mg/L	0.001 U	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	2E-05 U	
Bicarbonate Alkalinity as CaCO3	mg/L			220	230	220	220 B	220	220	230	240	230	230	230	230	230	240		
Boron	mg/L	0.067 JB	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				0.1 U	
Bromide	mg/L	0.13 J	0.13 J															0.045	
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0002 J	0.001 U	0.001 U	0.001 U	0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U	4E-05	
Calcium	mg/L	120	120	120	120	120	120	120	120	120	110	130	150	150			130	123	
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	22	24	25	27	30	28	37	38	41	41	42	42			42	17.1	
Chromium	mg/L	0.002 U	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	0.0005	
Cobalt	mg/L	0.00069 J	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	0.0011	0.000403	
Conductivity, Field	uS/cm				717				779	756	767	782	794	794		789	815	716	
Copper	mg/L	0.002 U	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	470 J	480 J	470	500	490	520	510	490	470	590	490	470 J	500 J				570	
Fluoride	mg/L	0.11	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	0.1	0.08 J	
Iron	mg/L	0.093 J	0.095 J										0.1	0.08 J					
Lead	mg/L	0.001 U	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	0.0009 J	3.9E-05	
Lithium	mg/L	0.0052 J	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	0.0028 J	0.0041 J	
Magnesium	mg/L	14	13	14	14	14	15	15	15	14	14	15	15	16	15	14	16	16	
Manganese	mg/L	0.49	0.47										0.57	0.58					
Mercury	mg/L	0.0002 U	0.0002 U										0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	5E-06 U	
Molybdenum	mg/L	0.01 U	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	0.005 U	0.00073	
Nickel	mg/L	0.002 U	0.002 U										0.005 U	0.005 U					
Oxidation-Reduction Potential, Field	mV												33.4	33.4		43.9		50.5	
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		7.17	
Potassium	mg/L	1.4	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	1.6	1.5	
Radium-226	pCi/L	0.17	0.258										0.0911 U	0.0844 U	0.175	0.0509 U	0.235	0.0798 U	
Radium-226/228	pCi/L	0.342	0.518										0.489 U	0.112 U	0.291 U	0.372 U	0.988	0.485 U	
Radium-228	pCi/L	0.171 U	0.259 U										0.398 U	0.0278 U	0.116 U	0.321 U	0.753	0.405 U	
Redox Potential, Field	mV																	165.3	
Selenium	mg/L	0.005 U	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	0.005 U	0.005 U	
Silver	mg/L	0.001 U	0.001 U										0.001 U	0.001 U					
Sodium	mg/L	16 J	15 J	15	17	15	17	15	17	15	14	17	18	19	16	15	17	17	
Strontium	mg/L	0.2	0.2										0.27	0.27					
Sulfate	mg/L	130	130	140	140	140	150	140	140	140	140	140	130	130			130	131	
Temperature, Field	deg C				14.1				13	13	13	13	13	13		13.1		14.7	
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00067 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	0.0004 J	
Turbidity, Field	NTU		0.6		11.3	2.72			4	3.8	2.3	1.9	4.8	6.5	6.5	0.01		2.28	
Vanadium	mg/L																	5.5	
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 = Millivolts
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 equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed

Appendix E
Analytical Data Summary
Bottom Ash Pond
Gavin Power Plant

Analyte	Location	MW-6	MW-6	MW-6	MW-6
	Date	2022-04-27	2022-06-28	2022-06-28	2022-10-11
Unit	Sample Type	N	FD	N	N
Alkalinity, Total as CaCO3	mg/L	230	230	240	230
Aluminum	mg/L				
Antimony	mg/L	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
Barium	mg/L	0.12	0.16	0.19	0.12
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	230	230	240	230
Boron	mg/L				0.1 U
Bromide	mg/L				
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L				110
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U
Chloride	mg/L				27
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt	mg/L	0.00039 J	0.00073 J	0.00095 J	0.00041 J
Conductivity, Field	uS/cm	702			755
Copper	mg/L				
Dissolved Oxygen, Field	mg/L	1.02			0.7
Dissolved Solids, Total	mg/L				440
Fluoride	mg/L	0.091	0.088	0.094	0.094
Iron	mg/L				
Lead	mg/L	0.001 U	0.001 U	0.00056 J	0.001 U
Lithium	mg/L	0.004 J	0.0044 J	0.0048 J	0.0049 J
Magnesium	mg/L	13	14	14	13
Manganese	mg/L				
Mercury	mg/L	0.00018 J	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L	0.005 U	0.0012 J	0.005 U	0.005 U
Nickel	mg/L				
Oxidation-Reduction Potential, Field	mV				55.6
pH, Field	pH units	7.03			7.32
Potassium	mg/L	1.6	1.7	1.8	1.5
Radium-226	pCi/L	0.0377 U	0.0864 U	0.152	0.0567 U
Radium-226/228	pCi/L	0.16 U	0.334 U	0.647	0.527
Radium-228	pCi/L	0.122 U	0.247 U	0.495	0.471 U
Redox Potential, Field	mV				
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U
Silver	mg/L				
Sodium	mg/L	13	14	13	13
Strontium	mg/L				
Sulfate	mg/L				120
Temperature, Field	deg C	13.6			15
Thallium	mg/L	0.001 U	0.00029 J	0.001 U	0.001 U
Turbidity, Field	NTU	0.15			2.7
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 = Millivolts
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 equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
F1 = MS and/or MSD Recovery is outside acceptance limits.
Empty cells = Not analyzed

APPENDIX F LABORATORY ANALYICAL REPORTS

ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-164476-1
Client Project/Site: Federal CCR Wells

For:
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Attn: Taylor Huffman



Authorized for release by:
5/23/2022 1:52:40 PM
Opal Johnson, Project Manager II
(330)966-9279
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Designee for
Roxanne Cisneros, Senior Project Manager
(615)301-5761
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LINKS

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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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.
U	Indicates the analyte was analyzed for but not detected.

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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Job ID: 240-164476-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-164476-1

Comments

The SW846 Method 6010D Metals (ICP) and SW-846 Method 6020B ICPMS analyses were performed at the Eurofins Cedar Falls laboratory.

The SW846 Method 9315 Radium-226, SW846 Method 9320 Radium-228 (GFPC), and Ra226_Ra228 Combined Radium 226 and Radium 228 analyses were performed at the Eurofins St. Louis laboratory.

Receipt

The samples were received on 4/2/2022 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 6 coolers at receipt time were 0.9° C, 1.0° C, 1.2° C, 1.4° C, 1.6° C and 2.1° C.

RAD

Method PrecSep_0: Radium-228 Prep Batch 160-559086

The following samples were prepared at a reduced aliquot due to Matrix: 96152-F-20220331-01 (240-164476-1), MW-F-20220331-01 (240-164476-2), DUPE-003-MW1-F-20220331-01 (240-164476-3), BAC-01-F-20220331-01 (240-164476-4), MW-6-F-20220331-01 (240-164476-5), BAC-07-F-20220331-01 (240-164476-6), B-0903-F-20220331-01 (240-164476-7), BAC-06-F-20220331-01 (240-164476-8), BAC-02-F-20220331-01 (240-164476-9) and EB-001-F-20220331-01 (240-164476-10). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-559084

The following samples were prepared at a reduced aliquot due to Matrix: 96152-F-20220331-01 (240-164476-1), MW-F-20220331-01 (240-164476-2), DUPE-003-MW1-F-20220331-01 (240-164476-3), BAC-01-F-20220331-01 (240-164476-4), MW-6-F-20220331-01 (240-164476-5), BAC-07-F-20220331-01 (240-164476-6), B-0903-F-20220331-01 (240-164476-7), BAC-06-F-20220331-01 (240-164476-8), BAC-02-F-20220331-01 (240-164476-9) and EB-001-F-20220331-01 (240-164476-10). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method 9320: Radium-228 batch 559086

The following sample(s) exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected. No further action is required.

EB-001-F-20220331-01 (240-164476-10)

Method 9320: Radium-228 batch 559086

The detection goal was not met for the following sample(s). Sample was prepped at a reduced volume due to the presence of matrix interferences: 96152-F-20220331-01 (240-164476-1). Analytical results are reported with the detection limit achieved.

Method 9320: Radium-228 batch 559086

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

96152-F-20220331-01 (240-164476-1), MW-F-20220331-01 (240-164476-2), DUPE-003-MW1-F-20220331-01 (240-164476-3), BAC-01-F-20220331-01 (240-164476-4), MW-6-F-20220331-01 (240-164476-5), BAC-07-F-20220331-01 (240-164476-6), B-0903-F-20220331-01 (240-164476-7), BAC-06-F-20220331-01 (240-164476-8), BAC-02-F-20220331-01 (240-164476-9), EB-001-F-20220331-01 (240-164476-10), (LCS 160-559086/1-A), (LCSD 160-559086/2-A) and (MB 160-559086/22-A)

Method 9315: Radium-226 Batch 559084

The LCS recovered at (74%). 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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Job ID: 240-164476-1 (Continued)

Laboratory: Eurofins Canton (Continued)

statistical limits of (67-118%) per method requirements. The LCS passes, no further action is required

(LCS 160-559084/1-A)

Method 9315: Radium-226 Batch 559084

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

96152-F-20220331-01 (240-164476-1), MW-F-20220331-01 (240-164476-2), DUPE-003-MW1-F-20220331-01 (240-164476-3), BAC-01-F-20220331-01 (240-164476-4), MW-6-F-20220331-01 (240-164476-5), BAC-07-F-20220331-01 (240-164476-6), B-0903-F-20220331-01 (240-164476-7), BAC-06-F-20220331-01 (240-164476-8), BAC-02-F-20220331-01 (240-164476-9), EB-001-F-20220331-01 (240-164476-10), (LCS 160-559084/1-A), (LCSD 160-559084/2-A) and (MB 160-559084/22-A)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Method Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	TAL CF
6020B	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CAN
2320B-1997	Alkalinity, Total	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CAN
9315	Radium 226 by GFPC	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Metals	SW846	TAL CF
7470A	Preparation, Mercury	SW846	TAL CAN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

- MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
- 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:

- TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396
- TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401
- TAL 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: 240-164476-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-164476-1	96152-F-20220331-01	Water	03/31/22 09:08	04/02/22 08:00
240-164476-2	MW-F-20220331-01	Water	03/31/22 10:43	04/02/22 08:00
240-164476-3	DUPE-003-MW1-F-20220331-01	Water	03/31/22 10:43	04/02/22 08:00
240-164476-4	BAC-01-F-20220331-01	Water	03/31/22 11:37	04/02/22 08:00
240-164476-5	MW-6-F-20220331-01	Water	03/31/22 12:09	04/02/22 08:00
240-164476-6	BAC-07-F-20220331-01	Water	03/31/22 12:59	04/02/22 08:00
240-164476-7	B-0903-F-20220331-01	Water	03/31/22 13:51	04/02/22 08:00
240-164476-8	BAC-06-F-20220331-01	Water	03/31/22 14:54	04/02/22 08:00
240-164476-9	BAC-02-F-20220331-01	Water	03/31/22 15:32	04/02/22 08:00
240-164476-10	EB-001-F-20220331-01	Water	03/31/22 15:45	04/02/22 08:00

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: 96152-F-20220331-01

Lab Sample ID: 240-164476-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	590	J	1200	340	ug/L	6		6010D	Total/NA
Aluminum	2700		50	17	ug/L	1		6020B	Total/NA
Arsenic	24		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	490		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	54000		500	190	ug/L	1		6020B	Total/NA
Chromium	9.3		5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	8.0		0.50	0.19	ug/L	1		6020B	Total/NA
Copper	12		5.0	1.8	ug/L	1		6020B	Total/NA
Iron	7300		700	250	ug/L	7		6020B	Total/NA
Lead	5.9		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	98		70	18	ug/L	7		6020B	Total/NA
Magnesium	19000		500	150	ug/L	1		6020B	Total/NA
Manganese	530		10	3.6	ug/L	1		6020B	Total/NA
Nickel	17		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	9000	B	3500	1100	ug/L	7		6020B	Total/NA
Selenium	1.5	J	5.0	0.96	ug/L	1		6020B	Total/NA
Silver	0.64	J	1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	2300000		7000	4300	ug/L	7		6020B	Total/NA
Strontium	3100		7.0	3.9	ug/L	7		6020B	Total/NA
Zinc	20		20	10	ug/L	1		6020B	Total/NA
Mercury	0.15	J B F1	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	600		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	600		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3000		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	0.85		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	92		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	4900		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-F-20220331-01

Lab Sample ID: 240-164476-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	68	J	200	56	ug/L	1		6010D	Total/NA
Aluminum	26	J	50	17	ug/L	1		6020B	Total/NA
Barium	130		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	150000		500	190	ug/L	1		6020B	Total/NA
Cobalt	0.62		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	80	J	100	36	ug/L	1		6020B	Total/NA
Lithium	3.3	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	16000		500	150	ug/L	1		6020B	Total/NA
Manganese	580		10	3.6	ug/L	1		6020B	Total/NA
Potassium	1700	B	500	150	ug/L	1		6020B	Total/NA
Sodium	19000		1000	610	ug/L	1		6020B	Total/NA
Strontium	270		1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	42		1.0	0.28	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
Total Dissolved Solids	500		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: DUPE-003-MW1-F-20220331-01

Lab Sample ID: 240-164476-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	61	J	200	56	ug/L	1		6010D	Total/NA
Aluminum	37	J	50	17	ug/L	1		6020B	Total/NA
Barium	130		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	150000		500	190	ug/L	1		6020B	Total/NA
Cobalt	0.65		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	100		100	36	ug/L	1		6020B	Total/NA
Lithium	4.5	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	15000		500	150	ug/L	1		6020B	Total/NA
Manganese	570		10	3.6	ug/L	1		6020B	Total/NA
Potassium	1500	B	500	150	ug/L	1		6020B	Total/NA
Sodium	18000		1000	610	ug/L	1		6020B	Total/NA
Strontium	270		1.0	0.56	ug/L	1		6020B	Total/NA
Mercury	0.13	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	42		1.0	0.28	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
Total Dissolved Solids	470		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-01-F-20220331-01

Lab Sample ID: 240-164476-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	130	J	200	56	ug/L	1		6010D	Total/NA
Aluminum	47	J	50	17	ug/L	1		6020B	Total/NA
Barium	65		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	110000		500	190	ug/L	1		6020B	Total/NA
Cobalt	0.23	J	0.50	0.19	ug/L	1		6020B	Total/NA
Copper	2.2	J	5.0	1.8	ug/L	1		6020B	Total/NA
Iron	110		100	36	ug/L	1		6020B	Total/NA
Lead	0.60		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	2.9	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	12000		500	150	ug/L	1		6020B	Total/NA
Manganese	120		10	3.6	ug/L	1		6020B	Total/NA
Potassium	1500	B	500	150	ug/L	1		6020B	Total/NA
Sodium	13000		1000	610	ug/L	1		6020B	Total/NA
Strontium	180		1.0	0.56	ug/L	1		6020B	Total/NA
Mercury	0.13	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	21		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.14		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	80		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	360		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-6-F-20220331-01

Lab Sample ID: 240-164476-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	61	J	200	56	ug/L	1		6010D	Total/NA
Antimony	0.85	J	2.0	0.69	ug/L	1		6020B	Total/NA
Barium	140		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	130000		500	190	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: MW-6-F-20220331-01 (Continued)

Lab Sample ID: 240-164476-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.46	J	0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	3.5	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	13000		500	150	ug/L	1		6020B	Total/NA
Manganese	1500		10	3.6	ug/L	1		6020B	Total/NA
Potassium	1700	B	500	150	ug/L	1		6020B	Total/NA
Silver	1.0		1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	14000		1000	610	ug/L	1		6020B	Total/NA
Strontium	230		1.0	0.56	ug/L	1		6020B	Total/NA
Mercury	0.13	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	24		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.098		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	110		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	420		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-07-F-20220331-01

Lab Sample ID: 240-164476-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1400		200	56	ug/L	1		6010D	Total/NA
Aluminum	28	J	50	17	ug/L	1		6020B	Total/NA
Barium	57		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.070	J	0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	100000		500	190	ug/L	1		6020B	Total/NA
Cobalt	2.0		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	310		100	36	ug/L	1		6020B	Total/NA
Lithium	5.7	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	20000		500	150	ug/L	1		6020B	Total/NA
Manganese	210		10	3.6	ug/L	1		6020B	Total/NA
Nickel	2.8	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1400	B	500	150	ug/L	1		6020B	Total/NA
Sodium	15000		1000	610	ug/L	1		6020B	Total/NA
Strontium	120		1.0	0.56	ug/L	1		6020B	Total/NA
Mercury	0.13	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	120		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	120		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	25		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.081		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	190		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	450		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: B-0903-F-20220331-01

Lab Sample ID: 240-164476-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	870		50	17	ug/L	1		6020B	Total/NA
Barium	120		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.20		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	25000		500	190	ug/L	1		6020B	Total/NA
Chromium	3.4	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	1.3		0.50	0.19	ug/L	1		6020B	Total/NA
Copper	2.3	J	5.0	1.8	ug/L	1		6020B	Total/NA
Iron	1800		100	36	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: B-0903-F-20220331-01 (Continued)

Lab Sample ID: 240-164476-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	2.1		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	2.7	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	8800		500	150	ug/L	1		6020B	Total/NA
Manganese	140		10	3.6	ug/L	1		6020B	Total/NA
Nickel	11		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	340	J B	500	150	ug/L	1		6020B	Total/NA
Sodium	14000		1000	610	ug/L	1		6020B	Total/NA
Strontium	120		1.0	0.56	ug/L	1		6020B	Total/NA
Zinc	13	J	20	10	ug/L	1		6020B	Total/NA
Mercury	0.16	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	29		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	29		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	33		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.041	J	0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	48		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	170		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-06-F-20220331-01

Lab Sample ID: 240-164476-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1900		200	56	ug/L	1		6010D	Total/NA
Arsenic	0.80	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	120		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	120000		500	190	ug/L	1		6020B	Total/NA
Cobalt	3.4		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	7500		100	36	ug/L	1		6020B	Total/NA
Lithium	5.5	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	24000		500	150	ug/L	1		6020B	Total/NA
Manganese	2100		10	3.6	ug/L	1		6020B	Total/NA
Nickel	3.9	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1300	B	500	150	ug/L	1		6020B	Total/NA
Sodium	16000		1000	610	ug/L	1		6020B	Total/NA
Strontium	140		1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	180		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	180		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	26		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.093		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	210		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	520		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-02-F-20220331-01

Lab Sample ID: 240-164476-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1900		200	56	ug/L	1		6010D	Total/NA
Barium	36		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.28		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	170000		500	190	ug/L	1		6020B	Total/NA
Cobalt	0.79		0.50	0.19	ug/L	1		6020B	Total/NA
Magnesium	42000		500	150	ug/L	1		6020B	Total/NA
Manganese	3900		10	3.6	ug/L	1		6020B	Total/NA
Nickel	14		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	3500	B	500	150	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-02-F-20220331-01 (Continued)

Lab Sample ID: 240-164476-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	78000		1000	610	ug/L	1		6020B	Total/NA
Strontium	530		1.0	0.56	ug/L	1		6020B	Total/NA
Mercury	0.13	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	260		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	260		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	78		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.19		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	400		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	900		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220331-01

Lab Sample ID: 240-164476-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	690		200	56	ug/L	1		6010D	Total/NA
Copper	4.2	J	5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.72		0.50	0.24	ug/L	1		6020B	Total/NA
Mercury	0.13	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Dissolved Solids	90		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: 96152-F-20220331-01

Lab Sample ID: 240-164476-1

Date Collected: 03/31/22 09:08

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	590	J	1200	340	ug/L		04/28/22 09:30	05/04/22 11:04	6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2700		50	17	ug/L		04/28/22 09:30	05/18/22 22:52	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 22:52	1
Arsenic	24		2.0	0.75	ug/L		04/28/22 09:30	05/18/22 22:52	1
Barium	490		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 22:52	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 22:52	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 22:52	1
Calcium	54000		500	190	ug/L		04/28/22 09:30	05/18/22 22:52	1
Chromium	9.3		5.0	1.1	ug/L		04/28/22 09:30	05/18/22 22:52	1
Cobalt	8.0		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 22:52	1
Copper	12		5.0	1.8	ug/L		04/28/22 09:30	05/18/22 22:52	1
Iron	7300		700	250	ug/L		04/28/22 09:30	05/19/22 18:11	7
Lead	5.9		0.50	0.24	ug/L		04/28/22 09:30	05/18/22 22:52	1
Lithium	98		70	18	ug/L		04/28/22 09:30	05/19/22 18:11	7
Magnesium	19000		500	150	ug/L		04/28/22 09:30	05/18/22 22:52	1
Manganese	530		10	3.6	ug/L		04/28/22 09:30	05/18/22 22:52	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 22:52	1
Nickel	17		5.0	1.9	ug/L		04/28/22 09:30	05/18/22 22:52	1
Potassium	9000	B	3500	1100	ug/L		04/28/22 09:30	05/19/22 18:11	7
Selenium	1.5	J	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 22:52	1
Silver	0.64	J	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 22:52	1
Sodium	2300000		7000	4300	ug/L		04/28/22 09:30	05/19/22 18:11	7
Strontium	3100		7.0	3.9	ug/L		04/28/22 09:30	05/19/22 18:11	7
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 22:52	1
Zinc	20		20	10	ug/L		04/28/22 09:30	05/18/22 22:52	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.15	J B F1	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	600		5.0	2.6	mg/L			04/11/22 14:45	1
Bicarbonate Alkalinity as CaCO3	600		5.0	2.6	mg/L			04/11/22 14:45	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:45	1
Chloride	3000		25	7.1	mg/L			04/24/22 00:43	25
Fluoride	0.85		0.25	0.12	mg/L			04/24/22 00:21	5
Sulfate	92		5.0	1.7	mg/L			04/24/22 00:21	5
Total Dissolved Solids	4900		50	39	mg/L			04/07/22 08:40	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.74		1.03	1.08	1.00	0.774	pCi/L	04/07/22 09:35	05/03/22 13:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	53.5		40 - 110					04/07/22 09:35	05/03/22 13:45	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: 96152-F-20220331-01

Lab Sample ID: 240-164476-1

Date Collected: 03/31/22 09:08

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.45	U G	1.53	1.54	1.00	2.50	pCi/L	04/07/22 10:01	04/29/22 17:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	53.5		40 - 110					04/07/22 10:01	04/29/22 17:35	1
Y Carrier	82.6		40 - 110					04/07/22 10:01	04/29/22 17:35	1

Method: 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	5.19		1.84	1.88	5.00	2.50	pCi/L		05/04/22 13:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: MW-F-20220331-01

Lab Sample ID: 240-164476-2

Date Collected: 03/31/22 10:43

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	68	J	200	56	ug/L		04/28/22 09:30	05/02/22 17:48	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	26	J	50	17	ug/L		04/28/22 09:30	05/18/22 22:56	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 22:56	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 22:56	1
Barium	130		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 22:56	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 22:56	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 22:56	1
Calcium	150000		500	190	ug/L		04/28/22 09:30	05/18/22 22:56	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 22:56	1
Cobalt	0.62		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 22:56	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 22:56	1
Iron	80	J	100	36	ug/L		04/28/22 09:30	05/19/22 18:15	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 22:56	1
Lithium	3.3	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 18:15	1
Magnesium	16000		500	150	ug/L		04/28/22 09:30	05/18/22 22:56	1
Manganese	580		10	3.6	ug/L		04/28/22 09:30	05/18/22 22:56	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 22:56	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 22:56	1
Potassium	1700	B	500	150	ug/L		04/28/22 09:30	05/19/22 18:15	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 22:56	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 22:56	1
Sodium	19000		1000	610	ug/L		04/28/22 09:30	05/18/22 22:56	1
Strontium	270		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 18:15	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 22:56	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 22:56	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 15:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			04/11/22 14:49	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			04/11/22 14:49	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:49	1
Chloride	42		1.0	0.28	mg/L			04/24/22 01:05	1
Fluoride	0.11		0.050	0.024	mg/L			04/24/22 01:05	1
Sulfate	130		1.0	0.35	mg/L			04/24/22 01:05	1
Total Dissolved Solids	500		10	7.8	mg/L			04/07/22 08:40	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0844	U	0.132	0.132	1.00	0.228	pCi/L	04/07/22 09:35	05/03/22 13:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					04/07/22 09:35	05/03/22 13:46	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: MW-F-20220331-01

Lab Sample ID: 240-164476-2

Date Collected: 03/31/22 10:43

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0278	U	0.280	0.280	1.00	0.503	pCi/L	04/07/22 10:01	04/29/22 17:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					04/07/22 10:01	04/29/22 17:35	1
Y Carrier	86.0		40 - 110					04/07/22 10:01	04/29/22 17:35	1

Method: 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	0.112	U	0.310	0.310	5.00	0.503	pCi/L		05/04/22 13:59	1



Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: DUPE-003-MW1-F-20220331-01

Lab Sample ID: 240-164476-3

Date Collected: 03/31/22 10:43

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	61	J	200	56	ug/L		04/28/22 09:30	05/02/22 17:50	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	37	J	50	17	ug/L		04/28/22 09:30	05/18/22 23:00	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 23:00	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 23:00	1
Barium	130		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 23:00	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 23:00	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 23:00	1
Calcium	150000		500	190	ug/L		04/28/22 09:30	05/18/22 23:00	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 23:00	1
Cobalt	0.65		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 23:00	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 23:00	1
Iron	100		100	36	ug/L		04/28/22 09:30	05/19/22 18:19	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 23:00	1
Lithium	4.5	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 18:19	1
Magnesium	15000		500	150	ug/L		04/28/22 09:30	05/18/22 23:00	1
Manganese	570		10	3.6	ug/L		04/28/22 09:30	05/18/22 23:00	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 23:00	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 23:00	1
Potassium	1500	B	500	150	ug/L		04/28/22 09:30	05/19/22 18:19	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 23:00	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 23:00	1
Sodium	18000		1000	610	ug/L		04/28/22 09:30	05/18/22 23:00	1
Strontium	270		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 18:19	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 23:00	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 23:00	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 15:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			04/11/22 14:54	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			04/11/22 14:54	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:54	1
Chloride	42		1.0	0.28	mg/L			04/24/22 01:26	1
Fluoride	0.11		0.050	0.024	mg/L			04/24/22 01:26	1
Sulfate	130		1.0	0.35	mg/L			04/24/22 01:26	1
Total Dissolved Solids	470		10	7.8	mg/L			04/05/22 08:51	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0911	U	0.186	0.187	1.00	0.334	pCi/L	04/07/22 09:35	05/03/22 13:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	54.2		40 - 110					04/07/22 09:35	05/03/22 13:46	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: DUPE-003-MW1-F-20220331-01

Lab Sample ID: 240-164476-3

Date Collected: 03/31/22 10:43

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.398	U	0.525	0.526	1.00	0.874	pCi/L	04/07/22 10:01	04/29/22 17:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	54.2		40 - 110					04/07/22 10:01	04/29/22 17:35	1
Y Carrier	85.6		40 - 110					04/07/22 10:01	04/29/22 17:35	1

Method: 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	0.489	U	0.557	0.558	5.00	0.874	pCi/L		05/04/22 13:59	1



Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-01-F-20220331-01

Lab Sample ID: 240-164476-4

Date Collected: 03/31/22 11:37

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	130	J	200	56	ug/L		04/28/22 09:30	05/02/22 17:52	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	47	J	50	17	ug/L		04/28/22 09:30	05/18/22 23:04	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 23:04	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 23:04	1
Barium	65		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 23:04	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 23:04	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 23:04	1
Calcium	110000		500	190	ug/L		04/28/22 09:30	05/18/22 23:04	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 23:04	1
Cobalt	0.23	J	0.50	0.19	ug/L		04/28/22 09:30	05/18/22 23:04	1
Copper	2.2	J	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 23:04	1
Iron	110		100	36	ug/L		04/28/22 09:30	05/19/22 18:39	1
Lead	0.60		0.50	0.24	ug/L		04/28/22 09:30	05/18/22 23:04	1
Lithium	2.9	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 18:39	1
Magnesium	12000		500	150	ug/L		04/28/22 09:30	05/18/22 23:04	1
Manganese	120		10	3.6	ug/L		04/28/22 09:30	05/18/22 23:04	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 23:04	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 23:04	1
Potassium	1500	B	500	150	ug/L		04/28/22 09:30	05/19/22 18:39	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 23:04	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 23:04	1
Sodium	13000		1000	610	ug/L		04/28/22 09:30	05/18/22 23:04	1
Strontium	180		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 18:39	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 23:04	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 23:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 15:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	210		5.0	2.6	mg/L			04/11/22 15:09	1
Bicarbonate Alkalinity as CaCO3	210		5.0	2.6	mg/L			04/11/22 15:09	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:09	1
Chloride	21		1.0	0.28	mg/L			04/24/22 01:48	1
Fluoride	0.14		0.050	0.024	mg/L			04/24/22 01:48	1
Sulfate	80		1.0	0.35	mg/L			04/24/22 01:48	1
Total Dissolved Solids	360		10	7.8	mg/L			04/05/22 08:51	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0525	U	0.139	0.139	1.00	0.254	pCi/L	04/07/22 09:35	05/03/22 13:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					04/07/22 09:35	05/03/22 13:46	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-01-F-20220331-01

Lab Sample ID: 240-164476-4

Date Collected: 03/31/22 11:37

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.105	U	0.309	0.309	1.00	0.575	pCi/L	04/07/22 10:01	04/29/22 17:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					04/07/22 10:01	04/29/22 17:35	1
Y Carrier	82.6		40 - 110					04/07/22 10:01	04/29/22 17:35	1

Method: 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	-0.0522	U	0.339	0.339	5.00	0.575	pCi/L		05/04/22 13:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: MW-6-F-20220331-01

Lab Sample ID: 240-164476-5

Date Collected: 03/31/22 12:09

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	61	J	200	56	ug/L		04/28/22 09:30	05/02/22 17:54	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/28/22 09:30	05/18/22 23:20	1
Antimony	0.85	J	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 23:20	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 23:20	1
Barium	140		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 23:20	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 23:20	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 23:20	1
Calcium	130000		500	190	ug/L		04/28/22 09:30	05/18/22 23:20	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 23:20	1
Cobalt	0.46	J	0.50	0.19	ug/L		04/28/22 09:30	05/18/22 23:20	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 23:20	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 18:43	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 23:20	1
Lithium	3.5	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 18:43	1
Magnesium	13000		500	150	ug/L		04/28/22 09:30	05/18/22 23:20	1
Manganese	1500		10	3.6	ug/L		04/28/22 09:30	05/18/22 23:20	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 23:20	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 23:20	1
Potassium	1700	B	500	150	ug/L		04/28/22 09:30	05/19/22 18:43	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 23:20	1
Silver	1.0		1.0	0.49	ug/L		04/28/22 09:30	05/18/22 23:20	1
Sodium	14000		1000	610	ug/L		04/28/22 09:30	05/18/22 23:20	1
Strontium	230		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 18:43	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 23:20	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 23:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 15:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			04/11/22 15:18	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			04/11/22 15:18	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:18	1
Chloride	24		1.0	0.28	mg/L			04/24/22 02:10	1
Fluoride	0.098		0.050	0.024	mg/L			04/24/22 02:10	1
Sulfate	110		1.0	0.35	mg/L			04/24/22 02:10	1
Total Dissolved Solids	420		10	7.8	mg/L			04/05/22 08:51	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0507	U	0.124	0.124	1.00	0.225	pCi/L	04/07/22 09:35	05/03/22 13:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					04/07/22 09:35	05/03/22 13:48	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: MW-6-F-20220331-01

Lab Sample ID: 240-164476-5

Date Collected: 03/31/22 12:09

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0267	U	0.336	0.336	1.00	0.606	pCi/L	04/07/22 10:01	04/29/22 17:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					04/07/22 10:01	04/29/22 17:35	1
Y Carrier	82.2		40 - 110					04/07/22 10:01	04/29/22 17:35	1

Method: 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	0.0240	U	0.358	0.358	5.00	0.606	pCi/L		05/04/22 13:59	1



Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-07-F-20220331-01

Lab Sample ID: 240-164476-6

Date Collected: 03/31/22 12:59

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1400		200	56	ug/L		04/28/22 09:30	05/02/22 18:02	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	28	J	50	17	ug/L		04/28/22 09:30	05/18/22 23:28	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 23:28	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 23:28	1
Barium	57		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 23:28	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 23:28	1
Cadmium	0.070	J	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 23:28	1
Calcium	100000		500	190	ug/L		04/28/22 09:30	05/18/22 23:28	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 23:28	1
Cobalt	2.0		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 23:28	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 23:28	1
Iron	310		100	36	ug/L		04/28/22 09:30	05/19/22 18:50	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 23:28	1
Lithium	5.7	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 18:50	1
Magnesium	20000		500	150	ug/L		04/28/22 09:30	05/18/22 23:28	1
Manganese	210		10	3.6	ug/L		04/28/22 09:30	05/18/22 23:28	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 23:28	1
Nickel	2.8	J	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 23:28	1
Potassium	1400	B	500	150	ug/L		04/28/22 09:30	05/19/22 18:50	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 23:28	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 23:28	1
Sodium	15000		1000	610	ug/L		04/28/22 09:30	05/18/22 23:28	1
Strontium	120		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 18:50	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 23:28	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 23:28	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 15:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	120		5.0	2.6	mg/L			04/11/22 15:23	1
Bicarbonate Alkalinity as CaCO3	120		5.0	2.6	mg/L			04/11/22 15:23	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:23	1
Chloride	25		1.0	0.28	mg/L			04/24/22 02:31	1
Fluoride	0.081		0.050	0.024	mg/L			04/24/22 02:31	1
Sulfate	190		1.0	0.35	mg/L			04/24/22 02:31	1
Total Dissolved Solids	450		10	7.8	mg/L			04/05/22 08:51	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.167	U	0.151	0.152	1.00	0.230	pCi/L	04/07/22 09:35	05/03/22 13:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					04/07/22 09:35	05/03/22 13:48	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-07-F-20220331-01

Lab Sample ID: 240-164476-6

Date Collected: 03/31/22 12:59

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.147	U	0.387	0.387	1.00	0.669	pCi/L	04/07/22 10:01	04/29/22 17:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					04/07/22 10:01	04/29/22 17:35	1
Y Carrier	83.4		40 - 110					04/07/22 10:01	04/29/22 17:35	1

Method: 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	0.314	U	0.415	0.416	5.00	0.669	pCi/L		05/04/22 13:59	1



Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: B-0903-F-20220331-01

Lab Sample ID: 240-164476-7

Date Collected: 03/31/22 13:51

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/28/22 09:30	05/02/22 18:04	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	870		50	17	ug/L		04/28/22 09:30	05/18/22 23:31	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 23:31	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 23:31	1
Barium	120		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 23:31	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 23:31	1
Cadmium	0.20		0.10	0.055	ug/L		04/28/22 09:30	05/18/22 23:31	1
Calcium	25000		500	190	ug/L		04/28/22 09:30	05/18/22 23:31	1
Chromium	3.4	J	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 23:31	1
Cobalt	1.3		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 23:31	1
Copper	2.3	J	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 23:31	1
Iron	1800		100	36	ug/L		04/28/22 09:30	05/19/22 18:54	1
Lead	2.1		0.50	0.24	ug/L		04/28/22 09:30	05/18/22 23:31	1
Lithium	2.7	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 18:54	1
Magnesium	8800		500	150	ug/L		04/28/22 09:30	05/18/22 23:31	1
Manganese	140		10	3.6	ug/L		04/28/22 09:30	05/18/22 23:31	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 23:31	1
Nickel	11		5.0	1.9	ug/L		04/28/22 09:30	05/18/22 23:31	1
Potassium	340	J B	500	150	ug/L		04/28/22 09:30	05/19/22 18:54	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 23:31	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 23:31	1
Sodium	14000		1000	610	ug/L		04/28/22 09:30	05/18/22 23:31	1
Strontium	120		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 18:54	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 23:31	1
Zinc	13	J	20	10	ug/L		04/28/22 09:30	05/18/22 23:31	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.16	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 15:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	29		5.0	2.6	mg/L			04/11/22 15:27	1
Bicarbonate Alkalinity as CaCO3	29		5.0	2.6	mg/L			04/11/22 15:27	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:27	1
Chloride	33		1.0	0.28	mg/L			04/24/22 03:36	1
Fluoride	0.041	J	0.050	0.024	mg/L			04/24/22 03:36	1
Sulfate	48		1.0	0.35	mg/L			04/24/22 03:36	1
Total Dissolved Solids	170		10	7.8	mg/L			04/05/22 08:51	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0866	U	0.182	0.182	1.00	0.326	pCi/L	04/07/22 09:35	05/03/22 13:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					04/07/22 09:35	05/03/22 13:49	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: B-0903-F-20220331-01

Lab Sample ID: 240-164476-7

Date Collected: 03/31/22 13:51

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0323	U	0.500	0.500	1.00	0.909	pCi/L	04/07/22 10:01	04/29/22 17:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					04/07/22 10:01	04/29/22 17:36	1
Y Carrier	82.6		40 - 110					04/07/22 10:01	04/29/22 17:36	1

Method: 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	0.0544	U	0.532	0.532	5.00	0.909	pCi/L		05/04/22 13:59	1



Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-06-F-20220331-01

Lab Sample ID: 240-164476-8

Date Collected: 03/31/22 14:54

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1900		200	56	ug/L		04/28/22 09:30	05/02/22 18:06	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/28/22 09:30	05/18/22 23:35	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 23:35	1
Arsenic	0.80	J	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 23:35	1
Barium	120		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 23:35	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 23:35	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 23:35	1
Calcium	120000		500	190	ug/L		04/28/22 09:30	05/18/22 23:35	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 23:35	1
Cobalt	3.4		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 23:35	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 23:35	1
Iron	7500		100	36	ug/L		04/28/22 09:30	05/19/22 18:58	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 23:35	1
Lithium	5.5	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 18:58	1
Magnesium	24000		500	150	ug/L		04/28/22 09:30	05/18/22 23:35	1
Manganese	2100		10	3.6	ug/L		04/28/22 09:30	05/18/22 23:35	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 23:35	1
Nickel	3.9	J	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 23:35	1
Potassium	1300	B	500	150	ug/L		04/28/22 09:30	05/19/22 18:58	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 23:35	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 23:35	1
Sodium	16000		1000	610	ug/L		04/28/22 09:30	05/18/22 23:35	1
Strontium	140		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 18:58	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 23:35	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 23:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	180		5.0	2.6	mg/L			04/11/22 15:35	1
Bicarbonate Alkalinity as CaCO3	180		5.0	2.6	mg/L			04/11/22 15:35	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:35	1
Chloride	26		1.0	0.28	mg/L			04/24/22 03:58	1
Fluoride	0.093		0.050	0.024	mg/L			04/24/22 03:58	1
Sulfate	210		2.0	0.70	mg/L			04/25/22 23:53	2
Total Dissolved Solids	520		10	7.8	mg/L			04/05/22 08:51	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.179	U	0.143	0.144	1.00	0.212	pCi/L	04/07/22 09:35	05/03/22 13:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110					04/07/22 09:35	05/03/22 13:49	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-06-F-20220331-01

Lab Sample ID: 240-164476-8

Date Collected: 03/31/22 14:54

Matrix: Water

Date Received: 04/02/22 08:00

Method: 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	0.541	pCi/L	04/07/22 10:01	04/29/22 17:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110					04/07/22 10:01	04/29/22 17:36	1
Y Carrier	81.5		40 - 110					04/07/22 10:01	04/29/22 17:36	1

Method: 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	0.599		0.371	0.373	5.00	0.541	pCi/L		05/04/22 13:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-02-F-20220331-01

Lab Sample ID: 240-164476-9

Date Collected: 03/31/22 15:32

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1900		200	56	ug/L		04/28/22 09:30	05/02/22 18:08	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/28/22 09:30	05/18/22 23:39	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 23:39	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 23:39	1
Barium	36		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 23:39	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 23:39	1
Cadmium	0.28		0.10	0.055	ug/L		04/28/22 09:30	05/18/22 23:39	1
Calcium	170000		500	190	ug/L		04/28/22 09:30	05/18/22 23:39	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 23:39	1
Cobalt	0.79		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 23:39	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 23:39	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 19:02	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 23:39	1
Lithium	10	U	10	2.5	ug/L		04/28/22 09:30	05/19/22 19:02	1
Magnesium	42000		500	150	ug/L		04/28/22 09:30	05/18/22 23:39	1
Manganese	3900		10	3.6	ug/L		04/28/22 09:30	05/18/22 23:39	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 23:39	1
Nickel	14		5.0	1.9	ug/L		04/28/22 09:30	05/18/22 23:39	1
Potassium	3500	B	500	150	ug/L		04/28/22 09:30	05/19/22 19:02	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 23:39	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 23:39	1
Sodium	78000		1000	610	ug/L		04/28/22 09:30	05/18/22 23:39	1
Strontium	530		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 19:02	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 23:39	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 23:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	260		5.0	2.6	mg/L			04/11/22 15:31	1
Bicarbonate Alkalinity as CaCO3	260		5.0	2.6	mg/L			04/11/22 15:31	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:31	1
Chloride	78		1.0	0.28	mg/L			04/24/22 04:20	1
Fluoride	0.19		0.050	0.024	mg/L			04/24/22 04:20	1
Sulfate	400		5.0	1.7	mg/L			04/24/22 04:42	5
Total Dissolved Solids	900		10	7.8	mg/L			04/07/22 08:40	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.168	U	0.155	0.155	1.00	0.240	pCi/L	04/07/22 09:35	05/03/22 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.8		40 - 110					04/07/22 09:35	05/03/22 16:11	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-02-F-20220331-01

Lab Sample ID: 240-164476-9

Date Collected: 03/31/22 15:32

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00741	U	0.356	0.356	1.00	0.640	pCi/L	04/07/22 10:01	04/29/22 17:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.8		40 - 110					04/07/22 10:01	04/29/22 17:36	1
Y Carrier	80.4		40 - 110					04/07/22 10:01	04/29/22 17:36	1

Method: 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	0.175	U	0.388	0.388	5.00	0.640	pCi/L		05/04/22 13:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: EB-001-F-20220331-01

Lab Sample ID: 240-164476-10

Date Collected: 03/31/22 15:45

Matrix: Water

Date Received: 04/02/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	690		200	56	ug/L		04/28/22 09:30	05/02/22 18:09	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/28/22 09:30	05/18/22 23:43	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 23:43	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 23:43	1
Barium	2.0	U	2.0	0.88	ug/L		04/28/22 09:30	05/18/22 23:43	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 23:43	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 23:43	1
Calcium	500	U	500	190	ug/L		04/28/22 09:30	05/18/22 23:43	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 23:43	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/28/22 09:30	05/18/22 23:43	1
Copper	4.2	J	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 23:43	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 19:06	1
Lead	0.72		0.50	0.24	ug/L		04/28/22 09:30	05/18/22 23:43	1
Lithium	10	U	10	2.5	ug/L		04/28/22 09:30	05/19/22 19:06	1
Magnesium	500	U	500	150	ug/L		04/28/22 09:30	05/18/22 23:43	1
Manganese	10	U	10	3.6	ug/L		04/28/22 09:30	05/18/22 23:43	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 23:43	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 23:43	1
Potassium	500	U	500	150	ug/L		04/28/22 09:30	05/19/22 19:06	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 23:43	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 23:43	1
Sodium	1000	U	1000	610	ug/L		04/28/22 09:30	05/18/22 23:43	1
Strontium	1.0	U	1.0	0.56	ug/L		04/28/22 09:30	05/19/22 19:06	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 23:43	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 23:43	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			04/11/22 15:39	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:39	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:39	1
Chloride	1.0	U	1.0	0.28	mg/L			04/24/22 05:03	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/24/22 05:03	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/24/22 05:03	1
Total Dissolved Solids	90		10	7.8	mg/L			04/07/22 08:40	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.112	U	0.120	0.121	1.00	0.193	pCi/L	04/07/22 09:35	05/03/22 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.0		40 - 110					04/07/22 09:35	05/03/22 16:11	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: EB-001-F-20220331-01

Lab Sample ID: 240-164476-10

Date Collected: 03/31/22 15:45

Matrix: Water

Date Received: 04/02/22 08:00

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.598	U	0.281	0.286	1.00	0.611	pCi/L	04/07/22 10:01	04/29/22 17:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.0		40 - 110					04/07/22 10:01	04/29/22 17:36	1
Y Carrier	80.7		40 - 110					04/07/22 10:01	04/29/22 17:36	1

Method: 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	-0.486	U	0.306	0.311	5.00	0.611	pCi/L		05/04/22 13:59	1



Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	
240-164476-1	96152-F-20220331-01	53.5	
240-164476-2	MW-F-20220331-01	93.8	
240-164476-3	DUPE-003-MW1-F-20220331-01	54.2	
240-164476-4	BAC-01-F-20220331-01	92.3	
240-164476-5	MW-6-F-20220331-01	92.0	
240-164476-6	BAC-07-F-20220331-01	80.1	
240-164476-7	B-0903-F-20220331-01	85.8	
240-164476-8	BAC-06-F-20220331-01	93.3	
240-164476-9	BAC-02-F-20220331-01	82.8	
240-164476-10	EB-001-F-20220331-01	97.0	
LCS 160-559084/1-A	Lab Control Sample	97.8	
LCSD 160-559084/2-A	Lab Control Sample Dup	96.0	
MB 160-559084/22-A	Method Blank	107	

Tracer/Carrier Legend
 Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
240-164476-1	96152-F-20220331-01	53.5	82.6
240-164476-2	MW-F-20220331-01	93.8	86.0
240-164476-3	DUPE-003-MW1-F-20220331-01	54.2	85.6
240-164476-4	BAC-01-F-20220331-01	92.3	82.6
240-164476-5	MW-6-F-20220331-01	92.0	82.2
240-164476-6	BAC-07-F-20220331-01	80.1	83.4
240-164476-7	B-0903-F-20220331-01	85.8	82.6
240-164476-8	BAC-06-F-20220331-01	93.3	81.5
240-164476-9	BAC-02-F-20220331-01	82.8	80.4
240-164476-10	EB-001-F-20220331-01	97.0	80.7
LCS 160-559086/1-A	Lab Control Sample	97.8	84.1
LCSD 160-559086/2-A	Lab Control Sample Dup	96.0	83.7
MB 160-559086/22-A	Method Blank	107	79.3

Tracer/Carrier Legend
 Ba = Ba Carrier
 Y = Y Carrier

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-351247/1-A
Matrix: Water
Analysis Batch: 351803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351247

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/28/22 09:30	05/02/22 17:19	1

Lab Sample ID: LCS 310-351247/2-A
Matrix: Water
Analysis Batch: 351803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351247

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2000	2240		ug/L		112	80 - 120

Lab Sample ID: 240-164476-5 DU
Matrix: Water
Analysis Batch: 351803

Client Sample ID: MW-6-F-20220331-01
Prep Type: Total/NA
Prep Batch: 351247

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	61	J	60.0	J	ug/L		2	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-351248/1-A
Matrix: Water
Analysis Batch: 353614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351248

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/28/22 09:30	05/18/22 21:54	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 21:54	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 21:54	1
Barium	2.0	U	2.0	0.88	ug/L		04/28/22 09:30	05/18/22 21:54	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 21:54	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 21:54	1
Calcium	500	U	500	190	ug/L		04/28/22 09:30	05/18/22 21:54	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 21:54	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/28/22 09:30	05/18/22 21:54	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 21:54	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/18/22 21:54	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 21:54	1
Lithium	10	U	10	2.5	ug/L		04/28/22 09:30	05/18/22 21:54	1
Magnesium	500	U	500	150	ug/L		04/28/22 09:30	05/18/22 21:54	1
Manganese	10	U	10	3.6	ug/L		04/28/22 09:30	05/18/22 21:54	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 21:54	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 21:54	1
Potassium	218	J	500	150	ug/L		04/28/22 09:30	05/18/22 21:54	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 21:54	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 21:54	1
Sodium	1000	U	1000	610	ug/L		04/28/22 09:30	05/18/22 21:54	1
Strontium	1.0	U	1.0	0.56	ug/L		04/28/22 09:30	05/18/22 21:54	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 21:54	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 21:54	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 310-351248/2-A
Matrix: Water
Analysis Batch: 353614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	200	212		ug/L		106	80 - 120
Antimony	200	225		ug/L		113	80 - 120
Arsenic	200	208		ug/L		104	80 - 120
Barium	100	109		ug/L		109	80 - 120
Beryllium	100	109		ug/L		109	80 - 120
Cadmium	100	108		ug/L		108	80 - 120
Calcium	2000	2090		ug/L		105	80 - 120
Chromium	100	102		ug/L		102	80 - 120
Cobalt	100	103		ug/L		103	80 - 120
Copper	200	223		ug/L		112	80 - 120
Lead	200	231		ug/L		115	80 - 120
Lithium	200	201		ug/L		100	80 - 120
Magnesium	2000	2060		ug/L		103	80 - 120
Manganese	100	104		ug/L		104	80 - 120
Molybdenum	200	214		ug/L		107	80 - 120
Nickel	200	209		ug/L		104	80 - 120
Selenium	400	404		ug/L		101	80 - 120
Silver	100	110		ug/L		110	80 - 120
Sodium	2000	2240		ug/L		112	80 - 120
Strontium	200	226		ug/L		113	80 - 120
Thallium	200	231		ug/L		115	80 - 120
Zinc	200	203		ug/L		102	80 - 120

Lab Sample ID: LCS 310-351248/2-A
Matrix: Water
Analysis Batch: 353783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	200	236		ug/L		118	80 - 120
Potassium	2000	2390		ug/L		120	80 - 120

Lab Sample ID: 240-164476-5 DU
Matrix: Water
Analysis Batch: 353614

Client Sample ID: MW-6-F-20220331-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Aluminum	50	U	50	U	ug/L		NC	20
Antimony	0.85	J	2.0	U	ug/L		NC	20
Arsenic	2.0	U	2.0	U	ug/L		NC	20
Barium	140		136		ug/L		1	20
Beryllium	1.0	U	1.0	U	ug/L		NC	20
Cadmium	0.10	U	0.10	U	ug/L		NC	20
Calcium	130000		128000		ug/L		0.2	20
Chromium	5.0	U	5.0	U	ug/L		NC	20
Cobalt	0.46	J	0.462	J	ug/L		0.2	20
Copper	5.0	U	5.0	U	ug/L		NC	20
Lead	0.50	U	0.50	U	ug/L		NC	20
Magnesium	13000		13200		ug/L		2	20
Manganese	1500		1470		ug/L		0.6	20

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-164476-5 DU
Matrix: Water
Analysis Batch: 353614

Client Sample ID: MW-6-F-20220331-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Molybdenum	2.0	U	2.0	U	ug/L		NC	20
Nickel	5.0	U	5.0	U	ug/L		NC	20
Selenium	5.0	U	5.0	U	ug/L		NC	20
Silver	1.0		1.0	U	ug/L		NC	20
Sodium	14000		13600		ug/L		2	20
Thallium	1.0	U	1.0	U	ug/L		NC	20
Zinc	20	U	20	U	ug/L		NC	20

Lab Sample ID: 240-164476-5 DU
Matrix: Water
Analysis Batch: 353783

Client Sample ID: MW-6-F-20220331-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Iron	100	U	100	U	ug/L		NC	20
Lithium	3.5	J	4.34	J F5	ug/L		21	20
Potassium	1700	B	1650		ug/L		3	20
Strontium	230		230		ug/L		2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-521601/1-A
Matrix: Water
Analysis Batch: 521770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.152	J	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 15:31	1

Lab Sample ID: LCS 240-521601/2-A
Matrix: Water
Analysis Batch: 521770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	4.86		ug/L		97	80 - 120

Lab Sample ID: 240-164476-1 MS
Matrix: Water
Analysis Batch: 521770

Client Sample ID: 96152-F-20220331-01
Prep Type: Total/NA
Prep Batch: 521601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.15	J B F1	1.00	1.41	F1	ug/L		126	80 - 120

Lab Sample ID: 240-164476-1 MSD
Matrix: Water
Analysis Batch: 521770

Client Sample ID: 96152-F-20220331-01
Prep Type: Total/NA
Prep Batch: 521601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.15	J B F1	1.00	1.33		ug/L		117	80 - 120	6	20

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-522399/30
Matrix: Water
Analysis Batch: 522399

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			04/11/22 13:05	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 13:05	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 13:05	1

Lab Sample ID: MB 240-522399/4
Matrix: Water
Analysis Batch: 522399

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			04/11/22 11:12	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 11:12	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 11:12	1

Lab Sample ID: MB 240-522399/56
Matrix: Water
Analysis Batch: 522399

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			04/11/22 15:03	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:03	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 15:03	1

Lab Sample ID: LCS 240-522399/29
Matrix: Water
Analysis Batch: 522399

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCS 240-522399/55
Matrix: Water
Analysis Batch: 522399

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: 240-164476-4 DU
Matrix: Water
Analysis Batch: 522399

Client Sample ID: BAC-01-F-20220331-01
Prep Type: Total/NA

Analyte	Sample		DU		Unit	D	RPD	RPD Limit
	Result	Qualifier	Result	Qualifier				
Total Alkalinity	210		210		mg/L		0.05	20
Bicarbonate Alkalinity as CaCO3	210		210		mg/L		0.05	20
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-523727/79
Matrix: Water
Analysis Batch: 523727

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			04/23/22 21:49	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/23/22 21:49	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/23/22 21:49	1

Lab Sample ID: LCS 240-523727/80
Matrix: Water
Analysis Batch: 523727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.63		mg/L		105	90 - 110
Sulfate	50.0	51.4		mg/L		103	90 - 110

Lab Sample ID: MB 240-523895/3
Matrix: Water
Analysis Batch: 523895

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			04/25/22 18:51	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/25/22 18:51	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/25/22 18:51	1

Lab Sample ID: LCS 240-523895/4
Matrix: Water
Analysis Batch: 523895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.48		mg/L		99	90 - 110
Sulfate	50.0	50.8		mg/L		102	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-521756/1
Matrix: Water
Analysis Batch: 521756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	10	U	10	7.8	mg/L			04/05/22 08:51	1

Lab Sample ID: LCS 240-521756/2
Matrix: Water
Analysis Batch: 521756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 240-164476-3 DU
 Matrix: Water
 Analysis Batch: 521756

Client Sample ID: DUPE-003-MW1-F-20220331-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	470		479		mg/L		1	20

Lab Sample ID: MB 240-521994/1
 Matrix: Water
 Analysis Batch: 521994

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	10	U	10	7.8	mg/L			04/07/22 08:40	1

Lab Sample ID: LCS 240-521994/2
 Matrix: Water
 Analysis Batch: 521994

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	150	142		mg/L		95	80 - 120

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-559084/22-A
 Matrix: Water
 Analysis Batch: 563486

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 559084

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02085	U	0.0374	0.0375	1.00	0.102	pCi/L	04/07/22 09:35	05/03/22 17:52	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					04/07/22 09:35	05/03/22 17:52	1

Lab Sample ID: LCS 160-559084/1-A
 Matrix: Water
 Analysis Batch: 563502

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 559084

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	8.377		0.948	1.00	0.174	pCi/L	74	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.8		40 - 110						

Lab Sample ID: LCSD 160-559084/2-A
 Matrix: Water
 Analysis Batch: 563502

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 559084

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	11.3	9.117		1.02	1.00	0.151	pCi/L	80	75 - 125	0.38	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCSD 160-559084/2-A
Matrix: Water
Analysis Batch: 563502

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 559084

Carrier	LCSD		Limits
	%Yield	Qualifier	
Ba Carrier	96.0	U	40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-559086/22-A
Matrix: Water
Analysis Batch: 562970

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559086

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac	
											MB %Yield
Radium-228	-0.1145	U	0.233	0.234	1.00	0.436	pCi/L	04/07/22 10:01	04/29/22 17:38	1	
Carrier									Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					04/07/22 10:01	04/29/22 17:38	1	
Y Carrier	79.3		40 - 110					04/07/22 10:01	04/29/22 17:38	1	

Lab Sample ID: LCS 160-559086/1-A
Matrix: Water
Analysis Batch: 562966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559086

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.66	9.544		1.12	1.00	0.403	pCi/L	110	75 - 125
Carrier									
Ba Carrier	97.8		40 - 110						
Y Carrier	84.1		40 - 110						

Lab Sample ID: LCSD 160-559086/2-A
Matrix: Water
Analysis Batch: 562966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 559086

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	8.66	9.504		1.12	1.00	0.406	pCi/L	110	75 - 125	0.02	1
Carrier											
Ba Carrier	96.0		40 - 110								
Y Carrier	83.7		40 - 110								

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Metals

Prep Batch: 351247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	3005A	
240-164476-2	MW-F-20220331-01	Total/NA	Water	3005A	
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	3005A	
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	3005A	
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	3005A	
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	3005A	
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	3005A	
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	3005A	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	3005A	
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	3005A	
MB 310-351247/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-351247/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164476-5 DU	MW-6-F-20220331-01	Total/NA	Water	3005A	

Prep Batch: 351248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	3005A	
240-164476-2	MW-F-20220331-01	Total/NA	Water	3005A	
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	3005A	
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	3005A	
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	3005A	
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	3005A	
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	3005A	
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	3005A	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	3005A	
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	3005A	
MB 310-351248/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-351248/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164476-5 DU	MW-6-F-20220331-01	Total/NA	Water	3005A	

Analysis Batch: 351803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-2	MW-F-20220331-01	Total/NA	Water	6010D	351247
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	6010D	351247
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	6010D	351247
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	6010D	351247
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	6010D	351247
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	6010D	351247
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	6010D	351247
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	6010D	351247
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	6010D	351247
MB 310-351247/1-A	Method Blank	Total/NA	Water	6010D	351247
LCS 310-351247/2-A	Lab Control Sample	Total/NA	Water	6010D	351247
240-164476-5 DU	MW-6-F-20220331-01	Total/NA	Water	6010D	351247

Analysis Batch: 351960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	6010D	351247

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Metals

Analysis Batch: 353614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-2	MW-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	6020B	351248
MB 310-351248/1-A	Method Blank	Total/NA	Water	6020B	351248
LCS 310-351248/2-A	Lab Control Sample	Total/NA	Water	6020B	351248
240-164476-5 DU	MW-6-F-20220331-01	Total/NA	Water	6020B	351248

Analysis Batch: 353783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-2	MW-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	6020B	351248
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	6020B	351248
LCS 310-351248/2-A	Lab Control Sample	Total/NA	Water	6020B	351248
240-164476-5 DU	MW-6-F-20220331-01	Total/NA	Water	6020B	351248

Prep Batch: 521601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	7470A	
240-164476-2	MW-F-20220331-01	Total/NA	Water	7470A	
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	7470A	
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	7470A	
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	7470A	
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	7470A	
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	7470A	
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	7470A	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	7470A	
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	7470A	
MB 240-521601/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-521601/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-164476-1 MS	96152-F-20220331-01	Total/NA	Water	7470A	
240-164476-1 MSD	96152-F-20220331-01	Total/NA	Water	7470A	

Analysis Batch: 521770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-2	MW-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	7470A	521601

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Metals (Continued)

Analysis Batch: 521770 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	7470A	521601
MB 240-521601/1-A	Method Blank	Total/NA	Water	7470A	521601
LCS 240-521601/2-A	Lab Control Sample	Total/NA	Water	7470A	521601
240-164476-1 MS	96152-F-20220331-01	Total/NA	Water	7470A	521601
240-164476-1 MSD	96152-F-20220331-01	Total/NA	Water	7470A	521601

General Chemistry

Analysis Batch: 521756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	SM 2540C	
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	SM 2540C	
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	SM 2540C	
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	SM 2540C	
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	SM 2540C	
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	SM 2540C	
MB 240-521756/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521756/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-164476-3 DU	DUPE-003-MW1-F-20220331-01	Total/NA	Water	SM 2540C	

Analysis Batch: 521994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	SM 2540C	
240-164476-2	MW-F-20220331-01	Total/NA	Water	SM 2540C	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	SM 2540C	
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	SM 2540C	
MB 240-521994/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521994/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 522399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-2	MW-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	2320B-1997	
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	2320B-1997	
MB 240-522399/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-522399/4	Method Blank	Total/NA	Water	2320B-1997	
MB 240-522399/56	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-522399/29	Lab Control Sample	Total/NA	Water	2320B-1997	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

General Chemistry (Continued)

Analysis Batch: 522399 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-522399/55	Lab Control Sample	Total/NA	Water	2320B-1997	
240-164476-4 DU	BAC-01-F-20220331-01	Total/NA	Water	2320B-1997	

Analysis Batch: 523727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	300.0	
240-164476-1	96152-F-20220331-01	Total/NA	Water	300.0	
240-164476-2	MW-F-20220331-01	Total/NA	Water	300.0	
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	300.0	
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	300.0	
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	300.0	
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	300.0	
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	300.0	
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	300.0	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	300.0	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	300.0	
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	300.0	
MB 240-523727/79	Method Blank	Total/NA	Water	300.0	
LCS 240-523727/80	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 523895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	300.0	
MB 240-523895/3	Method Blank	Total/NA	Water	300.0	
LCS 240-523895/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 559084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-2	MW-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	PrecSep-21	
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	PrecSep-21	
MB 160-559084/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-559084/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-559084/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 559086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-1	96152-F-20220331-01	Total/NA	Water	PrecSep_0	
240-164476-2	MW-F-20220331-01	Total/NA	Water	PrecSep_0	
240-164476-3	DUPE-003-MW1-F-20220331-01	Total/NA	Water	PrecSep_0	
240-164476-4	BAC-01-F-20220331-01	Total/NA	Water	PrecSep_0	
240-164476-5	MW-6-F-20220331-01	Total/NA	Water	PrecSep_0	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Rad (Continued)

Prep Batch: 559086 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164476-6	BAC-07-F-20220331-01	Total/NA	Water	PrecSep_0	
240-164476-7	B-0903-F-20220331-01	Total/NA	Water	PrecSep_0	
240-164476-8	BAC-06-F-20220331-01	Total/NA	Water	PrecSep_0	
240-164476-9	BAC-02-F-20220331-01	Total/NA	Water	PrecSep_0	
240-164476-10	EB-001-F-20220331-01	Total/NA	Water	PrecSep_0	
MB 160-559086/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-559086/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-559086/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: 96152-F-20220331-01

Lab Sample ID: 240-164476-1

Date Collected: 03/31/22 09:08

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		6	351960	05/04/22 11:04	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 22:52	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		7	353783	05/19/22 18:11	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 15:35	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:45	JMR	TAL CAN
Total/NA	Analysis	300.0		5	523727	04/24/22 00:21	KMS	TAL CAN
Total/NA	Analysis	300.0		25	523727	04/24/22 00:43	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521994	04/07/22 08:40	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563486	05/03/22 13:45	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:35	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Client Sample ID: MW-F-20220331-01

Lab Sample ID: 240-164476-2

Date Collected: 03/31/22 10:43

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 17:48	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 22:56	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 18:15	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 15:42	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:49	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 01:05	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521994	04/07/22 08:40	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563488	05/03/22 13:46	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:35	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: DUPE-003-MW1-F-20220331-01

Lab Sample ID: 240-164476-3

Date Collected: 03/31/22 10:43

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 17:50	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 23:00	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 18:19	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 15:45	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:54	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 01:26	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521756	04/05/22 08:51	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563488	05/03/22 13:46	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:35	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Client Sample ID: BAC-01-F-20220331-01

Lab Sample ID: 240-164476-4

Date Collected: 03/31/22 11:37

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 17:52	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 23:04	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 18:39	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 15:47	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 15:09	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 01:48	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521756	04/05/22 08:51	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563488	05/03/22 13:46	FLC	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:35	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: MW-6-F-20220331-01

Lab Sample ID: 240-164476-5

Date Collected: 03/31/22 12:09

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 17:54	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 23:20	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 18:43	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 15:49	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 15:18	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 02:10	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521756	04/05/22 08:51	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563502	05/03/22 13:48	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:35	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Client Sample ID: BAC-07-F-20220331-01

Lab Sample ID: 240-164476-6

Date Collected: 03/31/22 12:59

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 18:02	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 23:28	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 18:50	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 15:51	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 15:23	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 02:31	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521756	04/05/22 08:51	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563502	05/03/22 13:48	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:35	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: B-0903-F-20220331-01

Lab Sample ID: 240-164476-7

Date Collected: 03/31/22 13:51

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 18:04	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 23:31	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 18:54	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 15:58	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 15:27	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 03:36	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521756	04/05/22 08:51	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563502	05/03/22 13:49	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:36	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Client Sample ID: BAC-06-F-20220331-01

Lab Sample ID: 240-164476-8

Date Collected: 03/31/22 14:54

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 18:06	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 23:35	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 18:58	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:00	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 15:35	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 03:58	KMS	TAL CAN
Total/NA	Analysis	300.0		2	523895	04/25/22 23:53	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521756	04/05/22 08:51	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563502	05/03/22 13:49	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:36	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Client Sample ID: BAC-02-F-20220331-01

Lab Sample ID: 240-164476-9

Date Collected: 03/31/22 15:32

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 18:08	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 23:39	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 19:02	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:02	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 15:31	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 04:20	KMS	TAL CAN
Total/NA	Analysis	300.0		5	523727	04/24/22 04:42	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521994	04/07/22 08:40	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563502	05/03/22 16:11	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:36	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Client Sample ID: EB-001-F-20220331-01

Lab Sample ID: 240-164476-10

Date Collected: 03/31/22 15:45

Matrix: Water

Date Received: 04/02/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351247	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351803	05/02/22 18:09	CTB	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353614	05/18/22 23:43	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 19:06	SAP	TAL CF
Total/NA	Prep	7470A			521601	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:04	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 15:39	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 05:03	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521994	04/07/22 08:40	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559084	04/07/22 09:35	BMP	TAL SL
Total/NA	Analysis	9315		1	563502	05/03/22 16:11	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562836	04/29/22 17:36	JCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396
 TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401
 TAL 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
 Project/Site: Federal CCR Wells

Job ID: 240-164476-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22 *
Illinois	NELAP	200004	04-25-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-22-16	08-31-22
Virginia	NELAP	11570	04-25-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

Laboratory: Eurofins Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-22
Georgia	State	IA100001 (OR)	09-29-22
Illinois	NELAP	200024	11-29-22
Iowa	State	007	12-01-21 *
Kansas	NELAP	E-10341	01-31-23
Minnesota	NELAP	019-999-319	12-31-22
Minnesota (Petrofund)	State	3349	01-18-24
North Dakota	State	R-186	09-29-22
Oregon	NELAP	IA100001	09-29-22

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	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164476-1

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
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	05-10-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

Client Information		Sampler: Kemton		Lab PM: Cisneros, Roxanne		Carrier Tracking No(s): 240-93018-34502	
Client Contact: Taylor Huffman		Phone: 740-373-4308		E-Mail: roxanne.cisneros@eurolins.com		Page: Page 1 of 1	
Company: Lightstone Generation Gavin Power LLC		Address: 7397 OH-7		City: Cheshire		State of Origin: Job #:	
Phone: 740-925-3171(Tel)		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		TAT Requested (days):		Preservation Codes:	
PO #: 2935505		Project #: 24019633		Project Name: Federal - CCR Wells		A - HCL M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
SSOW#:		Sample Date		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wast/oil, A=air, L=lead)	
Sample Identification		Sample Time		Preservation Code:		Field Filtered Sample (Yes or No)	
96152-F-20220331-01		033122 0908		G		X	
MWI-F-20220331-01		033122 1043		G		X	
Dye-003-MWI-F-20220331-01		033122 1043		G		X	
BAC-01-F-20220331-01		033122 1137		G		X	
MW-6-F-20220331-01		033122 1209		G		X	
BAC-07-F-20220331-01		033122 1259		G		X	
B-0903-F-20220331-01		033122 1351		G		X	
BAC-176-F-20220331-01		033122 1454		G		X	
BAC-02-F-20220331-01		033122 1522		G		X	
ED-001-F-20220331-01		033122 1545		G		X	
Possible Hazard Identification		Sample Date		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wast/oil, A=air, L=lead)	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant		Sample Time		Preservation Code:		Field Filtered Sample (Yes or No)	
Deliverable Requested: I, II, III, IV, Other (specify)		Sample Date		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wast/oil, A=air, L=lead)	
Empty Kit Relinquished by:		Sample Time		Preservation Code:		Field Filtered Sample (Yes or No)	
Relinquished by: [Signature]		Sample Date		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wast/oil, A=air, L=lead)	
Relinquished by: [Signature]		Sample Time		Preservation Code:		Field Filtered Sample (Yes or No)	
Relinquished by: [Signature]		Sample Date		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wast/oil, A=air, L=lead)	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Sample Date		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wast/oil, A=air, L=lead)	
Custody Seal No.:		Sample Time		Preservation Code:		Field Filtered Sample (Yes or No)	
Cooler Temperature(s) °C and Other Remarks:		Sample Date		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wast/oil, A=air, L=lead)	



Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For Months

Received by: [Signature]	Date/Time: 4-1-22 1450	Company: STA
Received by: [Signature]	Date/Time: 4-1-22 0800	Company: ESTMC
Received by: [Signature]	Date/Time:	Company:



Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : _____
Canton Facility


Client Lights tone Site Name _____ Cooler unpacked by: Adam Gurey
Cooler Received on 4-2-22 Opened on 4-2-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ **Storage Location** _____

TestAmerica Cooler # 574 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

- Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-14 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (CF -0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
- Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 ea 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 NA
-Were tamper/custody seals intact and uncompromised? Yes No NA
- Shippers' packing slip attached to the cooler(s)? Yes No
- Did custody papers accompany the sample(s)? Yes No
- Were the custody papers relinquished & signed in the appropriate place? Yes No
- Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
- Did all bottles arrive in good condition (Unbroken)? Yes No
- Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
- For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
- Were correct bottle(s) used for the test(s) indicated? Yes No
- Sufficient quantity received to perform indicated analyses? Yes No
- 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.

- Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC157842
- Were VOAs on the COC? Yes No
- Were air bubbles >6 mm in any VOA vials?  ← Larger than this. Yes No NA
- Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
- Was a LL Hg or Me Hg trip blank present? Yes No

Concerning _____

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

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 TestAmerica Canton Sample Receipt Multiple Cooler Form									
Cooler Description (Circle)				IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
<u>TA</u>	Client	Box	Other	IR-14 IR-15	1.6	1.2	<u>Wet Ice</u>	Blue Ice	Dry Ice
<u>TA</u>	Client	Box	Other	IR-14 IR-15	1.2	1.4	<u>Wet Ice</u>	Blue Ice	Dry Ice
<u>TA</u>	Client	Box	Other	IR-14 IR-15	1.8	1.6	<u>Wet Ice</u>	Blue Ice	Dry Ice
<u>TA</u>	Client	Box	Other	IR-14 IR-15	2.3	2.1	<u>Wet Ice</u>	Blue Ice	Dry Ice
<u>TA</u>	Client	Box	Other	IR-14 IR-15	1.4	1.2	<u>Wet Ice</u>	Blue Ice	Dry Ice
<u>TA</u>	Client	Box	Other	IR-14 IR-15	1.1	0.9	<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice
TA	Client	Box	Other	IR-14 IR-15			<u>Wet Ice</u>	Blue Ice	Dry Ice

See Temperature Excursion Form

Temperature readings:

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
96152-F-20220331-01	240-164476-C-1	Plastic 500ml - with Nitric Acid	<2			
96152-F-20220331-01	240-164476-D-1	Plastic 1 liter - Nitric Acid	<2			
96152-F-20220331-01	240-164476-E-1	Plastic 1 liter - Nitric Acid	<2			
96152-F-20220331-01	240-164476-F-1	Plastic 250ml - with Nitric Acid	<2			
MW-F-20220331-01	240-164476-C-2	Plastic 500ml - with Nitric Acid	<2			
MW-F-20220331-01	240-164476-D-2	Plastic 1 liter - Nitric Acid	<2			
MW-F-20220331-01	240-164476-E-2	Plastic 1 liter - Nitric Acid	<2			
MW-F-20220331-01	240-164476-F-2	Plastic 250ml - with Nitric Acid	<2			
DUPE-003-MW1-F-20220331-01	240-164476-C-3	Plastic 500ml - with Nitric Acid	<2			
DUPE-003-MW1-F-20220331-01	240-164476-D-3	Plastic 1 liter - Nitric Acid	<2			
DUPE-003-MW1-F-20220331-01	240-164476-E-3	Plastic 1 liter - Nitric Acid	<2			
DUPE-003-MW1-F-20220331-01	240-164476-F-3	Plastic 250ml - with Nitric Acid	<2			
BAC-01-F-20220331-01	240-164476-C-4	Plastic 500ml - with Nitric Acid	<2			
BAC-01-F-20220331-01	240-164476-D-4	Plastic 1 liter - Nitric Acid	<2			
BAC-01-F-20220331-01	240-164476-E-4	Plastic 1 liter - Nitric Acid	<2			
BAC-01-F-20220331-01	240-164476-F-4	Plastic 250ml - with Nitric Acid	<2			
MW-6-F-20220331-01	240-164476-C-5	Plastic 500ml - with Nitric Acid	<2			
MW-6-F-20220331-01	240-164476-D-5	Plastic 1 liter - Nitric Acid	<2			
MW-6-F-20220331-01	240-164476-E-5	Plastic 1 liter - Nitric Acid	<2			
MW-6-F-20220331-01	240-164476-F-5	Plastic 250ml - with Nitric Acid	<2			
BAC-07-F-20220331-01	240-164476-C-6	Plastic 500ml - with Nitric Acid	<2			
BAC-07-F-20220331-01	240-164476-D-6	Plastic 1 liter - Nitric Acid	<2			
BAC-07-F-20220331-01	240-164476-E-6	Plastic 1 liter - Nitric Acid	<2			
BAC-07-F-20220331-01	240-164476-F-6	Plastic 250ml - with Nitric Acid	<2			
B-0903-F-20220331-01	240-164476-C-7	Plastic 500ml - with Nitric Acid	<2			
B-0903-F-20220331-01	240-164476-D-7	Plastic 1 liter - Nitric Acid	<2			
B-0903-F-20220331-01	240-164476-E-7	Plastic 1 liter - Nitric Acid	<2			
B-0903-F-20220331-01	240-164476-F-7	Plastic 250ml - with Nitric Acid	<2			
BAC-06-F-20220331-01	240-164476-C-8	Plastic 500ml - with Nitric Acid	<2			
BAC-06-F-20220331-01	240-164476-D-8	Plastic 1 liter - Nitric Acid	<2			
BAC-06-F-20220331-01	240-164476-E-8	Plastic 1 liter - Nitric Acid	<2			
BAC-06-F-20220331-01	240-164476-F-8	Plastic 250ml - with Nitric Acid	<2			
BAC-02-F-20220331-01	240-164476-C-9	Plastic 500ml - with Nitric Acid	<2			
BAC-02-F-20220331-01	240-164476-D-9	Plastic 1 liter - Nitric Acid	<2			
BAC-02-F-20220331-01	240-164476-E-9	Plastic 1 liter - Nitric Acid	<2			

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
BAC-02-F-20220331-01	240-164476-F-9	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
EB-001-F-20220331-01	240-164476-C-10	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
EB-001-F-20220331-01	240-164476-D-10	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-001-F-20220331-01	240-164476-E-10	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-001-F-20220331-01	240-164476-F-10	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____

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Eurofins Canton
 180 S. Van Buren Avenue
 Barberton, OH 44203
 Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record



Environment Testing
 America



Client Information (Sub Contract Lab)		Lab PII: Cisneros, Roxanne	Carrier Tracking No(s): 240-150379.1
Shipping/Receiving		E-Mail: roxanne.cisneros@eurofins.com	State of Origin: Ohio
Company: TessAmerica Laboratories, Inc.		Accreditations Required (See note): 240-164476-1	
Address: 13715 Rider Trail North,		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid E - NaHSO4 Q - Na2SO3 R - Na2S2O3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA V - MCAA W - pH 4-5 Z - other (specify) Other:	
Due Date Requested: 4/17/2022		Analysis Requested	
TAT Requested (days):		Total Number of containers	
City: Earth, City		9320_Ra226/Prescsp_0 Radium-226 (GFC)	
State, Zip: MO, 63045		9315_Ra226/Prescsp_21 Radium-226 (GFC)	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		R226Ra228 GFC/ Combined Radium-226 and	
Email:		Perform MS/MSD (Yes or No)	
Project #: 24019633		Field Filtered Sample (Yes or No)	
SSOW#:		Matrix (W=water, S=solid, O=ores/leach, A=air)	
Sample Identification - Client ID (Lab ID)		Special Instructions/Note:	
Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Preservation Code
96152-F-20220331-01 (240-164476-1)	3/31/22 09:08 Eastern	Water	Water
MW-F-20220331-01 (240-164476-2)	3/31/22 10:43 Eastern	Water	Water
DUPE-003-MW1-F-20220331-01 (240-164476-3)	3/31/22 10:43 Eastern	Water	Water
BAC-01-F-20220331-01 (240-164476-4)	3/31/22 11:37 Eastern	Water	Water
MW-6-F-20220331-01 (240-164476-5)	3/31/22 12:09 Eastern	Water	Water
BAC-07-F-20220331-01 (240-164476-6)	3/31/22 12:59 Eastern	Water	Water
B-0903-F-20220331-01 (240-164476-7)	3/31/22 13:51 Eastern	Water	Water
BAC-06-F-20220331-01 (240-164476-8)	3/31/22 14:54 Eastern	Water	Water
BAC-02-F-20220331-01 (240-164476-9)	3/31/22 15:32 Eastern	Water	Water
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out 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/test/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			
Deliverable Requested: I, II, III, IV, Other (specify)			
Primary Deliverable Rank: 2			
Empty Kit Relinquished by:			
Date:			
Relinquished by: <i>Mandy Blue</i>			
Date/Time: 4-4-22 5:30			
Relinquished by: FED EX			
Date/Time:			
Relinquished by:			
Date/Time:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Custody Seal No.:			
Cooler Temperature(s) °C and Other Remarks:			
Received by: <i>Autumn R. Johnson</i>			
Date/Time: APR 05 2022 09:25			
Company: <i>EVA SL</i>			
Received by:			
Date/Time:			
Company:			
Special Instructions/QC Requirements:			
Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Method of Shipment:			



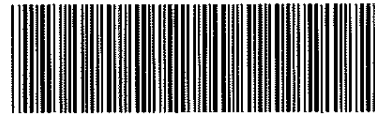
Chain of Custody Record

Client Information (Sub Contract Lab) Lab PM: Cisneros, Roxanne State of Origin: Ohio Carrier Tracking No(s): 240-150379.2 Shipping/Receiving: roxanne.cisneros@eurofinset.com Page: Page 2 of 2 Company: Tests/America Laboratories, Inc. Job #: 240-164476-1 Accreditations Required (See note):		COC No: 240-150379.2 Page: Page 2 of 2 Job #: 240-164476-1	
Due Date Requested: 4/17/2022 TAT Requested (days): PO #: 314-298-8566(Tel) 314-298-8757(Fax) WO #: Project #: 24019633 SOW#:		Analysis Requested: Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> 9320_Ra228/PreSep_0 Radium-228 (GFP) <input checked="" type="checkbox"/> 9315_Ra228/PreSep_21 Radium-226 (GFP) <input checked="" type="checkbox"/> Ra226Ra228 GFP/ Combined Radium-226 and Radium-228 <input checked="" type="checkbox"/> Total Number of Containers: 2	
Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: Project Name: Gavin CCR Site:		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 Other: 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 X - EDA Z - other (specify)	
Sample Identification - Client ID (Lab ID) EB-001-F-20220331-01 (240-164476-10)		Sample Date: 3/31/22 Sample Time: 15:45 Eastern Sample Type (C=comp, G=grab) Matrix (Aqueous, Solid, Overhead, BT/Trace, AAS)	
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out 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/test/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.		Special Instructions/Note: Recount of TAR after 21 day ingrowth if > action limit: save planchet	
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Date:			
Relinquished by: <i>Mandy Blue</i> Relinquished by: FED EX Relinquished by:		Date/Time: 4-17-2022 9:30 Date/Time: Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Special Instructions/QC Requirements:			
Received by: <i>Mandy Blue</i> Received by: FED EX Received by: Autumn R. Johnson		Date/Time: 4-17-2022 9:30 Date/Time: Date/Time:	
Relinquished by:		Date/Time:	
Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	





Environment Testing
America



240-164476 Chain of Custody

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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>Camden</u>			
City/State	CITY <u>Barberton</u>	STATE <u>OH</u>	Project
Receipt Information			
Date/Time Received	DATE <u>4/5/22</u>	TIME <u>0945</u>	Received By <u>[Signature]</u>
Delivery Type	<input type="checkbox"/> UPS	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
		<input type="checkbox"/> US Mail	<input type="checkbox"/> Spee-Dee
		<input type="checkbox"/> Other	
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes Cooler ID
Multiple Coolers?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes. Which VOA samples are in cooler? ↓
Temperature Record			
Coolant	<input checked="" type="checkbox"/> Wet ice	<input type="checkbox"/> Blue ice	<input type="checkbox"/> Dry ice
			<input checked="" type="checkbox"/> NONE
Thermometer ID	<u>P</u>	Correction Factor (°C)	<u>-0.1</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)	Corrected Temp (°C)		
Sample Container Temperature			
Container(s) used	CONTAINER 1 <u>PLSDONTIC</u>	CONTAINER 2 <u>→</u>	
Uncorrected Temp (°C)	<u>11.9</u>	<u>11.1</u>	
Corrected Temp (°C)	<u>11.8</u>	<u>11.0</u>	
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
America

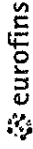
Place COC scanning label
here

479/482/477/497
494/475/476

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>Camton</u>			
City/State	CITY <u>Burkston</u>	STATE <u>OH</u>	Project
Receipt Information			
Date/Time Received	DATE <u>4/5/22</u>	TIME <u>0945</u>	Received By <u>M</u>
Delivery Type	<input type="checkbox"/> UPS	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
	<input type="checkbox"/> US Mail	<input type="checkbox"/> Spee-Dee	<input type="checkbox"/> Other _____
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes Cooler ID
Multiple Coolers?	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Cooler # <u>2</u> of <u>2</u>
Cooler Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes. Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes Which VOA samples are in cooler? ↓
Temperature Record			
Coolant	<input type="checkbox"/> Wet ice	<input type="checkbox"/> Blue ice	<input type="checkbox"/> Dry ice
	<input type="checkbox"/> Other _____	<input checked="" type="checkbox"/> NONE	
Thermometer ID	Correction Factor (°C)		
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)	Corrected Temp (°C)		
• Sample Container Temperature			
Container(s) used	CONTAINER 1 <u>PL 500 Nitro</u>	CONTAINER 2 <u>PL 500 Nitro</u>	
Uncorrected Temp (°C)	<u>11.9</u>	<u>12.9</u>	
Corrected Temp (°C)	<u>11.8</u>	<u>12.8</u>	
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Cisneros, Roxanne		Camer Tracking No(s):		COC No: 240-150382.1	
Shipping/Receiving		E-Mail: roxanne.cisneros@Eurofinset.com		State of Origin: Ohio		Page: Page 1 of 2	
Company: Eurofins Environment Testing North Cent		Accreditations Required (See note):		Job #: 240-164476-1		Preservation Codes:	
Address: 3019 Venture Way.		Due Date Requested: 5/4/2022		Analysis Requested		A HCL M Hexane	
City: Cedar Falls		TAT Requested (days):		Perform MS/MSD (Yes or No)		B NaOH N None	
State, Zip: IA, 50613		PO #:		6010D/3005A_TOT (MOD) Boron		C Zn Acetate O AsNaO2	
Phone: 319-277-2401(Tel) 319-277-2425(Fax)		WO #:		6020B/3005A_TOT 24 Metals		D Nitric Acid P Na2O4S	
Email:		Project #: 24019633		Field Filtered Sample (Yes or No)		E NaHSO4 R Na2SO3	
Project Name: Federal CCR Wells		SSOW#:		Matrix (Water, Seawater, Other, etc.)		F MeOH S H2SO4	
Site:		Sample Date		Sample Time		G Amchlor T TSP Dodecahydrate	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		H Ascorbic Acid U Acetone	
96152-F-20220331-01 (240-164476-1)		3/31/22		09:08 Eastern		I Ice V MCAA	
MW-F-20220331-01 (240-164476-2)		3/31/22		10:43 Eastern		J DI Water W pH 4-5	
DUPE-003-MW1-F-20220331-01 (240-164476-3)		3/31/22		10:43 Eastern		K EDTA Z other (specify)	
BAC-01-F-20220331-01 (240-164476-4)		3/31/22		11:37 Eastern		Other	
MW-6-F-20220331-01 (240-164476-5)		3/31/22		12:09 Eastern		Special Instructions/Note:	
BAC-07-F-20220331-01 (240-164476-6)		3/31/22		12:59 Eastern		Total Number of Containers	
B-0903-F-20220331-01 (240-164476-7)		3/31/22		13:51 Eastern		1	
BAC-06-F-20220331-01 (240-164476-8)		3/31/22		14:54 Eastern		1	
BAC-02-F-20220331-01 (240-164476-9)		3/31/22		15:32 Eastern		1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyze & 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/main, 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
 Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank. 2

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *Mandy Blal* Date/Time: 4-4-22 14:05
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____

Custody Seal Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Method of Shipment: _____
 Received by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____
 Received by: *PK* Date/Time: 4-5-22 945



Client Information (Sub Contract Lab)

Client Contact: Shipping/Receiving
 Company: Eufofins Environment Testing North Central

Address: 3019 Venture Way
 City: Cedar Falls
 State, Zip: IA, 50613
 Phone: 319-277-2401 (Tel) 319-277-2425 (Fax)
 Email:

Project Name: Federal CCR Wells
 Site:

Due Date Requested: 5/4/2022
 TAT Requested (days):
 PO #:
 WO #:
 Project #: 24019633
 SSOW#:

Lab PIV: Cisneros, Roxanne
 E-Mail: roxanne.cisneros@Eurofins.com

Carrier Tracking No(s): 240-150382.2
 State of Origin: Ohio

Accreditations Required (See note):

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	PRESERVATION CODE:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D/3005A_TOT (MOD) Boron	6020B/3005A_TOT 24 Metals	Total Number of Containers	Special Instructions/Note:
EB-001-F-20220331-01 (240-164476-10)	3/31/22	15:45 Eastern		Water			X	X	1	

Analysis Requested		Preservation Codes:																							
A	HCL	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	Z	Other (specify)

Note: Since laboratory accreditations are subject to change, Eufofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out 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/test/matrix being analyzed, the samples must be shipped back to the Eufofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eufofins 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 Eufofins Environment Testing North Central, LLC.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested I, II, III, IV Other (specify) Primary Deliverable Rank, 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: [Signature] Date: 4-4-22 14:05
 Relinquished by: [Signature] Date: []
 Relinquished by: [Signature] Date: []

Company Received by: [Signature] Date: 4-5-22 9:45
 Company Received by: [Signature] Date: []
 Company Received by: [Signature] Date: []

Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164476-1

Login Number: 164476

List Number: 3

Creator: Kizer, Preston V

List Source: Eurofins Cedar Falls

List Creation: 04/05/22 12:27 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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?	False	Received project as a subcontract.
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164476-1

Login Number: 164476

List Number: 2

Creator: Booker, Autumn R

List Source: Eurofins St. Louis

List Creation: 04/05/22 12:08 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?	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-164538-1
Client Project/Site: Federal CCR Wells
Revision: 1

For:
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Attn: Taylor Huffman



Authorized for release by:
8/2/2022 11:11:47 AM
Opal Johnson, Project Manager II
(330)966-9279
Opal.Johnson@et.eurofinsus.com

Designee for
Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164538-1

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.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Job ID: 240-164538-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-164538-1

Comments

The SW846 Method 6010D Metals (ICP) and SW-846 Method 6020B ICPMS analyses were performed at the Eurofins Cedar Falls laboratory.

The SW846 Method 9315 Radium-226, SW846 Method 9320 Radium-228 (GFPC), and Ra226_Ra228 Combined Radium 226 and Radium 228 analyses were performed at the Eurofins St. Louis laboratory.

Receipt

The samples were received on 4/5/2022 9:40 AM. 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 3.4° C and 4.3° C.

RAD

Method PrecSep_0:

Method PrecSep-21:

Method 9320: Radium-228 batch 559089

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

BAC-05-F-20220401-01 (240-164538-1), BAC-04-F-20220401-01 (240-164538-2), DUPE-004-BAC-04-F-20220401-01 (240-164538-3), BAC-03-F-20220401-01 (240-164538-4), EB-001-F-20220401-01 (240-164538-5), (LCS 160-559089/1-A), (MB 160-559089/15-A), (240-164477-M-1-B), (240-164477-J-1-C MS) and (240-164477-N-1-C MSD)

Method 9315: Radium-226 batch 559087

The LCS recovered at (74%). 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 (67-118%) per method requirements. The LCS passes, no further action is required

(LCS 160-559087/1-A)

Method 9315: Radium-226 batch 559087

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

BAC-05-F-20220401-01 (240-164538-1), BAC-04-F-20220401-01 (240-164538-2), DUPE-004-BAC-04-F-20220401-01 (240-164538-3), BAC-03-F-20220401-01 (240-164538-4), EB-001-F-20220401-01 (240-164538-5), (LCS 160-559087/1-A), (MB 160-559087/15-A), (240-164477-M-1-A), (240-164477-J-1-B MS) and (240-164477-N-1-B MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	TAL CF
6020B	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CAN
2320B-1997	Alkalinity, Total	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CAN
9315	Radium 226 by GFPC	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Metals	SW846	TAL CF
7470A	Preparation, Mercury	SW846	TAL CAN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

TAL 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: 240-164538-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-164538-1	BAC-05-F-20220401-01	Water	04/01/22 09:42	04/05/22 09:40
240-164538-2	BAC-04-F-20220401-01	Water	04/01/22 11:17	04/05/22 09:40
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Water	04/01/22 11:17	04/05/22 09:40
240-164538-4	BAC-03-F-20220401-01	Water	04/01/22 12:40	04/05/22 09:40
240-164538-5	EB-001-F-20220401-01	Water	04/01/22 13:10	04/05/22 09:40

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: BAC-05-F-20220401-01

Lab Sample ID: 240-164538-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2800		200	56	ug/L	1		6010D	Total/NA
Aluminum	49	J	50	17	ug/L	1		6020B	Total/NA
Barium	34		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.25		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	80000		500	190	ug/L	1		6020B	Total/NA
Cobalt	4.5		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	910		100	36	ug/L	1		6020B	Total/NA
Lithium	5.6	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	17000		2000	600	ug/L	4		6020B	Total/NA
Manganese	7200		40	14	ug/L	4		6020B	Total/NA
Nickel	29		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1300		500	150	ug/L	1		6020B	Total/NA
Sodium	20000		1000	610	ug/L	1		6020B	Total/NA
Strontium	150		1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	82		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	82		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	22		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.12		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	220		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	420		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-04-F-20220401-01

Lab Sample ID: 240-164538-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2800		200	56	ug/L	1		6010D	Total/NA
Arsenic	1.2	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	38		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	93000		500	190	ug/L	1		6020B	Total/NA
Cobalt	1.3		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	780		100	36	ug/L	1		6020B	Total/NA
Lead	0.26	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	5.2	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	14000		500	150	ug/L	1		6020B	Total/NA
Manganese	260		10	3.6	ug/L	1		6020B	Total/NA
Nickel	3.6	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1600		500	150	ug/L	1		6020B	Total/NA
Selenium	1.1	J	5.0	0.96	ug/L	1		6020B	Total/NA
Silver	0.91	J	1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	26000		1000	610	ug/L	1		6020B	Total/NA
Strontium	220		1.0	0.56	ug/L	1		6020B	Total/NA
Thallium	0.47	J	1.0	0.26	ug/L	1		6020B	Total/NA
Total Alkalinity	96		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	96		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	44		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.078		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	210		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	430		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUPE-004-BAC-04-F-20220401-01

Lab Sample ID: 240-164538-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2900		200	56	ug/L	1		6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: DUPE-004-BAC-04-F-20220401-01
 (Continued)

Lab Sample ID: 240-164538-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	38	J	50	17	ug/L	1		6020B	Total/NA
Barium	38		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.056	J	0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	86000		500	190	ug/L	1		6020B	Total/NA
Chromium	1.1	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.22	J	0.50	0.19	ug/L	1		6020B	Total/NA
Copper	2.4	J	5.0	1.8	ug/L	1		6020B	Total/NA
Iron	96	J	100	36	ug/L	1		6020B	Total/NA
Lead	0.94		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	5.0	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	18000		500	150	ug/L	1		6020B	Total/NA
Manganese	110		10	3.6	ug/L	1		6020B	Total/NA
Nickel	2.6	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1700		500	150	ug/L	1		6020B	Total/NA
Sodium	26000		1000	610	ug/L	1		6020B	Total/NA
Strontium	220		1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	98		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	98		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	44		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.077		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	210		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	460		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-03-F-20220401-01

Lab Sample ID: 240-164538-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2300		200	56	ug/L	1		6010D	Total/NA
Aluminum	40	J	50	17	ug/L	1		6020B	Total/NA
Barium	42		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	88000		500	190	ug/L	1		6020B	Total/NA
Chromium	1.2	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.22	J	0.50	0.19	ug/L	1		6020B	Total/NA
Copper	2.5	J	5.0	1.8	ug/L	1		6020B	Total/NA
Iron	100		100	36	ug/L	1		6020B	Total/NA
Lead	0.97		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	6.8	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	16000		500	150	ug/L	1		6020B	Total/NA
Manganese	120		10	3.6	ug/L	1		6020B	Total/NA
Nickel	2.4	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1800		500	150	ug/L	1		6020B	Total/NA
Sodium	29000		1000	610	ug/L	1		6020B	Total/NA
Strontium	230		1.0	0.56	ug/L	1		6020B	Total/NA
Zinc	10	J	20	10	ug/L	1		6020B	Total/NA
Total Alkalinity	81		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	81		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	51		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.063		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	190		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	440		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: EB-001-F-20220401-01

Lab Sample ID: 240-164538-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	680		200	56	ug/L	1		6010D	Total/NA
Chromium	1.6	J	5.0	1.1	ug/L	1		6020B	Total/NA
Copper	3.6	J	5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.65		0.50	0.24	ug/L	1		6020B	Total/NA
Total Dissolved Solids	96		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: BAC-05-F-20220401-01

Lab Sample ID: 240-164538-1

Date Collected: 04/01/22 09:42

Matrix: Water

Date Received: 04/05/22 09:40

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2800		200	56	ug/L		04/28/22 09:30	05/02/22 19:12	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	49	J	50	17	ug/L		04/28/22 09:30	05/19/22 21:03	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 21:03	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 21:03	1
Barium	34		2.0	0.88	ug/L		04/28/22 09:30	05/19/22 21:03	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 21:03	1
Cadmium	0.25		0.10	0.055	ug/L		04/28/22 09:30	05/19/22 21:03	1
Calcium	80000		500	190	ug/L		04/28/22 09:30	05/19/22 21:03	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/19/22 21:03	1
Cobalt	4.5		0.50	0.19	ug/L		04/28/22 09:30	05/19/22 21:03	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 21:03	1
Iron	910		100	36	ug/L		04/28/22 09:30	05/19/22 21:03	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/19/22 21:03	1
Lithium	5.6	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 21:03	1
Magnesium	17000		2000	600	ug/L		04/28/22 09:30	05/20/22 17:24	4
Manganese	7200		40	14	ug/L		04/28/22 09:30	05/20/22 17:24	4
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/19/22 21:03	1
Nickel	29		5.0	1.9	ug/L		04/28/22 09:30	05/19/22 21:03	1
Potassium	1300		500	150	ug/L		04/28/22 09:30	05/19/22 21:03	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 21:03	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 21:03	1
Sodium	20000		1000	610	ug/L		04/28/22 09:30	05/19/22 21:03	1
Strontium	150		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 21:03	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 21:03	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 21:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		04/07/22 08:00	04/07/22 15:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	82		5.0	2.6	mg/L			04/12/22 20:59	1
Bicarbonate Alkalinity as CaCO3	82		5.0	2.6	mg/L			04/12/22 20:59	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/12/22 20:59	1
Chloride	22		1.0	0.28	mg/L			04/24/22 05:25	1
Fluoride	0.12		0.050	0.024	mg/L			04/24/22 05:25	1
Sulfate	220		2.0	0.70	mg/L			04/26/22 00:13	2
Total Dissolved Solids	420		10	7.8	mg/L			04/07/22 08:03	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0500	U	0.141	0.141	1.00	0.259	pCi/L	04/07/22 10:04	05/02/22 16:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.1		40 - 110					04/07/22 10:04	05/02/22 16:27	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: BAC-05-F-20220401-01

Lab Sample ID: 240-164538-1

Date Collected: 04/01/22 09:42

Matrix: Water

Date Received: 04/05/22 09:40

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.226	U	0.385	0.386	1.00	0.651	pCi/L	04/07/22 10:23	04/29/22 17:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.1		40 - 110					04/07/22 10:23	04/29/22 17:25	1
Y Carrier	79.3		40 - 110					04/07/22 10:23	04/29/22 17:25	1

Method: 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	0.276	U	0.410	0.411	5.00	0.651	pCi/L		05/04/22 14:04	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: BAC-04-F-20220401-01

Lab Sample ID: 240-164538-2

Date Collected: 04/01/22 11:17

Matrix: Water

Date Received: 04/05/22 09:40

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2800		200	56	ug/L		04/28/22 09:30	05/02/22 19:18	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/28/22 09:30	05/19/22 21:30	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 21:30	1
Arsenic	1.2	J	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 21:30	1
Barium	38		2.0	0.88	ug/L		04/28/22 09:30	05/19/22 21:30	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 21:30	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 21:30	1
Calcium	93000		500	190	ug/L		04/28/22 09:30	05/19/22 21:30	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/19/22 21:30	1
Cobalt	1.3		0.50	0.19	ug/L		04/28/22 09:30	05/19/22 21:30	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 21:30	1
Iron	780		100	36	ug/L		04/28/22 09:30	05/19/22 21:30	1
Lead	0.26	J	0.50	0.24	ug/L		04/28/22 09:30	05/19/22 21:30	1
Lithium	5.2	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 21:30	1
Magnesium	14000		500	150	ug/L		04/28/22 09:30	05/20/22 17:35	1
Manganese	260		10	3.6	ug/L		04/28/22 09:30	05/19/22 21:30	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/19/22 21:30	1
Nickel	3.6	J	5.0	1.9	ug/L		04/28/22 09:30	05/19/22 21:30	1
Potassium	1600		500	150	ug/L		04/28/22 09:30	05/19/22 21:30	1
Selenium	1.1	J	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 21:30	1
Silver	0.91	J	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 21:30	1
Sodium	26000		1000	610	ug/L		04/28/22 09:30	05/19/22 21:30	1
Strontium	220		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 21:30	1
Thallium	0.47	J	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 21:30	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 21:30	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		04/07/22 08:00	04/07/22 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	96		5.0	2.6	mg/L			04/12/22 21:03	1
Bicarbonate Alkalinity as CaCO3	96		5.0	2.6	mg/L			04/12/22 21:03	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/12/22 21:03	1
Chloride	44		1.0	0.28	mg/L			04/24/22 06:30	1
Fluoride	0.078		0.050	0.024	mg/L			04/24/22 06:30	1
Sulfate	210		2.0	0.70	mg/L			04/26/22 01:13	2
Total Dissolved Solids	430		10	7.8	mg/L			04/07/22 08:03	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.113	U	0.144	0.144	1.00	0.239	pCi/L	04/07/22 10:04	05/02/22 16:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110					04/07/22 10:04	05/02/22 16:49	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: BAC-04-F-20220401-01

Lab Sample ID: 240-164538-2

Date Collected: 04/01/22 11:17

Matrix: Water

Date Received: 04/05/22 09:40

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.517	U	0.357	0.360	1.00	0.553	pCi/L	04/07/22 10:23	04/29/22 17:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110					04/07/22 10:23	04/29/22 17:25	1
Y Carrier	82.2		40 - 110					04/07/22 10:23	04/29/22 17:25	1

Method: 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	0.629		0.385	0.388	5.00	0.553	pCi/L		05/04/22 14:04	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: DUPE-004-BAC-04-F-20220401-01

Lab Sample ID: 240-164538-3

Date Collected: 04/01/22 11:17

Matrix: Water

Date Received: 04/05/22 09:40

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2900		200	56	ug/L		04/28/22 09:30	05/02/22 19:20	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	38	J	50	17	ug/L		04/28/22 09:30	05/19/22 21:34	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 21:34	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 21:34	1
Barium	38		2.0	0.88	ug/L		04/28/22 09:30	05/19/22 21:34	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 21:34	1
Cadmium	0.056	J	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 21:34	1
Calcium	86000		500	190	ug/L		04/28/22 09:30	05/19/22 21:34	1
Chromium	1.1	J	5.0	1.1	ug/L		04/28/22 09:30	05/19/22 21:34	1
Cobalt	0.22	J	0.50	0.19	ug/L		04/28/22 09:30	05/19/22 21:34	1
Copper	2.4	J	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 21:34	1
Iron	96	J	100	36	ug/L		04/28/22 09:30	05/19/22 21:34	1
Lead	0.94		0.50	0.24	ug/L		04/28/22 09:30	05/19/22 21:34	1
Lithium	5.0	J	10	2.5	ug/L		04/28/22 09:30	05/19/22 21:34	1
Magnesium	18000		500	150	ug/L		04/28/22 09:30	05/20/22 17:55	1
Manganese	110		10	3.6	ug/L		04/28/22 09:30	05/19/22 21:34	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/19/22 21:34	1
Nickel	2.6	J	5.0	1.9	ug/L		04/28/22 09:30	05/19/22 21:34	1
Potassium	1700		500	150	ug/L		04/28/22 09:30	05/19/22 21:34	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 21:34	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 21:34	1
Sodium	26000		1000	610	ug/L		04/28/22 09:30	05/19/22 21:34	1
Strontium	220		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 21:34	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 21:34	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 21:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		04/07/22 08:00	04/07/22 15:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	98		5.0	2.6	mg/L			04/12/22 21:20	1
Bicarbonate Alkalinity as CaCO3	98		5.0	2.6	mg/L			04/12/22 21:20	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/12/22 21:20	1
Chloride	44		1.0	0.28	mg/L			04/24/22 06:52	1
Fluoride	0.077		0.050	0.024	mg/L			04/24/22 06:52	1
Sulfate	210		2.0	0.70	mg/L			04/26/22 01:34	2
Total Dissolved Solids	460		10	7.8	mg/L			04/07/22 08:03	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.168	U	0.129	0.130	1.00	0.191	pCi/L	04/07/22 10:04	05/02/22 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.9		40 - 110					04/07/22 10:04	05/02/22 18:20	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: DUPE-004-BAC-04-F-20220401-01

Lab Sample ID: 240-164538-3

Date Collected: 04/01/22 11:17

Matrix: Water

Date Received: 04/05/22 09:40

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.256	U	0.262	0.263	1.00	0.426	pCi/L	04/07/22 10:23	04/29/22 17:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.9		40 - 110					04/07/22 10:23	04/29/22 17:25	1
Y Carrier	83.0		40 - 110					04/07/22 10:23	04/29/22 17:25	1

Method: 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	0.423	U	0.292	0.293	5.00	0.426	pCi/L		05/04/22 14:04	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: BAC-03-F-20220401-01

Lab Sample ID: 240-164538-4

Date Collected: 04/01/22 12:40

Matrix: Water

Date Received: 04/05/22 09:40

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2300		200	56	ug/L		04/28/22 09:30	05/02/22 19:22	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	40	J	50	17	ug/L		04/28/22 09:30	05/20/22 17:59	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/20/22 17:59	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/20/22 17:59	1
Barium	42		2.0	0.88	ug/L		04/28/22 09:30	05/20/22 17:59	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/20/22 17:59	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/20/22 17:59	1
Calcium	88000		500	190	ug/L		04/28/22 09:30	05/20/22 17:59	1
Chromium	1.2	J	5.0	1.1	ug/L		04/28/22 09:30	05/20/22 17:59	1
Cobalt	0.22	J	0.50	0.19	ug/L		04/28/22 09:30	05/20/22 17:59	1
Copper	2.5	J	5.0	1.8	ug/L		04/28/22 09:30	05/20/22 17:59	1
Iron	100		100	36	ug/L		04/28/22 09:30	05/20/22 17:59	1
Lead	0.97		0.50	0.24	ug/L		04/28/22 09:30	05/20/22 17:59	1
Lithium	6.8	J	10	2.5	ug/L		04/28/22 09:30	05/20/22 17:59	1
Magnesium	16000		500	150	ug/L		04/28/22 09:30	05/20/22 17:59	1
Manganese	120		10	3.6	ug/L		04/28/22 09:30	05/20/22 17:59	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/20/22 17:59	1
Nickel	2.4	J	5.0	1.9	ug/L		04/28/22 09:30	05/20/22 17:59	1
Potassium	1800		500	150	ug/L		04/28/22 09:30	05/20/22 17:59	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/20/22 17:59	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/20/22 17:59	1
Sodium	29000		1000	610	ug/L		04/28/22 09:30	05/20/22 17:59	1
Strontium	230		1.0	0.56	ug/L		04/28/22 09:30	05/20/22 17:59	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/20/22 17:59	1
Zinc	10	J	20	10	ug/L		04/28/22 09:30	05/20/22 17:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		04/07/22 08:00	04/07/22 15:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	81		5.0	2.6	mg/L			04/12/22 21:10	1
Bicarbonate Alkalinity as CaCO3	81		5.0	2.6	mg/L			04/12/22 21:10	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/12/22 21:10	1
Chloride	51		1.0	0.28	mg/L			04/24/22 07:57	1
Fluoride	0.063		0.050	0.024	mg/L			04/24/22 07:57	1
Sulfate	190		1.0	0.35	mg/L			04/24/22 07:57	1
Total Dissolved Solids	440		10	7.8	mg/L			04/07/22 08:03	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0737	U	0.128	0.129	1.00	0.226	pCi/L	04/07/22 10:04	05/02/22 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.9		40 - 110					04/07/22 10:04	05/02/22 18:20	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: BAC-03-F-20220401-01

Lab Sample ID: 240-164538-4

Date Collected: 04/01/22 12:40

Matrix: Water

Date Received: 04/05/22 09:40

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.171	U	0.338	0.339	1.00	0.578	pCi/L	04/07/22 10:23	04/29/22 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.9		40 - 110					04/07/22 10:23	04/29/22 17:26	1
Y Carrier	79.6		40 - 110					04/07/22 10:23	04/29/22 17:26	1

Method: 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	0.244	U	0.361	0.363	5.00	0.578	pCi/L		05/04/22 14:04	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: EB-001-F-20220401-01

Lab Sample ID: 240-164538-5

Date Collected: 04/01/22 13:10

Matrix: Water

Date Received: 04/05/22 09:40

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	680		200	56	ug/L		04/28/22 09:30	05/02/22 19:23	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/28/22 09:30	05/19/22 21:42	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 21:42	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 21:42	1
Barium	2.0	U	2.0	0.88	ug/L		04/28/22 09:30	05/19/22 21:42	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 21:42	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 21:42	1
Calcium	500	U	500	190	ug/L		04/28/22 09:30	05/19/22 21:42	1
Chromium	1.6	J	5.0	1.1	ug/L		04/28/22 09:30	05/19/22 21:42	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/28/22 09:30	05/19/22 21:42	1
Copper	3.6	J	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 21:42	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 21:42	1
Lead	0.65		0.50	0.24	ug/L		04/28/22 09:30	05/19/22 21:42	1
Lithium	10	U	10	2.5	ug/L		04/28/22 09:30	05/19/22 21:42	1
Magnesium	500	U	500	150	ug/L		04/28/22 09:30	05/20/22 18:03	1
Manganese	10	U	10	3.6	ug/L		04/28/22 09:30	05/19/22 21:42	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/19/22 21:42	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/19/22 21:42	1
Potassium	500	U	500	150	ug/L		04/28/22 09:30	05/19/22 21:42	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 21:42	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 21:42	1
Sodium	1000	U	1000	610	ug/L		04/28/22 09:30	05/19/22 21:42	1
Strontium	1.0	U	1.0	0.56	ug/L		04/28/22 09:30	05/19/22 21:42	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 21:42	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 21:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		04/07/22 08:00	04/07/22 15:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			04/12/22 21:14	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/12/22 21:14	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/12/22 21:14	1
Chloride	1.0	U	1.0	0.28	mg/L			04/24/22 08:18	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/24/22 08:18	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/24/22 08:18	1
Total Dissolved Solids	96		10	7.8	mg/L			04/07/22 08:03	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00215	U	0.0843	0.0843	1.00	0.170	pCi/L	04/07/22 10:04	05/02/22 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					04/07/22 10:04	05/02/22 18:20	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: EB-001-F-20220401-01

Lab Sample ID: 240-164538-5

Date Collected: 04/01/22 13:10

Matrix: Water

Date Received: 04/05/22 09:40

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.126	U	0.250	0.250	1.00	0.428	pCi/L	04/07/22 10:23	04/29/22 17:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		40 - 110					04/07/22 10:23	04/29/22 17:26	1
Y Carrier	82.2		40 - 110					04/07/22 10:23	04/29/22 17:26	1

Method: 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	0.264	0.264	5.00	0.428	pCi/L		05/04/22 14:04	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

			Percent Yield (Acceptance Limits)			
			Ba			
Lab Sample ID	Client Sample ID		(40-110)			
240-164538-1	BAC-05-F-20220401-01		90.1			
240-164538-2	BAC-04-F-20220401-01		93.3			
240-164538-3	DUPE-004-BAC-04-F-20220401-01		89.9			
240-164538-4	BAC-03-F-20220401-01		91.9			
240-164538-5	EB-001-F-20220401-01		92.1			
LCS 160-559087/1-A	Lab Control Sample		96.3			
MB 160-559087/15-A	Method Blank		96.6			

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		(40-110)	(40-110)		
240-164538-1	BAC-05-F-20220401-01		90.1	79.3		
240-164538-2	BAC-04-F-20220401-01		93.3	82.2		
240-164538-3	DUPE-004-BAC-04-F-20220401-01		89.9	83.0		
240-164538-4	BAC-03-F-20220401-01		91.9	79.6		
240-164538-5	EB-001-F-20220401-01		92.1	82.2		
LCS 160-559089/1-A	Lab Control Sample		96.3	80.4		
MB 160-559089/15-A	Method Blank		96.6	80.0		

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-351279/1-A
Matrix: Water
Analysis Batch: 351805

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351279

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/28/22 09:30	05/02/22 18:25	1

Lab Sample ID: LCS 310-351279/2-A
Matrix: Water
Analysis Batch: 351805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2000	2320		ug/L		116	80 - 120

Lab Sample ID: 240-164538-1 MS
Matrix: Water
Analysis Batch: 351805

Client Sample ID: BAC-05-F-20220401-01
Prep Type: Total/NA
Prep Batch: 351279

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2800		2000	5100		ug/L		114	75 - 125

Lab Sample ID: 240-164538-1 MSD
Matrix: Water
Analysis Batch: 351805

Client Sample ID: BAC-05-F-20220401-01
Prep Type: Total/NA
Prep Batch: 351279

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	2800		2000	5110		ug/L		115	75 - 125	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-351280/1-A
Matrix: Water
Analysis Batch: 353783

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351280

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/28/22 09:30	05/19/22 19:41	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 19:41	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 19:41	1
Barium	2.0	U	2.0	0.88	ug/L		04/28/22 09:30	05/19/22 19:41	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 19:41	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 19:41	1
Calcium	500	U	500	190	ug/L		04/28/22 09:30	05/19/22 19:41	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/19/22 19:41	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/28/22 09:30	05/19/22 19:41	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 19:41	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 19:41	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/19/22 19:41	1
Lithium	10	U	10	2.5	ug/L		04/28/22 09:30	05/19/22 19:41	1
Magnesium	500	U	500	150	ug/L		04/28/22 09:30	05/19/22 19:41	1
Manganese	10	U	10	3.6	ug/L		04/28/22 09:30	05/19/22 19:41	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/19/22 19:41	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/19/22 19:41	1
Potassium	500	U	500	150	ug/L		04/28/22 09:30	05/19/22 19:41	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 19:41	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 19:41	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 310-351280/1-A
Matrix: Water
Analysis Batch: 353783

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351280

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sodium	1000	U	1000	610	ug/L		04/28/22 09:30	05/19/22 19:41	1
Strontium	1.0	U	1.0	0.56	ug/L		04/28/22 09:30	05/19/22 19:41	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 19:41	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 19:41	1

Lab Sample ID: LCS 310-351280/2-A
Matrix: Water
Analysis Batch: 353783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351280

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	200	223		ug/L		111	80 - 120
Arsenic	200	203		ug/L		102	80 - 120
Barium	100	105		ug/L		105	80 - 120
Beryllium	100	106		ug/L		106	80 - 120
Cadmium	100	102		ug/L		102	80 - 120
Calcium	2000	1910		ug/L		95	80 - 120
Chromium	100	108		ug/L		108	80 - 120
Cobalt	100	108		ug/L		108	80 - 120
Copper	200	227		ug/L		113	80 - 120
Iron	200	224		ug/L		112	80 - 120
Lead	200	223		ug/L		112	80 - 120
Lithium	200	218		ug/L		109	80 - 120
Magnesium	2000	1940		ug/L		97	80 - 120
Manganese	100	103		ug/L		103	80 - 120
Molybdenum	200	227		ug/L		113	80 - 120
Nickel	200	219		ug/L		109	80 - 120
Potassium	2000	1940		ug/L		97	80 - 120
Selenium	400	399		ug/L		100	80 - 120
Silver	100	114		ug/L		114	80 - 120
Sodium	2000	2050		ug/L		102	80 - 120
Strontium	200	217		ug/L		108	80 - 120
Thallium	200	223		ug/L		112	80 - 120
Zinc	200	202		ug/L		101	80 - 120

Lab Sample ID: 240-164538-1 MS
Matrix: Water
Analysis Batch: 353783

Client Sample ID: BAC-05-F-20220401-01
Prep Type: Total/NA
Prep Batch: 351280

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2.0	U	200	219		ug/L		109	75 - 125
Arsenic	2.0	U	200	197		ug/L		98	75 - 125
Barium	34		100	132		ug/L		97	75 - 125
Beryllium	1.0	U	100	97.7		ug/L		98	75 - 125
Cadmium	0.25		100	101		ug/L		101	75 - 125
Calcium	80000		2000	79500	4	ug/L		-31	75 - 125
Chromium	5.0	U	100	99.2		ug/L		99	75 - 125
Cobalt	4.5		100	104		ug/L		99	75 - 125

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-164538-1 MS

Matrix: Water

Analysis Batch: 353783

Client Sample ID: BAC-05-F-20220401-01

Prep Type: Total/NA

Prep Batch: 351280

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier		Result	Qualifier					
Copper	5.0	U	200	208		ug/L		104		75 - 125
Iron	910		200	566	4	ug/L		-173		75 - 125
Lead	0.50	U	200	210		ug/L		105		75 - 125
Lithium	5.6	J	200	204		ug/L		99		75 - 125
Molybdenum	2.0	U	200	218		ug/L		109		75 - 125
Nickel	29		200	230		ug/L		101		75 - 125
Potassium	1300		2000	3320		ug/L		101		75 - 125
Selenium	5.0	U	400	404		ug/L		101		75 - 125
Silver	1.0	U	100	99.9		ug/L		100		75 - 125
Sodium	20000		2000	22100	4	ug/L		115		75 - 125
Strontium	150		200	370		ug/L		110		75 - 125
Thallium	1.0	U	200	203		ug/L		101		75 - 125
Zinc	20	U	200	199		ug/L		100		75 - 125

Lab Sample ID: 240-164538-1 MS

Matrix: Water

Analysis Batch: 353878

Client Sample ID: BAC-05-F-20220401-01

Prep Type: Total/NA

Prep Batch: 351280

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier		Result	Qualifier					
Magnesium	17000		2000	18500	4	ug/L		86		75 - 125
Manganese	7200		100	7210	4	ug/L		20		75 - 125

Lab Sample ID: 240-164538-1 MSD

Matrix: Water

Analysis Batch: 353783

Client Sample ID: BAC-05-F-20220401-01

Prep Type: Total/NA

Prep Batch: 351280

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier							
Aluminum	49	J	200	237		ug/L		94		75 - 125	0	20
Antimony	2.0	U	200	214		ug/L		107		75 - 125	2	20
Arsenic	2.0	U	200	191		ug/L		96		75 - 125	3	20
Barium	34		100	129		ug/L		95		75 - 125	2	20
Beryllium	1.0	U	100	97.1		ug/L		97		75 - 125	1	20
Cadmium	0.25		100	97.8		ug/L		98		75 - 125	3	20
Calcium	80000		2000	77000	4	ug/L		-155		75 - 125	3	20
Chromium	5.0	U	100	96.3		ug/L		96		75 - 125	3	20
Cobalt	4.5		100	101		ug/L		97		75 - 125	2	20
Copper	5.0	U	200	203		ug/L		101		75 - 125	3	20
Iron	910		200	565	4	ug/L		-174		75 - 125	0	20
Lead	0.50	U	200	204		ug/L		102		75 - 125	3	20
Lithium	5.6	J	200	195		ug/L		95		75 - 125	4	20
Molybdenum	2.0	U	200	213		ug/L		106		75 - 125	2	20
Nickel	29		200	223		ug/L		97		75 - 125	3	20
Potassium	1300		2000	3190		ug/L		95		75 - 125	4	20
Selenium	5.0	U	400	396		ug/L		99		75 - 125	2	20
Silver	1.0	U	100	107		ug/L		107		75 - 125	7	20
Sodium	20000		2000	21300	4	ug/L		78		75 - 125	3	20
Strontium	150		200	362		ug/L		106		75 - 125	2	20
Thallium	1.0	U	200	195		ug/L		98		75 - 125	4	20
Zinc	20	U	200	194		ug/L		97		75 - 125	3	20

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-164538-1 MSD
 Matrix: Water
 Analysis Batch: 353878

Client Sample ID: BAC-05-F-20220401-01
 Prep Type: Total/NA
 Prep Batch: 351280

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Magnesium	17000		2000	20600	4	ug/L		190	75 - 125	11	20
Manganese	7200		100	7940	4	ug/L		752	75 - 125	10	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-521958/1-A
 Matrix: Water
 Analysis Batch: 522089

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 521958

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.20	U	0.20	0.13	ug/L		04/07/22 08:00	04/07/22 14:58	1

Lab Sample ID: LCS 240-521958/2-A
 Matrix: Water
 Analysis Batch: 522089

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 521958

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: 240-164538-1 MS
 Matrix: Water
 Analysis Batch: 522089

Client Sample ID: BAC-05-F-20220401-01
 Prep Type: Total/NA
 Prep Batch: 521958

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	0.20	U	1.00	1.05		ug/L		105	80 - 120

Lab Sample ID: 240-164538-1 MSD
 Matrix: Water
 Analysis Batch: 522089

Client Sample ID: BAC-05-F-20220401-01
 Prep Type: Total/NA
 Prep Batch: 521958

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	0.20	U	1.00	0.988		ug/L		99	80 - 120	6	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-522689/4
 Matrix: Water
 Analysis Batch: 522689

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			04/12/22 19:39	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/12/22 19:39	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/12/22 19:39	1

Lab Sample ID: LCS 240-522689/3
 Matrix: Water
 Analysis Batch: 522689

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Total Alkalinity	121	118		mg/L		97	86 - 123

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: 240-164538-2 DU
Matrix: Water
Analysis Batch: 522689

Client Sample ID: BAC-04-F-20220401-01
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Alkalinity	96		96.8		mg/L		0.3	20
Bicarbonate Alkalinity as CaCO3	96		96.8		mg/L		0.3	20
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-523727/79
Matrix: Water
Analysis Batch: 523727

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			04/23/22 21:49	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/23/22 21:49	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/23/22 21:49	1

Lab Sample ID: LCS 240-523727/80
Matrix: Water
Analysis Batch: 523727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.63		mg/L		105	90 - 110
Sulfate	50.0	51.4		mg/L		103	90 - 110

Lab Sample ID: 240-164538-1 MS
Matrix: Water
Analysis Batch: 523727

Client Sample ID: BAC-05-F-20220401-01
Prep Type: Total/NA

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Chloride	22		50.0	71.4		mg/L		98	80 - 120
Fluoride	0.12		2.50	2.70		mg/L		103	80 - 120

Lab Sample ID: 240-164538-1 MSD
Matrix: Water
Analysis Batch: 523727

Client Sample ID: BAC-05-F-20220401-01
Prep Type: Total/NA

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Chloride	22		50.0	72.3		mg/L		100	80 - 120	1	15
Fluoride	0.12		2.50	2.75		mg/L		105	80 - 120	2	15

Lab Sample ID: MB 240-523895/3
Matrix: Water
Analysis Batch: 523895

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			04/25/22 18:51	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/25/22 18:51	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/25/22 18:51	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-523895/4
 Matrix: Water
 Analysis Batch: 523895

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	49.3		mg/L		99	90 - 110
Fluoride	2.50	2.48		mg/L		99	90 - 110
Sulfate	50.0	50.8		mg/L		102	90 - 110

Lab Sample ID: 240-164538-1 MS
 Matrix: Water
 Analysis Batch: 523895

Client Sample ID: BAC-05-F-20220401-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	220		100	304		mg/L		88	80 - 120

Lab Sample ID: 240-164538-1 MSD
 Matrix: Water
 Analysis Batch: 523895

Client Sample ID: BAC-05-F-20220401-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Sulfate	220		100	304		mg/L		89	80 - 120	0	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-521974/1
 Matrix: Water
 Analysis Batch: 521974

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	10	U	10	7.8	mg/L			04/07/22 08:03	1

Lab Sample ID: LCS 240-521974/2
 Matrix: Water
 Analysis Batch: 521974

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	150	142		mg/L		95	80 - 120

Lab Sample ID: 240-164538-1 DU
 Matrix: Water
 Analysis Batch: 521974

Client Sample ID: BAC-05-F-20220401-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	420		426		mg/L		1	20

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-559087/15-A
 Matrix: Water
 Analysis Batch: 563272

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 559087

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.06730	U	0.106	0.106	1.00	0.183	pCi/L	04/07/22 10:04	05/02/22 18:20	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: MB 160-559087/15-A
 Matrix: Water
 Analysis Batch: 563272

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 559087

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.6		40 - 110	04/07/22 10:04	05/02/22 18:20	1

Lab Sample ID: LCS 160-559087/1-A
 Matrix: Water
 Analysis Batch: 563273

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 559087

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	8.417		0.978	1.00	0.175	pCi/L	74	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.3		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-559089/15-A
 Matrix: Water
 Analysis Batch: 562966

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 559089

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1822	U	0.267	0.268	1.00	0.448	pCi/L	04/07/22 10:23	04/29/22 17:26	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.6		40 - 110	04/07/22 10:23	04/29/22 17:26	1
Y Carrier	80.0		40 - 110	04/07/22 10:23	04/29/22 17:26	1

Lab Sample ID: LCS 160-559089/1-A
 Matrix: Water
 Analysis Batch: 562835

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 559089

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.66	10.36		1.21	1.00	0.420	pCi/L	120	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.3		40 - 110
Y Carrier	80.4		40 - 110

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Metals

Prep Batch: 351279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	3005A	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	3005A	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	3005A	
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	3005A	
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	3005A	
MB 310-351279/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-351279/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	3005A	
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	3005A	

Prep Batch: 351280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	3005A	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	3005A	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	3005A	
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	3005A	
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	3005A	
MB 310-351280/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-351280/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	3005A	
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	3005A	

Analysis Batch: 351805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	6010D	351279
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	6010D	351279
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	6010D	351279
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	6010D	351279
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	6010D	351279
MB 310-351279/1-A	Method Blank	Total/NA	Water	6010D	351279
LCS 310-351279/2-A	Lab Control Sample	Total/NA	Water	6010D	351279
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	6010D	351279
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	6010D	351279

Analysis Batch: 353783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	6020B	351280
MB 310-351280/1-A	Method Blank	Total/NA	Water	6020B	351280
LCS 310-351280/2-A	Lab Control Sample	Total/NA	Water	6020B	351280
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	6020B	351280

Analysis Batch: 353878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	6020B	351280

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Metals (Continued)

Analysis Batch: 353878 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	6020B	351280
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	6020B	351280

Prep Batch: 521958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	7470A	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	7470A	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	7470A	
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	7470A	
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	7470A	
MB 240-521958/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-521958/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	7470A	
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	7470A	

Analysis Batch: 522089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	7470A	521958
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	7470A	521958
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	7470A	521958
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	7470A	521958
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	7470A	521958
MB 240-521958/1-A	Method Blank	Total/NA	Water	7470A	521958
LCS 240-521958/2-A	Lab Control Sample	Total/NA	Water	7470A	521958
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	7470A	521958
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	7470A	521958

General Chemistry

Analysis Batch: 521974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	SM 2540C	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	SM 2540C	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	SM 2540C	
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	SM 2540C	
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	SM 2540C	
MB 240-521974/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521974/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-164538-1 DU	BAC-05-F-20220401-01	Total/NA	Water	SM 2540C	

Analysis Batch: 522689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	2320B-1997	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	2320B-1997	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	2320B-1997	
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	2320B-1997	
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	2320B-1997	
MB 240-522689/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-522689/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-164538-2 DU	BAC-04-F-20220401-01	Total/NA	Water	2320B-1997	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

General Chemistry

Analysis Batch: 523727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	300.0	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	300.0	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	300.0	
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	300.0	
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	300.0	
MB 240-523727/79	Method Blank	Total/NA	Water	300.0	
LCS 240-523727/80	Lab Control Sample	Total/NA	Water	300.0	
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	300.0	
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	300.0	

Analysis Batch: 523895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	300.0	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	300.0	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	300.0	
MB 240-523895/3	Method Blank	Total/NA	Water	300.0	
LCS 240-523895/4	Lab Control Sample	Total/NA	Water	300.0	
240-164538-1 MS	BAC-05-F-20220401-01	Total/NA	Water	300.0	
240-164538-1 MSD	BAC-05-F-20220401-01	Total/NA	Water	300.0	

Rad

Prep Batch: 559087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	PrecSep-21	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	PrecSep-21	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	PrecSep-21	
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	PrecSep-21	
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	PrecSep-21	
MB 160-559087/15-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-559087/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 559089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164538-1	BAC-05-F-20220401-01	Total/NA	Water	PrecSep_0	
240-164538-2	BAC-04-F-20220401-01	Total/NA	Water	PrecSep_0	
240-164538-3	DUPE-004-BAC-04-F-20220401-01	Total/NA	Water	PrecSep_0	
240-164538-4	BAC-03-F-20220401-01	Total/NA	Water	PrecSep_0	
240-164538-5	EB-001-F-20220401-01	Total/NA	Water	PrecSep_0	
MB 160-559089/15-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-559089/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: BAC-05-F-20220401-01

Lab Sample ID: 240-164538-1

Date Collected: 04/01/22 09:42

Matrix: Water

Date Received: 04/05/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351279	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6010D		1	351805	05/02/22 19:12	ZRI4	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 21:03	DHM5	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		4	353878	05/20/22 17:24	DHM5	TAL CF
Total/NA	Prep	7470A			521958	04/07/22 08:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	522089	04/07/22 15:02	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522689	04/12/22 20:59	JWW	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 05:25	KMS	TAL CAN
Total/NA	Analysis	300.0		2	523895	04/26/22 00:13	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521974	04/07/22 08:03	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559087	04/07/22 10:04	BMP	TAL SL
Total/NA	Analysis	9315		1	563272	05/02/22 16:27	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559089	04/07/22 10:23	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563693	05/04/22 14:04	SCB	TAL SL

Client Sample ID: BAC-04-F-20220401-01

Lab Sample ID: 240-164538-2

Date Collected: 04/01/22 11:17

Matrix: Water

Date Received: 04/05/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351279	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6010D		1	351805	05/02/22 19:18	ZRI4	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 21:30	DHM5	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		1	353878	05/20/22 17:35	DHM5	TAL CF
Total/NA	Prep	7470A			521958	04/07/22 08:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	522089	04/07/22 15:15	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522689	04/12/22 21:03	JWW	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 06:30	KMS	TAL CAN
Total/NA	Analysis	300.0		2	523895	04/26/22 01:13	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521974	04/07/22 08:03	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559087	04/07/22 10:04	BMP	TAL SL
Total/NA	Analysis	9315		1	563272	05/02/22 16:49	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559089	04/07/22 10:23	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563693	05/04/22 14:04	SCB	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: DUPE-004-BAC-04-F-20220401-01

Lab Sample ID: 240-164538-3

Date Collected: 04/01/22 11:17

Matrix: Water

Date Received: 04/05/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351279	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6010D		1	351805	05/02/22 19:20	ZRI4	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 21:34	DHM5	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		1	353878	05/20/22 17:55	DHM5	TAL CF
Total/NA	Prep	7470A			521958	04/07/22 08:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	522089	04/07/22 15:17	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522689	04/12/22 21:20	JWW	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 06:52	KMS	TAL CAN
Total/NA	Analysis	300.0		2	523895	04/26/22 01:34	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521974	04/07/22 08:03	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559087	04/07/22 10:04	BMP	TAL SL
Total/NA	Analysis	9315		1	563272	05/02/22 18:20	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559089	04/07/22 10:23	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:25	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563693	05/04/22 14:04	SCB	TAL SL

Client Sample ID: BAC-03-F-20220401-01

Lab Sample ID: 240-164538-4

Date Collected: 04/01/22 12:40

Matrix: Water

Date Received: 04/05/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351279	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6010D		1	351805	05/02/22 19:22	ZRI4	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		1	353878	05/20/22 17:59	DHM5	TAL CF
Total/NA	Prep	7470A			521958	04/07/22 08:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	522089	04/07/22 15:19	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522689	04/12/22 21:10	JWW	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 07:57	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521974	04/07/22 08:03	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559087	04/07/22 10:04	BMP	TAL SL
Total/NA	Analysis	9315		1	563272	05/02/22 18:20	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559089	04/07/22 10:23	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:26	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563693	05/04/22 14:04	SCB	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Client Sample ID: EB-001-F-20220401-01

Lab Sample ID: 240-164538-5

Date Collected: 04/01/22 13:10

Matrix: Water

Date Received: 04/05/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351279	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6010D		1	351805	05/02/22 19:23	ZRI4	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 21:42	DHM5	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	QTZ5	TAL CF
Total/NA	Analysis	6020B		1	353878	05/20/22 18:03	DHM5	TAL CF
Total/NA	Prep	7470A			521958	04/07/22 08:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	522089	04/07/22 15:21	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522689	04/12/22 21:14	JWW	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/24/22 08:18	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521974	04/07/22 08:03	AJ	TAL CAN
Total/NA	Prep	PrecSep-21			559087	04/07/22 10:04	BMP	TAL SL
Total/NA	Analysis	9315		1	563272	05/02/22 18:20	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559089	04/07/22 10:23	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:26	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563693	05/04/22 14:04	SCB	TAL SL

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

TAL 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
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	06-02-22
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	05-31-22
Georgia	State	4062	06-16-22
Illinois	NELAP	200004	07-20-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	06-09-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	06-06-22
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	05-24-22
Oregon	NELAP	4062	05-24-22
Pennsylvania	NELAP	68-00340	06-20-22
Texas	NELAP	T104704517-22-17	06-09-22
Virginia	NELAP	11570	05-02-22
Washington	State	C971	06-05-22
West Virginia DEP	State	210	12-31-22

Laboratory: Eurofins Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-22
Georgia	State	IA100001 (OR)	09-29-22
Illinois	NELAP	200024	06-20-22
Iowa	State	007	12-01-21 *
Kansas	NELAP	E-10341	01-31-23
Minnesota	NELAP	019-999-319	12-31-22
Minnesota (Petrofund)	State	3349	01-18-24
North Dakota	State	R-186	09-29-22
Oregon	NELAP	IA100001	09-29-22

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	05-23-22
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-164538-1

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
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	05-10-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

3.6 J3.4
 Chain of Custody Record

Eurolfins TestAmerica, Canton
 4101 Shuffel Street
 North Canton, OH 44720
 Phone (330) 497-9396 Phone (330) 497-0772

Client Information
 Client Contact: Taylor Huffman
 Company: Lightstone Generation Gavin Power LLC
 Address: 7397 OH-7
 City: Cheshire
 State, Zip: OH, 45620
 Phone: 740-925-3171(Tel)
 Email: taylor.huffman@lightstonegen.com
 Project Name: Federal - CCR Wells
 Site: Ohio

Sampler: KEMPEK
Lab. PM: Cisneros, Roxanne
Phone: 740-373-4308
E-Mail: roxanne.cisneros@Eurolfins.com

Carrier Tracking No(s): 240-93018-34502
State of Origin:
Job #:

Analysis Requested

Perform MS/MSD (Yes or No) Yes No
 Field Filtered Sample (Yes or No) Yes No
 6010B, 7470, 6020 (See Metals List) Yes No
 2540C, Calcd, 300.0, 280 (Chloride, Fluoride, Sulfate) Yes No
 9315, Ra226, 9320, Ra228 Yes No
 2220B (Carbonate Alkalinity/Bi-Carbonate Alkalinity) Yes No
 Total Number of Containers: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Over-sat, A=Alt)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020 (See Metals List)	2540C, Calcd, 300.0, 280 (Chloride, Fluoride, Sulfate)	9315, Ra226, 9320, Ra228	2220B (Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of Containers	Special Instructions/Note:
BAC-05-F-20220401-01	040122	0942	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
BAC-05-F-20220401-M5	040122	0942	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
BAC-05-F-20220401-M5D	040122	0942	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
BAC-04-F-20220401-01	040122	1117	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Doe-004-BAC-04-F-20220401-01	040122	1117	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
BAC-03-F-20220401-01	040122	1240	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
EB-001-F-20220401-01	040122	1310	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Due Date Requested:
 TAT Requested (days):
 Compliance Project: Yes No
 PO #: 2936505
 WO #:
 Project #: 24019633
 SSOW #:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____
 Date: 4/4/22/0915
 Company: KEMPEK

Relinquished by: _____
 Date/Time: _____
 Company: _____

Relinquished by: _____
 Date/Time: _____
 Company: _____

Custody Seals Intact: Yes No
 Custody Seal No.:

Relinquished by: _____
 Date/Time: _____
 Company: _____

Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login #: 164538

Client Lightstone Site Name _____

Cooler unpacked by: [Signature]

Cooler Received on 4-5-22 Opened on 4-5-22

FedEx: 1st Grd Exp (UPS) FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA 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# IR-14 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-15 (CF -0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 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

Tests that are not checked for pH by Receiving:
 .VOAs
 Oil and Grease
 TOC

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# HC157842
 14. Were VOAs on the COC? Yes No
 15. Were air bubbles >6 mm in any VOA vials? Yes ← 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: _____

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

Login # : _____

Eurofins TestAmerica Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)				IR Gun # (Circle)		Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA	Client	Box	Other	IR-14	IR-15	3.6	3.4	Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15	4.3	4.3	Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-14	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	

See Temperature Excursion Form

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
BAC-05-F-20220401-01	240-164538-G-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-H-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-I-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-J-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-K-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-L-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-M-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-N-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-O-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-P-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-Q-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220401-01	240-164538-R-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
BAC-04-F-20220401-01	240-164538-C-2	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-04-F-20220401-01	240-164538-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-04-F-20220401-01	240-164538-E-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-04-F-20220401-01	240-164538-F-2	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
DUPE-004-BAC-04-F-20220401-01	240-164538-C-3	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
DUPE-004-BAC-04-F-20220401-01	240-164538-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUPE-004-BAC-04-F-20220401-01	240-164538-E-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUPE-004-BAC-04-F-20220401-01	240-164538-F-3	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
BAC-03-F-20220401-01	240-164538-C-4	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-03-F-20220401-01	240-164538-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-03-F-20220401-01	240-164538-E-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-03-F-20220401-01	240-164538-F-4	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
EB-001-F-20220401-01	240-164538-C-5	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
EB-001-F-20220401-01	240-164538-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-001-F-20220401-01	240-164538-E-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-001-F-20220401-01	240-164538-F-5	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No.					
Client Contact: Shipping/Receiving		Phone:	Cisneros, Roxanne		240-150423.1					
Company		E-Mail:	roxanne.cisneros@et.eurofins.com	State of Origin:	Page: Page 1 of 1					
Test/America Laboratories, Inc.		Accreditations Required (See note):		Ohio	Job #: 240-164538-1					
Address: 13715 Rider Trail North,		Due Date Requested:	Preservation Codes:							
City:		5/5/2022	A - HCL 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 X - EDTA Y - EDA Z - other (specify)							
State, Zip: MO, 63045		TAT Requested (days):	Analysis Requested							
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		PO #:	Total Number of Containers							
Email:		WO #:	6							
Project Name: Federal CCR Wells		Project #: 24019633	Special Instructions/Note:							
Site:		SSOW#:	. Recount of TAR after 21 day ingrowth if > action limit; save planchet . Recount of TAR after 21 day ingrowth if > action limit; save planchet . Recount of TAR after 21 day ingrowth if > action limit; save planchet . Recount of TAR after 21 day ingrowth if > action limit; save planchet . Recount of TAR after 21 day ingrowth if > action limit; save planchet							
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sealed, Overhead, etc.)	Field Filtered Sample (Yes or No)	Form 5310 (Yes or No)	9320_Ra228/PreSep_0 Radium-228 (GFC)	9315_Ra228/PreSep_21 Radium-228 (GFC)	9320_Ra228/PreSep_0 Radium-228 (GFC)	9315_Ra228/PreSep_21 Radium-228 and Radium-228 (GFC/ Combined Radium-228 and Radium-228)
BAC-05-F-20220401-01 (240-164538-1)	4/1/22	09:42 Eastern	Water	Water	X	X	X	X	X	X
BAC-04-F-20220401-01 (240-164538-2)	4/1/22	11:17 Eastern	Water	Water	X	X	X	X	X	X
DUPE-004-BAC-04-F-20220401-01 (240-164538-3)	4/1/22	11:17 Eastern	Water	Water	X	X	X	X	X	X
BAC-03-F-20220401-01 (240-164538-4)	4/1/22	12:40 Eastern	Water	Water	X	X	X	X	X	X
EB-001-F-20220401-01 (240-164538-5)	4/1/22	13:10 Eastern	Water	Water	X	X	X	X	X	X

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/test/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 Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification

Unconfirmed Return To Client Disposal By Lab Archive For Months

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____

Relinquished by: *Mandy Blak* Date/Time: *4-5-22 13:15* Company: *ELMC*

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Δ No Custody Seal No.: _____

Received by: _____ Date/Time: _____ Company: _____

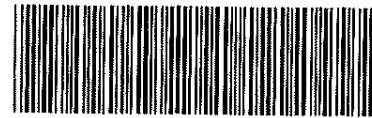
Received by: *Simsa Weddington* Date/Time: *APR 09 2022 0915* Company: *ETBTL*

Cooler Temperature(s) °C and Other Remarks: _____





Environment Testing
America



240-164538 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>Canton</u>			
City/State	CITY <u>Barberton</u>	STATE <u>OH</u>	Project
Receipt Information			
Date/Time Received	DATE <u>4-6-22</u>	TIME <u>1005</u>	Received By <u>ML</u>
Delivery Type <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other. _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes Cooler ID	
Multiple Coolers?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes Cooler # ____ of ____	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant <input type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other. _____ <input checked="" type="checkbox"/> NONE			
Thermometer ID	<u>✓</u>	Correction Factor (°C)	<u>0</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)	<u>-</u>	Corrected Temp (°C)	<u>-</u>
• Sample Container Temperature			
Container(s) used	CONTAINER 1 <u>P1 250 mL</u>	CONTAINER 2	
Uncorrected Temp (°C)	<u>14.4</u>		
Corrected Temp (°C)	<u>14.4</u>		
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>Metals</u>			

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150422.1																																																																		
Shipping/Receiving		E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1																																																																		
Company: Eurofins Environment Testing North Cent		Job #: 240-164538-1																																																																				
Address: 3019 Venture Way		Preservation Codes:																																																																				
City: Cedar Falls	State, Zip: IA, 50613	A HCL M Hexane																																																																				
Phone: 319-277-2401(Tel) 319-277-2425(Fax)	PO #:	B NaOH N None																																																																				
Email:	WG #:	C Zn Acetate O AsN ₂ O ₂																																																																				
Project Name: Federal CCR Wells	Project #: 24019633	D Nitric Acid P Na ₂ O ₄ S																																																																				
Site:	SSOW#:	E NaHSO ₄ Q Na ₂ SO ₃																																																																				
Due Date Requested: 5/5/2022		F MeOH R Na ₂ SO ₃																																																																				
TAT Requested (days):		G Amchlor S H ₂ SO ₄																																																																				
Sample Date		H Ascorbic Acid T TSP Dodecahydrate																																																																				
Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=organic, I=Inorganic, A=Air)																																																																		
BAC-05-F-20220401-01 (240-164538-1)	4/1/22	09:42 Eastern	Water	Water																																																																		
BAC-04-F-20220401-01 (240-164538-2)	4/1/22	11:17 Eastern	Water	Water																																																																		
DUPE-004-BAC-04-F-20220401-01 (240-164538-3)	4/1/22	11:17 Eastern	Water	Water																																																																		
BAC-03-F-20220401-01 (240-164538-4)	4/1/22	12:40 Eastern	Water	Water																																																																		
EB-001-F-20220401-01 (240-164538-5)	4/1/22	13:10 Eastern	Water	Water																																																																		
<table border="1"> <thead> <tr> <th>Sample ID (Lab ID)</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (W=water, S=solid, O=organic, I=Inorganic, A=Air)</th> <th>Field Filtered Sample (Yes or No)</th> <th>Param MS/MSD (Yes or No)</th> <th>6010D/3005A_TOT (MOD) Boron</th> <th>6020B/3005A_TOT 24 Metals</th> <th>Total Number of Containers</th> <th>Special Instructions/Note:</th> </tr> </thead> <tbody> <tr> <td>BAC-05-F-20220401-01 (240-164538-1)</td> <td>4/1/22</td> <td>09:42 Eastern</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>3</td> <td></td> </tr> <tr> <td>BAC-04-F-20220401-01 (240-164538-2)</td> <td>4/1/22</td> <td>11:17 Eastern</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> <tr> <td>DUPE-004-BAC-04-F-20220401-01 (240-164538-3)</td> <td>4/1/22</td> <td>11:17 Eastern</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> <tr> <td>BAC-03-F-20220401-01 (240-164538-4)</td> <td>4/1/22</td> <td>12:40 Eastern</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> <tr> <td>EB-001-F-20220401-01 (240-164538-5)</td> <td>4/1/22</td> <td>13:10 Eastern</td> <td>Water</td> <td>Water</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> </tbody> </table>					Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=organic, I=Inorganic, A=Air)	Field Filtered Sample (Yes or No)	Param MS/MSD (Yes or No)	6010D/3005A_TOT (MOD) Boron	6020B/3005A_TOT 24 Metals	Total Number of Containers	Special Instructions/Note:	BAC-05-F-20220401-01 (240-164538-1)	4/1/22	09:42 Eastern	Water	Water	X	X	X	X	3		BAC-04-F-20220401-01 (240-164538-2)	4/1/22	11:17 Eastern	Water	Water	X	X	X	X	1		DUPE-004-BAC-04-F-20220401-01 (240-164538-3)	4/1/22	11:17 Eastern	Water	Water	X	X	X	X	1		BAC-03-F-20220401-01 (240-164538-4)	4/1/22	12:40 Eastern	Water	Water	X	X	X	X	1		EB-001-F-20220401-01 (240-164538-5)	4/1/22	13:10 Eastern	Water	Water	X	X	X	X	1	
Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=organic, I=Inorganic, A=Air)	Field Filtered Sample (Yes or No)	Param MS/MSD (Yes or No)	6010D/3005A_TOT (MOD) Boron	6020B/3005A_TOT 24 Metals	Total Number of Containers	Special Instructions/Note:																																																												
BAC-05-F-20220401-01 (240-164538-1)	4/1/22	09:42 Eastern	Water	Water	X	X	X	X	3																																																													
BAC-04-F-20220401-01 (240-164538-2)	4/1/22	11:17 Eastern	Water	Water	X	X	X	X	1																																																													
DUPE-004-BAC-04-F-20220401-01 (240-164538-3)	4/1/22	11:17 Eastern	Water	Water	X	X	X	X	1																																																													
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EB-001-F-20220401-01 (240-164538-5)	4/1/22	13:10 Eastern	Water	Water	X	X	X	X	1																																																													
<p>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/test/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.</p>																																																																						
<p>Possible Hazard Identification</p> <p>Unconfirmed <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Deliverable Requested: I, II, III, IV Other (specify) _____ Primary Deliverable Rank: 2</p> <p>Special Instructions/QC Requirements: _____</p>																																																																						
<p>Empty Kit Relinquished by _____ Date: _____ Time: _____ Method of Shipment: _____</p> <p>Relinquished by: <i>M. Murphy - Block</i> Date/Time: 4-5-22 13:15 Company: <i>etm</i></p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Custody Seal No. _____</p> <p>Cooler Temperature(s) °C and Other Remarks: _____</p>																																																																						



Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164538-1

Login Number: 164538

List Number: 3

Creator: Kizer, Preston V

List Source: Eurofins Cedar Falls

List Creation: 04/06/22 12:56 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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?	False	Received project as a subcontract.
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164538-1

Login Number: 164538

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 04/06/22 11:45 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?	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire Ohio 45620

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-174587-1



Table of Contents

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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

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.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
U	Indicates the analyte was analyzed for but not detected.

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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Job ID: 240-174587-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-174587-1

Comments

No additional comments.

Receipt

The samples were received on 10/13/2022 9:43 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 0.1° C, 0.6° C, 0.7° C, 0.8° C, 1.1° C, 1.3° C and 2.0° C.

RAD

Method 9315: Radium-226 batch 586592: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-1-F-20221010-01 (240-174587-1), EB-001-F-20221010-01 (240-174587-2), BAC-01-F-20221011-01 (240-174587-3), DUP-001-BAC-01-F-20221011-01 (240-174587-4), MW-6-F-20221011-01 (240-174587-5), EB-001-F-20221011-01 (240-174587-6), BAC-05-F-20221012-01 (240-174587-7), BAC-04-F-20221012-01 (240-174587-8), EB-001-F-20221012-01 (240-174587-9), (LCS 160-586592/2-A), (MB 160-586592/1-A)

Method 9320: Radium-228 batch 586593: The detection goal was not met for the following sample(s). Samples were prepped at a reduced volume due to the presence of matrix interferences: BAC-01-F-20221011-01 (240-174587-3) and DUP-001-BAC-01-F-20221011-01 (240-174587-4). Analytical results are reported with the detection limit achieved.

Method 9320: Radium-228 batch 586593: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method SM 2540C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 240-547750 recovered outside control limits. The TDS was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method SM 2540C: LCS failed high for the batch. Samples will be reported for in hold results. Samples will be re-analyzed out of hold with passing QC. BAC-05-F-20221012-01 (240-174587-7), BAC-04-F-20221012-01 (240-174587-8)

Method SM 2540C: Reanalysis of the following sample(s) was performed outside of the analytical holding time to confirm the initial result. : BAC-05-F-20221012-01 (240-174587-7), BAC-04-F-20221012-01 (240-174587-8), EB-001-F-20221012-01 (240-174587-9).

Method 300.0: Sample is overranged for sulfate, but is being reported to get in hold results. Sample to be reanalyzed outside of hold time at a dilution and both sets of data to be reported. BAC-05-F-20221012-01 (240-174587-7) and BAC-04-F-20221012-01 (240-174587-8)

Method 300.0: Reanalysis of the following samples were performed outside of the analytical holding time due to needing a dilution: BAC-05-F-20221012-01 (240-174587-7) and BAC-04-F-20221012-01 (240-174587-8). Both in hold and out of hold data to be reported.

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: 240-174587-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CAN
6020B	Metals (ICP/MS)	SW846	EET CAN
7470A	Mercury (CVAA)	SW846	EET CAN
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAN
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 CAN
7470A	Preparation, Mercury	SW846	EET CAN
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 CAN = Eurofins Canton, 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: 240-174587-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-174587-1	MW-1-F-20221010-01	Water	10/10/22 13:56	10/13/22 09:43
240-174587-2	EB-001-F-20221010-01	Water	10/10/22 17:30	10/13/22 09:43
240-174587-3	BAC-01-F-20221011-01	Water	10/11/22 10:30	10/13/22 09:43
240-174587-4	DUP-001-BAC-01-F-20221011-01	Water	10/11/22 10:30	10/13/22 09:43
240-174587-5	MW-6-F-20221011-01	Water	10/11/22 13:33	10/13/22 09:43
240-174587-6	EB-001-F-20221011-01	Water	10/11/22 17:00	10/13/22 09:43
240-174587-7	BAC-05-F-20221012-01	Water	10/12/22 12:55	10/13/22 09:43
240-174587-8	BAC-04-F-20221012-01	Water	10/12/22 13:49	10/13/22 09:43
240-174587-9	EB-001-F-20221012-01	Water	10/12/22 18:15	10/13/22 09:43

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: MW-1-F-20221010-01

Lab Sample ID: 240-174587-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	130000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	17000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	240		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	240		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	42		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.10		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	130		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	570		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20221010-01

Lab Sample ID: 240-174587-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	24		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-01-F-20221011-01

Lab Sample ID: 240-174587-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	98	J	100	57	ug/L	1		6010D	Total Recoverable
Calcium	100000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	12000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	28		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.13		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	88		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	390		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-001-BAC-01-F-20221011-01

Lab Sample ID: 240-174587-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	98	J	100	57	ug/L	1		6010D	Total Recoverable
Calcium	100000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	12000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	28		1.0	0.28	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: DUP-001-BAC-01-F-20221011-01 (Continued)

Lab Sample ID: 240-174587-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.13		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	88		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	400		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-6-F-20221011-01

Lab Sample ID: 240-174587-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	110000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	13000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	27		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.094		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	120		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	440		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20221011-01

Lab Sample ID: 240-174587-6

No Detections.

Client Sample ID: BAC-05-F-20221012-01

Lab Sample ID: 240-174587-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2700		100	57	ug/L	1		6010D	Total Recoverable
Calcium	80000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	20000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	26		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.12		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	240	E	1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	490	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Sulfate - RA	230	H	2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids - RA	470	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-04-F-20221012-01

Lab Sample ID: 240-174587-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2300		100	57	ug/L	1		6010D	Total Recoverable
Calcium	88000		1000	580	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: BAC-04-F-20221012-01 (Continued)

Lab Sample ID: 240-174587-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	20000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	27000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	96		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	96		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	44		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.070		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	230	E	1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	480	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Sulfate - RA	230	H	2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids - RA	490	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20221012-01

Lab Sample ID: 240-174587-9

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton



Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: MW-1-F-20221010-01

Lab Sample ID: 240-174587-1

Date Collected: 10/10/22 13:56

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/14/22 18:00	10/18/22 04:59	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	130000		1000	580	ug/L		10/14/22 18:00	10/17/22 17:19	1
Magnesium	16000		1000	200	ug/L		10/14/22 18:00	10/17/22 17:19	1
Potassium	1500		1000	220	ug/L		10/14/22 18:00	10/17/22 17:19	1
Sodium	17000		1000	330	ug/L		10/14/22 18:00	10/17/22 17:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	240		5.0	2.6	mg/L			10/17/22 17:30	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	240		5.0	2.6	mg/L			10/17/22 17:30	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:30	1
Chloride (MCAWW 300.0)	42		1.0	0.28	mg/L			11/06/22 09:40	1
Fluoride (MCAWW 300.0)	0.10		0.050	0.024	mg/L			11/06/22 09:40	1
Sulfate (MCAWW 300.0)	130		1.0	0.35	mg/L			11/06/22 09:40	1
Total Dissolved Solids (SM 2540C)	570		10	7.8	mg/L			10/14/22 09:50	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	0.0798	U	0.0768	0.0772	1.00	0.117	pCi/L	10/19/22 15:23	11/10/22 17:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.9		40 - 110					10/19/22 15:23	11/10/22 17:42	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	0.405	U	0.393	0.395	1.00	0.630	pCi/L	10/19/22 15:47	11/04/22 13:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.9		40 - 110					10/19/22 15:47	11/04/22 13:36	1
Y Carrier	86.4		40 - 110					10/19/22 15:47	11/04/22 13:36	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	0.400	0.402	5.00	0.630	pCi/L		11/11/22 13:42	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: EB-001-F-20221010-01

Lab Sample ID: 240-174587-2

Date Collected: 10/10/22 17:30

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/14/22 18:00	10/18/22 05:19	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/14/22 18:00	10/17/22 17:31	1
Magnesium	1000	U	1000	200	ug/L		10/14/22 18:00	10/17/22 17:31	1
Potassium	1000	U	1000	220	ug/L		10/14/22 18:00	10/17/22 17:31	1
Sodium	1000	U	1000	330	ug/L		10/14/22 18:00	10/17/22 17:31	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:33	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:33	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:33	1
Chloride (MCAWW 300.0)	1.0	U	1.0	0.28	mg/L			11/06/22 10:00	1
Fluoride (MCAWW 300.0)	0.050	U	0.050	0.024	mg/L			11/06/22 10:00	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			11/06/22 10:00	1
Total Dissolved Solids (SM 2540C)	24		10	7.8	mg/L			10/14/22 09:50	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	0.0625	U	0.0818	0.0819	1.00	0.136	pCi/L	10/19/22 15:23	11/10/22 17:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.7		40 - 110					10/19/22 15:23	11/10/22 17:42	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	0.476	U	0.440	0.443	1.00	0.701	pCi/L	10/19/22 15:47	11/04/22 13:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.7		40 - 110					10/19/22 15:47	11/04/22 13:36	1
Y Carrier	81.9		40 - 110					10/19/22 15:47	11/04/22 13:36	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	0.539	U	0.448	0.451	5.00	0.701	pCi/L		11/11/22 13:42	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: BAC-01-F-20221011-01

Lab Sample ID: 240-174587-3

Date Collected: 10/11/22 10:30

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	98	J	100	57	ug/L		10/14/22 18:00	10/18/22 05:23	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	100000		1000	580	ug/L		10/14/22 18:00	10/17/22 17:34	1
Magnesium	13000		1000	200	ug/L		10/14/22 18:00	10/17/22 17:34	1
Potassium	1600		1000	220	ug/L		10/14/22 18:00	10/17/22 17:34	1
Sodium	12000		1000	330	ug/L		10/14/22 18:00	10/17/22 17:34	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	210		5.0	2.6	mg/L			10/17/22 17:37	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	210		5.0	2.6	mg/L			10/17/22 17:37	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:37	1
Chloride (MCAWW 300.0)	28		1.0	0.28	mg/L			11/07/22 19:41	1
Fluoride (MCAWW 300.0)	0.13		0.050	0.024	mg/L			11/07/22 19:41	1
Sulfate (MCAWW 300.0)	88		1.0	0.35	mg/L			11/07/22 19:41	1
Total Dissolved Solids (SM 2540C)	390		10	7.8	mg/L			10/17/22 10:08	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	0.110	U	0.133	0.134	1.00	0.216	pCi/L	10/19/22 15:23	11/10/22 17:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	47.8		40 - 110					10/19/22 15:23	11/10/22 17:42	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	1.22	U G	1.01	1.01	1.00	1.59	pCi/L	10/19/22 15:47	11/04/22 13:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	47.8		40 - 110					10/19/22 15:47	11/04/22 13:36	1
Y Carrier	88.2		40 - 110					10/19/22 15:47	11/04/22 13:36	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	1.33	U	1.02	1.02	5.00	1.59	pCi/L		11/11/22 13:42	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: DUP-001-BAC-01-F-20221011-01

Lab Sample ID: 240-174587-4

Date Collected: 10/11/22 10:30

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	98	J	100	57	ug/L		10/14/22 18:00	10/18/22 05:27	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	100000		1000	580	ug/L		10/14/22 18:00	10/17/22 17:36	1
Magnesium	13000		1000	200	ug/L		10/14/22 18:00	10/17/22 17:36	1
Potassium	1600		1000	220	ug/L		10/14/22 18:00	10/17/22 17:36	1
Sodium	12000		1000	330	ug/L		10/14/22 18:00	10/17/22 17:36	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	210		5.0	2.6	mg/L			10/17/22 17:41	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	210		5.0	2.6	mg/L			10/17/22 17:41	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:41	1
Chloride (MCAWW 300.0)	28		1.0	0.28	mg/L			11/07/22 20:02	1
Fluoride (MCAWW 300.0)	0.13		0.050	0.024	mg/L			11/07/22 20:02	1
Sulfate (MCAWW 300.0)	88		1.0	0.35	mg/L			11/07/22 20:02	1
Total Dissolved Solids (SM 2540C)	400		10	7.8	mg/L			10/17/22 10:08	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	0.194	U	0.164	0.165	1.00	0.241	pCi/L	10/19/22 15:23	11/10/22 17:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	50.0		40 - 110					10/19/22 15:23	11/10/22 17:42	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	1.03	U G	0.873	0.878	1.00	1.37	pCi/L	10/19/22 15:47	11/04/22 13:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	50.0		40 - 110					10/19/22 15:47	11/04/22 13:36	1
Y Carrier	87.9		40 - 110					10/19/22 15:47	11/04/22 13:36	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	1.22	U	0.888	0.893	5.00	1.37	pCi/L		11/11/22 13:42	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: MW-6-F-20221011-01

Lab Sample ID: 240-174587-5

Date Collected: 10/11/22 13:33

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/14/22 18:00	10/18/22 17:08	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110000		1000	580	ug/L		10/14/22 18:00	10/17/22 17:43	1
Magnesium	13000		1000	200	ug/L		10/14/22 18:00	10/17/22 17:43	1
Potassium	1500		1000	220	ug/L		10/14/22 18:00	10/17/22 17:43	1
Sodium	13000		1000	330	ug/L		10/14/22 18:00	10/17/22 17:43	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	230		5.0	2.6	mg/L			10/17/22 17:46	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	230		5.0	2.6	mg/L			10/17/22 17:46	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:46	1
Chloride (MCAWW 300.0)	27		1.0	0.28	mg/L			11/07/22 20:24	1
Fluoride (MCAWW 300.0)	0.094		0.050	0.024	mg/L			11/07/22 20:24	1
Sulfate (MCAWW 300.0)	120		1.0	0.35	mg/L			11/07/22 20:24	1
Total Dissolved Solids (SM 2540C)	440		10	7.8	mg/L			10/17/22 10:08	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	0.0567	U	0.0705	0.0707	1.00	0.116	pCi/L	10/19/22 15:23	11/10/22 17:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					10/19/22 15:23	11/10/22 17:42	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	0.471	U	0.338	0.340	1.00	0.507	pCi/L	10/19/22 15:47	11/04/22 13:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					10/19/22 15:47	11/04/22 13:36	1
Y Carrier	87.9		40 - 110					10/19/22 15:47	11/04/22 13:36	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	0.527		0.345	0.347	5.00	0.507	pCi/L		11/11/22 13:42	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: EB-001-F-20221011-01

Lab Sample ID: 240-174587-6

Date Collected: 10/11/22 17:00

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/14/22 18:00	10/18/22 17:13	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/14/22 18:00	10/17/22 17:46	1
Magnesium	1000	U	1000	200	ug/L		10/14/22 18:00	10/17/22 17:46	1
Potassium	1000	U	1000	220	ug/L		10/14/22 18:00	10/17/22 17:46	1
Sodium	1000	U	1000	330	ug/L		10/14/22 18:00	10/17/22 17:46	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:50	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:50	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:50	1
Chloride (MCAWW 300.0)	1.0	U	1.0	0.28	mg/L			11/07/22 20:46	1
Fluoride (MCAWW 300.0)	0.050	U	0.050	0.024	mg/L			11/07/22 20:46	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			11/07/22 20:46	1
Total Dissolved Solids (SM 2540C)	10	U	10	7.8	mg/L			10/17/22 10:08	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	0.0136	U	0.0815	0.0815	1.00	0.159	pCi/L	10/19/22 15:23	11/10/22 17:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.6		40 - 110					10/19/22 15:23	11/10/22 17:42	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	0.396	U	0.462	0.463	1.00	0.760	pCi/L	10/19/22 15:47	11/04/22 13:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.6		40 - 110					10/19/22 15:47	11/04/22 13:36	1
Y Carrier	86.0		40 - 110					10/19/22 15:47	11/04/22 13:36	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	0.410	U	0.469	0.470	5.00	0.760	pCi/L		11/11/22 13:42	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: BAC-05-F-20221012-01

Lab Sample ID: 240-174587-7

Date Collected: 10/12/22 12:55

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2700		100	57	ug/L		10/14/22 18:00	10/18/22 17:17	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	80000		1000	580	ug/L		10/14/22 18:00	10/17/22 17:48	1
Magnesium	21000		1000	200	ug/L		10/14/22 18:00	10/17/22 17:48	1
Potassium	1400		1000	220	ug/L		10/14/22 18:00	10/17/22 17:48	1
Sodium	20000		1000	330	ug/L		10/14/22 18:00	10/17/22 17:48	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	110		5.0	2.6	mg/L			10/20/22 22:56	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	110		5.0	2.6	mg/L			10/20/22 22:56	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/20/22 22:56	1
Chloride (MCAWW 300.0)	26		1.0	0.28	mg/L			11/07/22 21:51	1
Fluoride (MCAWW 300.0)	0.12		0.050	0.024	mg/L			11/07/22 21:51	1
Sulfate (MCAWW 300.0)	240	E	1.0	0.35	mg/L			11/07/22 21:51	1
Total Dissolved Solids (SM 2540C)	490	*+	10	7.8	mg/L			10/19/22 10:25	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (MCAWW 300.0)	230	H	2.0	0.70	mg/L			11/10/22 08:59	2
Total Dissolved Solids (SM 2540C)	470	H	10	7.8	mg/L			10/31/22 10:16	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
Radium-226	0.126	U	0.0918	0.0925	1.00	0.127	pCi/L	10/19/22 15:23	11/10/22 17:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					10/19/22 15:23	11/10/22 17:42	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
Radium-228	0.369	U	0.372	0.373	1.00	0.598	pCi/L	10/19/22 15:47	11/04/22 13:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					10/19/22 15:47	11/04/22 13:37	1
Y Carrier	91.6		40 - 110					10/19/22 15:47	11/04/22 13:37	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: BAC-05-F-20221012-01

Lab Sample ID: 240-174587-7

Date Collected: 10/12/22 12:55

Matrix: Water

Date Received: 10/13/22 09:43

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	0.383	0.384	5.00	0.598	pCi/L		11/11/22 13:42	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: BAC-04-F-20221012-01

Lab Sample ID: 240-174587-8

Date Collected: 10/12/22 13:49

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2300		100	57	ug/L		10/14/22 18:00	10/18/22 17:30	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	88000		1000	580	ug/L		10/14/22 18:00	10/17/22 17:51	1
Magnesium	20000		1000	200	ug/L		10/14/22 18:00	10/17/22 17:51	1
Potassium	1800		1000	220	ug/L		10/14/22 18:00	10/17/22 17:51	1
Sodium	27000		1000	330	ug/L		10/14/22 18:00	10/17/22 17:51	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	96		5.0	2.6	mg/L			10/20/22 23:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	96		5.0	2.6	mg/L			10/20/22 23:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/20/22 23:00	1
Chloride (MCAWW 300.0)	44		1.0	0.28	mg/L			11/07/22 22:13	1
Fluoride (MCAWW 300.0)	0.070		0.050	0.024	mg/L			11/07/22 22:13	1
Sulfate (MCAWW 300.0)	230	E	1.0	0.35	mg/L			11/07/22 22:13	1
Total Dissolved Solids (SM 2540C)	480	*+	10	7.8	mg/L			10/19/22 10:25	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (MCAWW 300.0)	230	H	2.0	0.70	mg/L			11/10/22 09:21	2
Total Dissolved Solids (SM 2540C)	490	H	10	7.8	mg/L			10/31/22 10:16	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.133	U	0.106	0.107	1.00	0.157	pCi/L	10/19/22 15:23	11/10/22 17:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.0		40 - 110					10/19/22 15:23	11/10/22 17:39	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.449	U	0.436	0.438	1.00	0.701	pCi/L	10/19/22 15:47	11/04/22 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.0		40 - 110					10/19/22 15:47	11/04/22 13:42	1
Y Carrier	87.1		40 - 110					10/19/22 15:47	11/04/22 13:42	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: BAC-04-F-20221012-01

Lab Sample ID: 240-174587-8

Date Collected: 10/12/22 13:49

Matrix: Water

Date Received: 10/13/22 09:43

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	0.582	U	0.449	0.451	5.00	0.701	pCi/L		11/11/22 13:42	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: EB-001-F-20221012-01

Lab Sample ID: 240-174587-9

Date Collected: 10/12/22 18:15

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/14/22 18:00	10/18/22 17:34	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/14/22 18:00	10/17/22 17:53	1
Magnesium	1000	U	1000	200	ug/L		10/14/22 18:00	10/17/22 17:53	1
Potassium	1000	U	1000	220	ug/L		10/14/22 18:00	10/17/22 17:53	1
Sodium	1000	U	1000	330	ug/L		10/14/22 18:00	10/17/22 17:53	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/20/22 23:03	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/20/22 23:03	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/20/22 23:03	1
Chloride (MCAWW 300.0)	1.0	U	1.0	0.28	mg/L			11/07/22 22:34	1
Fluoride (MCAWW 300.0)	0.050	U	0.050	0.024	mg/L			11/07/22 22:34	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			11/07/22 22:34	1
Total Dissolved Solids (SM 2540C)	10	U **	10	7.8	mg/L			10/19/22 10:25	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	0.112	U	0.0889	0.0894	1.00	0.130	pCi/L	10/19/22 15:23	11/10/22 17:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					10/19/22 15:23	11/10/22 17:39	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	0.0201	U	0.276	0.276	1.00	0.516	pCi/L	10/19/22 15:48	11/04/22 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					10/19/22 15:48	11/04/22 13:42	1
Y Carrier	90.5		40 - 110					10/19/22 15:48	11/04/22 13:42	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	0.132	U	0.290	0.290	5.00	0.516	pCi/L		11/11/22 13:42	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

			Percent Yield (Acceptance Limits)			
Lab Sample ID	Client Sample ID	Ba (40-110)				
240-174587-1	MW-1-F-20221010-01	78.9				
240-174587-2	EB-001-F-20221010-01	75.7				
240-174587-3	BAC-01-F-20221011-01	47.8				
240-174587-4	DUP-001-BAC-01-F-20221011-01	50.0				
240-174587-5	MW-6-F-20221011-01	87.0				
240-174587-6	EB-001-F-20221011-01	70.6				
240-174587-7	BAC-05-F-20221012-01	75.5				
240-174587-8	BAC-04-F-20221012-01	74.0				
240-174587-9	EB-001-F-20221012-01	86.3				
LCS 160-586592/2-A	Lab Control Sample	73.8				
MB 160-586592/1-A	Method Blank	71.3				

Tracer/Carrier Legend
Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

			Percent Yield (Acceptance Limits)		
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)		
240-174587-1	MW-1-F-20221010-01	78.9	86.4		
240-174587-2	EB-001-F-20221010-01	75.7	81.9		
240-174587-3	BAC-01-F-20221011-01	47.8	88.2		
240-174587-4	DUP-001-BAC-01-F-20221011-01	50.0	87.9		
240-174587-5	MW-6-F-20221011-01	87.0	87.9		
240-174587-6	EB-001-F-20221011-01	70.6	86.0		
240-174587-7	BAC-05-F-20221012-01	75.5	91.6		
240-174587-8	BAC-04-F-20221012-01	74.0	87.1		
240-174587-9	EB-001-F-20221012-01	86.3	90.5		
LCS 160-586593/2-A	Lab Control Sample	73.8	82.2		
MB 160-586593/1-A	Method Blank	71.3	83.4		

Tracer/Carrier Legend
Ba = Ba Carrier
Y = Y Carrier

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-547144/1-A
Matrix: Water
Analysis Batch: 547431

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 547144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/14/22 18:00	10/18/22 04:50	1

Lab Sample ID: LCS 240-547144/2-A
Matrix: Water
Analysis Batch: 547431

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 547144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	948		ug/L		95	80 - 120

Lab Sample ID: 240-174587-1 MS
Matrix: Water
Analysis Batch: 547431

Client Sample ID: MW-1-F-20221010-01
Prep Type: Total Recoverable
Prep Batch: 547144

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	100	U	1000	980		ug/L		98	75 - 125

Lab Sample ID: 240-174587-1 MSD
Matrix: Water
Analysis Batch: 547431

Client Sample ID: MW-1-F-20221010-01
Prep Type: Total Recoverable
Prep Batch: 547144

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	100	U	1000	1010		ug/L		101	75 - 125	3	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-547144/1-A
Matrix: Water
Analysis Batch: 547508

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 547144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/14/22 18:00	10/17/22 17:14	1
Magnesium	1000	U	1000	200	ug/L		10/14/22 18:00	10/17/22 17:14	1
Potassium	1000	U	1000	220	ug/L		10/14/22 18:00	10/17/22 17:14	1
Sodium	1000	U	1000	330	ug/L		10/14/22 18:00	10/17/22 17:14	1

Lab Sample ID: LCS 240-547144/3-A
Matrix: Water
Analysis Batch: 547508

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 547144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	23700		ug/L		95	80 - 120
Magnesium	25000	24100		ug/L		96	80 - 120
Potassium	25000	23500		ug/L		94	80 - 120
Sodium	25000	24200		ug/L		97	80 - 120

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-174587-1 MS
Matrix: Water
Analysis Batch: 547508

Client Sample ID: MW-1-F-20221010-01
Prep Type: Total Recoverable
Prep Batch: 547144

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Calcium	130000		25000	153000	4	ug/L		103	80 - 120	
Magnesium	16000		25000	39500		ug/L		95	80 - 120	
Potassium	1500		25000	25600		ug/L		96	80 - 120	
Sodium	17000		25000	41700		ug/L		97	80 - 120	

Lab Sample ID: 240-174587-1 MSD
Matrix: Water
Analysis Batch: 547508

Client Sample ID: MW-1-F-20221010-01
Prep Type: Total Recoverable
Prep Batch: 547144

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
Calcium	130000		25000	156000	4	ug/L		114	80 - 120		2
Magnesium	16000		25000	40500		ug/L		99	80 - 120		3
Potassium	1500		25000	26000		ug/L		98	80 - 120		2
Sodium	17000		25000	42800		ug/L		101	80 - 120		3

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-547158/1-A
Matrix: Water
Analysis Batch: 547424

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 547158

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.20	U	0.20	0.13	ug/L		10/14/22 12:00	10/17/22 15:06	1

Lab Sample ID: LCS 240-547158/2-A
Matrix: Water
Analysis Batch: 547424

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 547158

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Mercury	5.00	5.39		ug/L		108	80 - 120	

Lab Sample ID: 240-174587-1 MS
Matrix: Water
Analysis Batch: 547424

Client Sample ID: MW-1-F-20221010-01
Prep Type: Total/NA
Prep Batch: 547158

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Mercury	0.20	U	1.00	1.16		ug/L		116	80 - 120	

Lab Sample ID: 240-174587-1 MSD
Matrix: Water
Analysis Batch: 547424

Client Sample ID: MW-1-F-20221010-01
Prep Type: Total/NA
Prep Batch: 547158

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
Mercury	0.20	U	1.00	1.12		ug/L		112	80 - 120		4

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-547557/30
Matrix: Water
Analysis Batch: 547557

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/17/22 16:25	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 16:25	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 16:25	1

Lab Sample ID: MB 240-547557/4
Matrix: Water
Analysis Batch: 547557

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/17/22 14:38	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 14:38	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 14:38	1

Lab Sample ID: LCS 240-547557/29
Matrix: Water
Analysis Batch: 547557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: MB 240-548255/30
Matrix: Water
Analysis Batch: 548255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/20/22 21:30	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/20/22 21:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/20/22 21:30	1

Lab Sample ID: MB 240-548255/4
Matrix: Water
Analysis Batch: 548255

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/20/22 19:43	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/20/22 19:43	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/20/22 19:43	1

Lab Sample ID: LCS 240-548255/29
Matrix: Water
Analysis Batch: 548255

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-550576/33
Matrix: Water
Analysis Batch: 550576

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			11/06/22 09:00	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/06/22 09:00	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/06/22 09:00	1

Lab Sample ID: LCS 240-550576/34
Matrix: Water
Analysis Batch: 550576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.58		mg/L		103	90 - 110
Sulfate	50.0	52.5		mg/L		105	90 - 110

Lab Sample ID: MB 240-550809/3
Matrix: Water
Analysis Batch: 550809

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			11/07/22 11:37	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/07/22 11:37	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/07/22 11:37	1

Lab Sample ID: LCS 240-550809/4
Matrix: Water
Analysis Batch: 550809

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.71		mg/L		108	90 - 110
Sulfate	50.0	53.6		mg/L		107	90 - 110

Lab Sample ID: 240-174587-6 MS
Matrix: Water
Analysis Batch: 550809

Client Sample ID: EB-001-F-20221011-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.050	U	2.50	2.73		mg/L		109	80 - 120
Sulfate	1.0	U	50.0	54.4		mg/L		109	80 - 120

Lab Sample ID: 240-174587-6 MSD
Matrix: Water
Analysis Batch: 550809

Client Sample ID: EB-001-F-20221011-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.050	U	2.50	2.78		mg/L		111	80 - 120	2	15
Sulfate	1.0	U	50.0	55.5		mg/L		111	80 - 120	2	15

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-551244/3
Matrix: Water
Analysis Batch: 551244

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			11/10/22 07:10	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/10/22 07:10	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/10/22 07:10	1

Lab Sample ID: LCS 240-551244/4
Matrix: Water
Analysis Batch: 551244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.71		mg/L		108	90 - 110
Sulfate	50.0	53.8		mg/L		108	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-547111/1
Matrix: Water
Analysis Batch: 547111

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	10	U	10	7.8	mg/L			10/14/22 09:50	1

Lab Sample ID: LCS 240-547111/2
Matrix: Water
Analysis Batch: 547111

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: MB 240-547340/1
Matrix: Water
Analysis Batch: 547340

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	1.0	U	1.0	0.78	mg/L			10/17/22 10:08	1

Lab Sample ID: LCS 240-547340/2
Matrix: Water
Analysis Batch: 547340

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: MB 240-547750/1
Matrix: Water
Analysis Batch: 547750

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	10	U	10	7.8	mg/L			10/19/22 10:25	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-547750/2
 Matrix: Water
 Analysis Batch: 547750

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	500	868	*+	mg/L		174	80 - 120

Lab Sample ID: MB 240-549553/1
 Matrix: Water
 Analysis Batch: 549553

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	10	U	10	7.8	mg/L			10/31/22 10:16	1

Lab Sample ID: LCS 240-549553/2
 Matrix: Water
 Analysis Batch: 549553

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	388	370		mg/L		95	80 - 120

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-586592/1-A
 Matrix: Water
 Analysis Batch: 589641

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 586592

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.05242	U	0.0538	0.0540	1.00	0.147	pCi/L	10/19/22 15:23	11/10/22 17:34	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	71.3		40 - 110		10/19/22 15:23	11/10/22 17:34	1			

Lab Sample ID: LCS 160-586592/2-A
 Matrix: Water
 Analysis Batch: 589641

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 586592

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	11.93		1.27	1.00	0.148	pCi/L	105	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	73.8		40 - 110						

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-586593/1-A
 Matrix: Water
 Analysis Batch: 588709

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 586593

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.8439		0.469	0.476	1.00	0.667	pCi/L	10/19/22 15:47	11/04/22 13:32	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-586593/1-A
Matrix: Water
Analysis Batch: 588709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586593

Carrier	MB MB		Limits
	%Yield	Qualifier	
Ba Carrier	71.3		40 - 110
Y Carrier	83.4		40 - 110

Prepared	Analyzed	Dil Fac
10/19/22 15:47	11/04/22 13:32	1
10/19/22 15:47	11/04/22 13:32	1

Lab Sample ID: LCS 160-586593/2-A
Matrix: Water
Analysis Batch: 588709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586593

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec
									Limits
Radium-228	8.47	10.62		1.50	1.00	0.579	pCi/L	125	75 - 125

Carrier	LCS LCS		Limits
	%Yield	Qualifier	
Ba Carrier	73.8		40 - 110
Y Carrier	82.2		40 - 110

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Metals

Prep Batch: 547144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total Recoverable	Water	3005A	
240-174587-2	EB-001-F-20221010-01	Total Recoverable	Water	3005A	
240-174587-3	BAC-01-F-20221011-01	Total Recoverable	Water	3005A	
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total Recoverable	Water	3005A	
240-174587-5	MW-6-F-20221011-01	Total Recoverable	Water	3005A	
240-174587-6	EB-001-F-20221011-01	Total Recoverable	Water	3005A	
240-174587-7	BAC-05-F-20221012-01	Total Recoverable	Water	3005A	
240-174587-8	BAC-04-F-20221012-01	Total Recoverable	Water	3005A	
240-174587-9	EB-001-F-20221012-01	Total Recoverable	Water	3005A	
MB 240-547144/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-547144/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-547144/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-174587-1 MS	MW-1-F-20221010-01	Total Recoverable	Water	3005A	
240-174587-1 MS	MW-1-F-20221010-01	Total Recoverable	Water	3005A	
240-174587-1 MSD	MW-1-F-20221010-01	Total Recoverable	Water	3005A	
240-174587-1 MSD	MW-1-F-20221010-01	Total Recoverable	Water	3005A	

Prep Batch: 547158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total/NA	Water	7470A	
240-174587-2	EB-001-F-20221010-01	Total/NA	Water	7470A	
240-174587-3	BAC-01-F-20221011-01	Total/NA	Water	7470A	
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total/NA	Water	7470A	
240-174587-5	MW-6-F-20221011-01	Total/NA	Water	7470A	
240-174587-6	EB-001-F-20221011-01	Total/NA	Water	7470A	
240-174587-7	BAC-05-F-20221012-01	Total/NA	Water	7470A	
240-174587-8	BAC-04-F-20221012-01	Total/NA	Water	7470A	
240-174587-9	EB-001-F-20221012-01	Total/NA	Water	7470A	
MB 240-547158/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-547158/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-174587-1 MS	MW-1-F-20221010-01	Total/NA	Water	7470A	
240-174587-1 MSD	MW-1-F-20221010-01	Total/NA	Water	7470A	

Analysis Batch: 547424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total/NA	Water	7470A	547158
240-174587-2	EB-001-F-20221010-01	Total/NA	Water	7470A	547158
240-174587-3	BAC-01-F-20221011-01	Total/NA	Water	7470A	547158
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total/NA	Water	7470A	547158
240-174587-5	MW-6-F-20221011-01	Total/NA	Water	7470A	547158
240-174587-6	EB-001-F-20221011-01	Total/NA	Water	7470A	547158
240-174587-7	BAC-05-F-20221012-01	Total/NA	Water	7470A	547158
240-174587-8	BAC-04-F-20221012-01	Total/NA	Water	7470A	547158
240-174587-9	EB-001-F-20221012-01	Total/NA	Water	7470A	547158
MB 240-547158/1-A	Method Blank	Total/NA	Water	7470A	547158
LCS 240-547158/2-A	Lab Control Sample	Total/NA	Water	7470A	547158
240-174587-1 MS	MW-1-F-20221010-01	Total/NA	Water	7470A	547158
240-174587-1 MSD	MW-1-F-20221010-01	Total/NA	Water	7470A	547158

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Metals

Analysis Batch: 547431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total Recoverable	Water	6010D	547144
240-174587-2	EB-001-F-20221010-01	Total Recoverable	Water	6010D	547144
240-174587-3	BAC-01-F-20221011-01	Total Recoverable	Water	6010D	547144
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total Recoverable	Water	6010D	547144
MB 240-547144/1-A	Method Blank	Total Recoverable	Water	6010D	547144
LCS 240-547144/2-A	Lab Control Sample	Total Recoverable	Water	6010D	547144
240-174587-1 MS	MW-1-F-20221010-01	Total Recoverable	Water	6010D	547144
240-174587-1 MSD	MW-1-F-20221010-01	Total Recoverable	Water	6010D	547144

Analysis Batch: 547508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total Recoverable	Water	6020B	547144
240-174587-2	EB-001-F-20221010-01	Total Recoverable	Water	6020B	547144
240-174587-3	BAC-01-F-20221011-01	Total Recoverable	Water	6020B	547144
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total Recoverable	Water	6020B	547144
240-174587-5	MW-6-F-20221011-01	Total Recoverable	Water	6020B	547144
240-174587-6	EB-001-F-20221011-01	Total Recoverable	Water	6020B	547144
240-174587-7	BAC-05-F-20221012-01	Total Recoverable	Water	6020B	547144
240-174587-8	BAC-04-F-20221012-01	Total Recoverable	Water	6020B	547144
240-174587-9	EB-001-F-20221012-01	Total Recoverable	Water	6020B	547144
MB 240-547144/1-A	Method Blank	Total Recoverable	Water	6020B	547144
LCS 240-547144/3-A	Lab Control Sample	Total Recoverable	Water	6020B	547144
240-174587-1 MS	MW-1-F-20221010-01	Total Recoverable	Water	6020B	547144
240-174587-1 MSD	MW-1-F-20221010-01	Total Recoverable	Water	6020B	547144

Analysis Batch: 547695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-5	MW-6-F-20221011-01	Total Recoverable	Water	6010D	547144
240-174587-6	EB-001-F-20221011-01	Total Recoverable	Water	6010D	547144
240-174587-7	BAC-05-F-20221012-01	Total Recoverable	Water	6010D	547144
240-174587-8	BAC-04-F-20221012-01	Total Recoverable	Water	6010D	547144
240-174587-9	EB-001-F-20221012-01	Total Recoverable	Water	6010D	547144

General Chemistry

Analysis Batch: 547111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total/NA	Water	SM 2540C	
240-174587-2	EB-001-F-20221010-01	Total/NA	Water	SM 2540C	
MB 240-547111/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547111/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 547340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-3	BAC-01-F-20221011-01	Total/NA	Water	SM 2540C	
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total/NA	Water	SM 2540C	
240-174587-5	MW-6-F-20221011-01	Total/NA	Water	SM 2540C	
240-174587-6	EB-001-F-20221011-01	Total/NA	Water	SM 2540C	
MB 240-547340/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547340/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins Canton

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

General Chemistry

Analysis Batch: 547557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total/NA	Water	2320B-1997	
240-174587-2	EB-001-F-20221010-01	Total/NA	Water	2320B-1997	
240-174587-3	BAC-01-F-20221011-01	Total/NA	Water	2320B-1997	
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total/NA	Water	2320B-1997	
240-174587-5	MW-6-F-20221011-01	Total/NA	Water	2320B-1997	
240-174587-6	EB-001-F-20221011-01	Total/NA	Water	2320B-1997	
MB 240-547557/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-547557/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-547557/29	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 547750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-7	BAC-05-F-20221012-01	Total/NA	Water	SM 2540C	
240-174587-8	BAC-04-F-20221012-01	Total/NA	Water	SM 2540C	
240-174587-9	EB-001-F-20221012-01	Total/NA	Water	SM 2540C	
MB 240-547750/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547750/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-7	BAC-05-F-20221012-01	Total/NA	Water	2320B-1997	
240-174587-8	BAC-04-F-20221012-01	Total/NA	Water	2320B-1997	
240-174587-9	EB-001-F-20221012-01	Total/NA	Water	2320B-1997	
MB 240-548255/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548255/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548255/29	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 549553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-7 - RA	BAC-05-F-20221012-01	Total/NA	Water	SM 2540C	
240-174587-8 - RA	BAC-04-F-20221012-01	Total/NA	Water	SM 2540C	
MB 240-549553/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-549553/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 550576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total/NA	Water	300.0	
240-174587-2	EB-001-F-20221010-01	Total/NA	Water	300.0	
MB 240-550576/33	Method Blank	Total/NA	Water	300.0	
LCS 240-550576/34	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 550809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-3	BAC-01-F-20221011-01	Total/NA	Water	300.0	
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total/NA	Water	300.0	
240-174587-5	MW-6-F-20221011-01	Total/NA	Water	300.0	
240-174587-6	EB-001-F-20221011-01	Total/NA	Water	300.0	
240-174587-7	BAC-05-F-20221012-01	Total/NA	Water	300.0	
240-174587-8	BAC-04-F-20221012-01	Total/NA	Water	300.0	
240-174587-9	EB-001-F-20221012-01	Total/NA	Water	300.0	
MB 240-550809/3	Method Blank	Total/NA	Water	300.0	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174587-1

General Chemistry (Continued)

Analysis Batch: 550809 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-550809/4	Lab Control Sample	Total/NA	Water	300.0	
240-174587-6 MS	EB-001-F-20221011-01	Total/NA	Water	300.0	
240-174587-6 MSD	EB-001-F-20221011-01	Total/NA	Water	300.0	

Analysis Batch: 551244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-7 - RA	BAC-05-F-20221012-01	Total/NA	Water	300.0	
240-174587-8 - RA	BAC-04-F-20221012-01	Total/NA	Water	300.0	
MB 240-551244/3	Method Blank	Total/NA	Water	300.0	
LCS 240-551244/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 586592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total/NA	Water	PrecSep-21	
240-174587-2	EB-001-F-20221010-01	Total/NA	Water	PrecSep-21	
240-174587-3	BAC-01-F-20221011-01	Total/NA	Water	PrecSep-21	
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total/NA	Water	PrecSep-21	
240-174587-5	MW-6-F-20221011-01	Total/NA	Water	PrecSep-21	
240-174587-6	EB-001-F-20221011-01	Total/NA	Water	PrecSep-21	
240-174587-7	BAC-05-F-20221012-01	Total/NA	Water	PrecSep-21	
240-174587-8	BAC-04-F-20221012-01	Total/NA	Water	PrecSep-21	
240-174587-9	EB-001-F-20221012-01	Total/NA	Water	PrecSep-21	
MB 160-586592/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-586592/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 586593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174587-1	MW-1-F-20221010-01	Total/NA	Water	PrecSep_0	
240-174587-2	EB-001-F-20221010-01	Total/NA	Water	PrecSep_0	
240-174587-3	BAC-01-F-20221011-01	Total/NA	Water	PrecSep_0	
240-174587-4	DUP-001-BAC-01-F-20221011-01	Total/NA	Water	PrecSep_0	
240-174587-5	MW-6-F-20221011-01	Total/NA	Water	PrecSep_0	
240-174587-6	EB-001-F-20221011-01	Total/NA	Water	PrecSep_0	
240-174587-7	BAC-05-F-20221012-01	Total/NA	Water	PrecSep_0	
240-174587-8	BAC-04-F-20221012-01	Total/NA	Water	PrecSep_0	
240-174587-9	EB-001-F-20221012-01	Total/NA	Water	PrecSep_0	
MB 160-586593/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586593/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: MW-1-F-20221010-01
Date Collected: 10/10/22 13:56
Date Received: 10/13/22 09:43

Lab Sample ID: 240-174587-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547431	RKT	EET CAN	10/18/22 04:59
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:19
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:15
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 17:30
Total/NA	Analysis	300.0		1	550576	JMB	EET CAN	11/06/22 09:40
Total/NA	Analysis	SM 2540C		1	547111	MS	EET CAN	10/14/22 09:50
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 17:42
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:47
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:36
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Client Sample ID: EB-001-F-20221010-01
Date Collected: 10/10/22 17:30
Date Received: 10/13/22 09:43

Lab Sample ID: 240-174587-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547431	RKT	EET CAN	10/18/22 05:19
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:31
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:22
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 17:33
Total/NA	Analysis	300.0		1	550576	JMB	EET CAN	11/06/22 10:00
Total/NA	Analysis	SM 2540C		1	547111	MS	EET CAN	10/14/22 09:50
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 17:42
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:47
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:36
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Client Sample ID: BAC-01-F-20221011-01
Date Collected: 10/11/22 10:30
Date Received: 10/13/22 09:43

Lab Sample ID: 240-174587-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547431	RKT	EET CAN	10/18/22 05:23
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:34

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: BAC-01-F-20221011-01

Lab Sample ID: 240-174587-3

Date Collected: 10/11/22 10:30

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:24
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 17:37
Total/NA	Analysis	300.0		1	550809	JWW	EET CAN	11/07/22 19:41
Total/NA	Analysis	SM 2540C		1	547340	MS	EET CAN	10/17/22 10:08
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 17:42
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:47
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:36
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Client Sample ID: DUP-001-BAC-01-F-20221011-01

Lab Sample ID: 240-174587-4

Date Collected: 10/11/22 10:30

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547431	RKT	EET CAN	10/18/22 05:27
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:36
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:26
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 17:41
Total/NA	Analysis	300.0		1	550809	JWW	EET CAN	11/07/22 20:02
Total/NA	Analysis	SM 2540C		1	547340	MS	EET CAN	10/17/22 10:08
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 17:42
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:47
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:36
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Client Sample ID: MW-6-F-20221011-01

Lab Sample ID: 240-174587-5

Date Collected: 10/11/22 13:33

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/18/22 17:08
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:43
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:28
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 17:46
Total/NA	Analysis	300.0		1	550809	JWW	EET CAN	11/07/22 20:24

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: MW-6-F-20221011-01
Date Collected: 10/11/22 13:33
Date Received: 10/13/22 09:43

Lab Sample ID: 240-174587-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	547340	MS	EET CAN	10/17/22 10:08
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 17:42
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:47
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:36
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Client Sample ID: EB-001-F-20221011-01
Date Collected: 10/11/22 17:00
Date Received: 10/13/22 09:43

Lab Sample ID: 240-174587-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/18/22 17:13
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:46
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:30
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 17:50
Total/NA	Analysis	300.0		1	550809	JWW	EET CAN	11/07/22 20:46
Total/NA	Analysis	SM 2540C		1	547340	MS	EET CAN	10/17/22 10:08
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 17:42
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:47
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:36
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Client Sample ID: BAC-05-F-20221012-01
Date Collected: 10/12/22 12:55
Date Received: 10/13/22 09:43

Lab Sample ID: 240-174587-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/18/22 17:17
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:48
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:32
Total/NA	Analysis	2320B-1997		1	548255	JWW	EET CAN	10/20/22 22:56
Total/NA	Analysis	300.0		1	550809	JWW	EET CAN	11/07/22 21:51
Total/NA	Analysis	300.0	RA	2	551244	JMB	EET CAN	11/10/22 08:59
Total/NA	Analysis	SM 2540C		1	547750	MS	EET CAN	10/19/22 10:25
Total/NA	Analysis	SM 2540C	RA	1	549553	MS	EET CAN	10/31/22 10:16

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: BAC-05-F-20221012-01

Lab Sample ID: 240-174587-7

Date Collected: 10/12/22 12:55

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589594	FLC	EET SL	11/10/22 17:42
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:47
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:37
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Client Sample ID: BAC-04-F-20221012-01

Lab Sample ID: 240-174587-8

Date Collected: 10/12/22 13:49

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/18/22 17:30
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:51
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:39
Total/NA	Analysis	2320B-1997		1	548255	JWW	EET CAN	10/20/22 23:00
Total/NA	Analysis	300.0		1	550809	JWW	EET CAN	11/07/22 22:13
Total/NA	Analysis	300.0	RA	2	551244	JMB	EET CAN	11/10/22 09:21
Total/NA	Analysis	SM 2540C		1	547750	MS	EET CAN	10/19/22 10:25
Total/NA	Analysis	SM 2540C	RA	1	549553	MS	EET CAN	10/31/22 10:16
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589595	FLC	EET SL	11/10/22 17:39
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:47
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:42
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Client Sample ID: EB-001-F-20221012-01

Lab Sample ID: 240-174587-9

Date Collected: 10/12/22 18:15

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/18/22 17:34
Total Recoverable	Prep	3005A			547144	SHB	EET CAN	10/14/22 18:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 17:53
Total/NA	Prep	7470A			547158	SHB	EET CAN	10/14/22 12:00
Total/NA	Analysis	7470A		1	547424	MRL	EET CAN	10/17/22 15:41
Total/NA	Analysis	2320B-1997		1	548255	JWW	EET CAN	10/20/22 23:03
Total/NA	Analysis	300.0		1	550809	JWW	EET CAN	11/07/22 22:34
Total/NA	Analysis	SM 2540C		1	547750	MS	EET CAN	10/19/22 10:25
Total/NA	Prep	PrecSep-21			586592	ZR	EET SL	10/19/22 15:23
Total/NA	Analysis	9315		1	589595	FLC	EET SL	11/10/22 17:39

Eurofins Canton

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Client Sample ID: EB-001-F-20221012-01

Lab Sample ID: 240-174587-9

Date Collected: 10/12/22 18:15

Matrix: Water

Date Received: 10/13/22 09:43

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	PrecSep_0			586593	ZR	EET SL	10/19/22 15:48
Total/NA	Analysis	9320		1	588685	FLC	EET SL	11/04/22 13:42
Total/NA	Analysis	Ra226_Ra228		1	589757	EMH	EET SL	11/11/22 13:42

Laboratory References:

EET CAN = Eurofins Canton, 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
 Project/Site: Federal CCR Wells

Job ID: 240-174587-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22 *
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174587-1

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
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22



Chain of Custody, Record

Client Information		Lab PM		Carrier Tracking No(s)		COC No.																																																																	
Client Contact: Taylor Huffman		Cisneros, Roxanne		240-93018-34502		240-93018-34502																																																																	
Company: Lightstone Generation Gavin Power LLC		E-Mail: roxanne.cisneros@Eurofinsel.com		State of Origin:		Page: Page 1 of 1																																																																	
Address: 7397 OH-7 Cheshire State, Zn: OH, 45620		PO #: 2935505		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Job #:																																																																	
Phone: 740-925-3171(Tel)		WO #:		Project #: 24019633		Preservation Codes:																																																																	
Email: taylor.huffman@lightstonegen.com		Site: Ohio		SSOW#:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - DI Water X - EDTA Y - other (specify)																																																																	
Due Date Requested:		TAT Requested (days):		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)																																																																	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)																																																																	
Matrix (Water, Soils, Sewage, etc.)		Preservation Code:		2540C_Calcd, 300_0_28D(Chloride, Fluoride, Sulfate)		2320E(Carbonate Alkalinity/Bi-Carbonate Alkalinity)																																																																	
MW-1-F-20221010-C1		10-10-22		1356		W																																																																	
EB-001-F-20221010-C1		10-10-22		1730		W																																																																	
BAC-01-F-20221011-C1		10-11-22		1030		W																																																																	
DXP-001-BAC-01-F-20221011-C1		10-11-22		1333		W																																																																	
MW-6-EB-20221011-C1		10-11-22		1700		W																																																																	
EB-001-F-20221011-C1		10-11-22		1255		W																																																																	
BKC-05-F-20221012-C1		10-12-22		1349		W																																																																	
BAC-04-F-20221012-C1		10-12-22		1815		W																																																																	
BAC-13-F-20221012-C1		10-12-22				W																																																																	
EB-001-F-20221012-C1		10-12-22				W																																																																	
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Eurofins - Canton Sample Receipt Form/Narrative

Login # : _____

Barberton Facility

Client Lightstone Site Name _____

Cooler unpacked by:

Brandon

Cooler Received on 10-13-22 Opened on 10-13-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 11 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# IR-13 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

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# HC286797
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes ← 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: _____

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Eurofins - Canton Sample Receipt Multiple Cooler Form							
Cooler Description (Circle)				IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA	Client	Box	Other	IR-13 IR-15	0.1	0.1	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	0.7	0.7	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	1.3	1.3	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	0.6	0.6	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	1.1	1.1	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	2.0	2.0	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	0.8	0.8	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
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TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
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TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None

See Temperature Excursion Form

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Cisneros, Roxanne		Carrier Tracking No(s): 240-158834.1	
Company: TestAmerica Laboratories, Inc.		E-Mail: roxanne.cisneros@et.eurofins.com		Page: Page 1 of 1	
Address: 13715 Rider Trail North,		State of Origin: Ohio		Job #: 240-174587-1	
City: Earth City		Accreditations Required (See note):		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (Specify)	
State, Zip: MO, 63045		Due Date Requested: 11/14/2022		Analysis Requested	
PO #: 314-298-8566(Tel) 314-298-8757(Fax)		TAT Requested (days):		Total Number of Containers	
WO #:		Field Filtered Sample (Yes or No)		9320 Ra228/PreSep_0 Radium-228 (GFC)	
Project #: 24019633		Perform MS/MSD (Yes or No)		9315 Ra228/PreSep_21 Radium-226 (GFC)	
Site: Federal CCR Wells		Matrix (Weaver, Sealed, Omnisolid, BTEX/PAH, AAH)		Radium-228	
		Sample Type (C=Comp, G=grab)		9320 Ra228/PreSep_0 Radium-228 (GFC)	
		Sample Time		9315 Ra228/PreSep_21 Radium-226 (GFC)	
		Sample Date		Radium-228	
		Preservation Code:		Special Instructions/Note:	
		MW-1-F-20221010-01 (240-174587-1)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	
		EB-001-F-20221010-01 (240-174587-2)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	
		BAC-01-F-20221011-01 (240-174587-3)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	
		DUP-001-BAC-01-F-20221011-01 (240-174587-4)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	
		MW-6-F-20221011-01 (240-174587-5)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	
		EB-001-F-20221011-01 (240-174587-6)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	
		BAC-05-F-20221012-01 (240-174587-7)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	
		BAC-04-F-20221012-01 (240-174587-8)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	
		EB-001-F-20221012-01 (240-174587-9)		. Recount of TAR after 21 day ingrowth if > action limit; save planchet	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out 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/thesis/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
 Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: _____ Date: _____ Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No



Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-174587-1

Login Number: 174587

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 10/18/22 12:31 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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?	True	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins Canton

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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 {0} Project Manager.

Authorization

Roxanne Cisneros Generated
11/15/2022 12:37:33 PM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(615)301-5761



ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire Ohio 45620

Generated 11/21/2022 4:27:45 PM

JOB DESCRIPTION

Federal CCR Wells

JOB NUMBER

240-174839-1



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174839-1

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.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Job ID: 240-174839-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-174839-1

Receipt

The samples were received on 10/18/2022 12:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.1°C, 0.1°C, 0.1°C, 0.2°C, 0.7°C and 1.5°C

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 2540C_Calcd: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 240-547947 recovered outside control. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 2540C_Calcd: LCS failed high for the batch. Samples will be reported for in hold results. Samples will be re-analyzed out of hold with passing QC. BAC-07-F-20221014-01 (240-174839-3), DUP-002-BAC-07-F-20221014-01 (240-174839-4), B-0903-F-220221014-01 (240-174839-5), (240-174839-B-5 DU)

Method 2540C_Calcd: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 240-548150 recovered outside control limits. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 2540C_Calcd: Reanalysis of the following samples was performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis. BAC-03-F-20221013-01 (240-174839-1), BAC-07-F-20221014-01 (240-174839-3), DUP-002-BAC-07-F-20221014-01 (240-174839-4) and B-0903-F-220221014-01 (240-174839-5)

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 batch 586786Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference DateBAC-03-F-20221013-01 (240-174839-1), EB-001-F-20221013-01 (240-174839-2), BAC-07-F-20221014-01 (240-174839-3), DUP-002-BAC-07-F-20221014-01 (240-174839-4), B-0903-F-220221014-01 (240-174839-5), EB-001-F-20221014-01 (240-174839-6), (LCS 160-586786/2-A), (MB 160-586786/1-A) and (240-174839-D-4-B DU)

Method 9320_Ra228: Radium prep batch 160-586797:The detection goal was not met for the following samples due to the presence of matrix interferences: BAC-03-F-20221013-01 (240-174839-1) and B-0903-F-220221014-01 (240-174839-5). Analytical results are reported with the detection limit achieved.

Method 9320_Ra228: Radium-228 prep batch 160-586797:Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.BAC-03-F-20221013-01 (240-174839-1), EB-001-F-20221013-01 (240-174839-2), BAC-07-F-20221014-01 (240-174839-3), DUP-002-BAC-07-F-20221014-01 (240-174839-4), B-0903-F-220221014-01 (240-174839-5), EB-001-F-20221014-01 (240-174839-6), (LCS 160-586797/2-A), (MB 160-586797/1-A) and (240-174839-D-4-C DU)

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.

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Job ID: 240-174839-1 (Continued)

Laboratory: Eurofins Canton (Continued)

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Method Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CAN
6020B	Metals (ICP/MS)	SW846	EET CAN
7470A	Mercury (CVAA)	SW846	EET CAN
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAN
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 CAN
7470A	Preparation, Mercury	SW846	EET CAN
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

- MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
- 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 CAN = Eurofins Canton, 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: 240-174839-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-174839-1	BAC-03-F-20221013-01	Water	10/13/22 10:16	10/18/22 12:05
240-174839-2	EB-001-F-20221013-01	Water	10/13/22 15:30	10/18/22 12:05
240-174839-3	BAC-07-F-20221014-01	Water	10/14/22 10:31	10/18/22 12:05
240-174839-4	DUP-002-BAC-07-F-20221014-01	Water	10/14/22 10:31	10/18/22 12:05
240-174839-5	B-0903-F-220221014-01	Water	10/14/22 14:10	10/18/22 12:05
240-174839-6	EB-001-F-20221014-01	Water	10/14/22 17:00	10/18/22 12:05

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: BAC-03-F-20221013-01

Lab Sample ID: 240-174839-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1800		100	57	ug/L	1		6010D	Total Recoverable
Calcium	81000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	17000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	4300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	29000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	86		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	86		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	57		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.058		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	190		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	470	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	460	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20221013-01

Lab Sample ID: 240-174839-2

No Detections.

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174839-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1000		100	57	ug/L	1		6010D	Total Recoverable
Calcium	89000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	14000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	24		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.076		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	170		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	420	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	420	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-002-BAC-07-F-20221014-01

Lab Sample ID: 240-174839-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	960		100	57	ug/L	1		6010D	Total Recoverable
Calcium	86000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	19000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	14000		1000	330	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: DUP-002-BAC-07-F-20221014-01

Lab Sample ID: 240-174839-4

(Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity	130		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO ₃	130		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	24		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.076		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	170		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	410	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	440	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: B-0903-F-220221014-01

Lab Sample ID: 240-174839-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	24000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	4300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	330	ug/L	1		6020B	Total Recoverable
Mercury	0.13	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	31		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO ₃	31		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	36		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.032	J	0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	56		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	190	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	170	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20221014-01

Lab Sample ID: 240-174839-6

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: BAC-03-F-20221013-01

Lab Sample ID: 240-174839-1

Date Collected: 10/13/22 10:16

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1800		100	57	ug/L		10/19/22 12:00	10/20/22 15:18	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	81000		1000	580	ug/L		10/19/22 12:00	10/22/22 01:32	1
Magnesium	17000		1000	200	ug/L		10/19/22 12:00	10/22/22 01:32	1
Potassium	4300		1000	220	ug/L		10/19/22 12:00	10/22/22 01:32	1
Sodium	29000		1000	330	ug/L		10/19/22 12:00	10/22/22 01:32	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 12:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	86		5.0	2.6	mg/L			10/25/22 17:57	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	86		5.0	2.6	mg/L			10/25/22 17:57	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/25/22 17:57	1
Chloride (MCAWW 300.0)	57		1.0	0.28	mg/L			11/09/22 08:13	1
Fluoride (MCAWW 300.0)	0.058		0.050	0.024	mg/L			11/09/22 08:13	1
Sulfate (MCAWW 300.0)	190		1.0	0.35	mg/L			11/09/22 08:13	1
Total Dissolved Solids (SM 2540C)	470	*+	10	7.8	mg/L			10/20/22 10:44	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	460	H	10	7.8	mg/L			11/01/22 11:02	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.586	U	0.532	0.535	1.00	0.785	pCi/L	10/21/22 10:53	11/18/22 10:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	48.3		40 - 110					10/21/22 10:53	11/18/22 10:50	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	1.85	U G	2.14	2.15	1.00	3.51	pCi/L	10/21/22 11:48	11/14/22 16:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	48.3		40 - 110					10/21/22 11:48	11/14/22 16:28	1
Y Carrier	86.4		40 - 110					10/21/22 11:48	11/14/22 16:28	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: BAC-03-F-20221013-01

Lab Sample ID: 240-174839-1

Date Collected: 10/13/22 10:16

Matrix: Water

Date Received: 10/18/22 12:05

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	2.44	U	2.21	2.22	5.00	3.51	pCi/L		11/18/22 16:46	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: EB-001-F-20221013-01

Lab Sample ID: 240-174839-2

Date Collected: 10/13/22 15:30

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/19/22 12:00	10/20/22 14:58	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/19/22 12:00	10/22/22 01:10	1
Magnesium	1000	U	1000	200	ug/L		10/19/22 12:00	10/22/22 01:10	1
Potassium	1000	U	1000	220	ug/L		10/19/22 12:00	10/22/22 01:10	1
Sodium	1000	U	1000	330	ug/L		10/19/22 12:00	10/22/22 01:10	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 12:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 22:14	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 22:14	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 22:14	1
Chloride (MCAWW 300.0)	1.0	U	1.0	0.28	mg/L			11/09/22 03:11	1
Fluoride (MCAWW 300.0)	0.050	U	0.050	0.024	mg/L			11/09/22 03:11	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			11/09/22 03:11	1
Total Dissolved Solids (SM 2540C)	10	U **	10	7.8	mg/L			10/20/22 10:44	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0322	U	0.0776	0.0776	1.00	0.144	pCi/L	10/21/22 10:53	11/18/22 10:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					10/21/22 10:53	11/18/22 10:50	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.192	U	0.318	0.318	1.00	0.542	pCi/L	10/21/22 11:48	11/14/22 16:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					10/21/22 11:48	11/14/22 16:28	1
Y Carrier	88.2		40 - 110					10/21/22 11:48	11/14/22 16:28	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Combined Radium 226 + 228	0.225	U	0.327	0.327	5.00	0.542	pCi/L		11/18/22 16:46	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174839-3

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1000		100	57	ug/L		10/19/22 12:00	10/20/22 15:31	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	89000		1000	580	ug/L		10/19/22 12:00	10/22/22 01:37	1
Magnesium	20000		1000	200	ug/L		10/19/22 12:00	10/22/22 01:37	1
Potassium	1300		1000	220	ug/L		10/19/22 12:00	10/22/22 01:37	1
Sodium	14000		1000	330	ug/L		10/19/22 12:00	10/22/22 01:37	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 12:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	140		5.0	2.6	mg/L			10/24/22 17:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	140		5.0	2.6	mg/L			10/24/22 17:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 17:04	1
Chloride (MCAWW 300.0)	24		1.0	0.28	mg/L			11/09/22 09:13	1
Fluoride (MCAWW 300.0)	0.076		0.050	0.024	mg/L			11/09/22 09:13	1
Sulfate (MCAWW 300.0)	170		1.0	0.35	mg/L			11/09/22 09:13	1
Total Dissolved Solids (SM 2540C)	420	*+	10	7.8	mg/L			10/21/22 09:51	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	420	H	10	7.8	mg/L			11/04/22 16:47	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.101	U	0.0834	0.0839	1.00	0.120	pCi/L	10/21/22 10:53	11/18/22 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/21/22 10:53	11/18/22 10:51	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	-0.129	U	0.234	0.235	1.00	0.477	pCi/L	10/21/22 11:48	11/14/22 16:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					10/21/22 11:48	11/14/22 16:28	1
Y Carrier	87.5		40 - 110					10/21/22 11:48	11/14/22 16:28	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174839-3

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Combined Radium 226 + 228	-0.0280	U	0.248	0.250	5.00	0.477	pCi/L		11/18/22 16:46	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: DUP-002-BAC-07-F-20221014-01

Lab Sample ID: 240-174839-4

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	960		100	57	ug/L		10/19/22 12:00	10/20/22 15:35	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	86000		1000	580	ug/L		10/19/22 12:00	10/22/22 01:50	1
Magnesium	19000		1000	200	ug/L		10/19/22 12:00	10/22/22 01:50	1
Potassium	1300		1000	220	ug/L		10/19/22 12:00	10/22/22 01:50	1
Sodium	14000		1000	330	ug/L		10/19/22 12:00	10/22/22 01:50	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	130		5.0	2.6	mg/L			10/24/22 17:08	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	130		5.0	2.6	mg/L			10/24/22 17:08	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 17:08	1
Chloride (MCAWW 300.0)	24		1.0	0.28	mg/L			11/11/22 05:13	1
Fluoride (MCAWW 300.0)	0.076		0.050	0.024	mg/L			11/11/22 05:13	1
Sulfate (MCAWW 300.0)	170		1.0	0.35	mg/L			11/11/22 05:13	1
Total Dissolved Solids (SM 2540C)	410	*+	10	7.8	mg/L			10/21/22 09:51	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	440	H	10	7.8	mg/L			10/26/22 15:59	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.0640	U	0.0836	0.0838	1.00	0.140	pCi/L	10/21/22 10:53	11/18/22 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					10/21/22 10:53	11/18/22 10:51	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.372	U	0.302	0.304	1.00	0.468	pCi/L	10/21/22 11:48	11/14/22 16:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					10/21/22 11:48	11/14/22 16:28	1
Y Carrier	87.5		40 - 110					10/21/22 11:48	11/14/22 16:28	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: DUP-002-BAC-07-F-20221014-01

Lab Sample ID: 240-174839-4

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	0.436	U	0.313	0.315	5.00	0.468	pCi/L		11/18/22 16:46	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: B-0903-F-220221014-01

Lab Sample ID: 240-174839-5

Date Collected: 10/14/22 14:10

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/19/22 12:00	10/20/22 15:39	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	24000		1000	580	ug/L		10/19/22 12:00	10/22/22 01:54	1
Magnesium	13000		1000	200	ug/L		10/19/22 12:00	10/22/22 01:54	1
Potassium	4300		1000	220	ug/L		10/19/22 12:00	10/22/22 01:54	1
Sodium	15000		1000	330	ug/L		10/19/22 12:00	10/22/22 01:54	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	31		5.0	2.6	mg/L			10/24/22 17:27	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	31		5.0	2.6	mg/L			10/24/22 17:27	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 17:27	1
Chloride (MCAWW 300.0)	36		1.0	0.28	mg/L			11/11/22 06:13	1
Fluoride (MCAWW 300.0)	0.032	J	0.050	0.024	mg/L			11/11/22 06:13	1
Sulfate (MCAWW 300.0)	56		1.0	0.35	mg/L			11/11/22 06:13	1
Total Dissolved Solids (SM 2540C)	190	*+	10	7.8	mg/L			10/21/22 09:51	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	170	H	10	7.8	mg/L			10/31/22 10:16	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.499		0.250	0.254	1.00	0.290	pCi/L	10/21/22 10:53	11/18/22 10:51	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	80.9		40 - 110					10/21/22 10:53	11/18/22 10:51	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	1.79	G	0.846	0.862	1.00	1.16	pCi/L	10/21/22 11:48	11/14/22 16:28	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	80.9		40 - 110					10/21/22 11:48	11/14/22 16:28	1
Y Carrier	87.9		40 - 110					10/21/22 11:48	11/14/22 16:28	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: B-0903-F-220221014-01

Lab Sample ID: 240-174839-5

Date Collected: 10/14/22 14:10

Matrix: Water

Date Received: 10/18/22 12:05

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	2.29		0.882	0.899	5.00	1.16	pCi/L		11/18/22 16:46	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: EB-001-F-20221014-01

Lab Sample ID: 240-174839-6

Date Collected: 10/14/22 17:00

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/19/22 12:00	10/20/22 15:43	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/19/22 12:00	10/22/22 01:59	1
Magnesium	1000	U	1000	200	ug/L		10/19/22 12:00	10/22/22 01:59	1
Potassium	1000	U	1000	220	ug/L		10/19/22 12:00	10/22/22 01:59	1
Sodium	1000	U	1000	330	ug/L		10/19/22 12:00	10/22/22 01:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 17:20	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 17:20	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 17:20	1
Chloride (MCAWW 300.0)	1.0	U	1.0	0.28	mg/L			11/11/22 06:33	1
Fluoride (MCAWW 300.0)	0.050	U	0.050	0.024	mg/L			11/11/22 06:33	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			11/11/22 06:33	1
Total Dissolved Solids (SM 2540C)	10	U **	10	7.8	mg/L			10/21/22 09:51	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.102	U	0.0876	0.0881	1.00	0.129	pCi/L	10/21/22 10:53	11/18/22 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					10/21/22 10:53	11/18/22 10:51	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.625		0.347	0.352	1.00	0.500	pCi/L	10/21/22 11:48	11/14/22 16:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					10/21/22 11:48	11/14/22 16:28	1
Y Carrier	88.6		40 - 110					10/21/22 11:48	11/14/22 16:28	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Combined Radium 226 + 228	0.727		0.358	0.363	5.00	0.500	pCi/L		11/18/22 16:46	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
240-174839-1	BAC-03-F-20221013-01	48.3	
240-174839-2	EB-001-F-20221013-01	88.5	
240-174839-3	BAC-07-F-20221014-01	97.1	
240-174839-4	DUP-002-BAC-07-F-20221014-01	94.6	
240-174839-4 DU	DUP-002-BAC-07-F-20221014-01	97.3	
240-174839-5	B-0903-F-220221014-01	80.9	
240-174839-6	EB-001-F-20221014-01	98.8	
LCS 160-586786/2-A	Lab Control Sample	95.8	
MB 160-586786/1-A	Method Blank	98.5	
Tracer/Carrier Legend			
Ba = Ba Carrier			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
240-174839-1	BAC-03-F-20221013-01	48.3	86.4
240-174839-2	EB-001-F-20221013-01	88.5	88.2
240-174839-3	BAC-07-F-20221014-01	97.1	87.5
240-174839-4	DUP-002-BAC-07-F-20221014-01	94.6	87.5
240-174839-4 DU	DUP-002-BAC-07-F-20221014-01	97.3	90.1
240-174839-5	B-0903-F-220221014-01	80.9	87.9
240-174839-6	EB-001-F-20221014-01	98.8	88.6
LCS 160-586797/2-A	Lab Control Sample	95.8	83.7
MB 160-586797/1-A	Method Blank	98.5	84.1
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-547758/1-A
 Matrix: Water
 Analysis Batch: 548094

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/19/22 12:00	10/20/22 14:32	1

Lab Sample ID: LCS 240-547758/2-A
 Matrix: Water
 Analysis Batch: 548094

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1020		ug/L		102	80 - 120

Lab Sample ID: 240-174839-2 MS
 Matrix: Water
 Analysis Batch: 548094

Client Sample ID: EB-001-F-20221013-01
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	100	U	1000	1060		ug/L		106	75 - 125

Lab Sample ID: 240-174839-2 MSD
 Matrix: Water
 Analysis Batch: 548094

Client Sample ID: EB-001-F-20221013-01
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	100	U	1000	1050		ug/L		105	75 - 125	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-547758/1-A
 Matrix: Water
 Analysis Batch: 548375

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/19/22 12:00	10/22/22 00:57	1
Magnesium	1000	U	1000	200	ug/L		10/19/22 12:00	10/22/22 00:57	1
Potassium	1000	U	1000	220	ug/L		10/19/22 12:00	10/22/22 00:57	1
Sodium	1000	U	1000	330	ug/L		10/19/22 12:00	10/22/22 00:57	1

Lab Sample ID: LCS 240-547758/3-A
 Matrix: Water
 Analysis Batch: 548375

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24000		ug/L		96	80 - 120
Magnesium	25000	22700		ug/L		91	80 - 120
Potassium	25000	22600		ug/L		90	80 - 120
Sodium	25000	22500		ug/L		90	80 - 120

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-174839-2 MS
Matrix: Water
Analysis Batch: 548375

Client Sample ID: EB-001-F-20221013-01
Prep Type: Total Recoverable
Prep Batch: 547758

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Calcium	1000	U	25000	25100		ug/L		100	80 - 120	
Magnesium	1000	U	25000	23800		ug/L		95	80 - 120	
Potassium	1000	U	25000	23500		ug/L		94	80 - 120	
Sodium	1000	U	25000	23400		ug/L		93	80 - 120	

Lab Sample ID: 240-174839-2 MSD
Matrix: Water
Analysis Batch: 548375

Client Sample ID: EB-001-F-20221013-01
Prep Type: Total Recoverable
Prep Batch: 547758

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
Calcium	1000	U	25000	24900		ug/L		99	80 - 120		1
Magnesium	1000	U	25000	23600		ug/L		95	80 - 120		1
Potassium	1000	U	25000	23400		ug/L		94	80 - 120		0
Sodium	1000	U	25000	23200		ug/L		93	80 - 120		1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-547763/1-A
Matrix: Water
Analysis Batch: 548036

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 547763

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 12:19	1

Lab Sample ID: LCS 240-547763/2-A
Matrix: Water
Analysis Batch: 548036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 547763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Mercury	5.00	5.12		ug/L		102	80 - 120	

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548679/109
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1

Lab Sample ID: MB 240-548679/136
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-548679/30
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1

Lab Sample ID: MB 240-548679/56
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1

Lab Sample ID: MB 240-548679/83
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1

Lab Sample ID: LCS 240-548679/135
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCS 240-548679/55
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCS 240-548679/82
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: 240-174839-6 DU
Matrix: Water
Analysis Batch: 548679

Client Sample ID: EB-001-F-20221014-01
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Alkalinity	5.0	U	5.0	U	mg/L		NC	20
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: 240-174839-6 DU
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: EB-001-F-20221014-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Lab Sample ID: MB 240-548766/4
 Matrix: Water
 Analysis Batch: 548766

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/25/22 16:42	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 16:42	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 16:42	1

Lab Sample ID: LCS 240-548766/3
 Matrix: Water
 Analysis Batch: 548766

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	146	141		mg/L		97	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-550924/15
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.28	mg/L			11/08/22 17:08	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/08/22 17:08	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/08/22 17:08	1

Lab Sample ID: LCS 240-550924/16
 Matrix: Water
 Analysis Batch: 550924

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	50.4		mg/L		101	90 - 110
Fluoride	2.50	2.52		mg/L		101	90 - 110
Sulfate	50.0	51.7		mg/L		103	90 - 110

Lab Sample ID: 240-174839-2 MS
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: EB-001-F-20221013-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1.0	U	50.0	51.1		mg/L		102	80 - 120
Fluoride	0.050	U	2.50	2.54		mg/L		102	80 - 120
Sulfate	1.0	U	50.0	52.3		mg/L		105	80 - 120

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-174839-2 MSD
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: EB-001-F-20221013-01
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloride	1.0	U	50.0	50.6		mg/L		101	80 - 120	1	15
Fluoride	0.050	U	2.50	2.53		mg/L		101	80 - 120	0	15
Sulfate	1.0	U	50.0	52.0		mg/L		104	80 - 120	1	15

Lab Sample ID: MB 240-551451/3
 Matrix: Water
 Analysis Batch: 551451

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			11/10/22 21:10	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/10/22 21:10	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/10/22 21:10	1

Lab Sample ID: LCS 240-551451/4
 Matrix: Water
 Analysis Batch: 551451

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	50.9		mg/L		102	90 - 110
Fluoride	2.50	2.56		mg/L		102	90 - 110
Sulfate	50.0	52.5		mg/L		105	90 - 110

Lab Sample ID: 240-174839-4 MS
 Matrix: Water
 Analysis Batch: 551451

Client Sample ID: DUP-002-BAC-07-F-20221014-01
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				Limits
Chloride	24		50.0	75.0		mg/L		101	80 - 120
Fluoride	0.076		2.50	2.64		mg/L		103	80 - 120
Sulfate	170		50.0	213	E	mg/L		92	80 - 120

Lab Sample ID: 240-174839-4 MSD
 Matrix: Water
 Analysis Batch: 551451

Client Sample ID: DUP-002-BAC-07-F-20221014-01
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloride	24		50.0	75.1		mg/L		101	80 - 120	0	15
Fluoride	0.076		2.50	2.65		mg/L		103	80 - 120	0	15
Sulfate	170		50.0	213	E	mg/L		92	80 - 120	0	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-547947/1
 Matrix: Water
 Analysis Batch: 547947

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	10	U	10	7.8	mg/L			10/20/22 10:44	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-547947/2
Matrix: Water
Analysis Batch: 547947

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	250	452	*+	mg/L		181	80 - 120

Lab Sample ID: MB 240-548150/1
Matrix: Water
Analysis Batch: 548150

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	10	U	10	7.8	mg/L			10/21/22 09:51	1

Lab Sample ID: LCS 240-548150/2
Matrix: Water
Analysis Batch: 548150

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	500	831	*+	mg/L		166	80 - 120

Lab Sample ID: MB 240-548909/1
Matrix: Water
Analysis Batch: 548909

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	10	U	10	7.8	mg/L			10/26/22 15:59	1

Lab Sample ID: LCS 240-548909/2
Matrix: Water
Analysis Batch: 548909

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	388	359		mg/L		93	80 - 120

Lab Sample ID: MB 240-549553/1
Matrix: Water
Analysis Batch: 549553

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	10	U	10	7.8	mg/L			10/31/22 10:16	1

Lab Sample ID: LCS 240-549553/2
Matrix: Water
Analysis Batch: 549553

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	388	370		mg/L		95	80 - 120

Lab Sample ID: MB 240-549787/1
Matrix: Water
Analysis Batch: 549787

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	10	U	10	7.8	mg/L			11/01/22 11:02	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: LCS 240-549787/2
 Matrix: Water
 Analysis Batch: 549787

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	388	340		mg/L		88	80 - 120

Lab Sample ID: MB 240-550556/1
 Matrix: Water
 Analysis Batch: 550556

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	10	U	10	7.8	mg/L			11/04/22 16:47	1

Lab Sample ID: LCS 240-550556/2
 Matrix: Water
 Analysis Batch: 550556

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	388	351		mg/L		90	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS) - RA

Lab Sample ID: 240-174839-5 DU
 Matrix: Water
 Analysis Batch: 549553

Client Sample ID: B-0903-F-220221014-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids - RA	170	H	172		mg/L		2	20

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-586786/1-A
 Matrix: Water
 Analysis Batch: 590420

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 586786

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1402	U	0.172	0.172	1.00	0.284	pCi/L	10/21/22 10:53	11/17/22 21:33	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					10/21/22 10:53	11/17/22 21:33	1

Lab Sample ID: LCS 160-586786/2-A
 Matrix: Water
 Analysis Batch: 590420

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 586786

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	8.840		1.09	1.00	0.172	pCi/L	78	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	95.8		40 - 110						

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: 240-174839-4 DU
Matrix: Water
Analysis Batch: 590569

Client Sample ID: DUP-002-BAC-07-F-20221014-01
Prep Type: Total/NA
Prep Batch: 586786

Analyte	Sample	Sample	DU		Total	RL	MDC	Unit	RER	Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.0640	U	0.1061	U	0.0820	1.00	0.110	pCi/L	0.25	1
Carrier	%Yield	DU Qualifier	DU		Limits					
Ba Carrier	97.3				40 - 110					

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-586797/1-A
Matrix: Water
Analysis Batch: 590052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586797

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3314	U	0.293	0.295	1.00	0.462	pCi/L	10/21/22 11:48	11/14/22 16:23	1
Carrier	%Yield	MB Qualifier	MB		Limits					
Ba Carrier	98.5				40 - 110					
Y Carrier	84.1				40 - 110					

Lab Sample ID: LCS 160-586797/2-A
Matrix: Water
Analysis Batch: 590052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586797

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-228	8.45	8.803		1.20	1.00	0.423	pCi/L	104	75 - 125
Carrier	LCS %Yield	LCS Qualifier		Limits					
Ba Carrier	95.8			40 - 110					
Y Carrier	83.7			40 - 110					

Lab Sample ID: 240-174839-4 DU
Matrix: Water
Analysis Batch: 590053

Client Sample ID: DUP-002-BAC-07-F-20221014-01
Prep Type: Total/NA
Prep Batch: 586797

Analyte	Sample	Sample	DU		Total	RL	MDC	Unit	RER	Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-228	0.372	U	0.5051		0.293	1.00	0.408	pCi/L	0.22	1
Carrier	%Yield	DU Qualifier	DU		Limits					
Ba Carrier	97.3				40 - 110					
Y Carrier	90.1				40 - 110					

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Metals

Prep Batch: 547758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total Recoverable	Water	3005A	
240-174839-2	EB-001-F-20221013-01	Total Recoverable	Water	3005A	
240-174839-3	BAC-07-F-20221014-01	Total Recoverable	Water	3005A	
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total Recoverable	Water	3005A	
240-174839-5	B-0903-F-220221014-01	Total Recoverable	Water	3005A	
240-174839-6	EB-001-F-20221014-01	Total Recoverable	Water	3005A	
MB 240-547758/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-547758/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-547758/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-174839-2 MS	EB-001-F-20221013-01	Total Recoverable	Water	3005A	
240-174839-2 MS	EB-001-F-20221013-01	Total Recoverable	Water	3005A	
240-174839-2 MSD	EB-001-F-20221013-01	Total Recoverable	Water	3005A	
240-174839-2 MSD	EB-001-F-20221013-01	Total Recoverable	Water	3005A	

Prep Batch: 547763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total/NA	Water	7470A	
240-174839-2	EB-001-F-20221013-01	Total/NA	Water	7470A	
240-174839-3	BAC-07-F-20221014-01	Total/NA	Water	7470A	
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	7470A	
240-174839-5	B-0903-F-220221014-01	Total/NA	Water	7470A	
240-174839-6	EB-001-F-20221014-01	Total/NA	Water	7470A	
MB 240-547763/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-547763/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 548036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total/NA	Water	7470A	547763
240-174839-2	EB-001-F-20221013-01	Total/NA	Water	7470A	547763
240-174839-3	BAC-07-F-20221014-01	Total/NA	Water	7470A	547763
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	7470A	547763
240-174839-5	B-0903-F-220221014-01	Total/NA	Water	7470A	547763
240-174839-6	EB-001-F-20221014-01	Total/NA	Water	7470A	547763
MB 240-547763/1-A	Method Blank	Total/NA	Water	7470A	547763
LCS 240-547763/2-A	Lab Control Sample	Total/NA	Water	7470A	547763

Analysis Batch: 548094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total Recoverable	Water	6010D	547758
240-174839-2	EB-001-F-20221013-01	Total Recoverable	Water	6010D	547758
240-174839-3	BAC-07-F-20221014-01	Total Recoverable	Water	6010D	547758
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total Recoverable	Water	6010D	547758
240-174839-5	B-0903-F-220221014-01	Total Recoverable	Water	6010D	547758
240-174839-6	EB-001-F-20221014-01	Total Recoverable	Water	6010D	547758
MB 240-547758/1-A	Method Blank	Total Recoverable	Water	6010D	547758
LCS 240-547758/2-A	Lab Control Sample	Total Recoverable	Water	6010D	547758
240-174839-2 MS	EB-001-F-20221013-01	Total Recoverable	Water	6010D	547758
240-174839-2 MSD	EB-001-F-20221013-01	Total Recoverable	Water	6010D	547758

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Metals

Analysis Batch: 548375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total Recoverable	Water	6020B	547758
240-174839-2	EB-001-F-20221013-01	Total Recoverable	Water	6020B	547758
240-174839-3	BAC-07-F-20221014-01	Total Recoverable	Water	6020B	547758
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total Recoverable	Water	6020B	547758
240-174839-5	B-0903-F-220221014-01	Total Recoverable	Water	6020B	547758
240-174839-6	EB-001-F-20221014-01	Total Recoverable	Water	6020B	547758
MB 240-547758/1-A	Method Blank	Total Recoverable	Water	6020B	547758
LCS 240-547758/3-A	Lab Control Sample	Total Recoverable	Water	6020B	547758
240-174839-2 MS	EB-001-F-20221013-01	Total Recoverable	Water	6020B	547758
240-174839-2 MSD	EB-001-F-20221013-01	Total Recoverable	Water	6020B	547758

General Chemistry

Analysis Batch: 547947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total/NA	Water	SM 2540C	
240-174839-2	EB-001-F-20221013-01	Total/NA	Water	SM 2540C	
MB 240-547947/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547947/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-3	BAC-07-F-20221014-01	Total/NA	Water	SM 2540C	
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	SM 2540C	
240-174839-5	B-0903-F-220221014-01	Total/NA	Water	SM 2540C	
240-174839-6	EB-001-F-20221014-01	Total/NA	Water	SM 2540C	
MB 240-548150/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548150/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-2	EB-001-F-20221013-01	Total/NA	Water	2320B-1997	
240-174839-3	BAC-07-F-20221014-01	Total/NA	Water	2320B-1997	
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	2320B-1997	
240-174839-5	B-0903-F-220221014-01	Total/NA	Water	2320B-1997	
240-174839-6	EB-001-F-20221014-01	Total/NA	Water	2320B-1997	
MB 240-548679/109	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/136	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/56	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548679/135	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/55	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/82	Lab Control Sample	Total/NA	Water	2320B-1997	
240-174839-6 DU	EB-001-F-20221014-01	Total/NA	Water	2320B-1997	

Analysis Batch: 548766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total/NA	Water	2320B-1997	
MB 240-548766/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548766/3	Lab Control Sample	Total/NA	Water	2320B-1997	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

General Chemistry

Analysis Batch: 548909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-4 - RA	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	SM 2540C	
MB 240-548909/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548909/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 549553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-5 - RA	B-0903-F-220221014-01	Total/NA	Water	SM 2540C	
MB 240-549553/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-549553/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-174839-5 DU - RA	B-0903-F-220221014-01	Total/NA	Water	SM 2540C	

Analysis Batch: 549787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1 - RA	BAC-03-F-20221013-01	Total/NA	Water	SM 2540C	
MB 240-549787/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-549787/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 550556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-3 - RA	BAC-07-F-20221014-01	Total/NA	Water	SM 2540C	
MB 240-550556/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-550556/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 550924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total/NA	Water	300.0	
240-174839-2	EB-001-F-20221013-01	Total/NA	Water	300.0	
240-174839-3	BAC-07-F-20221014-01	Total/NA	Water	300.0	
MB 240-550924/15	Method Blank	Total/NA	Water	300.0	
LCS 240-550924/16	Lab Control Sample	Total/NA	Water	300.0	
240-174839-2 MS	EB-001-F-20221013-01	Total/NA	Water	300.0	
240-174839-2 MSD	EB-001-F-20221013-01	Total/NA	Water	300.0	

Analysis Batch: 551451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	300.0	
240-174839-5	B-0903-F-220221014-01	Total/NA	Water	300.0	
240-174839-6	EB-001-F-20221014-01	Total/NA	Water	300.0	
MB 240-551451/3	Method Blank	Total/NA	Water	300.0	
LCS 240-551451/4	Lab Control Sample	Total/NA	Water	300.0	
240-174839-4 MS	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	300.0	
240-174839-4 MSD	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	300.0	

Rad

Prep Batch: 586786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total/NA	Water	PrecSep-21	
240-174839-2	EB-001-F-20221013-01	Total/NA	Water	PrecSep-21	
240-174839-3	BAC-07-F-20221014-01	Total/NA	Water	PrecSep-21	
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	PrecSep-21	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Rad (Continued)

Prep Batch: 586786 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-5	B-0903-F-220221014-01	Total/NA	Water	PrecSep-21	
240-174839-6	EB-001-F-20221014-01	Total/NA	Water	PrecSep-21	
MB 160-586786/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-586786/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-174839-4 DU	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	PrecSep-21	

Prep Batch: 586797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174839-1	BAC-03-F-20221013-01	Total/NA	Water	PrecSep_0	
240-174839-2	EB-001-F-20221013-01	Total/NA	Water	PrecSep_0	
240-174839-3	BAC-07-F-20221014-01	Total/NA	Water	PrecSep_0	
240-174839-4	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	PrecSep_0	
240-174839-5	B-0903-F-220221014-01	Total/NA	Water	PrecSep_0	
240-174839-6	EB-001-F-20221014-01	Total/NA	Water	PrecSep_0	
MB 160-586797/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586797/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-174839-4 DU	DUP-002-BAC-07-F-20221014-01	Total/NA	Water	PrecSep_0	



Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: BAC-03-F-20221013-01

Lab Sample ID: 240-174839-1

Date Collected: 10/13/22 10:16

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 15:18
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 01:32
Total/NA	Prep	7470A			547763	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 12:47
Total/NA	Analysis	2320B-1997		1	548766	JMR	EET CAN	10/25/22 17:57
Total/NA	Analysis	300.0		1	550924	JMB	EET CAN	11/09/22 08:13
Total/NA	Analysis	SM 2540C		1	547947	MS	EET CAN	10/20/22 10:44
Total/NA	Analysis	SM 2540C	RA	1	549787	MS	EET CAN	11/01/22 11:02
Total/NA	Prep	PrecSep-21			586786	BMP	EET SL	10/21/22 10:53
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 10:50
Total/NA	Prep	PrecSep_0			586797	BMP	EET SL	10/21/22 11:48
Total/NA	Analysis	9320		1	590053	FLC	EET SL	11/14/22 16:28
Total/NA	Analysis	Ra226_Ra228		1	590651	CAH	EET SL	11/18/22 16:46

Client Sample ID: EB-001-F-20221013-01

Lab Sample ID: 240-174839-2

Date Collected: 10/13/22 15:30

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 14:58
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 01:10
Total/NA	Prep	7470A			547763	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 12:45
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 22:14
Total/NA	Analysis	300.0		1	550924	JMB	EET CAN	11/09/22 03:11
Total/NA	Analysis	SM 2540C		1	547947	MS	EET CAN	10/20/22 10:44
Total/NA	Prep	PrecSep-21			586786	BMP	EET SL	10/21/22 10:53
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 10:50
Total/NA	Prep	PrecSep_0			586797	BMP	EET SL	10/21/22 11:48
Total/NA	Analysis	9320		1	590053	FLC	EET SL	11/14/22 16:28
Total/NA	Analysis	Ra226_Ra228		1	590651	CAH	EET SL	11/18/22 16:46

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174839-3

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 15:31

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174839-3

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 01:37
Total/NA	Prep	7470A			547763	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 12:49
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 17:04
Total/NA	Analysis	300.0		1	550924	JMB	EET CAN	11/09/22 09:13
Total/NA	Analysis	SM 2540C		1	548150	MS	EET CAN	10/21/22 09:51
Total/NA	Analysis	SM 2540C	RA	1	550556	MS	EET CAN	11/04/22 16:47
Total/NA	Prep	PrecSep-21			586786	BMP	EET SL	10/21/22 10:53
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 10:51
Total/NA	Prep	PrecSep_0			586797	BMP	EET SL	10/21/22 11:48
Total/NA	Analysis	9320		1	590053	FLC	EET SL	11/14/22 16:28
Total/NA	Analysis	Ra226_Ra228		1	590651	CAH	EET SL	11/18/22 16:46

Client Sample ID: DUP-002-BAC-07-F-20221014-01

Lab Sample ID: 240-174839-4

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 15:35
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 01:50
Total/NA	Prep	7470A			547763	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 12:51
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 17:08
Total/NA	Analysis	300.0		1	551451	JMB	EET CAN	11/11/22 05:13
Total/NA	Analysis	SM 2540C		1	548150	MS	EET CAN	10/21/22 09:51
Total/NA	Analysis	SM 2540C	RA	1	548909	MS	EET CAN	10/26/22 15:59
Total/NA	Prep	PrecSep-21			586786	BMP	EET SL	10/21/22 10:53
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 10:51
Total/NA	Prep	PrecSep_0			586797	BMP	EET SL	10/21/22 11:48
Total/NA	Analysis	9320		1	590053	FLC	EET SL	11/14/22 16:28
Total/NA	Analysis	Ra226_Ra228		1	590651	CAH	EET SL	11/18/22 16:46

Client Sample ID: B-0903-F-220221014-01

Lab Sample ID: 240-174839-5

Date Collected: 10/14/22 14:10

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 15:39
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 01:54

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Client Sample ID: B-0903-F-220221014-01

Lab Sample ID: 240-174839-5

Date Collected: 10/14/22 14:10

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			547763	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 12:53
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 17:27
Total/NA	Analysis	300.0		1	551451	JMB	EET CAN	11/11/22 06:13
Total/NA	Analysis	SM 2540C		1	548150	MS	EET CAN	10/21/22 09:51
Total/NA	Analysis	SM 2540C	RA	1	549553	MS	EET CAN	10/31/22 10:16
Total/NA	Prep	PrecSep-21			586786	BMP	EET SL	10/21/22 10:53
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 10:51
Total/NA	Prep	PrecSep_0			586797	BMP	EET SL	10/21/22 11:48
Total/NA	Analysis	9320		1	590053	FLC	EET SL	11/14/22 16:28
Total/NA	Analysis	Ra226_Ra228		1	590651	CAH	EET SL	11/18/22 16:46

Client Sample ID: EB-001-F-20221014-01

Lab Sample ID: 240-174839-6

Date Collected: 10/14/22 17:00

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 15:43
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 01:59
Total/NA	Prep	7470A			547763	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 12:55
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 17:20
Total/NA	Analysis	300.0		1	551451	JMB	EET CAN	11/11/22 06:33
Total/NA	Analysis	SM 2540C		1	548150	MS	EET CAN	10/21/22 09:51
Total/NA	Prep	PrecSep-21			586786	BMP	EET SL	10/21/22 10:53
Total/NA	Analysis	9315		1	590569	FLC	EET SL	11/18/22 10:51
Total/NA	Prep	PrecSep_0			586797	BMP	EET SL	10/21/22 11:48
Total/NA	Analysis	9320		1	590053	FLC	EET SL	11/14/22 16:28
Total/NA	Analysis	Ra226_Ra228		1	590651	CAH	EET SL	11/18/22 16:46

Laboratory References:

EET CAN = Eurofins Canton, 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
 Project/Site: Federal CCR Wells

Job ID: 240-174839-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	11-30-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells

Job ID: 240-174839-1

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
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

4101 Shuffel Street
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Client Information

Client Contact: Taylor Huffman
Company: Lightstone Generation Gavin Power LLC
Address: 7397 OH-7
City: Cheshire
State, Zip: OH, 45620
Phone: 740-925-3171 (Tel)
E-mail: taylor.huffman@lightstonegen.com
Project Name: Federal - CCR Wells
Site: Ohio

Sampler: Bobby Coyle

Phone: 740-373-4308
IPWSID:

Lab PM: Cisneros, Roxanne
E-Mail: roxanne.cisneros@Eurofins.com

Carrier Tracking No(s):

COC No: 240-93018-34502

State of Origin:

Page: Page 1 of 1
Job #:

Due Date Requested:

TAT Requested (days):

Compliance Project: Yes No

PO #: 2935505
WO #:

Project #: 24019633
SSOW#:

Analysis Requested

Analysis Requested	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020 (See Metals List)	2540C, Caicd, 500.0, 280 (Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B (Carbonate Alkalinity/Bi-Carbonate Alkalinity)
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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 - EDTA
 Other:

M - Hexane
 N - None
 O - AsNaO2
 P - Na2OAS
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 Z - other (specify)

Sample Identification

~~BAC-03-F-20221013-C1~~
~~EB-001-F-20221013-C1~~
~~BAC-07-F-20221013-C1~~
~~DUP-002-BAC-07-F-20221014-C1~~
~~B-0903-F-20221014-C1~~
~~EB-001-F-20221014-C1~~

Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code:
10-13-22	1016	G	W	
10-13-22	1530	G	W	
10-14-22	1031	G	W	
10-14-22	1031	G	W	
10-14-22	1410	G	W	
10-14-22	1700	G	W	

Special Instructions/Note:

Total Number of containers



Possible Hazard Identification

Non-Hazard
 Flammable
 Skin Irritant
 Poison B
 Unknown
 Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposition:
 Return To Client
 Archive For _____
 Months

are retained longer than 1 month

Empty Kit Relinquished by:

Date: _____

Time: _____

Method of Shipment:

Received by:

Date/Time:

Company:

Received by:

Date/Time:

Company:

Received by:

Date/Time:

Company:

*Seals Intact:

Custody Seal No.: _____

Cooler Temperature(s) °C and Other Remarks:



Eurofins - Canton Sample Receipt Form/Narrative Login # : _____
Barberton Facility

Client 1st St Store Site Name _____ Cooler unpacked by: Charish
Cooler Received on 10-18-22 Opened on 10-18-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # FA 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# IR-13 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (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 _____ No
-Were the seals on the outside of the cooler(s) signed & dated? No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA
-Were tamper/custody seals intact and uncompromised? No NA

3. Shippers' packing slip attached to the cooler(s)? No
4. Did custody papers accompany the sample(s)? No
5. Were the custody papers relinquished & signed in the appropriate place? No
6. Was/were the person(s) who collected the samples clearly identified on the COC? No
7. Did all bottles arrive in good condition (Unbroken)? No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? 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? No
11. Sufficient quantity received to perform indicated analyses? 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? No NA pH Strip Lot# HC286797
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 _____

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

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 - Canton Sample Receipt Multiple Cooler Form						
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA Client Box Other	IR-13 IR-15	0.7	0.7	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15	0.2	0.2	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15	0.1	0.1	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15	0.1	0.1	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15	0.6	0.6	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15	1.5	1.5	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice

See Temperature Excursion Form

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Cisneros, Roxanne		COC No: 240-158924.1	
Client Contact: Shipping/Receiving		E-Mail: roxanne.cisneros@et.eurofins.com		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-174839-1	
Address: 13715 Rider Trail North, Earth City, MO, 63045		Due Date Requested: 10/31/2022		Preservation Codes:	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		TAT Requested (days):		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 Other:	
Project Name: Gavin CCR		PO #:		M - Hexane N - None O - AshNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (Specify)	
Site: S50W#:		WO #:		Total Number of Containers	
Sample Identification - Client ID (Lab ID)		Sample Date		Special Instructions/Note:	
BAC-03-F-20221013-01 (240-174839-1)	10/13/22	10:16 Eastern	Water	9320_Ra228/PreSep_0 Radium-228 (GFPC)	2
EB-001-F-20221013-01 (240-174839-2)	10/13/22	15:30 Eastern	Water	9315_Ra228/PreSep_21 Radium-226 and Radium-228 (GFPC)	2
BAC-07-F-20221013-01 (240-174839-3)	10/14/22	10:31 Eastern	Water	9320_Ra228/PreSep_0 Radium-228 (GFPC)	2
DUP-002-BAC-07-F-20221014-01 (240-174839-4)	10/14/22	10:31 Eastern	Water	Field Filled Sample (Yes or No)	2
B-0903-F-20221014-01 (240-174839-5)	10/14/22	14:10 Eastern	Water	Field Filled Sample (Yes or No)	2
EB-001-F-20221014-01 (240-174839-6)	10/14/22	17:00 Eastern	Water	Field Filled Sample (Yes or No)	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					
Deliverable Requested: I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Date: _____ Time: _____					
Special Instructions/QC Requirements:					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Empty Kit Relinquished by:					
Date/Time: 10/18/22 1340		Company: FEDEX		Date/Time: _____	
Date/Time: _____		Company: FEDEX		Date/Time: _____	
Date/Time: _____		Company: FEDEX		Date/Time: _____	
Custody Seals Intact: _____					
Custody Seal No.: _____					
Cooler Temperature(s) °C and Other Remarks:					



Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-174839-1

Login Number: 174839

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 10/19/22 10:48 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?	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Eurofins Canton

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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Authorization

Roxanne Cisneros

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Authorized for release by
Roxanne Cisneros, Senior Project Manager
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(615)301-5761



ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Generated 12/14/2022 4:46:50 PM Revision 1

JOB DESCRIPTION

Federal CCR Wells - App III

JOB NUMBER

240-175048-1

Eurofins Canton

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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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Revision 1

Authorized for release by
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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Job ID: 240-175048-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-175048-1

Revised Report 12/14/2022:

TDS for BAC-11-F-20221017-01 (240-175048-2) was corrected for dilution.

Receipt

The samples were received on 10/20/2022 9:25 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 0.2°C, 0.3°C, 0.4°C, 1.1°C and 1.2°C

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 2540C_Calcd: LCS failed high for the batch. Samples will be reported in hold results. Samples will be re-analyzed out of hold with passing QC. BAC-06-F-20221017-01 (240-175048-1), BAC-11-F-20221017-01 (240-175048-2), BAC-12-F-20221017-01 (240-175048-3)

Method 2540C_Calcd: Reanalysis of the following samples was performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis. BAC-06-F-20221017-01 (240-175048-1), BAC-11-F-20221017-01 (240-175048-2) and BAC-12-F-20221017-01 (240-175048-3)

Method 2540C_Calcd: Reanalysis of the following sample was performed outside of the analytical holding time to confirm dilution factor was missed in original analysis : BAC-11-F-20221017-01 (240-175048-2).

Method 2540C_Calcd: Sample dilution was corrected from a 1X to a 100X dilution. Analyst missed the dilution factor at time of analysis. Sample was re-analyzed to confirm result. BAC-11-F-20221017-01 (240-175048-2)

Method 300.0_28D: The following sample was diluted due to the nature of the sample matrix: BAC-11-F-20221017-01 (240-175048-2). 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.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CAN
6020B	Metals (ICP/MS)	SW846	EET CAN
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-175048-1	BAC-06-F-20221017-01	Water	10/17/22 10:53	10/20/22 09:25
240-175048-2	BAC-11-F-20221017-01	Water	10/17/22 12:26	10/20/22 09:25
240-175048-3	BAC-12-F-20221017-01	Water	10/17/22 15:23	10/20/22 09:25
240-175048-4	BAC-14-F-20221018-01	Water	10/18/22 09:34	10/20/22 09:25
240-175048-5	EB-001-F-20221018-01	Water	10/18/22 18:00	10/20/22 09:25

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175048-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1700		100	57	ug/L	1		6010D	Total Recoverable
Calcium	120000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	27000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	16000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	25		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.11		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	230		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	530	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	540	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175048-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	250		100	57	ug/L	1		6010D	Total Recoverable
Calcium	2900000		20000	12000	ug/L	20		6020B	Total Recoverable
Magnesium	750000		20000	4000	ug/L	20		6020B	Total Recoverable
Potassium	25000		20000	4300	ug/L	20		6020B	Total Recoverable
Sodium	10000000		20000	6600	ug/L	20		6020B	Total Recoverable
Total Alkalinity	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	27000		500	140	mg/L	500		300.0	Total/NA
Fluoride	0.63	J	1.3	0.60	mg/L	25		300.0	Total/NA
Total Dissolved Solids	40000	*+	1000	780	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	54000	H	1000	780	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	41000	H	1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175048-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2300		100	57	ug/L	1		6010D	Total Recoverable
Calcium	73000		2000	1200	ug/L	2		6020B	Total Recoverable
Magnesium	17000		2000	400	ug/L	2		6020B	Total Recoverable
Potassium	3400		2000	430	ug/L	2		6020B	Total Recoverable
Sodium	27000		2000	660	ug/L	2		6020B	Total Recoverable
Total Alkalinity	120		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	120		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	50		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.083		0.050	0.024	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-12-F-20221017-01 (Continued)

Lab Sample ID: 240-175048-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	180		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	420	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	390	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175048-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2600		100	57	ug/L	1		6010D	Total Recoverable
Calcium	74000		2000	1200	ug/L	2		6020B	Total Recoverable
Magnesium	20000		2000	400	ug/L	2		6020B	Total Recoverable
Potassium	1900		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	21000		2000	660	ug/L	2		6020B	Total Recoverable
Total Alkalinity	81		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	81		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	36		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.055		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	220		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	430		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175048-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	12		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175048-1

Date Collected: 10/17/22 10:53

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1700		100	57	ug/L		10/21/22 12:00	10/24/22 22:17	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	120000		1000	580	ug/L		10/21/22 12:00	10/26/22 22:11	1
Magnesium	27000		1000	200	ug/L		10/21/22 12:00	10/26/22 22:11	1
Potassium	1500		1000	220	ug/L		10/21/22 12:00	10/26/22 22:11	1
Sodium	16000		1000	330	ug/L		10/21/22 12:00	10/26/22 22:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	190		5.0	2.6	mg/L			10/24/22 18:50	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	190		5.0	2.6	mg/L			10/24/22 18:50	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:50	1
Chloride (MCAWW 300.0)	25		1.0	0.28	mg/L			11/01/22 20:35	1
Fluoride (MCAWW 300.0)	0.11		0.050	0.024	mg/L			11/01/22 20:35	1
Sulfate (MCAWW 300.0)	230		2.0	0.70	mg/L			11/02/22 16:29	2
Total Dissolved Solids (SM 2540C)	530	*+	10	7.8	mg/L			10/21/22 09:53	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	540	H	10	7.8	mg/L			10/25/22 16:00	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175048-2

Date Collected: 10/17/22 12:26

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	250		100	57	ug/L		10/21/22 12:00	10/24/22 22:29	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	2900000		20000	12000	ug/L		10/21/22 12:00	10/26/22 22:16	20
Magnesium	750000		20000	4000	ug/L		10/21/22 12:00	10/26/22 22:16	20
Potassium	25000		20000	4300	ug/L		10/21/22 12:00	10/26/22 22:16	20
Sodium	10000000		20000	6600	ug/L		10/21/22 12:00	10/26/22 22:16	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	190		5.0	2.6	mg/L			10/24/22 19:02	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	190		5.0	2.6	mg/L			10/24/22 19:02	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 19:02	1
Chloride (MCAWW 300.0)	27000		500	140	mg/L			11/01/22 21:18	500
Fluoride (MCAWW 300.0)	0.63	J	1.3	0.60	mg/L			11/02/22 16:51	25
Sulfate (MCAWW 300.0)	25	U	25	8.7	mg/L			11/02/22 16:51	25
Total Dissolved Solids (SM 2540C)	40000	*+	1000	780	mg/L			10/21/22 09:53	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	54000	H	1000	780	mg/L			10/25/22 16:00	1
Total Dissolved Solids (SM 2540C)	41000	H	1000	780	mg/L			12/13/22 08:15	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175048-3

Date Collected: 10/17/22 15:23

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2300		100	57	ug/L		10/21/22 12:00	10/24/22 22:34	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	73000		2000	1200	ug/L		10/21/22 12:00	10/26/22 22:20	2
Magnesium	17000		2000	400	ug/L		10/21/22 12:00	10/26/22 22:20	2
Potassium	3400		2000	430	ug/L		10/21/22 12:00	10/26/22 22:20	2
Sodium	27000		2000	660	ug/L		10/21/22 12:00	10/26/22 22:20	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	120		5.0	2.6	mg/L			10/24/22 19:12	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	120		5.0	2.6	mg/L			10/24/22 19:12	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 19:12	1
Chloride (MCAWW 300.0)	50		1.0	0.28	mg/L			11/01/22 21:40	1
Fluoride (MCAWW 300.0)	0.083		0.050	0.024	mg/L			11/01/22 21:40	1
Sulfate (MCAWW 300.0)	180		1.0	0.35	mg/L			11/01/22 21:40	1
Total Dissolved Solids (SM 2540C)	420	*+	10	7.8	mg/L			10/21/22 09:53	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	390	H	10	7.8	mg/L			10/25/22 16:00	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175048-4

Date Collected: 10/18/22 09:34

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2600		100	57	ug/L		10/21/22 12:00	10/24/22 22:38	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	74000		2000	1200	ug/L		10/21/22 12:00	10/26/22 22:25	2
Magnesium	20000		2000	400	ug/L		10/21/22 12:00	10/26/22 22:25	2
Potassium	1900		1000	220	ug/L		10/21/22 12:00	10/27/22 21:08	1
Sodium	21000		2000	660	ug/L		10/21/22 12:00	10/26/22 22:25	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	81		5.0	2.6	mg/L			10/24/22 23:10	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	81		5.0	2.6	mg/L			10/24/22 23:10	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:10	1
Chloride (MCAWW 300.0)	36		1.0	0.28	mg/L			11/01/22 22:02	1
Fluoride (MCAWW 300.0)	0.055		0.050	0.024	mg/L			11/01/22 22:02	1
Sulfate (MCAWW 300.0)	220		2.0	0.70	mg/L			11/02/22 17:13	2
Total Dissolved Solids (SM 2540C)	430		10	7.8	mg/L			10/24/22 10:05	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175048-5

Date Collected: 10/18/22 18:00

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/21/22 12:00	10/24/22 22:42	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/21/22 12:00	10/26/22 22:29	1
Magnesium	1000	U	1000	200	ug/L		10/21/22 12:00	10/26/22 22:29	1
Potassium	1000	U	1000	220	ug/L		10/21/22 12:00	10/26/22 22:29	1
Sodium	1000	U	1000	330	ug/L		10/21/22 12:00	10/26/22 22:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:14	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:14	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:14	1
Chloride (MCAWW 300.0)	1.0	U	1.0	0.28	mg/L			11/01/22 22:23	1
Fluoride (MCAWW 300.0)	0.050	U	0.050	0.024	mg/L			11/01/22 22:23	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			11/01/22 22:23	1
Total Dissolved Solids (SM 2540C)	12		10	7.8	mg/L			10/24/22 10:05	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-548228/1-A
 Matrix: Water
 Analysis Batch: 548566

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 548228

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/21/22 12:00	10/24/22 21:06	1

Lab Sample ID: LCS 240-548228/2-A
 Matrix: Water
 Analysis Batch: 548566

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 548228

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 240-548228/1-A
 Matrix: Water
 Analysis Batch: 549001

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 548228

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/21/22 12:00	10/26/22 20:48	1
Magnesium	1000	U	1000	200	ug/L		10/21/22 12:00	10/26/22 20:48	1
Potassium	1000	U	1000	220	ug/L		10/21/22 12:00	10/26/22 20:48	1
Sodium	1000	U	1000	330	ug/L		10/21/22 12:00	10/26/22 20:48	1

Lab Sample ID: LCS 240-548228/3-A
 Matrix: Water
 Analysis Batch: 549001

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 548228

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	25200		ug/L		101	80 - 120
Magnesium	25000	24300		ug/L		97	80 - 120
Potassium	25000	24600		ug/L		99	80 - 120
Sodium	25000	24200		ug/L		97	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548679/109
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1

Lab Sample ID: MB 240-548679/136
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-548679/162
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1

Lab Sample ID: MB 240-548679/56
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1

Lab Sample ID: MB 240-548679/83
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1

Lab Sample ID: LCS 240-548679/108
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCS 240-548679/161
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCS 240-548679/82
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: 240-175048-2 DU
Matrix: Water
Analysis Batch: 548679

Client Sample ID: BAC-11-F-20221017-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	
			Result	Qualifier			RPD	Limit
Total Alkalinity	190		188		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	190		188		mg/L		2	20

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: 240-175048-2 DU
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: BAC-11-F-20221017-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-549776/3
 Matrix: Water
 Analysis Batch: 549776

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.28	mg/L			11/01/22 10:28	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/01/22 10:28	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/01/22 10:28	1

Lab Sample ID: LCS 240-549776/4
 Matrix: Water
 Analysis Batch: 549776

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	51.3		mg/L		103	90 - 110
Fluoride	2.50	2.68		mg/L		107	90 - 110
Sulfate	50.0	53.4		mg/L		107	90 - 110

Lab Sample ID: MB 240-549810/3
 Matrix: Water
 Analysis Batch: 549810

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.28	mg/L			11/02/22 01:39	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/02/22 01:39	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/02/22 01:39	1

Lab Sample ID: MB 240-549810/42
 Matrix: Water
 Analysis Batch: 549810

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.28	mg/L			11/02/22 15:46	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/02/22 15:46	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/02/22 15:46	1

Lab Sample ID: LCS 240-549810/4
 Matrix: Water
 Analysis Batch: 549810

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	51.2		mg/L		102	90 - 110
Fluoride	2.50	2.70		mg/L		108	90 - 110
Sulfate	50.0	54.2		mg/L		108	90 - 110

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-549810/43
 Matrix: Water
 Analysis Batch: 549810

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	51.4		mg/L		103	90 - 110
Fluoride	2.50	2.72		mg/L		109	90 - 110
Sulfate	50.0	53.3		mg/L		107	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-548155/1
 Matrix: Water
 Analysis Batch: 548155

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	10	U	10	7.8	mg/L			10/21/22 09:53	1

Lab Sample ID: LCS 240-548155/2
 Matrix: Water
 Analysis Batch: 548155

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	500	868	*+	mg/L		174	80 - 120

Lab Sample ID: MB 240-548418/1
 Matrix: Water
 Analysis Batch: 548418

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	10	U	10	7.8	mg/L			10/24/22 10:05	1

Lab Sample ID: LCS 240-548418/2
 Matrix: Water
 Analysis Batch: 548418

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	500	454		mg/L		91	80 - 120

Lab Sample ID: MB 240-548703/1
 Matrix: Water
 Analysis Batch: 548703

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	10	U	10	7.8	mg/L			10/25/22 16:00	1

Lab Sample ID: LCS 240-548703/2
 Matrix: Water
 Analysis Batch: 548703

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	388	376		mg/L		97	80 - 120

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 240-555625/1
Matrix: Water
Analysis Batch: 555625

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	10	U	10	7.8	mg/L	-		12/13/22 08:15	1

Lab Sample ID: LCS 240-555625/2
Matrix: Water
Analysis Batch: 555625

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	665	642		mg/L	-	97	80 - 120



QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Metals

Prep Batch: 548228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total Recoverable	Water	3005A	
240-175048-2	BAC-11-F-20221017-01	Total Recoverable	Water	3005A	
240-175048-3	BAC-12-F-20221017-01	Total Recoverable	Water	3005A	
240-175048-4	BAC-14-F-20221018-01	Total Recoverable	Water	3005A	
240-175048-5	EB-001-F-20221018-01	Total Recoverable	Water	3005A	
MB 240-548228/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-548228/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-548228/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 548566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total Recoverable	Water	6010D	548228
240-175048-2	BAC-11-F-20221017-01	Total Recoverable	Water	6010D	548228
240-175048-3	BAC-12-F-20221017-01	Total Recoverable	Water	6010D	548228
240-175048-4	BAC-14-F-20221018-01	Total Recoverable	Water	6010D	548228
240-175048-5	EB-001-F-20221018-01	Total Recoverable	Water	6010D	548228
MB 240-548228/1-A	Method Blank	Total Recoverable	Water	6010D	548228
LCS 240-548228/2-A	Lab Control Sample	Total Recoverable	Water	6010D	548228

Analysis Batch: 549001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total Recoverable	Water	6020B	548228
240-175048-2	BAC-11-F-20221017-01	Total Recoverable	Water	6020B	548228
240-175048-3	BAC-12-F-20221017-01	Total Recoverable	Water	6020B	548228
240-175048-4	BAC-14-F-20221018-01	Total Recoverable	Water	6020B	548228
240-175048-5	EB-001-F-20221018-01	Total Recoverable	Water	6020B	548228
MB 240-548228/1-A	Method Blank	Total Recoverable	Water	6020B	548228
LCS 240-548228/3-A	Lab Control Sample	Total Recoverable	Water	6020B	548228

Analysis Batch: 549264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-4	BAC-14-F-20221018-01	Total Recoverable	Water	6020B	548228

General Chemistry

Analysis Batch: 548155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total/NA	Water	SM 2540C	
240-175048-2	BAC-11-F-20221017-01	Total/NA	Water	SM 2540C	
240-175048-3	BAC-12-F-20221017-01	Total/NA	Water	SM 2540C	
MB 240-548155/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548155/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-4	BAC-14-F-20221018-01	Total/NA	Water	SM 2540C	
240-175048-5	EB-001-F-20221018-01	Total/NA	Water	SM 2540C	
MB 240-548418/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548418/2	Lab Control Sample	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

General Chemistry

Analysis Batch: 548679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total/NA	Water	2320B-1997	
240-175048-2	BAC-11-F-20221017-01	Total/NA	Water	2320B-1997	
240-175048-3	BAC-12-F-20221017-01	Total/NA	Water	2320B-1997	
240-175048-4	BAC-14-F-20221018-01	Total/NA	Water	2320B-1997	
240-175048-5	EB-001-F-20221018-01	Total/NA	Water	2320B-1997	
MB 240-548679/109	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/136	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/162	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/56	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548679/108	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/161	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/82	Lab Control Sample	Total/NA	Water	2320B-1997	
240-175048-2 DU	BAC-11-F-20221017-01	Total/NA	Water	2320B-1997	

Analysis Batch: 548703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1 - RA	BAC-06-F-20221017-01	Total/NA	Water	SM 2540C	
240-175048-2 - RA	BAC-11-F-20221017-01	Total/NA	Water	SM 2540C	
240-175048-3 - RA	BAC-12-F-20221017-01	Total/NA	Water	SM 2540C	
MB 240-548703/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548703/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 549776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total/NA	Water	300.0	
240-175048-2	BAC-11-F-20221017-01	Total/NA	Water	300.0	
240-175048-3	BAC-12-F-20221017-01	Total/NA	Water	300.0	
240-175048-4	BAC-14-F-20221018-01	Total/NA	Water	300.0	
240-175048-5	EB-001-F-20221018-01	Total/NA	Water	300.0	
MB 240-549776/3	Method Blank	Total/NA	Water	300.0	
LCS 240-549776/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 549810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total/NA	Water	300.0	
240-175048-2	BAC-11-F-20221017-01	Total/NA	Water	300.0	
240-175048-4	BAC-14-F-20221018-01	Total/NA	Water	300.0	
MB 240-549810/3	Method Blank	Total/NA	Water	300.0	
MB 240-549810/42	Method Blank	Total/NA	Water	300.0	
LCS 240-549810/4	Lab Control Sample	Total/NA	Water	300.0	
LCS 240-549810/43	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 555625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-2 - RA	BAC-11-F-20221017-01	Total/NA	Water	SM 2540C	
MB 240-555625/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-555625/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175048-1

Date Collected: 10/17/22 10:53

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:17
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549001	DSH	EET CAN	10/26/22 22:11
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:50
Total/NA	Analysis	300.0		1	549776	JMB	EET CAN	11/01/22 20:35
Total/NA	Analysis	300.0		2	549810	JMB	EET CAN	11/02/22 16:29
Total/NA	Analysis	SM 2540C		1	548155	MS	EET CAN	10/21/22 09:53
Total/NA	Analysis	SM 2540C	RA	1	548703	MED	EET CAN	10/25/22 16:00

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175048-2

Date Collected: 10/17/22 12:26

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:29
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		20	549001	DSH	EET CAN	10/26/22 22:16
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 19:02
Total/NA	Analysis	300.0		500	549776	JMB	EET CAN	11/01/22 21:18
Total/NA	Analysis	300.0		25	549810	JMB	EET CAN	11/02/22 16:51
Total/NA	Analysis	SM 2540C		1	548155	MS	EET CAN	10/21/22 09:53
Total/NA	Analysis	SM 2540C	RA	1	548703	MED	EET CAN	10/25/22 16:00
Total/NA	Analysis	SM 2540C	RA	1	555625	MS	EET CAN	12/13/22 08:15

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175048-3

Date Collected: 10/17/22 15:23

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:34
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		2	549001	DSH	EET CAN	10/26/22 22:20
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 19:12
Total/NA	Analysis	300.0		1	549776	JMB	EET CAN	11/01/22 21:40
Total/NA	Analysis	SM 2540C		1	548155	MS	EET CAN	10/21/22 09:53
Total/NA	Analysis	SM 2540C	RA	1	548703	MED	EET CAN	10/25/22 16:00

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175048-4

Date Collected: 10/18/22 09:34

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:38
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		2	549001	DSH	EET CAN	10/26/22 22:25
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549264	DSH	EET CAN	10/27/22 21:08
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 23:10
Total/NA	Analysis	300.0		1	549776	JMB	EET CAN	11/01/22 22:02
Total/NA	Analysis	300.0		2	549810	JMB	EET CAN	11/02/22 17:13
Total/NA	Analysis	SM 2540C		1	548418	MS	EET CAN	10/24/22 10:05

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175048-5

Date Collected: 10/18/22 18:00

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:42
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549001	DSH	EET CAN	10/26/22 22:29
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 23:14
Total/NA	Analysis	300.0		1	549776	JMB	EET CAN	11/01/22 22:23
Total/NA	Analysis	SM 2540C		1	548418	MS	EET CAN	10/24/22 10:05

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Michigan	State	9135	02-27-23
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22


Eurofins Canton

180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record



Environment Testing
America

Client Information		Sample: <u>Bobby Castro</u>	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): 240-93465-34577.1						
Taylor Huffman		Phone: <u>740-373-4308</u>	E-Mail: roxanne.cisneros@Eurofins.com	State of Origin: _____						
Company: Lightstone Generation Gavin Power LLC		PW/SID: _____								
Address: 7397 OH-7		Due Date Requested: _____								
City: Cheshire		TAT Requested (days): _____								
State, Zip: OH, 45620		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								
Phone: 740-925-3171(Tel)		PO #: 2935505								
Email: taylor.huffman@lightstonegen.com		WO #: _____								
Project Name: Federal CCR Wells - App III		Project #: 24019633								
Site: _____		SSOW#: _____								
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=oil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd, 300.0, 280	2220B - Alkalinity	Total Number of Containers	Special Instructions/Note:
BAC-06-F-20221017-01	10-17-22	1053	6	W	X	X	N	N	X	
BAC-11-F-20221017-01	10-17-22	1226	6	W	X	X	N	N	X	
BAC-12-F-20221017-01	10-17-22	1523	6	W	X	X	N	N	X	
BAC-14-F-20221018-01	10-18-22	0934	6	W	X	X	N	N	X	
EB-001-F-20221018-01	10-18-22	1800	6	W	X	X	N	N	X	
 240-175048 Chain of Custody										
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify) _____										
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements: _____										
Empty Kit Relinquished by: Bobby Castro Relinquished by: <u>Bobby Castro</u> Relinquished by: <u>Michelle Callahan</u> Date: <u>10-20-22 16:45</u> Date/Time: <u>10-20-22 09:25</u> Company: <u>KE Eurofins</u> Company: <u>KE Eurofins</u> Company: <u>KE Eurofins</u>										
Received by: <u>Michelle Callahan</u> Date/Time: <u>10-20-22 06:45</u> Company: <u>KE Eurofins</u> Received by: <u>Bobby Castro</u> Date/Time: <u>10-20-22 09:25</u> Company: <u>KE Eurofins</u>										
Cooler Temperature(s) °C and Other Remarks: _____										

Ver: 01/16/2019
1
2
3
4
5
6
7
8
9
10
11
12
13

Eurofins - Canton Sample Receipt Form/Narrative Login # : _____
Barberton Facility

Client Lightsstone Site Name _____ Cooler unpacked by: Dany Pezz
Cooler Received on 10-20-22 Opened on 10-20-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 1A 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# IR-13 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (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 1 eqd 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 NA
-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)? Yes No
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# HC286797
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 _____

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

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 - Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)				IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA	Client	Box	Other	IR-13 IR-15	0.2	0.2	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15	0.3	0.3	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15	0.4	0.4	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15	1.1	1.1	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15	1.2	1.2	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	

See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 - Multiple Coolers



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-165797-1
Client Project/Site: Gavin CCR App IV

For:
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
6/3/2022 4:59:09 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

LINKS

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results through



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Qualifiers

Metals

Qualifier	Qualifier Description
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.
U	Indicates the analyte was analyzed for but not detected.

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.
U	Indicates the analyte was analyzed for but not detected.

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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Job ID: 240-165797-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-165797-1

Comments

The SW846 Method 9315 Radium-226, SW846 Method 9320 Radium-228 (GFPC), and Ra226_Ra228 Combined Radium 226 and Radium 228 analyses were performed at the Eurofins St. Louis laboratory.

Receipt

The samples were received on 4/30/2022 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 8 coolers at receipt time were 0.1° C, 0.3° C, 0.4° C, 0.5° C, 0.8° C, 1.4° C, 1.5° C and 1.7° C.

RAD

Method 9315: Radium-226 BATCH 563682: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. River-F-20220428-01 (240-165797-1), Bottom Ash Pond-F-20220428-01 (240-165797-2), Reclaim Pond-F-20220428-01 (240-165797-3), Reclaim Pond-F-20220428-MS1 & MSD1-01 (240-165797-4), Reclaim Pond-F-20220428-MS2 & MSD2-01 (240-165797-5), Reclaim Pond-F-20220428-MS3 & MSD3-01 (240-165797-6), MW-6-F-20220427-01 (240-165797-7), BAC-01-F-20220427-01 (240-165797-8), MW-1-F-20220427-01 (240-165797-9), DUP-001-MW-1-F-20220427-01 (240-165797-10), B-0903-F-20220427-01 (240-165797-11), BAC-02-F-20220427-01 (240-165797-12), BAC-05-F-20220428-01 (240-165797-13), BAC-04-F-20220428-01 (240-165797-14), BAC-03-F-20220428-01 (240-165797-15), BAC-07-F-20220428-01 (240-165797-16), BAC-06-F-20220428-01 (240-165797-17), (LCS 160-563682/1-A), (LCSD 160-563682/2-A) and (MB 160-563682/20-A)

Method 9320: Radium-228 batch 563683: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. River-F-20220428-01 (240-165797-1), Bottom Ash Pond-F-20220428-01 (240-165797-2), Reclaim Pond-F-20220428-01 (240-165797-3), Reclaim Pond-F-20220428-MS1 & MSD1-01 (240-165797-4), Reclaim Pond-F-20220428-MS2 & MSD2-01 (240-165797-5), Reclaim Pond-F-20220428-MS3 & MSD3-01 (240-165797-6), MW-6-F-20220427-01 (240-165797-7), BAC-01-F-20220427-01 (240-165797-8), MW-1-F-20220427-01 (240-165797-9), DUP-001-MW-1-F-20220427-01 (240-165797-10), B-0903-F-20220427-01 (240-165797-11), BAC-02-F-20220427-01 (240-165797-12), BAC-05-F-20220428-01 (240-165797-13), BAC-04-F-20220428-01 (240-165797-14), BAC-03-F-20220428-01 (240-165797-15), BAC-07-F-20220428-01 (240-165797-16), BAC-06-F-20220428-01 (240-165797-17), (LCS 160-563683/1-A), (LCSD 160-563683/2-A) and (MB 160-563683/20-A)

Method PrecSep_0: Radium-228 Prep Batch 160-563683: The following samples were prepared at a reduced aliquot due to Matrix: River-F-20220428-01 (240-165797-1), Bottom Ash Pond-F-20220428-01 (240-165797-2), Reclaim Pond-F-20220428-01 (240-165797-3), Reclaim Pond-F-20220428-MS1 & MSD1-01 (240-165797-4), Reclaim Pond-F-20220428-MS2 & MSD2-01 (240-165797-5), Reclaim Pond-F-20220428-MS3 & MSD3-01 (240-165797-6), BAC-01-F-20220427-01 (240-165797-8), B-0903-F-20220427-01 (240-165797-11), BAC-04-F-20220428-01 (240-165797-14) and BAC-06-F-20220428-01 (240-165797-17). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-563682: The following samples were prepared at a reduced aliquot due to Matrix: River-F-20220428-01 (240-165797-1), Bottom Ash Pond-F-20220428-01 (240-165797-2), Reclaim Pond-F-20220428-01 (240-165797-3), Reclaim Pond-F-20220428-MS1 & MSD1-01 (240-165797-4), Reclaim Pond-F-20220428-MS2 & MSD2-01 (240-165797-5), Reclaim Pond-F-20220428-MS3 & MSD3-01 (240-165797-6), BAC-01-F-20220427-01 (240-165797-8), B-0903-F-20220427-01 (240-165797-11), BAC-04-F-20220428-01 (240-165797-14) and BAC-06-F-20220428-01 (240-165797-17). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Job ID: 240-165797-1 (Continued)

Laboratory: Eurofins Canton (Continued)

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
2320B-1997	Alkalinity, Total	SM	TAL CAN
300.0-1993 R2.1	Anions, Ion Chromatography	EPA	TAL CAN
9315	Radium 226 by GFPC	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL 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:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

TAL 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: Gavin CCR App IV

Job ID: 240-165797-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-165797-1	River-F-20220428-01	Water	04/28/22 14:36	04/30/22 08:00
240-165797-2	Bottom Ash Pond-F-20220428-01	Water	04/28/22 14:50	04/30/22 08:00
240-165797-3	Reclaim Pond-F-20220428-01	Water	04/28/22 15:00	04/30/22 08:00
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Water	04/28/22 15:02	04/30/22 08:00
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Water	04/28/22 15:04	04/30/22 08:00
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Water	04/28/22 15:06	04/30/22 08:00
240-165797-7	MW-6-F-20220427-01	Water	04/27/22 10:05	04/30/22 08:00
240-165797-8	BAC-01-F-20220427-01	Water	04/27/22 10:38	04/30/22 08:00
240-165797-9	MW-1-F-20220427-01	Water	04/27/22 13:02	04/30/22 08:00
240-165797-10	DUP-001-MW-1-F-20220427-01	Water	04/27/22 13:09	04/30/22 08:00
240-165797-11	B-0903-F-20220427-01	Water	04/27/22 13:52	04/30/22 08:00
240-165797-12	BAC-02-F-20220427-01	Water	04/27/22 14:46	04/30/22 08:00
240-165797-13	BAC-05-F-20220428-01	Water	04/28/22 09:32	04/30/22 08:00
240-165797-14	BAC-04-F-20220428-01	Water	04/28/22 10:16	04/30/22 08:00
240-165797-15	BAC-03-F-20220428-01	Water	04/28/22 10:49	04/30/22 08:00
240-165797-16	BAC-07-F-20220428-01	Water	04/28/22 12:51	04/30/22 08:00
240-165797-17	BAC-06-F-20220428-01	Water	04/28/22 13:35	04/30/22 08:00

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: River-F-20220428-01

Lab Sample ID: 240-165797-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.2	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	42		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.87	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	1.4		1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	6.0	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	8800		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	1.2	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	18000		1000	330	ug/L	1		6020	Total Recoverable
Thallium	0.40	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Total Alkalinity	63		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	63		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.088		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: Bottom Ash Pond-F-20220428-01

Lab Sample ID: 240-165797-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.3	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	35		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.43	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	9.1		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	11000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	2.3	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2500		1000	220	ug/L	1		6020	Total Recoverable
Sodium	26000		1000	330	ug/L	1		6020	Total Recoverable
Thallium	0.83	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Total Alkalinity	69		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	69		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.15		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: Reclaim Pond-F-20220428-01

Lab Sample ID: 240-165797-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.92	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	38		5.0	2.2	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-01 (Continued)

Lab Sample ID: 240-165797-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.37	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	11		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	2.0	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2700		1000	220	ug/L	1		6020	Total Recoverable
Sodium	28000		1000	330	ug/L	1		6020	Total Recoverable
Thallium	0.60	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Total Alkalinity	69		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	69		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.15		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: Reclaim Pond-F-20220428-MS1 & MSD1-01

Lab Sample ID: 240-165797-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.79	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	38		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.33	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	11		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	2.0	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2800		1000	220	ug/L	1		6020	Total Recoverable
Sodium	28000		1000	330	ug/L	1		6020	Total Recoverable
Thallium	0.39	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Total Alkalinity	70		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	70		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.15		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: Reclaim Pond-F-20220428-MS2 & MSD2-01

Lab Sample ID: 240-165797-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.81	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	38		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.31	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	12		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-MS2 & MSD2-01 (Continued)

Lab Sample ID: 240-165797-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	1.9	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2800		1000	220	ug/L	1		6020	Total Recoverable
Sodium	28000		1000	330	ug/L	1		6020	Total Recoverable
Thallium	0.37	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Mercury	0.20		0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	69		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	69		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.15		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: Reclaim Pond-F-20220428-MS3 & MSD3-01

Lab Sample ID: 240-165797-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	32		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.24	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	9.2		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	10000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	1.4	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2200		1000	220	ug/L	1		6020	Total Recoverable
Sodium	23000		1000	330	ug/L	1		6020	Total Recoverable
Thallium	0.24	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Total Alkalinity	70		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	70		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.15		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: MW-6-F-20220427-01

Lab Sample ID: 240-165797-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	120		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.39	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	4.0	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	13000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020	Total Recoverable
Sodium	13000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.18	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.091		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-01-F-20220427-01

Lab Sample ID: 240-165797-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	58		5.0	2.2	ug/L	1		6020	Total Recoverable
Lithium	2.4	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020	Total Recoverable
Sodium	11000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.13		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: MW-1-F-20220427-01

Lab Sample ID: 240-165797-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	110		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.53	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	4.0	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	14000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020	Total Recoverable
Sodium	15000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.11		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: DUP-001-MW-1-F-20220427-01

Lab Sample ID: 240-165797-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	120		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.57	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	4.6	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	15000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020	Total Recoverable
Sodium	16000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.10		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: B-0903-F-20220427-01

Lab Sample ID: 240-165797-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.5	J	5.0	0.75	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: B-0903-F-20220427-01 (Continued)

Lab Sample ID: 240-165797-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	130		5.0	2.2	ug/L	1		6020	Total Recoverable
Cadmium	0.23	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Chromium	9.7		5.0	2.5	ug/L	1		6020	Total Recoverable
Cobalt	2.3		1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	3.2		1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	8.2		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	9700		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020	Total Recoverable
Sodium	14000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.14	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	27		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	27		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.041	J	0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-02-F-20220427-01

Lab Sample ID: 240-165797-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	35		5.0	2.2	ug/L	1		6020	Total Recoverable
Cadmium	0.26	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Cobalt	0.80	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	2.2	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	44000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	3500		1000	220	ug/L	1		6020	Total Recoverable
Sodium	80000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	260		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	260		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.19		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-05-F-20220428-01

Lab Sample ID: 240-165797-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	31		5.0	2.2	ug/L	1		6020	Total Recoverable
Cadmium	0.25	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Cobalt	5.0		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	7.2	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	15000		1000	200	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-05-F-20220428-01 (Continued)

Lab Sample ID: 240-165797-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	1300		1000	220	ug/L	1		6020	Total Recoverable
Sodium	19000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.21		0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	66		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	66		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.10		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-04-F-20220428-01

Lab Sample ID: 240-165797-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.6	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	35		5.0	2.2	ug/L	1		6020	Total Recoverable
Chromium	27		5.0	2.5	ug/L	1		6020	Total Recoverable
Cobalt	1.6		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	5.9	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020	Total Recoverable
Sodium	23000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.23		0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	97		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	97		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.082		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-03-F-20220428-01

Lab Sample ID: 240-165797-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	39		5.0	2.2	ug/L	1		6020	Total Recoverable
Lithium	6.7	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020	Total Recoverable
Sodium	28000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	84		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	84		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.064		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-07-F-20220428-01

Lab Sample ID: 240-165797-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	56		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	1.9		1.0	0.19	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-07-F-20220428-01 (Continued)

Lab Sample ID: 240-165797-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	6.0	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	21000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020	Total Recoverable
Sodium	16000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	130		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	130		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.080		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-06-F-20220428-01

Lab Sample ID: 240-165797-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	110		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	3.5		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	5.5	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	24000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020	Total Recoverable
Sodium	15000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	180		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	180		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.091		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: River-F-20220428-01

Lab Sample ID: 240-165797-1

Date Collected: 04/28/22 14:36

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 12:55	1
Arsenic	1.2	J	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 12:55	1
Barium	42		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 12:55	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 12:55	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 12:55	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 12:55	1
Cobalt	0.87	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 12:55	1
Lead	1.4		1.0	0.45	ug/L		05/03/22 12:00	05/04/22 12:55	1
Lithium	6.0	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 12:55	1
Magnesium	8800		1000	200	ug/L		05/03/22 12:00	05/04/22 12:55	1
Molybdenum	1.2	J	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 12:55	1
Potassium	2000		1000	220	ug/L		05/03/22 12:00	05/04/22 12:55	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 12:55	1
Sodium	18000		1000	330	ug/L		05/03/22 12:00	05/04/22 12:55	1
Thallium	0.40	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 12:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U F1	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	63		5.0	2.6	mg/L			05/03/22 10:24	1
Bicarbonate Alkalinity as CaCO3	63		5.0	2.6	mg/L			05/03/22 10:24	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 10:24	1
Fluoride	0.088		0.050	0.024	mg/L			05/18/22 15:43	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0343	U	0.0692	0.0693	1.00	0.126	pCi/L	05/04/22 12:28	06/01/22 12:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					05/04/22 12:28	06/01/22 12:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.408	U	0.406	0.408	1.00	0.652	pCi/L	05/04/22 12:36	05/24/22 12:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					05/04/22 12:36	05/24/22 12:36	1
Y Carrier	85.2		40 - 110					05/04/22 12:36	05/24/22 12:36	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: River-F-20220428-01

Lab Sample ID: 240-165797-1

Date Collected: 04/28/22 14:36

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.442	U	0.412	0.414	5.00	0.652	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Bottom Ash Pond-F-20220428-01

Lab Sample ID: 240-165797-2

Date Collected: 04/28/22 14:50

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:07	1
Arsenic	1.3	J	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:07	1
Barium	35		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:07	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:07	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:07	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:07	1
Cobalt	0.43	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:07	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:07	1
Lithium	9.1		8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:07	1
Magnesium	11000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:07	1
Molybdenum	2.3	J	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:07	1
Potassium	2500		1000	220	ug/L		05/03/22 12:00	05/04/22 13:07	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:07	1
Sodium	26000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:07	1
Thallium	0.83	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:07	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	69		5.0	2.6	mg/L			05/03/22 10:30	1
Bicarbonate Alkalinity as CaCO3	69		5.0	2.6	mg/L			05/03/22 10:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 10:30	1
Fluoride	0.15		0.050	0.024	mg/L			05/18/22 16:03	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0495	U	0.0783	0.0784	1.00	0.136	pCi/L	05/04/22 12:28	06/01/22 12:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/04/22 12:28	06/01/22 12:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.212	U	0.380	0.380	1.00	0.654	pCi/L	05/04/22 12:36	05/24/22 12:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/04/22 12:36	05/24/22 12:39	1
Y Carrier	87.9		40 - 110					05/04/22 12:36	05/24/22 12:39	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Bottom Ash Pond-F-20220428-01

Lab Sample ID: 240-165797-2

Date Collected: 04/28/22 14:50

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.262	U	0.388	0.388	5.00	0.654	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-01

Lab Sample ID: 240-165797-3

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:09	1
Arsenic	0.92	J	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:09	1
Barium	38		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:09	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:09	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:09	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:09	1
Cobalt	0.37	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:09	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:09	1
Lithium	11		8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:09	1
Magnesium	12000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:09	1
Molybdenum	2.0	J	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:09	1
Potassium	2700		1000	220	ug/L		05/03/22 12:00	05/04/22 13:09	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:09	1
Sodium	28000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:09	1
Thallium	0.60	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	69		5.0	2.6	mg/L			05/03/22 10:34	1
Bicarbonate Alkalinity as CaCO3	69		5.0	2.6	mg/L			05/03/22 10:34	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 10:34	1
Fluoride	0.15		0.050	0.024	mg/L			05/18/22 16:23	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0140	U	0.0755	0.0755	1.00	0.148	pCi/L	05/04/22 12:28	06/01/22 12:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.5		40 - 110					05/04/22 12:28	06/01/22 12:57	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.104	U	0.339	0.339	1.00	0.609	pCi/L	05/04/22 12:36	05/24/22 12:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.5		40 - 110					05/04/22 12:36	05/24/22 12:39	1
Y Carrier	87.5		40 - 110					05/04/22 12:36	05/24/22 12:39	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-01

Lab Sample ID: 240-165797-3

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.118	U	0.347	0.347	5.00	0.609	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-MS1 & MSD1-01

Lab Sample ID: 240-165797-4

Date Collected: 04/28/22 15:02

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:17	1
Arsenic	0.79	J	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:17	1
Barium	38		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:17	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:17	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:17	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:17	1
Cobalt	0.33	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:17	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:17	1
Lithium	11		8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:17	1
Magnesium	12000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:17	1
Molybdenum	2.0	J	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:17	1
Potassium	2800		1000	220	ug/L		05/03/22 12:00	05/04/22 13:17	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:17	1
Sodium	28000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:17	1
Thallium	0.39	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:17	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	70		5.0	2.6	mg/L			05/04/22 09:45	1
Bicarbonate Alkalinity as CaCO3	70		5.0	2.6	mg/L			05/04/22 09:45	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 09:45	1
Fluoride	0.15		0.050	0.024	mg/L			05/18/22 17:24	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0721	U	0.0990	0.0992	1.00	0.167	pCi/L	05/04/22 12:28	06/01/22 12:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/04/22 12:28	06/01/22 12:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.213	U	0.349	0.350	1.00	0.599	pCi/L	05/04/22 12:36	05/24/22 12:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/04/22 12:36	05/24/22 12:39	1
Y Carrier	90.8		40 - 110					05/04/22 12:36	05/24/22 12:39	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-MS1 & MSD1-01

Lab Sample ID: 240-165797-4

Date Collected: 04/28/22 15:02

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.285	U	0.363	0.364	5.00	0.599	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-MS2 & MSD2-01

Lab Sample ID: 240-165797-5

Date Collected: 04/28/22 15:04

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:19	1
Arsenic	0.81	J	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:19	1
Barium	38		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:19	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:19	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:19	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:19	1
Cobalt	0.31	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:19	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:19	1
Lithium	12		8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:19	1
Magnesium	12000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:19	1
Molybdenum	1.9	J	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:19	1
Potassium	2800		1000	220	ug/L		05/03/22 12:00	05/04/22 13:19	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:19	1
Sodium	28000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:19	1
Thallium	0.37	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:19	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20		0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	69		5.0	2.6	mg/L			05/04/22 10:09	1
Bicarbonate Alkalinity as CaCO3	69		5.0	2.6	mg/L			05/04/22 10:09	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 10:09	1
Fluoride	0.15		0.050	0.024	mg/L			05/18/22 17:44	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0383	U	0.0962	0.0963	1.00	0.175	pCi/L	05/04/22 12:28	06/01/22 14:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					05/04/22 12:28	06/01/22 14:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.150	U	0.378	0.378	1.00	0.667	pCi/L	05/04/22 12:36	05/24/22 12:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					05/04/22 12:36	05/24/22 12:39	1
Y Carrier	89.3		40 - 110					05/04/22 12:36	05/24/22 12:39	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-MS2 & MSD2-01

Lab Sample ID: 240-165797-5

Date Collected: 04/28/22 15:04

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.188	U	0.390	0.390	5.00	0.667	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-MS3 & MSD3-01

Lab Sample ID: 240-165797-6

Date Collected: 04/28/22 15:06

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:22	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:22	1
Barium	32		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:22	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:22	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:22	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:22	1
Cobalt	0.24	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:22	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:22	1
Lithium	9.2		8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:22	1
Magnesium	10000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:22	1
Molybdenum	1.4	J	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:22	1
Potassium	2200		1000	220	ug/L		05/03/22 12:00	05/04/22 13:22	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:22	1
Sodium	23000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:22	1
Thallium	0.24	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:22	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	70		5.0	2.6	mg/L			05/04/22 09:53	1
Bicarbonate Alkalinity as CaCO3	70		5.0	2.6	mg/L			05/04/22 09:53	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 09:53	1
Fluoride	0.15		0.050	0.024	mg/L			05/18/22 18:04	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0613	U	0.0828	0.0830	1.00	0.139	pCi/L	05/04/22 12:28	06/01/22 14:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					05/04/22 12:28	06/01/22 14:47	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.130	U	0.342	0.342	1.00	0.680	pCi/L	05/04/22 12:36	05/24/22 12:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					05/04/22 12:36	05/24/22 12:40	1
Y Carrier	87.9		40 - 110					05/04/22 12:36	05/24/22 12:40	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-MS3 & MSD3-01

Lab Sample ID: 240-165797-6

Date Collected: 04/28/22 15:06

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	-0.0683	U	0.352	0.352	5.00	0.680	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: MW-6-F-20220427-01

Lab Sample ID: 240-165797-7

Date Collected: 04/27/22 10:05

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:24	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:24	1
Barium	120		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:24	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:24	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:24	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:24	1
Cobalt	0.39	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:24	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:24	1
Lithium	4.0	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:24	1
Magnesium	13000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:24	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:24	1
Potassium	1600		1000	220	ug/L		05/03/22 12:00	05/04/22 13:24	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:24	1
Sodium	13000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:24	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.18	J	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			05/03/22 09:24	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			05/03/22 09:24	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 09:24	1
Fluoride	0.091		0.050	0.024	mg/L			05/18/22 18:24	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0377	U	0.0695	0.0695	1.00	0.123	pCi/L	05/04/22 12:28	06/01/22 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					05/04/22 12:28	06/01/22 14:48	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.122	U	0.266	0.267	1.00	0.467	pCi/L	05/04/22 12:36	05/24/22 12:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					05/04/22 12:36	05/24/22 12:40	1
Y Carrier	90.5		40 - 110					05/04/22 12:36	05/24/22 12:40	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: MW-6-F-20220427-01

Lab Sample ID: 240-165797-7

Date Collected: 04/27/22 10:05

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.160	U	0.275	0.276	5.00	0.467	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-01-F-20220427-01

Lab Sample ID: 240-165797-8

Date Collected: 04/27/22 10:38

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:27	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:27	1
Barium	58		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:27	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:27	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:27	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:27	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:27	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:27	1
Lithium	2.4	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:27	1
Magnesium	12000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:27	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:27	1
Potassium	1400		1000	220	ug/L		05/03/22 12:00	05/04/22 13:27	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:27	1
Sodium	11000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:27	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	210		5.0	2.6	mg/L			05/03/22 09:28	1
Bicarbonate Alkalinity as CaCO3	210		5.0	2.6	mg/L			05/03/22 09:28	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 09:28	1
Fluoride	0.13		0.050	0.024	mg/L			05/18/22 18:44	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0643	U	0.0953	0.0954	1.00	0.163	pCi/L	05/04/22 12:28	06/01/22 16:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					05/04/22 12:28	06/01/22 16:30	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.394	0.395	1.00	0.656	pCi/L	05/04/22 12:36	05/24/22 12:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					05/04/22 12:36	05/24/22 12:40	1
Y Carrier	88.2		40 - 110					05/04/22 12:36	05/24/22 12:40	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-01-F-20220427-01

Lab Sample ID: 240-165797-8

Date Collected: 04/27/22 10:38

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.371	U	0.405	0.406	5.00	0.656	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: MW-1-F-20220427-01

Lab Sample ID: 240-165797-9

Date Collected: 04/27/22 13:02

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:29	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:29	1
Barium	110		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:29	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:29	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:29	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:29	1
Cobalt	0.53	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:29	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:29	1
Lithium	4.0	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:29	1
Magnesium	14000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:29	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:29	1
Potassium	1400		1000	220	ug/L		05/03/22 12:00	05/04/22 13:29	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:29	1
Sodium	15000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:29	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			05/03/22 09:32	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			05/03/22 09:32	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 09:32	1
Fluoride	0.11		0.050	0.024	mg/L			05/18/22 19:45	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0509	U	0.0604	0.0606	1.00	0.0983	pCi/L	05/04/22 12:28	06/01/22 16:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110					05/04/22 12:28	06/01/22 16:31	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.321	U	0.301	0.303	1.00	0.480	pCi/L	05/04/22 12:36	05/24/22 12:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		40 - 110					05/04/22 12:36	05/24/22 12:40	1
Y Carrier	89.0		40 - 110					05/04/22 12:36	05/24/22 12:40	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: MW-1-F-20220427-01

Lab Sample ID: 240-165797-9

Date Collected: 04/27/22 13:02

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.372	U	0.307	0.309	5.00	0.480	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: DUP-001-MW-1-F-20220427-01

Lab Sample ID: 240-165797-10

Date Collected: 04/27/22 13:09

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:32	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:32	1
Barium	120		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:32	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:32	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:32	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:32	1
Cobalt	0.57	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:32	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:32	1
Lithium	4.6	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:32	1
Magnesium	15000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:32	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:32	1
Potassium	1500		1000	220	ug/L		05/03/22 12:00	05/04/22 13:32	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:32	1
Sodium	16000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:32	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:32	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			05/03/22 09:37	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			05/03/22 09:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 09:37	1
Fluoride	0.10		0.050	0.024	mg/L			05/18/22 20:05	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.175		0.0920	0.0934	1.00	0.117	pCi/L	05/04/22 12:28	06/01/22 16:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					05/04/22 12:28	06/01/22 16:31	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.116	U	0.274	0.274	1.00	0.481	pCi/L	05/04/22 12:36	05/24/22 12:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					05/04/22 12:36	05/24/22 12:40	1
Y Carrier	88.2		40 - 110					05/04/22 12:36	05/24/22 12:40	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: DUP-001-MW-1-F-20220427-01

Lab Sample ID: 240-165797-10

Date Collected: 04/27/22 13:09

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.291	U	0.289	0.289	5.00	0.481	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: B-0903-F-20220427-01

Lab Sample ID: 240-165797-11

Date Collected: 04/27/22 13:52

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:34	1
Arsenic	2.5	J	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:34	1
Barium	130		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:34	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:34	1
Cadmium	0.23	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:34	1
Chromium	9.7		5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:34	1
Cobalt	2.3		1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:34	1
Lead	3.2		1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:34	1
Lithium	8.2		8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:34	1
Magnesium	9700		1000	200	ug/L		05/03/22 12:00	05/04/22 13:34	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:34	1
Potassium	1600		1000	220	ug/L		05/03/22 12:00	05/04/22 13:34	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:34	1
Sodium	14000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:34	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.14	J	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	27		5.0	2.6	mg/L			05/03/22 09:41	1
Bicarbonate Alkalinity as CaCO3	27		5.0	2.6	mg/L			05/03/22 09:41	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 09:41	1
Fluoride	0.041	J	0.050	0.024	mg/L			05/18/22 20:25	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.102	U	0.151	0.151	1.00	0.257	pCi/L	05/04/22 12:28	06/01/22 18:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					05/04/22 12:28	06/01/22 18:19	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.457	U	0.577	0.579	1.00	0.959	pCi/L	05/04/22 12:36	05/24/22 12:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					05/04/22 12:36	05/24/22 12:40	1
Y Carrier	86.4		40 - 110					05/04/22 12:36	05/24/22 12:40	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: B-0903-F-20220427-01

Lab Sample ID: 240-165797-11

Date Collected: 04/27/22 13:52

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.559	U	0.596	0.598	5.00	0.959	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-02-F-20220427-01

Lab Sample ID: 240-165797-12

Date Collected: 04/27/22 14:46

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:37	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:37	1
Barium	35		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:37	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:37	1
Cadmium	0.26	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:37	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:37	1
Cobalt	0.80	J	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:37	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:37	1
Lithium	2.2	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:37	1
Magnesium	44000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:37	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:37	1
Potassium	3500		1000	220	ug/L		05/03/22 12:00	05/04/22 13:37	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:37	1
Sodium	80000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:37	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:37	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	260		5.0	2.6	mg/L			05/03/22 09:47	1
Bicarbonate Alkalinity as CaCO3	260		5.0	2.6	mg/L			05/03/22 09:47	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 09:47	1
Fluoride	0.19		0.050	0.024	mg/L			05/18/22 21:25	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0517	U	0.0614	0.0615	1.00	0.0998	pCi/L	05/04/22 12:28	06/01/22 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					05/04/22 12:28	06/01/22 18:20	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.323	U	0.306	0.307	1.00	0.487	pCi/L	05/04/22 12:36	05/24/22 12:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					05/04/22 12:36	05/24/22 12:40	1
Y Carrier	85.6		40 - 110					05/04/22 12:36	05/24/22 12:40	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-02-F-20220427-01

Lab Sample ID: 240-165797-12

Date Collected: 04/27/22 14:46

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.374	U	0.312	0.313	5.00	0.487	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-05-F-20220428-01

Lab Sample ID: 240-165797-13

Date Collected: 04/28/22 09:32

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:39	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:39	1
Barium	31		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:39	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:39	1
Cadmium	0.25	J	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:39	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:39	1
Cobalt	5.0		1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:39	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:39	1
Lithium	7.2	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:39	1
Magnesium	15000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:39	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:39	1
Potassium	1300		1000	220	ug/L		05/03/22 12:00	05/04/22 13:39	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:39	1
Sodium	19000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:39	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.21		0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	66		5.0	2.6	mg/L			05/04/22 09:57	1
Bicarbonate Alkalinity as CaCO3	66		5.0	2.6	mg/L			05/04/22 09:57	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 09:57	1
Fluoride	0.10		0.050	0.024	mg/L			05/18/22 21:45	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.125		0.0840	0.0848	1.00	0.118	pCi/L	05/04/22 12:28	06/01/22 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110					05/04/22 12:28	06/01/22 18:20	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.131	U	0.270	0.270	1.00	0.472	pCi/L	05/04/22 12:36	05/24/22 12:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110					05/04/22 12:36	05/24/22 12:40	1
Y Carrier	83.0		40 - 110					05/04/22 12:36	05/24/22 12:40	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-05-F-20220428-01

Lab Sample ID: 240-165797-13

Date Collected: 04/28/22 09:32

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.255	U	0.283	0.283	5.00	0.472	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-04-F-20220428-01

Lab Sample ID: 240-165797-14

Date Collected: 04/28/22 10:16

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:47	1
Arsenic	1.6	J	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:47	1
Barium	35		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:47	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:47	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:47	1
Chromium	27		5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:47	1
Cobalt	1.6		1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:47	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:47	1
Lithium	5.9	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:47	1
Magnesium	16000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:47	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:47	1
Potassium	1600		1000	220	ug/L		05/03/22 12:00	05/04/22 13:47	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:47	1
Sodium	23000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:47	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.23		0.20	0.13	ug/L		05/03/22 12:00	05/04/22 18:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	97		5.0	2.6	mg/L			05/04/22 10:05	1
Bicarbonate Alkalinity as CaCO3	97		5.0	2.6	mg/L			05/04/22 10:05	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 10:05	1
Fluoride	0.082		0.050	0.024	mg/L			05/18/22 22:06	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0871	U	0.103	0.104	1.00	0.170	pCi/L	05/04/22 12:28	06/01/22 20:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					05/04/22 12:28	06/01/22 20:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.259	U	0.368	0.368	1.00	0.619	pCi/L	05/04/22 12:36	05/24/22 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					05/04/22 12:36	05/24/22 12:41	1
Y Carrier	87.5		40 - 110					05/04/22 12:36	05/24/22 12:41	1

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-04-F-20220428-01

Lab Sample ID: 240-165797-14

Date Collected: 04/28/22 10:16

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.346	U	0.382	0.382	5.00	0.619	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-03-F-20220428-01

Lab Sample ID: 240-165797-15

Date Collected: 04/28/22 10:49

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:49	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:49	1
Barium	39		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:49	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:49	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:49	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:49	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:49	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:49	1
Lithium	6.7 J		8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:49	1
Magnesium	16000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:49	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:49	1
Potassium	1800		1000	220	ug/L		05/03/22 12:00	05/04/22 13:49	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:49	1
Sodium	28000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:49	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 18:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	84		5.0	2.6	mg/L			05/04/22 10:15	1
Bicarbonate Alkalinity as CaCO3	84		5.0	2.6	mg/L			05/04/22 10:15	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 10:15	1
Fluoride	0.064		0.050	0.024	mg/L			05/18/22 22:26	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0646	U	0.0627	0.0630	1.00	0.0961	pCi/L	05/04/22 12:28	06/01/22 20:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110					05/04/22 12:28	06/01/22 20:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.210	U	0.275	0.275	1.00	0.458	pCi/L	05/04/22 12:36	05/24/22 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.5		40 - 110					05/04/22 12:36	05/24/22 12:41	1
Y Carrier	89.0		40 - 110					05/04/22 12:36	05/24/22 12:41	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-03-F-20220428-01

Lab Sample ID: 240-165797-15

Date Collected: 04/28/22 10:49

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.282	0.282	5.00	0.458	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-07-F-20220428-01

Lab Sample ID: 240-165797-16

Date Collected: 04/28/22 12:51

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:52	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:52	1
Barium	56		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:52	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:52	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:52	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:52	1
Cobalt	1.9		1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:52	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:52	1
Lithium	6.0	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:52	1
Magnesium	21000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:52	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:52	1
Potassium	1400		1000	220	ug/L		05/03/22 12:00	05/04/22 13:52	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:52	1
Sodium	16000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:52	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:52	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 18:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	130		5.0	2.6	mg/L			05/04/22 10:19	1
Bicarbonate Alkalinity as CaCO3	130		5.0	2.6	mg/L			05/04/22 10:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 10:19	1
Fluoride	0.080		0.050	0.024	mg/L			05/18/22 22:46	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0366	U	0.0675	0.0676	1.00	0.119	pCi/L	05/04/22 12:28	06/01/22 20:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		40 - 110					05/04/22 12:28	06/01/22 20:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.215	U	0.281	0.282	1.00	0.469	pCi/L	05/04/22 12:36	05/24/22 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		40 - 110					05/04/22 12:36	05/24/22 12:41	1
Y Carrier	89.7		40 - 110					05/04/22 12:36	05/24/22 12:41	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-07-F-20220428-01

Lab Sample ID: 240-165797-16

Date Collected: 04/28/22 12:51

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.252	U	0.289	0.290	5.00	0.469	pCi/L		06/02/22 16:43	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-06-F-20220428-01

Lab Sample ID: 240-165797-17

Date Collected: 04/28/22 13:35

Matrix: Water

Date Received: 04/30/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 13:54	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 13:54	1
Barium	110		5.0	2.2	ug/L		05/03/22 12:00	05/04/22 13:54	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 13:54	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:54	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 13:54	1
Cobalt	3.5		1.0	0.19	ug/L		05/03/22 12:00	05/04/22 13:54	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 13:54	1
Lithium	5.5	J	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 13:54	1
Magnesium	24000		1000	200	ug/L		05/03/22 12:00	05/04/22 13:54	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 13:54	1
Potassium	1300		1000	220	ug/L		05/03/22 12:00	05/04/22 13:54	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 13:54	1
Sodium	15000		1000	330	ug/L		05/03/22 12:00	05/04/22 13:54	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 13:54	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 18:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	180		5.0	2.6	mg/L			05/04/22 10:02	1
Bicarbonate Alkalinity as CaCO3	180		5.0	2.6	mg/L			05/04/22 10:02	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 10:02	1
Fluoride	0.091		0.050	0.024	mg/L			05/18/22 23:06	1

Method: 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		0.124	0.126	1.00	0.140	pCi/L	05/04/22 12:28	06/01/22 22:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/04/22 12:28	06/01/22 22:56	1

Method: 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	0.357	0.358	1.00	0.598	pCi/L	05/04/22 12:36	05/24/22 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/04/22 12:36	05/24/22 12:41	1
Y Carrier	86.7		40 - 110					05/04/22 12:36	05/24/22 12:41	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-06-F-20220428-01

Lab Sample ID: 240-165797-17

Date Collected: 04/28/22 13:35

Matrix: Water

Date Received: 04/30/22 08:00

Method: 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	0.533	U	0.378	0.380	5.00	0.598	pCi/L		06/02/22 16:43	1

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Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	
240-165797-1	River-F-20220428-01	91.3	
240-165797-2	Bottom Ash Pond-F-20220428-01	88.5	
240-165797-3	Reclaim Pond-F-20220428-01	92.5	
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	88.5	
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	88.3	
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	85.8	
240-165797-7	MW-6-F-20220427-01	90.3	
240-165797-8	BAC-01-F-20220427-01	96.5	
240-165797-9	MW-1-F-20220427-01	93.3	
240-165797-10	DUP-001-MW-1-F-20220427-01	96.0	
240-165797-11	B-0903-F-20220427-01	90.0	
240-165797-12	BAC-02-F-20220427-01	91.3	
240-165797-13	BAC-05-F-20220428-01	94.5	
240-165797-14	BAC-04-F-20220428-01	92.0	
240-165797-15	BAC-03-F-20220428-01	94.5	
240-165797-16	BAC-07-F-20220428-01	92.8	
240-165797-17	BAC-06-F-20220428-01	88.5	
LCS 160-563682/1-A	Lab Control Sample	84.8	
LCS D 160-563682/2-A	Lab Control Sample Dup	94.8	
MB 160-563682/20-A	Method Blank	101	

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
240-165797-1	River-F-20220428-01	91.3	85.2
240-165797-2	Bottom Ash Pond-F-20220428-01	88.5	87.9
240-165797-3	Reclaim Pond-F-20220428-01	92.5	87.5
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	88.5	90.8
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	88.3	89.3
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	85.8	87.9
240-165797-7	MW-6-F-20220427-01	90.3	90.5
240-165797-8	BAC-01-F-20220427-01	96.5	88.2
240-165797-9	MW-1-F-20220427-01	93.3	89.0
240-165797-10	DUP-001-MW-1-F-20220427-01	96.0	88.2
240-165797-11	B-0903-F-20220427-01	90.0	86.4
240-165797-12	BAC-02-F-20220427-01	91.3	85.6
240-165797-13	BAC-05-F-20220428-01	94.5	83.0
240-165797-14	BAC-04-F-20220428-01	92.0	87.5

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Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method: 9320 - Radium-228 (GFPC) (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
240-165797-15	BAC-03-F-20220428-01	94.5	89.0
240-165797-16	BAC-07-F-20220428-01	92.8	89.7
240-165797-17	BAC-06-F-20220428-01	88.5	86.7
LCS 160-563683/1-A	Lab Control Sample	84.8	86.0
LCSD 160-563683/2-A	Lab Control Sample Dup	94.8	86.0
MB 160-563683/20-A	Method Blank	101	87.5

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-524893/1-A
Matrix: Water
Analysis Batch: 525227

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 524893

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	2.0	U	2.0	0.57	ug/L		05/03/22 12:00	05/04/22 12:51	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/03/22 12:00	05/04/22 12:51	1
Barium	5.0	U	5.0	2.2	ug/L		05/03/22 12:00	05/04/22 12:51	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/03/22 12:00	05/04/22 12:51	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 12:51	1
Chromium	5.0	U	5.0	2.5	ug/L		05/03/22 12:00	05/04/22 12:51	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/03/22 12:00	05/04/22 12:51	1
Lead	1.0	U	1.0	0.45	ug/L		05/03/22 12:00	05/04/22 12:51	1
Lithium	8.0	U	8.0	1.7	ug/L		05/03/22 12:00	05/04/22 12:51	1
Magnesium	1000	U	1000	200	ug/L		05/03/22 12:00	05/04/22 12:51	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/03/22 12:00	05/04/22 12:51	1
Potassium	1000	U	1000	220	ug/L		05/03/22 12:00	05/04/22 12:51	1
Selenium	5.0	U	5.0	0.89	ug/L		05/03/22 12:00	05/04/22 12:51	1
Sodium	1000	U	1000	330	ug/L		05/03/22 12:00	05/04/22 12:51	1
Thallium	1.0	U	1.0	0.20	ug/L		05/03/22 12:00	05/04/22 12:51	1

Lab Sample ID: LCS 240-524893/2-A
Matrix: Water
Analysis Batch: 525227

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 524893

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	970		ug/L		97	80 - 120
Barium	1000	1050		ug/L		105	80 - 120
Beryllium	500	494		ug/L		99	80 - 120
Cadmium	500	515		ug/L		103	80 - 120
Chromium	500	518		ug/L		104	80 - 120
Cobalt	500	501		ug/L		100	80 - 120
Lead	500	528		ug/L		106	80 - 120
Lithium	500	523		ug/L		105	80 - 120
Magnesium	25000	25200		ug/L		101	80 - 120
Molybdenum	500	520		ug/L		104	80 - 120
Potassium	25000	25500		ug/L		102	80 - 120
Selenium	1000	997		ug/L		100	80 - 120
Sodium	25000	25500		ug/L		102	80 - 120
Thallium	1000	988		ug/L		99	80 - 120

Lab Sample ID: 240-165797-1 MS
Matrix: Water
Analysis Batch: 525227

Client Sample ID: River-F-20220428-01
Prep Type: Total Recoverable
Prep Batch: 524893

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.2	J	1000	968		ug/L		97	75 - 125
Barium	42		1000	1100		ug/L		105	75 - 125
Beryllium	1.0	U	500	492		ug/L		98	75 - 125
Cadmium	1.0	U	500	513		ug/L		103	75 - 125
Chromium	5.0	U	500	520		ug/L		104	75 - 125
Cobalt	0.87	J	500	492		ug/L		98	75 - 125

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-165797-1 MS
Matrix: Water
Analysis Batch: 525227

Client Sample ID: River-F-20220428-01
Prep Type: Total Recoverable
Prep Batch: 524893

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	1.4		500	535		ug/L		107	75 - 125
Lithium	6.0	J	500	534		ug/L		106	75 - 125
Magnesium	8800		25000	33500		ug/L		99	75 - 125
Molybdenum	1.2	J	500	525		ug/L		105	75 - 125
Potassium	2000		25000	27100		ug/L		101	75 - 125
Selenium	5.0	U	1000	989		ug/L		99	75 - 125
Sodium	18000		25000	43200		ug/L		99	75 - 125
Thallium	0.40	J	1000	1010		ug/L		101	75 - 125

Lab Sample ID: 240-165797-1 MSD
Matrix: Water
Analysis Batch: 525227

Client Sample ID: River-F-20220428-01
Prep Type: Total Recoverable
Prep Batch: 524893

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	2.0	U	100	109		ug/L		109	75 - 125	2	20
Arsenic	1.2	J	1000	994		ug/L		99	75 - 125	3	20
Barium	42		1000	1110		ug/L		107	75 - 125	1	20
Beryllium	1.0	U	500	495		ug/L		99	75 - 125	1	20
Cadmium	1.0	U	500	522		ug/L		104	75 - 125	2	20
Chromium	5.0	U	500	531		ug/L		106	75 - 125	2	20
Cobalt	0.87	J	500	506		ug/L		101	75 - 125	3	20
Lead	1.4		500	538		ug/L		107	75 - 125	1	20
Lithium	6.0	J	500	541		ug/L		107	75 - 125	1	20
Magnesium	8800		25000	34100		ug/L		101	75 - 125	2	20
Molybdenum	1.2	J	500	532		ug/L		106	75 - 125	1	20
Potassium	2000		25000	27700		ug/L		103	75 - 125	2	20
Selenium	5.0	U	1000	1020		ug/L		102	75 - 125	3	20
Sodium	18000		25000	44400		ug/L		104	75 - 125	3	20
Thallium	0.40	J	1000	1010		ug/L		101	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-524895/1-A
Matrix: Water
Analysis Batch: 525141

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 524895

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/03/22 12:00	05/04/22 17:18	1

Lab Sample ID: LCS 240-524895/2-A
Matrix: Water
Analysis Batch: 525141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 524895

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.84		ug/L		117	80 - 120

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-165797-1 MS
Matrix: Water
Analysis Batch: 525141

Client Sample ID: River-F-20220428-01
Prep Type: Total/NA
Prep Batch: 524895

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U F1	1.00	1.24	F1	ug/L		124	80 - 120

Lab Sample ID: 240-165797-1 MSD
Matrix: Water
Analysis Batch: 525141

Client Sample ID: River-F-20220428-01
Prep Type: Total/NA
Prep Batch: 524895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.20	U F1	1.00	1.19		ug/L		119	80 - 120	4	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-524945/30
Matrix: Water
Analysis Batch: 524945

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			05/03/22 10:08	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 10:08	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 10:08	1

Lab Sample ID: MB 240-524945/4
Matrix: Water
Analysis Batch: 524945

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			05/03/22 08:18	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 08:18	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/03/22 08:18	1

Lab Sample ID: LCS 240-524945/29
Matrix: Water
Analysis Batch: 524945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	121	116		mg/L		96	86 - 123

Lab Sample ID: LCS 240-524945/3
Matrix: Water
Analysis Batch: 524945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	121	117		mg/L		97	86 - 123

Lab Sample ID: MB 240-525124/4
Matrix: Water
Analysis Batch: 525124

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			05/04/22 08:53	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 08:53	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-525124/4
Matrix: Water
Analysis Batch: 525124

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/04/22 08:53	1

Lab Sample ID: LCS 240-525124/3
Matrix: Water
Analysis Batch: 525124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	121	117		mg/L		96	86 - 123

Lab Sample ID: 240-165797-4 DU
Matrix: Water
Analysis Batch: 525124

Client Sample ID: Reclaim Pond-F-20220428-MS1 & MSD1-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Alkalinity	70		69.0		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	70		69.0		mg/L		2	20
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-526989/3
Matrix: Water
Analysis Batch: 526989

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	0.024	mg/L			05/18/22 11:26	1

Lab Sample ID: LCS 240-526989/4
Matrix: Water
Analysis Batch: 526989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.43		mg/L		97	90 - 110

Lab Sample ID: 240-165797-8 MS
Matrix: Water
Analysis Batch: 526989

Client Sample ID: BAC-01-F-20220427-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.13		2.50	2.75		mg/L		105	80 - 120

Lab Sample ID: 240-165797-8 MSD
Matrix: Water
Analysis Batch: 526989

Client Sample ID: BAC-01-F-20220427-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Fluoride	0.13		2.50	2.76		mg/L		105	80 - 120	1	15

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-563682/20-A
Matrix: Water
Analysis Batch: 567929

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 563682

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.09171	U	0.0879	0.0883	1.00	0.139	pCi/L	05/04/22 12:28	06/01/22 22:56	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	101		40 - 110					05/04/22 12:28	06/01/22 22:56	1

Lab Sample ID: LCS 160-563682/1-A
Matrix: Water
Analysis Batch: 567929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 563682

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	10.58		1.12	1.00	0.136	pCi/L	93	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	84.8		40 - 110					05/04/22 12:28	06/01/22 22:56

Lab Sample ID: LCSD 160-563682/2-A
Matrix: Water
Analysis Batch: 567929

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 563682

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.3	10.24		1.07	1.00	0.0926	pCi/L	90	75 - 125	0.16	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	94.8		40 - 110					05/04/22 12:36	05/24/22 12:41	1	

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-563683/20-A
Matrix: Water
Analysis Batch: 567048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 563683

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.1818	U	0.250	0.250	1.00	0.420	pCi/L	05/04/22 12:36	05/24/22 12:41	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	101		40 - 110					05/04/22 12:36	05/24/22 12:41	1
Y Carrier	87.5		40 - 110		05/04/22 12:36	05/24/22 12:41	1			

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-563683/1-A
Matrix: Water
Analysis Batch: 567047

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 563683

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	
Radium-228	8.59	9.136		1.27	1.00	0.577	pCi/L	106	75 - 125	
LCS LCS										
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	84.8		40 - 110							
Y Carrier	86.0		40 - 110							

Lab Sample ID: LCSD 160-563683/2-A
Matrix: Water
Analysis Batch: 567047

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 563683

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		RER	RER Limit
Radium-228	8.59	9.561		1.27	1.00	0.458	pCi/L	111	75 - 125	0.17	1	
LCSD LCSD												
Carrier	%Yield	Qualifier	Limits									
Ba Carrier	94.8		40 - 110									
Y Carrier	86.0		40 - 110									

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Metals

Prep Batch: 524893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-1	River-F-20220428-01	Total Recoverable	Water	3005A	
240-165797-2	Bottom Ash Pond-F-20220428-01	Total Recoverable	Water	3005A	
240-165797-3	Reclaim Pond-F-20220428-01	Total Recoverable	Water	3005A	
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total Recoverable	Water	3005A	
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Total Recoverable	Water	3005A	
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Total Recoverable	Water	3005A	
240-165797-7	MW-6-F-20220427-01	Total Recoverable	Water	3005A	
240-165797-8	BAC-01-F-20220427-01	Total Recoverable	Water	3005A	
240-165797-9	MW-1-F-20220427-01	Total Recoverable	Water	3005A	
240-165797-10	DUP-001-MW-1-F-20220427-01	Total Recoverable	Water	3005A	
240-165797-11	B-0903-F-20220427-01	Total Recoverable	Water	3005A	
240-165797-12	BAC-02-F-20220427-01	Total Recoverable	Water	3005A	
240-165797-13	BAC-05-F-20220428-01	Total Recoverable	Water	3005A	
240-165797-14	BAC-04-F-20220428-01	Total Recoverable	Water	3005A	
240-165797-15	BAC-03-F-20220428-01	Total Recoverable	Water	3005A	
240-165797-16	BAC-07-F-20220428-01	Total Recoverable	Water	3005A	
240-165797-17	BAC-06-F-20220428-01	Total Recoverable	Water	3005A	
MB 240-524893/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-524893/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-165797-1 MS	River-F-20220428-01	Total Recoverable	Water	3005A	
240-165797-1 MSD	River-F-20220428-01	Total Recoverable	Water	3005A	

Prep Batch: 524895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-1	River-F-20220428-01	Total/NA	Water	7470A	
240-165797-2	Bottom Ash Pond-F-20220428-01	Total/NA	Water	7470A	
240-165797-3	Reclaim Pond-F-20220428-01	Total/NA	Water	7470A	
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total/NA	Water	7470A	
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Total/NA	Water	7470A	
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Total/NA	Water	7470A	
240-165797-7	MW-6-F-20220427-01	Total/NA	Water	7470A	
240-165797-8	BAC-01-F-20220427-01	Total/NA	Water	7470A	
240-165797-9	MW-1-F-20220427-01	Total/NA	Water	7470A	
240-165797-10	DUP-001-MW-1-F-20220427-01	Total/NA	Water	7470A	
240-165797-11	B-0903-F-20220427-01	Total/NA	Water	7470A	
240-165797-12	BAC-02-F-20220427-01	Total/NA	Water	7470A	
240-165797-13	BAC-05-F-20220428-01	Total/NA	Water	7470A	
240-165797-14	BAC-04-F-20220428-01	Total/NA	Water	7470A	
240-165797-15	BAC-03-F-20220428-01	Total/NA	Water	7470A	
240-165797-16	BAC-07-F-20220428-01	Total/NA	Water	7470A	
240-165797-17	BAC-06-F-20220428-01	Total/NA	Water	7470A	
MB 240-524895/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-524895/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-165797-1 MS	River-F-20220428-01	Total/NA	Water	7470A	
240-165797-1 MSD	River-F-20220428-01	Total/NA	Water	7470A	

Analysis Batch: 525141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-1	River-F-20220428-01	Total/NA	Water	7470A	524895
240-165797-2	Bottom Ash Pond-F-20220428-01	Total/NA	Water	7470A	524895
240-165797-3	Reclaim Pond-F-20220428-01	Total/NA	Water	7470A	524895

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Metals (Continued)

Analysis Batch: 525141 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total/NA	Water	7470A	524895
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Total/NA	Water	7470A	524895
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Total/NA	Water	7470A	524895
240-165797-7	MW-6-F-20220427-01	Total/NA	Water	7470A	524895
240-165797-8	BAC-01-F-20220427-01	Total/NA	Water	7470A	524895
240-165797-9	MW-1-F-20220427-01	Total/NA	Water	7470A	524895
240-165797-10	DUP-001-MW-1-F-20220427-01	Total/NA	Water	7470A	524895
240-165797-11	B-0903-F-20220427-01	Total/NA	Water	7470A	524895
240-165797-12	BAC-02-F-20220427-01	Total/NA	Water	7470A	524895
240-165797-13	BAC-05-F-20220428-01	Total/NA	Water	7470A	524895
240-165797-14	BAC-04-F-20220428-01	Total/NA	Water	7470A	524895
240-165797-15	BAC-03-F-20220428-01	Total/NA	Water	7470A	524895
240-165797-16	BAC-07-F-20220428-01	Total/NA	Water	7470A	524895
240-165797-17	BAC-06-F-20220428-01	Total/NA	Water	7470A	524895
MB 240-524895/1-A	Method Blank	Total/NA	Water	7470A	524895
LCS 240-524895/2-A	Lab Control Sample	Total/NA	Water	7470A	524895
240-165797-1 MS	River-F-20220428-01	Total/NA	Water	7470A	524895
240-165797-1 MSD	River-F-20220428-01	Total/NA	Water	7470A	524895

Analysis Batch: 525227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-1	River-F-20220428-01	Total Recoverable	Water	6020	524893
240-165797-2	Bottom Ash Pond-F-20220428-01	Total Recoverable	Water	6020	524893
240-165797-3	Reclaim Pond-F-20220428-01	Total Recoverable	Water	6020	524893
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total Recoverable	Water	6020	524893
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Total Recoverable	Water	6020	524893
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Total Recoverable	Water	6020	524893
240-165797-7	MW-6-F-20220427-01	Total Recoverable	Water	6020	524893
240-165797-8	BAC-01-F-20220427-01	Total Recoverable	Water	6020	524893
240-165797-9	MW-1-F-20220427-01	Total Recoverable	Water	6020	524893
240-165797-10	DUP-001-MW-1-F-20220427-01	Total Recoverable	Water	6020	524893
240-165797-11	B-0903-F-20220427-01	Total Recoverable	Water	6020	524893
240-165797-12	BAC-02-F-20220427-01	Total Recoverable	Water	6020	524893
240-165797-13	BAC-05-F-20220428-01	Total Recoverable	Water	6020	524893
240-165797-14	BAC-04-F-20220428-01	Total Recoverable	Water	6020	524893
240-165797-15	BAC-03-F-20220428-01	Total Recoverable	Water	6020	524893
240-165797-16	BAC-07-F-20220428-01	Total Recoverable	Water	6020	524893
240-165797-17	BAC-06-F-20220428-01	Total Recoverable	Water	6020	524893
MB 240-524893/1-A	Method Blank	Total Recoverable	Water	6020	524893
LCS 240-524893/2-A	Lab Control Sample	Total Recoverable	Water	6020	524893
240-165797-1 MS	River-F-20220428-01	Total Recoverable	Water	6020	524893
240-165797-1 MSD	River-F-20220428-01	Total Recoverable	Water	6020	524893

General Chemistry

Analysis Batch: 524945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-1	River-F-20220428-01	Total/NA	Water	2320B-1997	
240-165797-2	Bottom Ash Pond-F-20220428-01	Total/NA	Water	2320B-1997	
240-165797-3	Reclaim Pond-F-20220428-01	Total/NA	Water	2320B-1997	
240-165797-7	MW-6-F-20220427-01	Total/NA	Water	2320B-1997	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

General Chemistry (Continued)

Analysis Batch: 524945 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-8	BAC-01-F-20220427-01	Total/NA	Water	2320B-1997	
240-165797-9	MW-1-F-20220427-01	Total/NA	Water	2320B-1997	
240-165797-10	DUP-001-MW-1-F-20220427-01	Total/NA	Water	2320B-1997	
240-165797-11	B-0903-F-20220427-01	Total/NA	Water	2320B-1997	
240-165797-12	BAC-02-F-20220427-01	Total/NA	Water	2320B-1997	
MB 240-524945/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-524945/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-524945/29	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-524945/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 525124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total/NA	Water	2320B-1997	
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Total/NA	Water	2320B-1997	
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Total/NA	Water	2320B-1997	
240-165797-13	BAC-05-F-20220428-01	Total/NA	Water	2320B-1997	
240-165797-14	BAC-04-F-20220428-01	Total/NA	Water	2320B-1997	
240-165797-15	BAC-03-F-20220428-01	Total/NA	Water	2320B-1997	
240-165797-16	BAC-07-F-20220428-01	Total/NA	Water	2320B-1997	
240-165797-17	BAC-06-F-20220428-01	Total/NA	Water	2320B-1997	
MB 240-525124/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-525124/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-165797-4 DU	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total/NA	Water	2320B-1997	

Analysis Batch: 526989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-1	River-F-20220428-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-2	Bottom Ash Pond-F-20220428-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-3	Reclaim Pond-F-20220428-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-7	MW-6-F-20220427-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-8	BAC-01-F-20220427-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-9	MW-1-F-20220427-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-10	DUP-001-MW-1-F-20220427-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-11	B-0903-F-20220427-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-12	BAC-02-F-20220427-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-13	BAC-05-F-20220428-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-14	BAC-04-F-20220428-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-15	BAC-03-F-20220428-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-16	BAC-07-F-20220428-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-17	BAC-06-F-20220428-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-526989/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-526989/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
240-165797-8 MS	BAC-01-F-20220427-01	Total/NA	Water	300.0-1993 R2.1	
240-165797-8 MSD	BAC-01-F-20220427-01	Total/NA	Water	300.0-1993 R2.1	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

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Prep Batch: 563682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-1	River-F-20220428-01	Total/NA	Water	PrecSep-21	
240-165797-2	Bottom Ash Pond-F-20220428-01	Total/NA	Water	PrecSep-21	
240-165797-3	Reclaim Pond-F-20220428-01	Total/NA	Water	PrecSep-21	
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total/NA	Water	PrecSep-21	
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Total/NA	Water	PrecSep-21	
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Total/NA	Water	PrecSep-21	
240-165797-7	MW-6-F-20220427-01	Total/NA	Water	PrecSep-21	
240-165797-8	BAC-01-F-20220427-01	Total/NA	Water	PrecSep-21	
240-165797-9	MW-1-F-20220427-01	Total/NA	Water	PrecSep-21	
240-165797-10	DUP-001-MW-1-F-20220427-01	Total/NA	Water	PrecSep-21	
240-165797-11	B-0903-F-20220427-01	Total/NA	Water	PrecSep-21	
240-165797-12	BAC-02-F-20220427-01	Total/NA	Water	PrecSep-21	
240-165797-13	BAC-05-F-20220428-01	Total/NA	Water	PrecSep-21	
240-165797-14	BAC-04-F-20220428-01	Total/NA	Water	PrecSep-21	
240-165797-15	BAC-03-F-20220428-01	Total/NA	Water	PrecSep-21	
240-165797-16	BAC-07-F-20220428-01	Total/NA	Water	PrecSep-21	
240-165797-17	BAC-06-F-20220428-01	Total/NA	Water	PrecSep-21	
MB 160-563682/20-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-563682/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-563682/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 563683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165797-1	River-F-20220428-01	Total/NA	Water	PrecSep_0	
240-165797-2	Bottom Ash Pond-F-20220428-01	Total/NA	Water	PrecSep_0	
240-165797-3	Reclaim Pond-F-20220428-01	Total/NA	Water	PrecSep_0	
240-165797-4	Reclaim Pond-F-20220428-MS1 & MSD1-01	Total/NA	Water	PrecSep_0	
240-165797-5	Reclaim Pond-F-20220428-MS2 & MSD2-01	Total/NA	Water	PrecSep_0	
240-165797-6	Reclaim Pond-F-20220428-MS3 & MSD3-01	Total/NA	Water	PrecSep_0	
240-165797-7	MW-6-F-20220427-01	Total/NA	Water	PrecSep_0	
240-165797-8	BAC-01-F-20220427-01	Total/NA	Water	PrecSep_0	
240-165797-9	MW-1-F-20220427-01	Total/NA	Water	PrecSep_0	
240-165797-10	DUP-001-MW-1-F-20220427-01	Total/NA	Water	PrecSep_0	
240-165797-11	B-0903-F-20220427-01	Total/NA	Water	PrecSep_0	
240-165797-12	BAC-02-F-20220427-01	Total/NA	Water	PrecSep_0	
240-165797-13	BAC-05-F-20220428-01	Total/NA	Water	PrecSep_0	
240-165797-14	BAC-04-F-20220428-01	Total/NA	Water	PrecSep_0	
240-165797-15	BAC-03-F-20220428-01	Total/NA	Water	PrecSep_0	
240-165797-16	BAC-07-F-20220428-01	Total/NA	Water	PrecSep_0	
240-165797-17	BAC-06-F-20220428-01	Total/NA	Water	PrecSep_0	
MB 160-563683/20-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-563683/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-563683/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: River-F-20220428-01

Lab Sample ID: 240-165797-1

Date Collected: 04/28/22 14:36

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 12:55	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:27	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 10:24	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 15:43	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 12:57	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567047	05/24/22 12:36	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: Bottom Ash Pond-F-20220428-01

Lab Sample ID: 240-165797-2

Date Collected: 04/28/22 14:50

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:07	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:33	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 10:30	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 16:03	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 12:57	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:39	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: Reclaim Pond-F-20220428-01

Lab Sample ID: 240-165797-3

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:09	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:35	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 10:34	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 16:23	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 12:57	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:39	FLC	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-01

Lab Sample ID: 240-165797-3

Date Collected: 04/28/22 15:00

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: Reclaim Pond-F-20220428-MS1 & MSD1-01

Lab Sample ID: 240-165797-4

Date Collected: 04/28/22 15:02

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:17	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:37	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	525124	05/04/22 09:45	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 17:24	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 12:58	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:39	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: Reclaim Pond-F-20220428-MS2 & MSD2-01

Lab Sample ID: 240-165797-5

Date Collected: 04/28/22 15:04

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:19	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:39	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	525124	05/04/22 10:09	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 17:44	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 14:47	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:39	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: Reclaim Pond-F-20220428-MS3 & MSD3-01

Lab Sample ID: 240-165797-6

Date Collected: 04/28/22 15:06

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:22	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:41	AJC	TAL CAN

Eurofins Canton

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: Reclaim Pond-F-20220428-MS3 & MSD3-01

Lab Sample ID: 240-165797-6

Date Collected: 04/28/22 15:06

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-1997		1	525124	05/04/22 09:53	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 18:04	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 14:47	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: MW-6-F-20220427-01

Lab Sample ID: 240-165797-7

Date Collected: 04/27/22 10:05

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:24	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:43	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 09:24	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 18:24	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 14:48	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: BAC-01-F-20220427-01

Lab Sample ID: 240-165797-8

Date Collected: 04/27/22 10:38

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:27	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:45	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 09:28	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 18:44	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 16:30	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: MW-1-F-20220427-01
Date Collected: 04/27/22 13:02
Date Received: 04/30/22 08:00

Lab Sample ID: 240-165797-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:29	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:51	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 09:32	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 19:45	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 16:31	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: DUP-001-MW-1-F-20220427-01
Date Collected: 04/27/22 13:09
Date Received: 04/30/22 08:00

Lab Sample ID: 240-165797-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:32	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:53	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 09:37	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 20:05	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 16:31	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: B-0903-F-20220427-01
Date Collected: 04/27/22 13:52
Date Received: 04/30/22 08:00

Lab Sample ID: 240-165797-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:34	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:55	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 09:41	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 20:25	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 18:19	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:40	FLC	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: B-0903-F-20220427-01
Date Collected: 04/27/22 13:52
Date Received: 04/30/22 08:00

Lab Sample ID: 240-165797-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: BAC-02-F-20220427-01
Date Collected: 04/27/22 14:46
Date Received: 04/30/22 08:00

Lab Sample ID: 240-165797-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:37	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:57	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	524945	05/03/22 09:47	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 21:25	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 18:20	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: BAC-05-F-20220428-01
Date Collected: 04/28/22 09:32
Date Received: 04/30/22 08:00

Lab Sample ID: 240-165797-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:39	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 17:59	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	525124	05/04/22 09:57	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 21:45	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 18:20	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: BAC-04-F-20220428-01
Date Collected: 04/28/22 10:16
Date Received: 04/30/22 08:00

Lab Sample ID: 240-165797-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:47	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 18:01	AJC	TAL CAN

Eurofins Canton

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-04-F-20220428-01

Lab Sample ID: 240-165797-14

Date Collected: 04/28/22 10:16

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-1997		1	525124	05/04/22 10:05	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 22:06	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 20:11	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:41	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: BAC-03-F-20220428-01

Lab Sample ID: 240-165797-15

Date Collected: 04/28/22 10:49

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:49	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 18:03	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	525124	05/04/22 10:15	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 22:26	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 20:11	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:41	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Client Sample ID: BAC-07-F-20220428-01

Lab Sample ID: 240-165797-16

Date Collected: 04/28/22 12:51

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:52	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 18:05	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	525124	05/04/22 10:19	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 22:46	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 20:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:41	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Client Sample ID: BAC-06-F-20220428-01

Lab Sample ID: 240-165797-17

Date Collected: 04/28/22 13:35

Matrix: Water

Date Received: 04/30/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524893	05/03/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525227	05/04/22 13:54	DSH	TAL CAN
Total/NA	Prep	7470A			524895	05/03/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525141	05/04/22 18:07	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	525124	05/04/22 10:02	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	526989	05/18/22 23:06	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			563682	05/04/22 12:28	MS	TAL SL
Total/NA	Analysis	9315		1	567929	06/01/22 22:56	FLC	TAL SL
Total/NA	Prep	PrecSep_0			563683	05/04/22 12:36	MS	TAL SL
Total/NA	Analysis	9320		1	567048	05/24/22 12:41	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	568130	06/02/22 16:43	CLP	TAL SL

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

TAL 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
 Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	05-31-22
Georgia	State	4062	02-23-22 *
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	05-24-22
Oregon	NELAP	4062	05-24-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-22-16	08-31-22
Virginia	NELAP	11570	05-31-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-165797-1

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
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

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Client Information		Sampler:		Lab PM:		Carrier Tracking No(s)		COC No:		
Client Contact: Taylor Huffman		Phone: PWSID:		Cisneros, Roxanne		State of Origin:		240-94765-34853.1		
Company: Lightstone Generation Gavin Power LLC		Address: 7397 OH-7		E-Mail: roxanne.cisneros@et.eurofins.com		Page: Page 1 of 3		Job #:		
City: Cheshire		State, Zip: OH, 45620		Due Date Requested:		Analysis Requested		Preservation Codes:		
Phone: 740-925-3171 (Tel)		Email: taylor.huffman@lightstonegen.com		TAT Requested (days):		Field Filtered Sample (Yes or No)		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 Other:		
Project Name: Gavin CCR		Project #: 24019633		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Perform MS/MSD (Yes or No)		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 Z - other (specify)		
Site:		SOW#:		PO #: 2935505		6020_7470A		Special Instructions/Note: AP-1V		
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=sterile, ET=issue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300.0_28D - Fluoride	2220B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GPC	Total Number of Containers
River-F-20220428-01	4-28-22	1436	G	Water	X	X	1	1	2	5
Bottom Ash Pond-F-20220428-01	4-28-22	1450	G	Water	X	X	1	1	2	5
Reclaim Pond-F-20220428-01	4-28-22	1500	G	Water	X	X	1	1	2	5
Reclaim Pond-F-20220428-MS1 AND	4-28-22	1502	G	Water	X	X	1	1	2	5
Reclaim Pond-F-20220428-MS2 AND	4-28-22	1504	G	Water	X	X	1	1	2	5
Reclaim Pond-F-20220428-MS3 AND	4-28-22	1506	G	Water	X	X	1	1	2	5



240-165797 Chain of Custody

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *[Signature]* Date/Time: 4/29/22 08:10 Company: EPA

Relinquished by: *[Signature]* Date/Time: 4/29/22 17:00 Company: EPA

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Method of Shipment: _____

Received by: *[Signature]* Date/Time: 4/29/22 17:00 Company: EPA

Received by: *[Signature]* Date/Time: 4/30/22 8:00 Company: KETOC

Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks:

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Ver: 06/08/2021

Client Information		Lab P#:		Camer Tracking No(s)		COC No:	
Taylor Huffman		Cisneros, Roxanne		209		240-94765-34853.3	
Company: Lightstone Generation Gavin Power LLC		E-Mail: roxanne.cisneros@et.euofins.com		State of Origin:		Page: Page 3 of 3	
Address: 7397 OH-7		PWSID:		Job #:		Preservation Codes:	
City: Cheshire		Due Date Requested:		Analysis Requested		M - Hexane	
State, Zip: OH, 45620		TAT Requested (days):		9316_Ra226, 9320_Ra226, Ra226Ra226_GFP		N - None	
Phone: 740-925-3171(Tel)		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		300_28D - Fluoride		O - AsNB02	
Email: taylor.huffman@lightstonegen.com		PO #: 2935505		620_7470A		P - Na2O4S	
Project Name: Gavin CCR		WO #: 24019633		Perform MS/MSD (Yes or No)		Q - Na2SO3	
Site:		Sample Date		Field Filtered Sample (Yes or No)		R - Na2S2O3	
Sample Identification		Sample Time		Matrix (w/water, w/solid, or tissue, A=At)		S - H2SO4	
MW-6-F-20220427-01		1005		Water		T - TSP Dodecahydrate	
BAC-01-F-20220427-01		1038		Water		U - Acetone	
MW-1-F-20220427-01		1303		Water		V - MCAA	
Dwp-DD1-MW-1-F-20220427-01		1309		Water		W - pH 4-5	
B-0903-F-20220427-01		1352		Water		Z - other (specify)	
BAC-02-F-20220427-01		1446		Water		Other:	
BAC-05-F-20220428-01		0932		Water		AP-1V	
BAC-04-F-20220428-01		1016		Water		Special Instructions/Note:	
BAC-03-F-20220428-01		0949		W		Total Number of Containers	
BAC-07-F-20220428-01		1251		W		5	
BAC-06-F-20220428-01		1335		W		5	
Possible Hazard Identification		Date/Time		Date/Time		Date/Time	
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		4/29/22 09:10		4/29/22 1700		4/29/22 1700	
Deliverable Requested: I, II, III, IV, Other (specify)		Date:		Date/Time		Date/Time	
Empty Kit Relinquished by:		Date:		Date/Time		Date/Time	
Relinquished by: [Signature]		4/29/22 1700		4/29/22 1700		4/29/22 1700	
Relinquished by: [Signature]		4/29/22 1700		4/29/22 1700		4/29/22 1700	
Relinquished by: [Signature]		4/29/22 1700		4/29/22 1700		4/29/22 1700	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Company	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/> Disposal By Lab <input checked="" type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:		Company	



Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : 165797
Canton Facility

Client Lightstone Site Name _____ Cooler unpacked by: [Signature]
Cooler Received on 4-30-22 Opened on 5-2-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____
Receipt After-hours: Drop-off Date/Time _____ **Storage Location** _____

TestAmerica Cooler # TA 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# IR-13 (CF 0.0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (CF -0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity each 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 NA
-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)? Yes No
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# HC157842
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: _____

Login # : _____

Eurofins TestAmerica Canton Sample Receipt Multiple Cooler Form						
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA Client Box Other	IR-14 IR-15 13	0.1	0.1	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15 13	0.2	0.2	Water	None	
TA Client Box Other	IR-14 IR-15 13	1.5	1.5	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15 13	0.5	0.5	Water	None	
TA Client Box Other	IR-14 IR-15 13	1.7	1.7	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15 13	0.2	0.3	Water	None	
TA Client Box Other	IR-14 IR-15 13	1.2	1.2	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15 13	0.8	0.8	Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	
TA Client Box Other	IR-14 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-14 IR-15			Water	None	

See Temperature Excursion Form

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container		Preservative	
			pH	Temp	Added (mls)	Lot #
RIBER-F-20220428-01	240-165797-C-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
RIBER-F-20220428-01	240-165797-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RIBER-F-20220428-01	240-165797-E-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BOTTOMASHPOND-F-20220428-01	240-165797-C-2	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BOTTOMASHPOND-F-20220428-01	240-165797-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BOTTOMASHPOND-F-20220428-01	240-165797-E-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428-01	240-165797-C-3	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428-01	240-165797-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428-01	240-165797-E-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD1-01	240-165797-C-4	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD1-01	240-165797-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD1-01	240-165797-E-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD2-01	240-165797-C-5	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD2-01	240-165797-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD2-01	240-165797-E-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD3-01	240-165797-C-6	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD3-01	240-165797-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220428M SD3-01	240-165797-E-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-6-F-20220427-01	240-165797-C-7	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-6-F-20220427-01	240-165797-D-7	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-6-F-20220427-01	240-165797-E-7	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-01-F-20220427-01	240-165797-C-8	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-01-F-20220427-01	240-165797-D-8	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-01-F-20220427-01	240-165797-E-8	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-1-F-20220427-01	240-165797-C-9	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-1-F-20220427-01	240-165797-D-9	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-1-F-20220427-01	240-165797-E-9	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

Client Sample ID	Lab ID	Container Type	Container		Preservative	
			pH	Temp	Added (mls)	Lot #
DUP-001-MW-1-F-20220427-01 4	240-165797-C-10	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
DUP-001-MW-1-F-20220427-01 4	240-165797-D-10	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-001-MW-1-F-20220427-01 4	240-165797-E-10	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
B-0903-F-20220427-01	240-165797-C-11	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
B-0903-F-20220427-01	240-165797-D-11	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
B-0903-F-20220427-01	240-165797-E-11	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-02-F-20220427-01	240-165797-C-12	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-02-F-20220427-01	240-165797-D-12	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-02-F-20220427-01	240-165797-E-12	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220428-01	240-165797-C-13	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220428-01	240-165797-D-13	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-05-F-20220428-01	240-165797-E-13	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-04-F-20220428-01	240-165797-C-14	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-04-F-20220428-01	240-165797-D-14	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-04-F-20220428-01	240-165797-E-14	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-03-F-20220428-01	240-165797-C-15	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-03-F-20220428-01	240-165797-D-15	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-03-F-20220428-01	240-165797-E-15	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-07-F-20220428-01	240-165797-C-16	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-07-F-20220428-01	240-165797-D-16	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-07-F-20220428-01	240-165797-E-16	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-06-F-20220428-01	240-165797-C-17	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BAC-06-F-20220428-01	240-165797-D-17	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BAC-06-F-20220428-01	240-165797-E-17	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-151439.1							
Shipping/Receiving		E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 2							
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note)									
Address: 13715 Rider Trail North, Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:		Job #: 240-165797-1									
Project Name: Gavin CCR		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 Other:									
Site: SSOW#:		Total Number of Containers									
Due Date Requested: 5/15/2022		Analysis Requested									
TAT Requested (days):		9315_Ra226/PreSep_21 Radium-226 (GFC)									
PO #:		9320_Ra228/PreSep_0 Radium-228 (GFC)									
WO #:		Ra226Ra228_GFC/Combined Radium-226 and Radium-228									
Project #: 24019633		Perform MS/MSD (Yes or No)									
Site: SSOW#:		Field Filtered Sample (Yes or No)									
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code:	Field Filtered Sample (Yes or No)	9315_Ra226/PreSep_21 Radium-226 (GFC)	9320_Ra228/PreSep_0 Radium-228 (GFC)	Ra226Ra228_GFC/Combined Radium-226 and Radium-228	Total Number of Containers	Special Instructions/Note:
RIBER-F-20220428-01 (240-165797-1)	4/28/22	14:36 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
BOTTOMASHPOND-F-20220428-01 (240-165797-2)	4/28/22	14:50 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
RECLAIMPOND-F-20220428-01 (240-165797-3)	4/28/22	15:00 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
RECLAIMPOND-F-20220428MSD1-01 (240-165797-4)	4/28/22	15:02 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
RECLAIMPOND-F-20220428MSD2-01 (240-165797-5)	4/28/22	15:04 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
RECLAIMPOND-F-20220428MSD3-01 (240-165797-6)	4/28/22	15:06 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
MW-6-F-20220427-01 (240-165797-7)	4/27/22	10:05 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
BAC-01-F-20220427-01 (240-165797-8)	4/27/22	10:32 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
MW-1-F-20220427-01 (240-165797-9)	4/27/22	13:02 Eastern	Water	Water		X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet

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/test/mainx 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

Special Instructions/QC Requirements:

Deliverable Requested: I, II, III, IV, Other (specify)
Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *Barber* Date/Time: 5-2-22 4:00 Company: FA
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No

Received by: *Jana Worthington* Date/Time: MAY 03 2022 09:20 Company: ETHAN
 Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks:

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Camer Tracking No(s):	COC No:							
Client Contact: Shipping/Receiving		Phone:	Cisneros, Roxanne		240-151439.2							
Company: Test:America Laboratories, Inc.		E-Mail:	roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page							
Address: 13715 Rider Trail North,		Accreditations Required (See note):		Ohio	Page 2 of 2							
City:	Earth City	Due Date Requested:	240-165797-1									
State, Zip:	MO. 63045	TAT Requested (days):	Analysis Requested:									
Phone:	314-298-8566(Tel) 314-298-8757(Fax)	PO #:	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 Z - other (specify)									
Email:		WO #:	Other:									
Project Name:	Gavin CCR	Project #:										
Site:		SSOW#:										
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PreSep_21 Radium-226 (GFPc)	9320_Ra228/PreSep_0 Radium-228 (GFPc)	Ra226Ra228_GFPc/Combined Radium-226 and Radium-228	Total Number of Containers	Special Instructions/Note:
DUP-001-MW-1-F-20220427-014 (240-165797-10)	4/27/22	13:09 Eastern	Water			X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet	
B-0903-F-20220427-01 (240-165797-11)	4/27/22	13:52 Eastern	Water			X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet	
BAC-02-F-20220427-01 (240-165797-12)	4/27/22	14:46 Eastern	Water			X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet	
BAC-05-F-20220428-01 (240-165797-13)	4/28/22	09:32 Eastern	Water			X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet	
BAC-04-F-20220428-01 (240-165797-14)	4/28/22	10:16 Eastern	Water			X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet	
BAC-03-F-20220428-01 (240-165797-15)	4/28/22	10:49 Eastern	Water			X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet	
BAC-07-F-20220428-01 (240-165797-16)	4/28/22	12:51 Eastern	Water			X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet	
BAC-06-F-20220428-01 (240-165797-17)	4/28/22	13:35 Eastern	Water			X	X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet	

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/test/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
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *[Signature]* Date: 5-2-22
 Relinquished by: _____ Date: _____
 Relinquished by: _____ Date: _____

Received by: *[Signature]* Date/Time: MAY 03 2022 0920
 Received by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____

Company: *[Signature]* Company: *[Signature]*
 Company: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements: _____



Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-165797-1

Login Number: 165797

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 05/03/22 01:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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?	True	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-168712-1
Client Project/Site: Gavin CCR

For:
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Attn: Taylor Huffman



Authorized for release by:
7/26/2022 9:30:00 AM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

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.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Job ID: 240-168712-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-168712-1

Comments

The SW846 Method 9315 Radium-226, SW846 Method 9320 Radium-228 (GFPC), and Combined Radium 226 and Ra226_Ra228 Radium 228 analyses were performed at the Eurofins St. Louis laboratory.

Receipt

The samples were received on 6/22/2022 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 5 coolers at receipt time were 0.6° C, 0.8° C, 1.2° C, 1.4° C and 2.1° C.

RAD

Methods 903.0, 9315: Radium-226 batch 572280

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

BAC-05-F-20220621-01 (240-168712-1), MW-1-F-20220621-01 (240-168712-2), BAC-03-F-20220621-01 (240-168712-3), BAC-04-F-20220621-01 (240-168712-4), (LCS 160-572280/2-A), (LCSD 160-572280/3-A) and (MB 160-572280/1-A)

Methods 904.0, 9320: Radium-228 batch 572284

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

BAC-05-F-20220621-01 (240-168712-1), MW-1-F-20220621-01 (240-168712-2), BAC-03-F-20220621-01 (240-168712-3), BAC-04-F-20220621-01 (240-168712-4), (LCS 160-572284/2-A), (LCSD 160-572284/3-A) and (MB 160-572284/1-A)

Method PrecSep_0: Radium-228 Prep Batch 160-572284

The following samples were prepared at a reduced aliquot due to Matrix: MW-1-F-20220621-01 (240-168712-2) and BAC-04-F-20220621-01 (240-168712-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep_0: Radium-228 Prep Batch 160-572284

Insufficient sample volume was available to perform a sample duplicate for the following samples: BAC-05-F-20220621-01 (240-168712-1), MW-1-F-20220621-01 (240-168712-2), BAC-03-F-20220621-01 (240-168712-3) and BAC-04-F-20220621-01 (240-168712-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-572280

The following samples were prepared at a reduced aliquot due to Matrix: MW-1-F-20220621-01 (240-168712-2) and BAC-04-F-20220621-01 (240-168712-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-572280

Insufficient sample volume was available to perform a sample duplicate for the following samples: BAC-05-F-20220621-01 (240-168712-1), MW-1-F-20220621-01 (240-168712-2), BAC-03-F-20220621-01 (240-168712-3) and BAC-04-F-20220621-01 (240-168712-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Job ID: 240-168712-1 (Continued)

Laboratory: Eurofins Canton (Continued)

Metals

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
2320B-1997	Alkalinity, Total	SM	TAL CAN
300.0-1993 R2.1	Anions, Ion Chromatography	EPA	TAL CAN
9315	Radium 226 by GFPC	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL 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:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

TAL 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: Gavin CCR

Job ID: 240-168712-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-168712-1	BAC-05-F-20220621-01	Water	06/21/22 13:32	06/22/22 15:20
240-168712-2	MW-1-F-20220621-01	Water	06/21/22 16:56	06/22/22 15:20
240-168712-3	BAC-03-F-20220621-01	Water	06/21/22 17:33	06/22/22 15:20
240-168712-4	BAC-04-F-20220621-01	Water	06/21/22 18:24	06/22/22 15:20

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-05-F-20220621-01

Lab Sample ID: 240-168712-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	41		5.0	2.2	ug/L	1		6020	Total Recoverable
Cadmium	0.46	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Cobalt	7.4		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	7.2	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	22000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020	Total Recoverable
Sodium	26000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	64		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	64		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.087		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: MW-1-F-20220621-01

Lab Sample ID: 240-168712-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	120		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	1.1		1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	0.90	J	1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	2.8	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020	Total Recoverable
Sodium	17000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.10		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-03-F-20220621-01

Lab Sample ID: 240-168712-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	38		5.0	2.2	ug/L	1		6020	Total Recoverable
Lead	0.52	J	1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	3.1	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	17000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1900		1000	220	ug/L	1		6020	Total Recoverable
Sodium	30000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	96		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	96		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.054		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-04-F-20220621-01

Lab Sample ID: 240-168712-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.8	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	47		5.0	2.2	ug/L	1		6020	Total Recoverable
Cadmium	0.23	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Cobalt	2.6		1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	2.7		1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	4.2	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	19000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	2000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	27000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.13	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	100		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	100		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.070		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-05-F-20220621-01

Lab Sample ID: 240-168712-1

Date Collected: 06/21/22 13:32

Matrix: Water

Date Received: 06/22/22 15:20

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		06/23/22 12:00	06/29/22 16:46	1
Arsenic	5.0	U	5.0	0.75	ug/L		06/23/22 12:00	06/29/22 16:46	1
Barium	41		5.0	2.2	ug/L		06/23/22 12:00	06/29/22 16:46	1
Beryllium	1.0	U	1.0	0.62	ug/L		06/23/22 12:00	06/29/22 16:46	1
Cadmium	0.46	J	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 16:46	1
Chromium	5.0	U	5.0	2.5	ug/L		06/23/22 12:00	06/29/22 16:46	1
Cobalt	7.4		1.0	0.19	ug/L		06/23/22 12:00	06/29/22 16:46	1
Lead	1.0	U	1.0	0.45	ug/L		06/23/22 12:00	06/29/22 16:46	1
Lithium	7.2	J	8.0	1.7	ug/L		06/23/22 12:00	06/29/22 16:46	1
Magnesium	22000		1000	200	ug/L		06/23/22 12:00	06/29/22 16:46	1
Molybdenum	5.0	U	5.0	1.1	ug/L		06/23/22 12:00	06/29/22 16:46	1
Potassium	1600		1000	220	ug/L		06/23/22 12:00	06/29/22 16:46	1
Selenium	5.0	U	5.0	0.89	ug/L		06/23/22 12:00	06/29/22 16:46	1
Sodium	26000		1000	330	ug/L		06/23/22 12:00	06/29/22 16:46	1
Thallium	1.0	U	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 16:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/23/22 12:00	06/24/22 18:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	64		5.0	2.6	mg/L			07/01/22 19:33	1
Bicarbonate Alkalinity as CaCO3	64		5.0	2.6	mg/L			07/01/22 19:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/01/22 19:33	1
Fluoride	0.087		0.050	0.024	mg/L			06/30/22 11:17	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0585	U	0.0830	0.0832	1.00	0.140	pCi/L	06/30/22 10:22	07/22/22 08:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					06/30/22 10:22	07/22/22 08:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.953		0.405	0.415	1.00	0.539	pCi/L	06/30/22 11:05	07/11/22 11:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					06/30/22 11:05	07/11/22 11:16	1
Y Carrier	84.9		40 - 110					06/30/22 11:05	07/11/22 11:16	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-05-F-20220621-01

Lab Sample ID: 240-168712-1

Date Collected: 06/21/22 13:32

Matrix: Water

Date Received: 06/22/22 15:20

Method: 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	1.01		0.413	0.423	5.00	0.539	pCi/L		07/25/22 16:12	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: MW-1-F-20220621-01

Lab Sample ID: 240-168712-2

Date Collected: 06/21/22 16:56

Matrix: Water

Date Received: 06/22/22 15:20

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		06/23/22 12:00	06/29/22 16:54	1
Arsenic	5.0	U	5.0	0.75	ug/L		06/23/22 12:00	06/29/22 16:54	1
Barium	120		5.0	2.2	ug/L		06/23/22 12:00	06/29/22 16:54	1
Beryllium	1.0	U	1.0	0.62	ug/L		06/23/22 12:00	06/29/22 16:54	1
Cadmium	1.0	U	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 16:54	1
Chromium	5.0	U	5.0	2.5	ug/L		06/23/22 12:00	06/29/22 16:54	1
Cobalt	1.1		1.0	0.19	ug/L		06/23/22 12:00	06/29/22 16:54	1
Lead	0.90	J	1.0	0.45	ug/L		06/23/22 12:00	06/29/22 16:54	1
Lithium	2.8	J	8.0	1.7	ug/L		06/23/22 12:00	06/29/22 16:54	1
Magnesium	16000		1000	200	ug/L		06/23/22 12:00	06/29/22 16:54	1
Molybdenum	5.0	U	5.0	1.1	ug/L		06/23/22 12:00	06/29/22 16:54	1
Potassium	1600		1000	220	ug/L		06/23/22 12:00	06/29/22 16:54	1
Selenium	5.0	U	5.0	0.89	ug/L		06/23/22 12:00	06/29/22 16:54	1
Sodium	17000		1000	330	ug/L		06/23/22 12:00	06/29/22 16:54	1
Thallium	1.0	U	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 16:54	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/23/22 12:00	06/24/22 18:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			06/27/22 10:50	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			06/27/22 10:50	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			06/27/22 10:50	1
Fluoride	0.10		0.050	0.024	mg/L			06/30/22 12:17	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.235		0.118	0.119	1.00	0.137	pCi/L	06/30/22 10:22	07/22/22 08:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.8		40 - 110					06/30/22 10:22	07/22/22 08:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.753		0.453	0.458	1.00	0.645	pCi/L	06/30/22 11:05	07/11/22 11:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.8		40 - 110					06/30/22 11:05	07/11/22 11:16	1
Y Carrier	84.9		40 - 110					06/30/22 11:05	07/11/22 11:16	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: MW-1-F-20220621-01

Lab Sample ID: 240-168712-2

Date Collected: 06/21/22 16:56

Matrix: Water

Date Received: 06/22/22 15:20

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2 σ +/-)	Total Uncert. (2 σ +/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.988		0.468	0.473	5.00	0.645	pCi/L		07/25/22 16:12	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-03-F-20220621-01

Lab Sample ID: 240-168712-3

Date Collected: 06/21/22 17:33

Matrix: Water

Date Received: 06/22/22 15:20

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		06/23/22 12:00	06/29/22 16:56	1
Arsenic	5.0	U	5.0	0.75	ug/L		06/23/22 12:00	06/29/22 16:56	1
Barium	38		5.0	2.2	ug/L		06/23/22 12:00	06/29/22 16:56	1
Beryllium	1.0	U	1.0	0.62	ug/L		06/23/22 12:00	06/29/22 16:56	1
Cadmium	1.0	U	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 16:56	1
Chromium	5.0	U	5.0	2.5	ug/L		06/23/22 12:00	06/29/22 16:56	1
Cobalt	1.0	U	1.0	0.19	ug/L		06/23/22 12:00	06/29/22 16:56	1
Lead	0.52	J	1.0	0.45	ug/L		06/23/22 12:00	06/29/22 16:56	1
Lithium	3.1	J	8.0	1.7	ug/L		06/23/22 12:00	06/29/22 16:56	1
Magnesium	17000		1000	200	ug/L		06/23/22 12:00	06/29/22 16:56	1
Molybdenum	5.0	U	5.0	1.1	ug/L		06/23/22 12:00	06/29/22 16:56	1
Potassium	1900		1000	220	ug/L		06/23/22 12:00	06/29/22 16:56	1
Selenium	5.0	U	5.0	0.89	ug/L		06/23/22 12:00	06/29/22 16:56	1
Sodium	30000		1000	330	ug/L		06/23/22 12:00	06/29/22 16:56	1
Thallium	1.0	U	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 16:56	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		06/23/22 12:00	06/24/22 18:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	96		5.0	2.6	mg/L			06/27/22 10:45	1
Bicarbonate Alkalinity as CaCO3	96		5.0	2.6	mg/L			06/27/22 10:45	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			06/27/22 10:45	1
Fluoride	0.054		0.050	0.024	mg/L			06/30/22 13:17	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0577	U	0.0577	0.0580	1.00	0.0897	pCi/L	06/30/22 10:22	07/22/22 08:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					06/30/22 10:22	07/22/22 08:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.653		0.309	0.315	1.00	0.411	pCi/L	06/30/22 11:05	07/11/22 11:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.2		40 - 110					06/30/22 11:05	07/11/22 11:16	1
Y Carrier	88.6		40 - 110					06/30/22 11:05	07/11/22 11:16	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-03-F-20220621-01

Lab Sample ID: 240-168712-3

Date Collected: 06/21/22 17:33

Matrix: Water

Date Received: 06/22/22 15:20

Method: 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	0.711		0.314	0.320	5.00	0.411	pCi/L		07/25/22 16:12	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-04-F-20220621-01

Lab Sample ID: 240-168712-4

Date Collected: 06/21/22 18:24

Matrix: Water

Date Received: 06/22/22 15:20

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		06/23/22 12:00	06/29/22 16:59	1
Arsenic	3.8	J	5.0	0.75	ug/L		06/23/22 12:00	06/29/22 16:59	1
Barium	47		5.0	2.2	ug/L		06/23/22 12:00	06/29/22 16:59	1
Beryllium	1.0	U	1.0	0.62	ug/L		06/23/22 12:00	06/29/22 16:59	1
Cadmium	0.23	J	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 16:59	1
Chromium	5.0	U	5.0	2.5	ug/L		06/23/22 12:00	06/29/22 16:59	1
Cobalt	2.6		1.0	0.19	ug/L		06/23/22 12:00	06/29/22 16:59	1
Lead	2.7		1.0	0.45	ug/L		06/23/22 12:00	06/29/22 16:59	1
Lithium	4.2	J	8.0	1.7	ug/L		06/23/22 12:00	06/29/22 16:59	1
Magnesium	19000		1000	200	ug/L		06/23/22 12:00	06/29/22 16:59	1
Molybdenum	5.0	U	5.0	1.1	ug/L		06/23/22 12:00	06/29/22 16:59	1
Potassium	2000		1000	220	ug/L		06/23/22 12:00	06/29/22 16:59	1
Selenium	5.0	U	5.0	0.89	ug/L		06/23/22 12:00	06/29/22 16:59	1
Sodium	27000		1000	330	ug/L		06/23/22 12:00	06/29/22 16:59	1
Thallium	1.0	U	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 16:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J	0.20	0.13	ug/L		06/23/22 12:00	06/24/22 18:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	100		5.0	2.6	mg/L			06/27/22 10:41	1
Bicarbonate Alkalinity as CaCO3	100		5.0	2.6	mg/L			06/27/22 10:41	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			06/27/22 10:41	1
Fluoride	0.070		0.050	0.024	mg/L			06/30/22 13:38	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0773	U	0.0825	0.0828	1.00	0.131	pCi/L	06/30/22 10:22	07/22/22 08:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					06/30/22 10:22	07/22/22 08:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0742	U	0.361	0.361	1.00	0.694	pCi/L	06/30/22 11:05	07/11/22 12:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					06/30/22 11:05	07/11/22 12:11	1
Y Carrier	87.9		40 - 110					06/30/22 11:05	07/11/22 12:11	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-04-F-20220621-01

Lab Sample ID: 240-168712-4

Date Collected: 06/21/22 18:24

Matrix: Water

Date Received: 06/22/22 15:20

Method: 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	0.00318	U	0.370	0.370	5.00	0.694	pCi/L		07/25/22 16:12	1

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Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
240-168712-1	BAC-05-F-20220621-01	88.6
240-168712-2	MW-1-F-20220621-01	81.8
240-168712-3	BAC-03-F-20220621-01	95.2
240-168712-4	BAC-04-F-20220621-01	93.7
LCS 160-572280/2-A	Lab Control Sample	92.9
LCSD 160-572280/3-A	Lab Control Sample Dup	93.2
MB 160-572280/1-A	Method Blank	83.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
240-168712-1	BAC-05-F-20220621-01	88.6	84.9
240-168712-2	MW-1-F-20220621-01	81.8	84.9
240-168712-3	BAC-03-F-20220621-01	95.2	88.6
240-168712-4	BAC-04-F-20220621-01	93.7	87.9
LCS 160-572284/2-A	Lab Control Sample	92.9	85.6
LCSD 160-572284/3-A	Lab Control Sample Dup	93.2	85.2
MB 160-572284/1-A	Method Blank	83.8	84.1

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-531956/1-A
Matrix: Water
Analysis Batch: 532882

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 531956

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	2.0	U	2.0	0.57	ug/L		06/23/22 12:00	06/29/22 15:42	1
Arsenic	5.0	U	5.0	0.75	ug/L		06/23/22 12:00	06/29/22 15:42	1
Barium	5.0	U	5.0	2.2	ug/L		06/23/22 12:00	06/29/22 15:42	1
Beryllium	1.0	U	1.0	0.62	ug/L		06/23/22 12:00	06/29/22 15:42	1
Cadmium	1.0	U	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 15:42	1
Chromium	5.0	U	5.0	2.5	ug/L		06/23/22 12:00	06/29/22 15:42	1
Cobalt	1.0	U	1.0	0.19	ug/L		06/23/22 12:00	06/29/22 15:42	1
Lead	1.0	U	1.0	0.45	ug/L		06/23/22 12:00	06/29/22 15:42	1
Lithium	8.0	U	8.0	1.7	ug/L		06/23/22 12:00	06/29/22 15:42	1
Magnesium	1000	U	1000	200	ug/L		06/23/22 12:00	06/29/22 15:42	1
Molybdenum	5.0	U	5.0	1.1	ug/L		06/23/22 12:00	06/29/22 15:42	1
Potassium	1000	U	1000	220	ug/L		06/23/22 12:00	06/29/22 15:42	1
Selenium	5.0	U	5.0	0.89	ug/L		06/23/22 12:00	06/29/22 15:42	1
Sodium	1000	U	1000	330	ug/L		06/23/22 12:00	06/29/22 15:42	1
Thallium	1.0	U	1.0	0.20	ug/L		06/23/22 12:00	06/29/22 15:42	1

Lab Sample ID: LCS 240-531956/2-A
Matrix: Water
Analysis Batch: 532882

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 531956

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	978		ug/L		98	80 - 120
Barium	1000	1040		ug/L		104	80 - 120
Beryllium	500	501		ug/L		100	80 - 120
Cadmium	500	505		ug/L		101	80 - 120
Chromium	500	511		ug/L		102	80 - 120
Cobalt	500	499		ug/L		100	80 - 120
Lead	500	533		ug/L		107	80 - 120
Lithium	500	498		ug/L		100	80 - 120
Magnesium	25000	25100		ug/L		100	80 - 120
Molybdenum	500	522		ug/L		104	80 - 120
Potassium	25000	25200		ug/L		101	80 - 120
Selenium	1000	1000		ug/L		100	80 - 120
Sodium	25000	25300		ug/L		101	80 - 120
Thallium	1000	1010		ug/L		101	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-531957/1-A
Matrix: Water
Analysis Batch: 532352

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 531957

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.20	U	0.20	0.13	ug/L		06/23/22 12:00	06/24/22 17:31	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-531957/2-A
Matrix: Water
Analysis Batch: 532352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 531957

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.81		ug/L		96	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-532442/30
Matrix: Water
Analysis Batch: 532442

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			06/27/22 09:26	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			06/27/22 09:26	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			06/27/22 09:26	1

Lab Sample ID: MB 240-532442/4
Matrix: Water
Analysis Batch: 532442

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			06/27/22 07:34	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			06/27/22 07:34	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			06/27/22 07:34	1

Lab Sample ID: LCS 240-532442/29
Matrix: Water
Analysis Batch: 532442

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	121	121		mg/L		100	86 - 123

Lab Sample ID: MB 240-533198/108
Matrix: Water
Analysis Batch: 533198

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			07/01/22 18:01	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/01/22 18:01	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/01/22 18:01	1

Lab Sample ID: MB 240-533198/82
Matrix: Water
Analysis Batch: 533198

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			07/01/22 16:13	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/01/22 16:13	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/01/22 16:13	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: LCS 240-533198/107
 Matrix: Water
 Analysis Batch: 533198

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	121	122		mg/L		101	86 - 123

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-532623/3
 Matrix: Water
 Analysis Batch: 532623

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	0.024	mg/L			06/30/22 04:34	1

Lab Sample ID: LCS 240-532623/4
 Matrix: Water
 Analysis Batch: 532623

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.47		mg/L		99	90 - 110

Lab Sample ID: 240-168712-1 MS
 Matrix: Water
 Analysis Batch: 532623

Client Sample ID: BAC-05-F-20220621-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.087		2.50	2.58		mg/L		100	80 - 120

Lab Sample ID: 240-168712-1 MSD
 Matrix: Water
 Analysis Batch: 532623

Client Sample ID: BAC-05-F-20220621-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.087		2.50	2.59		mg/L		100	80 - 120	0	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-572280/1-A
 Matrix: Water
 Analysis Batch: 574946

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 572280

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01358	U	0.0504	0.0504	1.00	0.112	pCi/L	06/30/22 10:22	07/22/22 08:14	1
Carrier	MB %Yield	MB Qualifier	Limits							
Ba Carrier	83.8		40 - 110	Prepared	Analyzed	Dil Fac				
				06/30/22 10:22	07/22/22 08:14	1				

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-572280/2-A
Matrix: Water
Analysis Batch: 574946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572280

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	
Radium-226	11.3	10.63		1.10	1.00	0.0846	pCi/L	94	75 - 125	
Carrier	%Yield	LCS Qualifier	Limits							
Ba Carrier	92.9		40 - 110							

Lab Sample ID: LCSD 160-572280/3-A
Matrix: Water
Analysis Batch: 574946

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 572280

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	11.3	10.18		1.06	1.00	0.0917	pCi/L	90	75 - 125	0.21	1
Carrier	%Yield	LCSD Qualifier	Limits								
Ba Carrier	93.2		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-572284/1-A
Matrix: Water
Analysis Batch: 573524

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 572284

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3630	U	0.388	0.389	1.00	0.632	pCi/L	06/30/22 11:05	07/11/22 11:12	1
Carrier	%Yield	MB Qualifier	Limits							
Ba Carrier	83.8		40 - 110							
Y Carrier	84.1		40 - 110							
								Prepared	Analyzed	Dil Fac
								06/30/22 11:05	07/11/22 11:12	1
								06/30/22 11:05	07/11/22 11:12	1

Lab Sample ID: LCS 160-572284/2-A
Matrix: Water
Analysis Batch: 573524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572284

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.46	9.732		1.28	1.00	0.483	pCi/L	115	75 - 125
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	92.9		40 - 110						
Y Carrier	85.6		40 - 110						

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-572284/3-A
Matrix: Water
Analysis Batch: 573524

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 572284

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	8.46	9.892		1.29	1.00	0.452	pCi/L	117	75 - 125	0.06	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	93.2		40 - 110
Y Carrier	85.2		40 - 110

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Metals

Prep Batch: 531956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-1	BAC-05-F-20220621-01	Total Recoverable	Water	3005A	
240-168712-2	MW-1-F-20220621-01	Total Recoverable	Water	3005A	
240-168712-3	BAC-03-F-20220621-01	Total Recoverable	Water	3005A	
240-168712-4	BAC-04-F-20220621-01	Total Recoverable	Water	3005A	
MB 240-531956/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-531956/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 531957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-1	BAC-05-F-20220621-01	Total/NA	Water	7470A	
240-168712-2	MW-1-F-20220621-01	Total/NA	Water	7470A	
240-168712-3	BAC-03-F-20220621-01	Total/NA	Water	7470A	
240-168712-4	BAC-04-F-20220621-01	Total/NA	Water	7470A	
MB 240-531957/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-531957/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 532352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-1	BAC-05-F-20220621-01	Total/NA	Water	7470A	531957
240-168712-2	MW-1-F-20220621-01	Total/NA	Water	7470A	531957
240-168712-3	BAC-03-F-20220621-01	Total/NA	Water	7470A	531957
240-168712-4	BAC-04-F-20220621-01	Total/NA	Water	7470A	531957
MB 240-531957/1-A	Method Blank	Total/NA	Water	7470A	531957
LCS 240-531957/2-A	Lab Control Sample	Total/NA	Water	7470A	531957

Analysis Batch: 532882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-1	BAC-05-F-20220621-01	Total Recoverable	Water	6020	531956
240-168712-2	MW-1-F-20220621-01	Total Recoverable	Water	6020	531956
240-168712-3	BAC-03-F-20220621-01	Total Recoverable	Water	6020	531956
240-168712-4	BAC-04-F-20220621-01	Total Recoverable	Water	6020	531956
MB 240-531956/1-A	Method Blank	Total Recoverable	Water	6020	531956
LCS 240-531956/2-A	Lab Control Sample	Total Recoverable	Water	6020	531956

General Chemistry

Analysis Batch: 532442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-2	MW-1-F-20220621-01	Total/NA	Water	2320B-1997	
240-168712-3	BAC-03-F-20220621-01	Total/NA	Water	2320B-1997	
240-168712-4	BAC-04-F-20220621-01	Total/NA	Water	2320B-1997	
MB 240-532442/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-532442/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-532442/29	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 532623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-1	BAC-05-F-20220621-01	Total/NA	Water	300.0-1993 R2.1	
240-168712-2	MW-1-F-20220621-01	Total/NA	Water	300.0-1993 R2.1	
240-168712-3	BAC-03-F-20220621-01	Total/NA	Water	300.0-1993 R2.1	
240-168712-4	BAC-04-F-20220621-01	Total/NA	Water	300.0-1993 R2.1	

Eurofins Canton

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

General Chemistry (Continued)

Analysis Batch: 532623 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-532623/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-532623/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
240-168712-1 MS	BAC-05-F-20220621-01	Total/NA	Water	300.0-1993 R2.1	
240-168712-1 MSD	BAC-05-F-20220621-01	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 533198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-1	BAC-05-F-20220621-01	Total/NA	Water	2320B-1997	
MB 240-533198/108	Method Blank	Total/NA	Water	2320B-1997	
MB 240-533198/82	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-533198/107	Lab Control Sample	Total/NA	Water	2320B-1997	

Rad

Prep Batch: 572280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-1	BAC-05-F-20220621-01	Total/NA	Water	PrecSep-21	
240-168712-2	MW-1-F-20220621-01	Total/NA	Water	PrecSep-21	
240-168712-3	BAC-03-F-20220621-01	Total/NA	Water	PrecSep-21	
240-168712-4	BAC-04-F-20220621-01	Total/NA	Water	PrecSep-21	
MB 160-572280/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-572280/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-572280/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 572284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-168712-1	BAC-05-F-20220621-01	Total/NA	Water	PrecSep_0	
240-168712-2	MW-1-F-20220621-01	Total/NA	Water	PrecSep_0	
240-168712-3	BAC-03-F-20220621-01	Total/NA	Water	PrecSep_0	
240-168712-4	BAC-04-F-20220621-01	Total/NA	Water	PrecSep_0	
MB 160-572284/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-572284/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-572284/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-05-F-20220621-01

Lab Sample ID: 240-168712-1

Date Collected: 06/21/22 13:32

Matrix: Water

Date Received: 06/22/22 15:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			531956	06/23/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	532882	06/29/22 16:46	RKT	TAL CAN
Total/NA	Prep	7470A			531957	06/23/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	532352	06/24/22 18:24	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	533198	07/01/22 19:33	KMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	532623	06/30/22 11:17	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572280	06/30/22 10:22	MS	TAL SL
Total/NA	Analysis	9315		1	574946	07/22/22 08:15	FLC	TAL SL
Total/NA	Prep	PrecSep_0			572284	06/30/22 11:05	MS	TAL SL
Total/NA	Analysis	9320		1	573477	07/11/22 11:16	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	575386	07/25/22 16:12	EMH	TAL SL

Client Sample ID: MW-1-F-20220621-01

Lab Sample ID: 240-168712-2

Date Collected: 06/21/22 16:56

Matrix: Water

Date Received: 06/22/22 15:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			531956	06/23/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	532882	06/29/22 16:54	RKT	TAL CAN
Total/NA	Prep	7470A			531957	06/23/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	532352	06/24/22 18:30	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	532442	06/27/22 10:50	JWW	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	532623	06/30/22 12:17	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572280	06/30/22 10:22	MS	TAL SL
Total/NA	Analysis	9315		1	574946	07/22/22 08:16	FLC	TAL SL
Total/NA	Prep	PrecSep_0			572284	06/30/22 11:05	MS	TAL SL
Total/NA	Analysis	9320		1	573477	07/11/22 11:16	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	575386	07/25/22 16:12	EMH	TAL SL

Client Sample ID: BAC-03-F-20220621-01

Lab Sample ID: 240-168712-3

Date Collected: 06/21/22 17:33

Matrix: Water

Date Received: 06/22/22 15:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			531956	06/23/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	532882	06/29/22 16:56	RKT	TAL CAN
Total/NA	Prep	7470A			531957	06/23/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	532352	06/24/22 18:32	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	532442	06/27/22 10:45	JWW	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	532623	06/30/22 13:17	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572280	06/30/22 10:22	MS	TAL SL
Total/NA	Analysis	9315		1	574946	07/22/22 08:16	FLC	TAL SL
Total/NA	Prep	PrecSep_0			572284	06/30/22 11:05	MS	TAL SL
Total/NA	Analysis	9320		1	573477	07/11/22 11:16	FLC	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Client Sample ID: BAC-03-F-20220621-01

Lab Sample ID: 240-168712-3

Date Collected: 06/21/22 17:33

Matrix: Water

Date Received: 06/22/22 15:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	575386	07/25/22 16:12	EMH	TAL SL

Client Sample ID: BAC-04-F-20220621-01

Lab Sample ID: 240-168712-4

Date Collected: 06/21/22 18:24

Matrix: Water

Date Received: 06/22/22 15:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			531956	06/23/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	532882	06/29/22 16:59	RKT	TAL CAN
Total/NA	Prep	7470A			531957	06/23/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	532352	06/24/22 18:34	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	532442	06/27/22 10:41	JWW	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	532623	06/30/22 13:38	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572280	06/30/22 10:22	MS	TAL SL
Total/NA	Analysis	9315		1	574946	07/22/22 08:16	FLC	TAL SL
Total/NA	Prep	PrecSep_0			572284	06/30/22 11:05	MS	TAL SL
Total/NA	Analysis	9320		1	573479	07/11/22 12:11	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	575386	07/25/22 16:12	EMH	TAL SL

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

TAL 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
 Project/Site: Gavin CCR

Job ID: 240-168712-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-20-22
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	07-24-22
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-22 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22 *
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR

Job ID: 240-168712-1

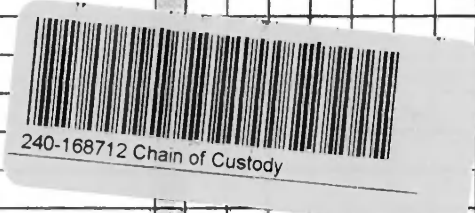
Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
North Dakota	State	R-207	06-30-22 *
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22 *
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Client Information		Lab PM: Cisneros, Roxanne		COC No: 240-94765-34853.2							
Client Contact: Taylor Huffman		E-Mail: roxanne.cisneros@et.eurofins.com		Page: 2 of 3							
Company: Lightstone Generation Gavin Power LLC		PWSID:		Job #:							
Address: 7397 OH-7		Due Date Requested:		Total Number of Containers: AP-1V							
City: Cheshire		TAT Requested (days):		Special Instructions/Note:							
State, Zip: OH, 45620		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Preservation Codes:							
Phone: 740-925-3171(Tel)		PO #: 2935505		M - Hexane N - None O - As NaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - EDTA L - EDA Z - other (specify)							
Email: taylor.huffman@lightstonegen.com		WO #:		Other:							
Project Name: Gavin CCR		Project #: 24019633		Total Number of Containers: 5							
Site:		SSOW#:		Total Number of Containers: 5							
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/oil, BT=Tissue, AA=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020_7470A	500_0_28D - Fluoride	2320B - Alkalinity	9316_Ra226, 9320_Ra228, Ra226Ra228_GFPc	Analysis Requested
BAC-05-F-20220621-01	6-21-22	1332	G	Water							
MW-1-F-20220621-01	6-21-22	1656	G	Water							
BAC-03-F-20220621-01	6-21-22	1733	G	Water							
BAC-04-F-20220621-01	6-21-22	1824	G	Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
<p>Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)</p> <p>Empty Kit Relinquished by: _____ Date: _____</p> <p>Relinquished by: <i>Sara Shavin</i> Date/Time: 6-22-22 1500 Company: <i>Quinn</i> Company Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks:</p>											
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Special Instructions/QC Requirements:</p>											



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Eurofins - Canton Sample Receipt Form/Narrative Login # : _____
Barberton Facility

Client LightScore Site Name _____ Cooler unpacked by: Brandon
Cooler Received on 6-22-22 Opened on 6-22-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ **Storage Location** _____

Eurofins Cooler # FA 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# IR-13 (CF 0.0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (CF -0.7°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 NA
-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)? Yes No
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# HC178690
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 _____

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

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 - Canton Sample Receipt Multiple Cooler Form						
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA Client Box Other	IR-13 IR-15	1.2	1.2	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15	0.8	0.8	Water	None	
TA Client Box Other	IR-13 IR-15	1.4	1.4	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15	2.1	2.1	Water	None	
TA Client Box Other	IR-13 IR-15	0.6	0.6	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	
TA Client Box Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-13 IR-15			Water	None	

See Temperature Excursion Form

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Camer Tracking No(s):		COC No:	
Client Contact:		Cisneros, Roxanne		Cisneros, Roxanne				240-153864.1	
Shipping/Receiving		E-Mail:		E-Mail:		State of Origin:		Page:	
Company:		TestAmerica Laboratories, Inc.		roxanne.cisneros@et.eurofins.com		Ohio		Page 1 of 1	
Address:		13715 Rider Trail North,		Accreditations Required (See note):		Job #		240-168712-1	
City:		Earth City		Analysis Requested		Preservation Codes:		M - Hexane N - None O - AshAO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
State, Zip:		MO, 63045		Due Date Requested:		TAT Requested (days):		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Phone:		314-298-8566(Tel) 314-298-8757(Fax)		PO #:		WO #:		Total Number of Containers	
Email:				Project #:		24019633		Special Instructions/Note:	
Project Name:		Gavin CCR		SSOW#:				2	
Site:				Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (Water, Solid, Other)	
BAC-05-F-20220621-01 (240-168712-1)		6/21/22		13:32 Eastern		Water		Field Filtered Sample (Yes or No)	
MW-1-F-20220621-01 (240-168712-2)		6/21/22		16:56 Eastern		Water		Perform MS/MSD (Yes or No)	
BAC-03-F-20220621-01 (240-168712-3)		6/21/22		17:33 Eastern		Water		9315_Ra228/PreSep_21 Radium-226 (GFC)	
BAC-04-F-20220621-01 (240-168712-4)		6/21/22		18:24 Eastern		Water		9320_Ra228/PreSep_0 Radium-226 (GFC)	
								Radium-228	
								9326Ra228_GFC/ Combined Radium-226 and	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out 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/test/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
 Deliverable Requested: I, II, III, IV, Other (specify) _____ Months
 Special Instructions/QC Requirements: _____

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: *[Signature]* Date: 6/23/2022 09:00 EST Company: *[Signature]*
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks: _____



Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-168712-1

Login Number: 168712

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 06/29/22 08:29 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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?	True	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-169224-1
Client Project/Site: Gavin CCR App IV

For:
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
8/1/2022 3:19:22 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Qualifiers

Metals

Qualifier	Qualifier Description
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.
U	Indicates the analyte was analyzed for but not detected.

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.
U	Indicates the analyte was analyzed for but not detected.

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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Job ID: 240-169224-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-169224-1

Comments

No additional comments.

Receipt

The samples were received on 7/1/2022 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 6 coolers at receipt time were 0.8° C, 1.2° C, 1.4° C, 1.4° C, 1.6° C and 1.8° C.

RAD

Methods 9315: Radium 226 Batch 572891: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-6-F-20220628-01 (240-169224-1), DUP-001-MW-6-F-20220628-01 (240-169224-2), BAC-01-F-20220628-01 (240-169224-3), BAC-02-F-20220628-01 (240-169224-4), BAC-06-F-20220628-01 (240-169224-5), BAC-07-F-20220628-01 (240-169224-6), B-0903-F-20220628-01 (240-169224-7), BOTTOM ASH POND-F-20220629-01 (240-169224-8), BOTTOM ASH POND-F-20220629-MS1 and MSD1-01 (240-169224-9), BOTTOM ASH POND-F-20220629-MS2 and MSD2-01 (240-169224-10), BOTTOM ASH POND-F-20220629-MS3 and MSD3-01 (240-169224-11), RECLAIMPOND-F-20220629-01 (240-169224-12), RIVER-F-20220629-01 (240-169224-13), (LCS 160-572891/2-A), (LCSD 160-572891/3-A) and (MB 160-572891/1-A)

Methods 9320: Radium-228 batch 572892: The detection goal was not met for the following sample(s). Samples were prepped at a reduced volume due to the presence of matrix interferences: BAC-01-F-20220628-01 (240-169224-3), BAC-02-F-20220628-01 (240-169224-4) and B-0903-F-20220628-01 (240-169224-7). Analytical results are reported with the detection limit achieved.

Methods 9320: Radium-228 batch 572892: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-6-F-20220628-01 (240-169224-1), DUP-001-MW-6-F-20220628-01 (240-169224-2), BAC-01-F-20220628-01 (240-169224-3), BAC-02-F-20220628-01 (240-169224-4), BAC-06-F-20220628-01 (240-169224-5), BAC-07-F-20220628-01 (240-169224-6), B-0903-F-20220628-01 (240-169224-7), BOTTOM ASH POND-F-20220629-01 (240-169224-8), BOTTOM ASH POND-F-20220629-MS1 and MSD1-01 (240-169224-9), BOTTOM ASH POND-F-20220629-MS2 and MSD2-01 (240-169224-10), BOTTOM ASH POND-F-20220629-MS3 and MSD3-01 (240-169224-11), RECLAIMPOND-F-20220629-01 (240-169224-12), RIVER-F-20220629-01 (240-169224-13), (LCS 160-572892/2-A), (LCSD 160-572892/3-A) and (MB 160-572892/1-A)

Method PrecSep_0: Radium-228 Prep Batch 160-572892: The following samples were prepared at a reduced aliquot due to Matrix: BAC-01-F-20220628-01 (240-169224-3), BAC-02-F-20220628-01 (240-169224-4), B-0903-F-20220628-01 (240-169224-7), BOTTOM ASH POND-F-20220629-MS2 and MSD2-01 (240-169224-10), BOTTOM ASH POND-F-20220629-MS3 and MSD3-01 (240-169224-11), RECLAIMPOND-F-20220629-01 (240-169224-12) and RIVER-F-20220629-01 (240-169224-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep_0: Radium-228 Prep Batch 160-572892: Insufficient sample volume was available to perform a sample duplicate for the following samples: MW-6-F-20220628-01 (240-169224-1), DUP-001-MW-6-F-20220628-01 (240-169224-2), BAC-01-F-20220628-01 (240-169224-3), BAC-02-F-20220628-01 (240-169224-4), BAC-06-F-20220628-01 (240-169224-5), BAC-07-F-20220628-01 (240-169224-6), B-0903-F-20220628-01 (240-169224-7), BOTTOM ASH POND-F-20220629-01 (240-169224-8), BOTTOM ASH POND-F-20220629-MS1 and MSD1-01 (240-169224-9), BOTTOM ASH POND-F-20220629-MS2 and MSD2-01 (240-169224-10), BOTTOM ASH POND-F-20220629-MS3 and MSD3-01 (240-169224-11), RECLAIMPOND-F-20220629-01 (240-169224-12) and RIVER-F-20220629-01 (240-169224-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-572891: The following samples were prepared at a reduced aliquot due to Matrix: BAC-01-F-20220628-01 (240-169224-3), BAC-02-F-20220628-01 (240-169224-4), B-0903-F-20220628-01 (240-169224-7), BOTTOM ASH POND-F-20220629-MS2 and MSD2-01 (240-169224-10), BOTTOM ASH POND-F-20220629-MS3 and MSD3-01 (240-169224-11), RECLAIMPOND-F-20220629-01 (240-169224-12) and RIVER-F-20220629-01 (240-169224-13). A laboratory control sample/ laboratory

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Job ID: 240-169224-1 (Continued)

Laboratory: Eurofins Canton (Continued)

control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-572891: Insufficient sample volume was available to perform a sample duplicate for the following samples: MW-6-F-20220628-01 (240-169224-1), DUP-001-MW-6-F-20220628-01 (240-169224-2), BAC-01-F-20220628-01 (240-169224-3), BAC-02-F-20220628-01 (240-169224-4), BAC-06-F-20220628-01 (240-169224-5), BAC-07-F-20220628-01 (240-169224-6), B-0903-F-20220628-01 (240-169224-7), BOTTOM ASH POND-F-20220629-01 (240-169224-8), BOTTOM ASH POND-F-20220629-MS1 and MSD1-01 (240-169224-9), BOTTOM ASH POND-F-20220629-MS2 and MSD2-01 (240-169224-10), BOTTOM ASH POND-F-20220629-MS3 and MSD3-01 (240-169224-11), RECLAIMPOND-F-20220629-01 (240-169224-12) and RIVER-F-20220629-01 (240-169224-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
2320B-1997	Alkalinity, Total	SM	TAL CAN
300.0-1993 R2.1	Anions, Ion Chromatography	EPA	TAL CAN
9315	Radium 226 by GFPC	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL 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:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

TAL 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: Gavin CCR App IV

Job ID: 240-169224-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-169224-1	MW-6-F-20220628-01	Water	06/28/22 12:52	07/01/22 08:00
240-169224-2	DUP-001-MW-6-F-20220628-01	Water	06/28/22 12:59	07/01/22 08:00
240-169224-3	BAC-01-F-20220628-01	Water	06/28/22 13:36	07/01/22 08:00
240-169224-4	BAC-02-F-20220628-01	Water	06/28/22 14:58	07/01/22 08:00
240-169224-5	BAC-06-F-20220628-01	Water	06/28/22 15:49	07/01/22 08:00
240-169224-6	BAC-07-F-20220628-01	Water	06/28/22 16:35	07/01/22 08:00
240-169224-7	B-0903-F-20220628-01	Water	06/28/22 17:26	07/01/22 08:00
240-169224-8	BOTTOM ASH POND-F-20220629-01	Water	06/29/22 17:38	07/01/22 08:00
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSD1-01	Water	06/29/22 17:40	07/01/22 08:00
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSD2-01	Water	06/29/22 17:42	07/01/22 08:00
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSD3-01	Water	06/29/22 17:44	07/01/22 08:00
240-169224-12	RECLAIMPOND-F-20220629-01	Water	06/29/22 18:10	07/01/22 08:00
240-169224-13	RIVER-F-20220629-01	Water	06/29/22 18:20	07/01/22 08:00

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: MW-6-F-20220628-01

Lab Sample ID: 240-169224-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	190		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.95	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	0.56	J	1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	4.8	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	14000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020	Total Recoverable
Sodium	13000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	240		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	240		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.094		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: DUP-001-MW-6-F-20220628-01

Lab Sample ID: 240-169224-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	160		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.73	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	4.4	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	14000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	1.2	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	1700		1000	220	ug/L	1		6020	Total Recoverable
Sodium	14000		1000	330	ug/L	1		6020	Total Recoverable
Thallium	0.29	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.088		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-01-F-20220628-01

Lab Sample ID: 240-169224-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	8.2		5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	150		5.0	2.2	ug/L	1		6020	Total Recoverable
Chromium	5.0		5.0	2.5	ug/L	1		6020	Total Recoverable
Cobalt	4.3		1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	5.6		1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	6.4	J	8.0	1.7	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-01-F-20220628-01 (Continued)

Lab Sample ID: 240-169224-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	13000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	1.3	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2300		1000	220	ug/L	1		6020	Total Recoverable
Sodium	12000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	220		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.12		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-02-F-20220628-01

Lab Sample ID: 240-169224-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	17		5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	320		5.0	2.2	ug/L	1		6020	Total Recoverable
Beryllium	0.69	J	1.0	0.62	ug/L	1		6020	Total Recoverable
Cadmium	0.47	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Chromium	22		5.0	2.5	ug/L	1		6020	Total Recoverable
Cobalt	10		1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	17		1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	12		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	42000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	1.6	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	4800		1000	220	ug/L	1		6020	Total Recoverable
Sodium	72000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.17	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	270		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.23		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-06-F-20220628-01

Lab Sample ID: 240-169224-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	110		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	3.7		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	5.1	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	26000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-06-F-20220628-01 (Continued)

Lab Sample ID: 240-169224-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	16000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.090		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-07-F-20220628-01

Lab Sample ID: 240-169224-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	49		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	1.7		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	5.3	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	20000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020	Total Recoverable
Sodium	15000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.073		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: B-0903-F-20220628-01

Lab Sample ID: 240-169224-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	7.5		5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	210		5.0	2.2	ug/L	1		6020	Total Recoverable
Beryllium	0.81	J	1.0	0.62	ug/L	1		6020	Total Recoverable
Cadmium	0.32	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Chromium	32		5.0	2.5	ug/L	1		6020	Total Recoverable
Cobalt	6.3		1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	11		1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	15		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	2.2	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	3400		1000	220	ug/L	1		6020	Total Recoverable
Sodium	16000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.15	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	29		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	29		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.037	J	0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-01

Lab Sample ID: 240-169224-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.7	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	100		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.75	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	16		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	27000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	7.3		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	7200		1000	220	ug/L	1		6020	Total Recoverable
Selenium	1.2	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	55000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.44		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BOTTOM ASH POND-F-20220629-MS1 and MSD1-01

Lab Sample ID: 240-169224-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.9	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	99		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.75	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	15		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	28000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	7.1		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	7300		1000	220	ug/L	1		6020	Total Recoverable
Selenium	1.2	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	55000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.13	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.45		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BOTTOM ASH POND-F-20220629-MS2 and MSD2-01

Lab Sample ID: 240-169224-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.5	J	5.0	0.75	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-MS2 and MSD2-01 (Continued)

Lab Sample ID: 240-169224-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	100		5.0	2.2	ug/L	1		6020	Total Recoverable
Chromium	4.7	J	5.0	2.5	ug/L	1		6020	Total Recoverable
Cobalt	0.82	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	16		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	28000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	7.4		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	7300		1000	220	ug/L	1		6020	Total Recoverable
Selenium	1.2	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	56000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.13	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.45		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BOTTOM ASH POND-F-20220629-MS3 and MSD3-01

Lab Sample ID: 240-169224-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.4	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	97		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.72	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	15		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	27000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	7.2		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	7000		1000	220	ug/L	1		6020	Total Recoverable
Selenium	1.2	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	54000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.45		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: RECLAIMPOND-F-20220629-01

Lab Sample ID: 240-169224-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.8	J	5.0	0.75	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: RECLAIMPOND-F-20220629-01 (Continued)

Lab Sample ID: 240-169224-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	95		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.71	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	14		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	26000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	6.9		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	6900		1000	220	ug/L	1		6020	Total Recoverable
Selenium	1.1	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	54000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	100		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	100		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.43		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: RIVER-F-20220629-01

Lab Sample ID: 240-169224-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.3	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	49		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.64	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	0.78	J	1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	4.5	J	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	10000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	1.4	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2900		1000	220	ug/L	1		6020	Total Recoverable
Sodium	18000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	86		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	86		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.13		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: MW-6-F-20220628-01

Lab Sample ID: 240-169224-1

Date Collected: 06/28/22 12:52

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:24	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:24	1
Barium	190		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:24	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:24	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:24	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:24	1
Cobalt	0.95	J	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:24	1
Lead	0.56	J	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:24	1
Lithium	4.8	J	8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:24	1
Magnesium	14000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:24	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:24	1
Potassium	1800		1000	220	ug/L		07/05/22 12:00	07/06/22 12:24	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:24	1
Sodium	13000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:24	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U F1	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	240		5.0	2.6	mg/L			07/05/22 17:36	1
Bicarbonate Alkalinity as CaCO3	240		5.0	2.6	mg/L			07/05/22 17:36	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 17:36	1
Fluoride	0.094		0.050	0.024	mg/L			07/14/22 19:44	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.152		0.0735	0.0748	1.00	0.0843	pCi/L	07/06/22 13:46	07/30/22 07:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/06/22 13:46	07/30/22 07:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.495		0.329	0.332	1.00	0.491	pCi/L	07/06/22 14:04	07/14/22 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/06/22 14:04	07/14/22 10:57	1
Y Carrier	84.1		40 - 110					07/06/22 14:04	07/14/22 10:57	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: MW-6-F-20220628-01

Lab Sample ID: 240-169224-1

Date Collected: 06/28/22 12:52

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.647		0.337	0.340	5.00	0.491	pCi/L		08/01/22 14:50	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: DUP-001-MW-6-F-20220628-01

Lab Sample ID: 240-169224-2

Date Collected: 06/28/22 12:59

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:36	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:36	1
Barium	160		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:36	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:36	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:36	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:36	1
Cobalt	0.73	J	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:36	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:36	1
Lithium	4.4	J	8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:36	1
Magnesium	14000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:36	1
Molybdenum	1.2	J	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:36	1
Potassium	1700		1000	220	ug/L		07/05/22 12:00	07/06/22 12:36	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:36	1
Sodium	14000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:36	1
Thallium	0.29	J	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:36	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			07/05/22 17:40	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			07/05/22 17:40	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 17:40	1
Fluoride	0.088		0.050	0.024	mg/L			07/14/22 20:49	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0864	U	0.0676	0.0681	1.00	0.0982	pCi/L	07/06/22 13:46	07/30/22 07:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					07/06/22 13:46	07/30/22 07:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.247	U	0.373	0.374	1.00	0.630	pCi/L	07/06/22 14:04	07/14/22 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					07/06/22 14:04	07/14/22 10:57	1
Y Carrier	83.0		40 - 110					07/06/22 14:04	07/14/22 10:57	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: DUP-001-MW-6-F-20220628-01

Lab Sample ID: 240-169224-2

Date Collected: 06/28/22 12:59

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.334	U	0.379	0.380	5.00	0.630	pCi/L		08/01/22 14:50	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-01-F-20220628-01

Lab Sample ID: 240-169224-3

Date Collected: 06/28/22 13:36

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:38	1
Arsenic	8.2		5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:38	1
Barium	150		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:38	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:38	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:38	1
Chromium	5.0		5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:38	1
Cobalt	4.3		1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:38	1
Lead	5.6		1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:38	1
Lithium	6.4	J	8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:38	1
Magnesium	13000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:38	1
Molybdenum	1.3	J	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:38	1
Potassium	2300		1000	220	ug/L		07/05/22 12:00	07/06/22 12:38	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:38	1
Sodium	12000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:38	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	220		5.0	2.6	mg/L			07/05/22 17:56	1
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L			07/05/22 17:56	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 17:56	1
Fluoride	0.12		0.050	0.024	mg/L			07/14/22 21:11	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.190	U	0.136	0.137	1.00	0.193	pCi/L	07/06/22 13:46	07/30/22 07:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.2		40 - 110					07/06/22 13:46	07/30/22 07:08	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.37	G	0.765	0.775	1.00	1.11	pCi/L	07/06/22 14:04	07/14/22 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.2		40 - 110					07/06/22 14:04	07/14/22 10:57	1
Y Carrier	82.6		40 - 110					07/06/22 14:04	07/14/22 10:57	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-01-F-20220628-01

Lab Sample ID: 240-169224-3

Date Collected: 06/28/22 13:36

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	1.56		0.777	0.787	5.00	1.11	pCi/L		08/01/22 14:50	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-02-F-20220628-01

Lab Sample ID: 240-169224-4

Date Collected: 06/28/22 14:58

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:46	1
Arsenic	17		5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:46	1
Barium	320		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:46	1
Beryllium	0.69	J	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:46	1
Cadmium	0.47	J	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:46	1
Chromium	22		5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:46	1
Cobalt	10		1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:46	1
Lead	17		1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:46	1
Lithium	12		8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:46	1
Magnesium	42000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:46	1
Molybdenum	1.6	J	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:46	1
Potassium	4800		1000	220	ug/L		07/05/22 12:00	07/06/22 12:46	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:46	1
Sodium	72000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:46	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	J	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	270		5.0	2.6	mg/L			07/05/22 18:01	1
Bicarbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L			07/05/22 18:01	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:01	1
Fluoride	0.23		0.050	0.024	mg/L			07/14/22 21:32	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.453		0.180	0.185	1.00	0.189	pCi/L	07/06/22 13:46	07/30/22 07:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					07/06/22 13:46	07/30/22 07:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.134	U G	0.565	0.565	1.00	1.09	pCi/L	07/06/22 14:04	07/14/22 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					07/06/22 14:04	07/14/22 10:57	1
Y Carrier	84.1		40 - 110					07/06/22 14:04	07/14/22 10:57	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-02-F-20220628-01

Lab Sample ID: 240-169224-4

Date Collected: 06/28/22 14:58

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.319	U	0.593	0.595	5.00	1.09	pCi/L		08/01/22 14:50	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-06-F-20220628-01

Lab Sample ID: 240-169224-5

Date Collected: 06/28/22 15:49

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:48	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:48	1
Barium	110		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:48	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:48	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:48	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:48	1
Cobalt	3.7		1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:48	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:48	1
Lithium	5.1	J	8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:48	1
Magnesium	26000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:48	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:48	1
Potassium	1400		1000	220	ug/L		07/05/22 12:00	07/06/22 12:48	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:48	1
Sodium	16000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:48	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:48	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	190		5.0	2.6	mg/L			07/05/22 18:05	1
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L			07/05/22 18:05	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:05	1
Fluoride	0.090		0.050	0.024	mg/L			07/14/22 21:54	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.289		0.0949	0.0984	1.00	0.0837	pCi/L	07/06/22 13:46	07/30/22 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					07/06/22 13:46	07/30/22 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.520		0.345	0.348	1.00	0.517	pCi/L	07/06/22 14:04	07/14/22 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					07/06/22 14:04	07/14/22 10:57	1
Y Carrier	85.2		40 - 110					07/06/22 14:04	07/14/22 10:57	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-06-F-20220628-01

Lab Sample ID: 240-169224-5

Date Collected: 06/28/22 15:49

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.809		0.358	0.362	5.00	0.517	pCi/L		08/01/22 14:50	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-07-F-20220628-01

Lab Sample ID: 240-169224-6

Date Collected: 06/28/22 16:35

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:51	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:51	1
Barium	49		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:51	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:51	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:51	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:51	1
Cobalt	1.7		1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:51	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:51	1
Lithium	5.3	J	8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:51	1
Magnesium	20000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:51	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:51	1
Potassium	1300		1000	220	ug/L		07/05/22 12:00	07/06/22 12:51	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:51	1
Sodium	15000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:51	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:51	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	140		5.0	2.6	mg/L			07/05/22 18:10	1
Bicarbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L			07/05/22 18:10	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:10	1
Fluoride	0.073		0.050	0.024	mg/L			07/14/22 22:16	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0744	U	0.0650	0.0654	1.00	0.0984	pCi/L	07/06/22 13:46	07/30/22 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/06/22 13:46	07/30/22 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.486		0.323	0.326	1.00	0.481	pCi/L	07/06/22 14:04	07/14/22 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/06/22 14:04	07/14/22 10:57	1
Y Carrier	86.4		40 - 110					07/06/22 14:04	07/14/22 10:57	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-07-F-20220628-01

Lab Sample ID: 240-169224-6

Date Collected: 06/28/22 16:35

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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		0.329	0.332	5.00	0.481	pCi/L		08/01/22 14:50	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: B-0903-F-20220628-01

Lab Sample ID: 240-169224-7

Date Collected: 06/28/22 17:26

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:53	1
Arsenic	7.5		5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:53	1
Barium	210		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:53	1
Beryllium	0.81	J	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:53	1
Cadmium	0.32	J	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:53	1
Chromium	32		5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:53	1
Cobalt	6.3		1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:53	1
Lead	11		1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:53	1
Lithium	15		8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:53	1
Magnesium	12000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:53	1
Molybdenum	2.2	J	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:53	1
Potassium	3400		1000	220	ug/L		07/05/22 12:00	07/06/22 12:53	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:53	1
Sodium	16000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:53	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:53	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.15	J	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	29		5.0	2.6	mg/L			07/05/22 18:14	1
Bicarbonate Alkalinity as CaCO3	29		5.0	2.6	mg/L			07/05/22 18:14	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:14	1
Fluoride	0.037	J	0.050	0.024	mg/L			07/14/22 23:21	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.366		0.154	0.158	1.00	0.151	pCi/L	07/06/22 13:46	07/30/22 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					07/06/22 13:46	07/30/22 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.652	U G	0.640	0.643	1.00	1.03	pCi/L	07/06/22 14:04	07/14/22 11:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					07/06/22 14:04	07/14/22 11:01	1
Y Carrier	84.5		40 - 110					07/06/22 14:04	07/14/22 11:01	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: B-0903-F-20220628-01

Lab Sample ID: 240-169224-7

Date Collected: 06/28/22 17:26

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	1.02	U	0.658	0.662	5.00	1.03	pCi/L		08/01/22 14:50	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-01

Lab Sample ID: 240-169224-8

Date Collected: 06/29/22 17:38

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:55	1
Arsenic	2.7	J	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:55	1
Barium	100		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:55	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:55	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:55	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:55	1
Cobalt	0.75	J	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:55	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:55	1
Lithium	16		8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:55	1
Magnesium	27000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:55	1
Molybdenum	7.3		5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:55	1
Potassium	7200		1000	220	ug/L		07/05/22 12:00	07/06/22 12:55	1
Selenium	1.2	J	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:55	1
Sodium	55000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:55	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	110		5.0	2.6	mg/L			07/05/22 18:18	1
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L			07/05/22 18:18	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:18	1
Fluoride	0.44		0.050	0.024	mg/L			07/14/22 23:43	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0831	U	0.0621	0.0626	1.00	0.0861	pCi/L	07/06/22 13:46	07/30/22 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/06/22 13:46	07/30/22 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.102	U	0.261	0.261	1.00	0.467	pCi/L	07/06/22 14:04	07/14/22 11:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/06/22 14:04	07/14/22 11:01	1
Y Carrier	83.4		40 - 110					07/06/22 14:04	07/14/22 11:01	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-01

Lab Sample ID: 240-169224-8

Date Collected: 06/29/22 17:38

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.185	U	0.268	0.268	5.00	0.467	pCi/L		08/01/22 14:50	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-MS1 and MSD1-01

Lab Sample ID: 240-169224-9

Date Collected: 06/29/22 17:40

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:58	1
Arsenic	2.9	J	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:58	1
Barium	99		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:58	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:58	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:58	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:58	1
Cobalt	0.75	J	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:58	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:58	1
Lithium	15		8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:58	1
Magnesium	28000		1000	200	ug/L		07/05/22 12:00	07/06/22 12:58	1
Molybdenum	7.1		5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:58	1
Potassium	7300		1000	220	ug/L		07/05/22 12:00	07/06/22 12:58	1
Selenium	1.2	J	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:58	1
Sodium	55000		1000	330	ug/L		07/05/22 12:00	07/06/22 12:58	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	110		5.0	2.6	mg/L			07/05/22 18:22	1
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L			07/05/22 18:22	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:22	1
Fluoride	0.45		0.050	0.024	mg/L			07/15/22 00:04	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.124		0.0709	0.0717	1.00	0.0877	pCi/L	07/06/22 13:46	07/30/22 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/06/22 13:46	07/30/22 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0605	U	0.251	0.251	1.00	0.458	pCi/L	07/06/22 14:04	07/14/22 11:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/06/22 14:04	07/14/22 11:02	1
Y Carrier	84.5		40 - 110					07/06/22 14:04	07/14/22 11:02	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-MS1 and MSD1-01

Lab Sample ID: 240-169224-9

Date Collected: 06/29/22 17:40

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.185	U	0.261	0.261	5.00	0.458	pCi/L		08/01/22 14:50	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-MS2 and MSD2-01

Lab Sample ID: 240-169224-10

Date Collected: 06/29/22 17:42

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 13:00	1
Arsenic	2.5	J	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 13:00	1
Barium	100		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 13:00	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 13:00	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 13:00	1
Chromium	4.7	J	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 13:00	1
Cobalt	0.82	J	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 13:00	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 13:00	1
Lithium	16		8.0	1.7	ug/L		07/05/22 12:00	07/06/22 13:00	1
Magnesium	28000		1000	200	ug/L		07/05/22 12:00	07/06/22 13:00	1
Molybdenum	7.4		5.0	1.1	ug/L		07/05/22 12:00	07/06/22 13:00	1
Potassium	7300		1000	220	ug/L		07/05/22 12:00	07/06/22 13:00	1
Selenium	1.2	J	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 13:00	1
Sodium	56000		1000	330	ug/L		07/05/22 12:00	07/06/22 13:00	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 13:00	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	110		5.0	2.6	mg/L			07/05/22 18:26	1
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L			07/05/22 18:26	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:26	1
Fluoride	0.45		0.050	0.024	mg/L			07/15/22 00:26	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0333	U	0.0772	0.0773	1.00	0.140	pCi/L	07/06/22 13:46	07/30/22 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					07/06/22 13:46	07/30/22 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.114	U	0.372	0.372	1.00	0.663	pCi/L	07/06/22 14:04	07/14/22 11:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					07/06/22 14:04	07/14/22 11:02	1
Y Carrier	86.4		40 - 110					07/06/22 14:04	07/14/22 11:02	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-MS2 and MSD2-01

Lab Sample ID: 240-169224-10

Date Collected: 06/29/22 17:42

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.147	U	0.380	0.380	5.00	0.663	pCi/L		08/01/22 14:50	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-MS3 and MSD3-01

Lab Sample ID: 240-169224-11

Date Collected: 06/29/22 17:44

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 13:03	1
Arsenic	2.4	J	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 13:03	1
Barium	97		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 13:03	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 13:03	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 13:03	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 13:03	1
Cobalt	0.72	J	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 13:03	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 13:03	1
Lithium	15		8.0	1.7	ug/L		07/05/22 12:00	07/06/22 13:03	1
Magnesium	27000		1000	200	ug/L		07/05/22 12:00	07/06/22 13:03	1
Molybdenum	7.2		5.0	1.1	ug/L		07/05/22 12:00	07/06/22 13:03	1
Potassium	7000		1000	220	ug/L		07/05/22 12:00	07/06/22 13:03	1
Selenium	1.2	J	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 13:03	1
Sodium	54000		1000	330	ug/L		07/05/22 12:00	07/06/22 13:03	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 13:03	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	110		5.0	2.6	mg/L			07/05/22 18:30	1
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L			07/05/22 18:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:30	1
Fluoride	0.45		0.050	0.024	mg/L			07/15/22 00:48	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.111	U	0.0855	0.0861	1.00	0.122	pCi/L	07/06/22 13:46	07/30/22 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.9		40 - 110					07/06/22 13:46	07/30/22 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.774		0.467	0.472	1.00	0.680	pCi/L	07/06/22 14:04	07/14/22 11:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.9		40 - 110					07/06/22 14:04	07/14/22 11:02	1
Y Carrier	85.6		40 - 110					07/06/22 14:04	07/14/22 11:02	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

**Client Sample ID: BOTTOM ASH POND-F-20220629-MS3 and
MSD3-01**

Lab Sample ID: 240-169224-11

Date Collected: 06/29/22 17:44

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.885		0.475	0.480	5.00	0.680	pCi/L		08/01/22 14:50	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: RECLAIMPOND-F-20220629-01

Lab Sample ID: 240-169224-12

Date Collected: 06/29/22 18:10

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 13:05	1
Arsenic	2.8	J	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 13:05	1
Barium	95		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 13:05	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 13:05	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 13:05	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 13:05	1
Cobalt	0.71	J	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 13:05	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 13:05	1
Lithium	14		8.0	1.7	ug/L		07/05/22 12:00	07/06/22 13:05	1
Magnesium	26000		1000	200	ug/L		07/05/22 12:00	07/06/22 13:05	1
Molybdenum	6.9		5.0	1.1	ug/L		07/05/22 12:00	07/06/22 13:05	1
Potassium	6900		1000	220	ug/L		07/05/22 12:00	07/06/22 13:05	1
Selenium	1.1	J	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 13:05	1
Sodium	54000		1000	330	ug/L		07/05/22 12:00	07/06/22 13:05	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 13:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	100		5.0	2.6	mg/L			07/05/22 18:34	1
Bicarbonate Alkalinity as CaCO3	100		5.0	2.6	mg/L			07/05/22 18:34	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:34	1
Fluoride	0.43		0.050	0.024	mg/L			07/15/22 01:09	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0805	U	0.0864	0.0867	1.00	0.138	pCi/L	07/06/22 13:46	07/30/22 07:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110					07/06/22 13:46	07/30/22 07:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.881		0.475	0.482	1.00	0.670	pCi/L	07/06/22 14:04	07/14/22 11:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110					07/06/22 14:04	07/14/22 11:03	1
Y Carrier	86.0		40 - 110					07/06/22 14:04	07/14/22 11:03	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: RECLAIMPOND-F-20220629-01

Lab Sample ID: 240-169224-12

Date Collected: 06/29/22 18:10

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.961		0.483	0.490	5.00	0.670	pCi/L		08/01/22 14:50	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: RIVER-F-20220629-01

Lab Sample ID: 240-169224-13

Date Collected: 06/29/22 18:20

Matrix: Water

Date Received: 07/01/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 13:08	1
Arsenic	1.3	J	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 13:08	1
Barium	49		5.0	2.2	ug/L		07/05/22 12:00	07/06/22 13:08	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 13:08	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 13:08	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 13:08	1
Cobalt	0.64	J	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 13:08	1
Lead	0.78	J	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 13:08	1
Lithium	4.5	J	8.0	1.7	ug/L		07/05/22 12:00	07/06/22 13:08	1
Magnesium	10000		1000	200	ug/L		07/05/22 12:00	07/06/22 13:08	1
Molybdenum	1.4	J	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 13:08	1
Potassium	2900		1000	220	ug/L		07/05/22 12:00	07/06/22 13:08	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 13:08	1
Sodium	18000		1000	330	ug/L		07/05/22 12:00	07/06/22 13:08	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 13:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	86		5.0	2.6	mg/L			07/05/22 18:42	1
Bicarbonate Alkalinity as CaCO3	86		5.0	2.6	mg/L			07/05/22 18:42	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 18:42	1
Fluoride	0.13		0.050	0.024	mg/L			07/15/22 01:31	1

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0666	U	0.0808	0.0811	1.00	0.133	pCi/L	07/06/22 13:46	07/30/22 07:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/06/22 13:46	07/30/22 07:25	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.266	U	0.311	0.312	1.00	0.510	pCi/L	07/06/22 14:04	07/14/22 11:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/06/22 14:04	07/14/22 11:03	1
Y Carrier	88.6		40 - 110					07/06/22 14:04	07/14/22 11:03	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: RIVER-F-20220629-01

Lab Sample ID: 240-169224-13

Date Collected: 06/29/22 18:20

Matrix: Water

Date Received: 07/01/22 08:00

Method: 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	0.333	U	0.321	0.322	5.00	0.510	pCi/L		08/01/22 14:50	1

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Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y
240-169224-1	MW-6-F-20220628-01	93.2	
240-169224-2	DUP-001-MW-6-F-20220628-01	88.6	
240-169224-3	BAC-01-F-20220628-01	94.2	
240-169224-4	BAC-02-F-20220628-01	88.4	
240-169224-5	BAC-06-F-20220628-01	93.4	
240-169224-6	BAC-07-F-20220628-01	93.2	
240-169224-7	B-0903-F-20220628-01	96.2	
240-169224-8	BOTTOM ASH POND-F-20220629-01	90.9	
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSD1-01	93.2	
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSD2-01	96.2	
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSD3-01	91.9	
240-169224-12	RECLAIMPOND-F-20220629-01	89.6	
240-169224-13	RIVER-F-20220629-01	93.7	
LCS 160-572891/2-A	Lab Control Sample	95.4	
LCSD 160-572891/3-A	Lab Control Sample Dup	95.2	
MB 160-572891/1-A	Method Blank	97.2	

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
240-169224-1	MW-6-F-20220628-01	93.2	84.1
240-169224-2	DUP-001-MW-6-F-20220628-01	88.6	83.0
240-169224-3	BAC-01-F-20220628-01	94.2	82.6
240-169224-4	BAC-02-F-20220628-01	88.4	84.1
240-169224-5	BAC-06-F-20220628-01	93.4	85.2
240-169224-6	BAC-07-F-20220628-01	93.2	86.4
240-169224-7	B-0903-F-20220628-01	96.2	84.5
240-169224-8	BOTTOM ASH POND-F-20220629-01	90.9	83.4
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSD1-01	93.2	84.5
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSD2-01	96.2	86.4
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSD3-01	91.9	85.6
240-169224-12	RECLAIMPOND-F-20220629-01	89.6	86.0
240-169224-13	RIVER-F-20220629-01	93.7	88.6

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method: 9320 - Radium-228 (GFPC) (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
LCS 160-572892/2-A	Lab Control Sample	95.4	84.9
LCSD 160-572892/3-A	Lab Control Sample Dup	95.2	85.6
MB 160-572892/1-A	Method Blank	97.2	86.0

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-533382/1-A
Matrix: Water
Analysis Batch: 533690

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 533382

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	2.0	U	2.0	0.57	ug/L		07/05/22 12:00	07/06/22 12:19	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/05/22 12:00	07/06/22 12:19	1
Barium	5.0	U	5.0	2.2	ug/L		07/05/22 12:00	07/06/22 12:19	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/05/22 12:00	07/06/22 12:19	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:19	1
Chromium	5.0	U	5.0	2.5	ug/L		07/05/22 12:00	07/06/22 12:19	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/05/22 12:00	07/06/22 12:19	1
Lead	1.0	U	1.0	0.45	ug/L		07/05/22 12:00	07/06/22 12:19	1
Lithium	8.0	U	8.0	1.7	ug/L		07/05/22 12:00	07/06/22 12:19	1
Magnesium	1000	U	1000	200	ug/L		07/05/22 12:00	07/06/22 12:19	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/05/22 12:00	07/06/22 12:19	1
Potassium	1000	U	1000	220	ug/L		07/05/22 12:00	07/06/22 12:19	1
Selenium	5.0	U	5.0	0.89	ug/L		07/05/22 12:00	07/06/22 12:19	1
Sodium	1000	U	1000	330	ug/L		07/05/22 12:00	07/06/22 12:19	1
Thallium	1.0	U	1.0	0.20	ug/L		07/05/22 12:00	07/06/22 12:19	1

Lab Sample ID: LCS 240-533382/3-A
Matrix: Water
Analysis Batch: 533690

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 533382

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	941		ug/L		94	80 - 120
Barium	1000	1000		ug/L		100	80 - 120
Beryllium	500	492		ug/L		98	80 - 120
Cadmium	500	490		ug/L		98	80 - 120
Chromium	500	497		ug/L		99	80 - 120
Cobalt	500	480		ug/L		96	80 - 120
Lead	500	503		ug/L		101	80 - 120
Lithium	500	484		ug/L		97	80 - 120
Magnesium	25000	24200		ug/L		97	80 - 120
Molybdenum	500	482		ug/L		96	80 - 120
Potassium	25000	23600		ug/L		94	80 - 120
Selenium	1000	941		ug/L		94	80 - 120
Sodium	25000	24100		ug/L		96	80 - 120
Thallium	1000	964		ug/L		96	80 - 120

Lab Sample ID: 240-169224-1 MS
Matrix: Water
Analysis Batch: 533690

Client Sample ID: MW-6-F-20220628-01
Prep Type: Total Recoverable
Prep Batch: 533382

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	5.0	U	1000	939		ug/L		94	75 - 125
Barium	190		1000	1160		ug/L		97	75 - 125
Beryllium	1.0	U	500	478		ug/L		96	75 - 125
Cadmium	1.0	U	500	476		ug/L		95	75 - 125
Chromium	5.0	U	500	485		ug/L		97	75 - 125
Cobalt	0.95	J	500	458		ug/L		91	75 - 125

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-169224-1 MS
Matrix: Water
Analysis Batch: 533690

Client Sample ID: MW-6-F-20220628-01
Prep Type: Total Recoverable
Prep Batch: 533382

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.56	J	500	484		ug/L		97	75 - 125
Lithium	4.8	J	500	485		ug/L		96	75 - 125
Magnesium	14000		25000	37100		ug/L		92	75 - 125
Molybdenum	5.0	U	500	470		ug/L		94	75 - 125
Potassium	1800		25000	25200		ug/L		94	75 - 125
Selenium	5.0	U	1000	910		ug/L		91	75 - 125
Sodium	13000		25000	36500		ug/L		92	75 - 125
Thallium	1.0	U	1000	938		ug/L		94	75 - 125

Lab Sample ID: 240-169224-1 MSD
Matrix: Water
Analysis Batch: 533690

Client Sample ID: MW-6-F-20220628-01
Prep Type: Total Recoverable
Prep Batch: 533382

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	2.0	U	100	106		ug/L		106	75 - 125	6	20
Arsenic	5.0	U	1000	988		ug/L		99	75 - 125	5	20
Barium	190		1000	1240		ug/L		105	75 - 125	7	20
Beryllium	1.0	U	500	501		ug/L		100	75 - 125	5	20
Cadmium	1.0	U	500	501		ug/L		100	75 - 125	5	20
Chromium	5.0	U	500	516		ug/L		103	75 - 125	6	20
Cobalt	0.95	J	500	486		ug/L		97	75 - 125	6	20
Lead	0.56	J	500	512		ug/L		102	75 - 125	6	20
Lithium	4.8	J	500	506		ug/L		100	75 - 125	4	20
Magnesium	14000		25000	39300		ug/L		101	75 - 125	6	20
Molybdenum	5.0	U	500	499		ug/L		100	75 - 125	6	20
Potassium	1800		25000	26300		ug/L		98	75 - 125	4	20
Selenium	5.0	U	1000	965		ug/L		97	75 - 125	6	20
Sodium	13000		25000	38700		ug/L		101	75 - 125	6	20
Thallium	1.0	U	1000	992		ug/L		99	75 - 125	6	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-533383/1-A
Matrix: Water
Analysis Batch: 533799

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 533383

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/05/22 12:00	07/07/22 11:13	1

Lab Sample ID: LCS 240-533383/2-A
Matrix: Water
Analysis Batch: 533799

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 533383

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.46		ug/L		109	80 - 120

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-169224-1 MS
Matrix: Water
Analysis Batch: 533799

Client Sample ID: MW-6-F-20220628-01
Prep Type: Total/NA
Prep Batch: 533383

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U F1	1.00	1.24	F1	ug/L		124	80 - 120

Lab Sample ID: 240-169224-1 MSD
Matrix: Water
Analysis Batch: 533799

Client Sample ID: MW-6-F-20220628-01
Prep Type: Total/NA
Prep Batch: 533383

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.20	U F1	1.00	1.15		ug/L		115	80 - 120	8	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-533680/30
Matrix: Water
Analysis Batch: 533680

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			07/05/22 17:48	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 17:48	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 17:48	1

Lab Sample ID: MB 240-533680/4
Matrix: Water
Analysis Batch: 533680

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			07/05/22 15:44	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 15:44	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/05/22 15:44	1

Lab Sample ID: LCS 240-533680/29
Matrix: Water
Analysis Batch: 533680

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	121	121		mg/L		100	86 - 123

Lab Sample ID: LCS 240-533680/3
Matrix: Water
Analysis Batch: 533680

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	121	121		mg/L		100	86 - 123

Lab Sample ID: 240-169224-3 DU
Matrix: Water
Analysis Batch: 533680

Client Sample ID: BAC-01-F-20220628-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	220		219		mg/L		0.2	20
Bicarbonate Alkalinity as CaCO3	220		219		mg/L		0.2	20

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: 240-169224-3 DU
 Matrix: Water
 Analysis Batch: 533680

Client Sample ID: BAC-01-F-20220628-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Lab Sample ID: 240-169224-13 DU
 Matrix: Water
 Analysis Batch: 533680

Client Sample ID: RIVER-F-20220629-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	86		88.4		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	86		88.4		mg/L		2	20
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-534735/3
 Matrix: Water
 Analysis Batch: 534735

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	0.024	mg/L			07/14/22 19:00	1

Lab Sample ID: LCS 240-534735/4
 Matrix: Water
 Analysis Batch: 534735

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.55		mg/L		102	90 - 110

Lab Sample ID: 240-169224-1 MS
 Matrix: Water
 Analysis Batch: 534735

Client Sample ID: MW-6-F-20220628-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.094		2.50	2.83		mg/L		109	80 - 120

Lab Sample ID: 240-169224-1 MSD
 Matrix: Water
 Analysis Batch: 534735

Client Sample ID: MW-6-F-20220628-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.094		2.50	2.87		mg/L		111	80 - 120	1	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-572891/1-A
 Matrix: Water
 Analysis Batch: 575778

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 572891

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03149	U	0.0681	0.0681	1.00	0.121	pCi/L	07/06/22 13:46	07/30/22 07:07	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: MB 160-572891/1-A
 Matrix: Water
 Analysis Batch: 575778

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 572891

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	97.2		40 - 110	07/06/22 13:46	07/30/22 07:07	1

Lab Sample ID: LCS 160-572891/2-A
 Matrix: Water
 Analysis Batch: 575778

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 572891

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	11.19		1.14	1.00	0.0843	pCi/L	99	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	95.4		40 - 110

Lab Sample ID: LCSD 160-572891/3-A
 Matrix: Water
 Analysis Batch: 575778

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 572891

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	Limit
Radium-226	11.3	10.35		1.06	1.00	0.0840	pCi/L	91	75 - 125	0.38	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	95.2		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-572892/1-A
 Matrix: Water
 Analysis Batch: 573982

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 572892

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2118	U	0.284	0.284	1.00	0.474	pCi/L	07/06/22 14:04	07/14/22 10:56	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	97.2		40 - 110	07/06/22 14:04	07/14/22 10:56	1
Y Carrier	86.0		40 - 110	07/06/22 14:04	07/14/22 10:56	1

Lab Sample ID: LCS 160-572892/2-A
 Matrix: Water
 Analysis Batch: 573982

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 572892

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.45	9.485		1.25	1.00	0.440	pCi/L	112	75 - 125

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-572892/2-A
Matrix: Water
Analysis Batch: 573982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572892

Carrier	LCS		Limits
	%Yield	Qualifier	
Ba Carrier	95.4		40 - 110
Y Carrier	84.9		40 - 110

Lab Sample ID: LCSD 160-572892/3-A
Matrix: Water
Analysis Batch: 573982

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 572892

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec		RER
									Limits	RER	Limit
Radium-228	8.45	9.227		1.23	1.00	0.478	pCi/L	109	75 - 125	0.10	1

Carrier	LCSD		Limits
	%Yield	Qualifier	
Ba Carrier	95.2		40 - 110
Y Carrier	85.6		40 - 110

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Metals

Prep Batch: 533382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-1	MW-6-F-20220628-01	Total Recoverable	Water	3005A	
240-169224-2	DUP-001-MW-6-F-20220628-01	Total Recoverable	Water	3005A	
240-169224-3	BAC-01-F-20220628-01	Total Recoverable	Water	3005A	
240-169224-4	BAC-02-F-20220628-01	Total Recoverable	Water	3005A	
240-169224-5	BAC-06-F-20220628-01	Total Recoverable	Water	3005A	
240-169224-6	BAC-07-F-20220628-01	Total Recoverable	Water	3005A	
240-169224-7	B-0903-F-20220628-01	Total Recoverable	Water	3005A	
240-169224-8	BOTTOM ASH POND-F-20220629-01	Total Recoverable	Water	3005A	
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSI	Total Recoverable	Water	3005A	
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSI	Total Recoverable	Water	3005A	
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSI	Total Recoverable	Water	3005A	
240-169224-12	RECLAIMPOND-F-20220629-01	Total Recoverable	Water	3005A	
240-169224-13	RIVER-F-20220629-01	Total Recoverable	Water	3005A	
MB 240-533382/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-533382/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-169224-1 MS	MW-6-F-20220628-01	Total Recoverable	Water	3005A	
240-169224-1 MSD	MW-6-F-20220628-01	Total Recoverable	Water	3005A	

Prep Batch: 533383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-1	MW-6-F-20220628-01	Total/NA	Water	7470A	
240-169224-2	DUP-001-MW-6-F-20220628-01	Total/NA	Water	7470A	
240-169224-3	BAC-01-F-20220628-01	Total/NA	Water	7470A	
240-169224-4	BAC-02-F-20220628-01	Total/NA	Water	7470A	
240-169224-5	BAC-06-F-20220628-01	Total/NA	Water	7470A	
240-169224-6	BAC-07-F-20220628-01	Total/NA	Water	7470A	
240-169224-7	B-0903-F-20220628-01	Total/NA	Water	7470A	
240-169224-8	BOTTOM ASH POND-F-20220629-01	Total/NA	Water	7470A	
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSI	Total/NA	Water	7470A	
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSI	Total/NA	Water	7470A	
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSI	Total/NA	Water	7470A	
240-169224-12	RECLAIMPOND-F-20220629-01	Total/NA	Water	7470A	
240-169224-13	RIVER-F-20220629-01	Total/NA	Water	7470A	
MB 240-533383/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-533383/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-169224-1 MS	MW-6-F-20220628-01	Total/NA	Water	7470A	
240-169224-1 MSD	MW-6-F-20220628-01	Total/NA	Water	7470A	

Analysis Batch: 533690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-1	MW-6-F-20220628-01	Total Recoverable	Water	6020	533382
240-169224-2	DUP-001-MW-6-F-20220628-01	Total Recoverable	Water	6020	533382
240-169224-3	BAC-01-F-20220628-01	Total Recoverable	Water	6020	533382
240-169224-4	BAC-02-F-20220628-01	Total Recoverable	Water	6020	533382
240-169224-5	BAC-06-F-20220628-01	Total Recoverable	Water	6020	533382
240-169224-6	BAC-07-F-20220628-01	Total Recoverable	Water	6020	533382
240-169224-7	B-0903-F-20220628-01	Total Recoverable	Water	6020	533382
240-169224-8	BOTTOM ASH POND-F-20220629-01	Total Recoverable	Water	6020	533382
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSI	Total Recoverable	Water	6020	533382
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSI	Total Recoverable	Water	6020	533382
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSI	Total Recoverable	Water	6020	533382

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Metals (Continued)

Analysis Batch: 533690 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-12	RECLAIMPOND-F-20220629-01	Total Recoverable	Water	6020	533382
240-169224-13	RIVER-F-20220629-01	Total Recoverable	Water	6020	533382
MB 240-533382/1-A	Method Blank	Total Recoverable	Water	6020	533382
LCS 240-533382/3-A	Lab Control Sample	Total Recoverable	Water	6020	533382
240-169224-1 MS	MW-6-F-20220628-01	Total Recoverable	Water	6020	533382
240-169224-1 MSD	MW-6-F-20220628-01	Total Recoverable	Water	6020	533382

Analysis Batch: 533799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-1	MW-6-F-20220628-01	Total/NA	Water	7470A	533383
240-169224-2	DUP-001-MW-6-F-20220628-01	Total/NA	Water	7470A	533383
240-169224-3	BAC-01-F-20220628-01	Total/NA	Water	7470A	533383
240-169224-4	BAC-02-F-20220628-01	Total/NA	Water	7470A	533383
240-169224-5	BAC-06-F-20220628-01	Total/NA	Water	7470A	533383
240-169224-6	BAC-07-F-20220628-01	Total/NA	Water	7470A	533383
240-169224-7	B-0903-F-20220628-01	Total/NA	Water	7470A	533383
240-169224-8	BOTTOM ASH POND-F-20220629-01	Total/NA	Water	7470A	533383
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSI	Total/NA	Water	7470A	533383
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSI	Total/NA	Water	7470A	533383
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSI	Total/NA	Water	7470A	533383
240-169224-12	RECLAIMPOND-F-20220629-01	Total/NA	Water	7470A	533383
240-169224-13	RIVER-F-20220629-01	Total/NA	Water	7470A	533383
MB 240-533383/1-A	Method Blank	Total/NA	Water	7470A	533383
LCS 240-533383/2-A	Lab Control Sample	Total/NA	Water	7470A	533383
240-169224-1 MS	MW-6-F-20220628-01	Total/NA	Water	7470A	533383
240-169224-1 MSD	MW-6-F-20220628-01	Total/NA	Water	7470A	533383

General Chemistry

Analysis Batch: 533680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-1	MW-6-F-20220628-01	Total/NA	Water	2320B-1997	
240-169224-2	DUP-001-MW-6-F-20220628-01	Total/NA	Water	2320B-1997	
240-169224-3	BAC-01-F-20220628-01	Total/NA	Water	2320B-1997	
240-169224-4	BAC-02-F-20220628-01	Total/NA	Water	2320B-1997	
240-169224-5	BAC-06-F-20220628-01	Total/NA	Water	2320B-1997	
240-169224-6	BAC-07-F-20220628-01	Total/NA	Water	2320B-1997	
240-169224-7	B-0903-F-20220628-01	Total/NA	Water	2320B-1997	
240-169224-8	BOTTOM ASH POND-F-20220629-01	Total/NA	Water	2320B-1997	
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSI	Total/NA	Water	2320B-1997	
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSI	Total/NA	Water	2320B-1997	
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSI	Total/NA	Water	2320B-1997	
240-169224-12	RECLAIMPOND-F-20220629-01	Total/NA	Water	2320B-1997	
240-169224-13	RIVER-F-20220629-01	Total/NA	Water	2320B-1997	
MB 240-533680/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-533680/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-533680/29	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-533680/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-169224-3 DU	BAC-01-F-20220628-01	Total/NA	Water	2320B-1997	
240-169224-13 DU	RIVER-F-20220629-01	Total/NA	Water	2320B-1997	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

General Chemistry

Analysis Batch: 534735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-1	MW-6-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-2	DUP-001-MW-6-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-3	BAC-01-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-4	BAC-02-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-5	BAC-06-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-6	BAC-07-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-7	B-0903-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-8	BOTTOM ASH POND-F-20220629-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSI	Total/NA	Water	300.0-1993 R2.1	
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSI	Total/NA	Water	300.0-1993 R2.1	
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSI	Total/NA	Water	300.0-1993 R2.1	
240-169224-12	RECLAIMPOND-F-20220629-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-13	RIVER-F-20220629-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-534735/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-534735/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
240-169224-1 MS	MW-6-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	
240-169224-1 MSD	MW-6-F-20220628-01	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 572891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-1	MW-6-F-20220628-01	Total/NA	Water	PrecSep-21	
240-169224-2	DUP-001-MW-6-F-20220628-01	Total/NA	Water	PrecSep-21	
240-169224-3	BAC-01-F-20220628-01	Total/NA	Water	PrecSep-21	
240-169224-4	BAC-02-F-20220628-01	Total/NA	Water	PrecSep-21	
240-169224-5	BAC-06-F-20220628-01	Total/NA	Water	PrecSep-21	
240-169224-6	BAC-07-F-20220628-01	Total/NA	Water	PrecSep-21	
240-169224-7	B-0903-F-20220628-01	Total/NA	Water	PrecSep-21	
240-169224-8	BOTTOM ASH POND-F-20220629-01	Total/NA	Water	PrecSep-21	
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSI	Total/NA	Water	PrecSep-21	
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSI	Total/NA	Water	PrecSep-21	
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MSI	Total/NA	Water	PrecSep-21	
240-169224-12	RECLAIMPOND-F-20220629-01	Total/NA	Water	PrecSep-21	
240-169224-13	RIVER-F-20220629-01	Total/NA	Water	PrecSep-21	
MB 160-572891/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-572891/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-572891/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 572892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-1	MW-6-F-20220628-01	Total/NA	Water	PrecSep_0	
240-169224-2	DUP-001-MW-6-F-20220628-01	Total/NA	Water	PrecSep_0	
240-169224-3	BAC-01-F-20220628-01	Total/NA	Water	PrecSep_0	
240-169224-4	BAC-02-F-20220628-01	Total/NA	Water	PrecSep_0	
240-169224-5	BAC-06-F-20220628-01	Total/NA	Water	PrecSep_0	
240-169224-6	BAC-07-F-20220628-01	Total/NA	Water	PrecSep_0	
240-169224-7	B-0903-F-20220628-01	Total/NA	Water	PrecSep_0	
240-169224-8	BOTTOM ASH POND-F-20220629-01	Total/NA	Water	PrecSep_0	
240-169224-9	BOTTOM ASH POND-F-20220629-MS1 and MSI	Total/NA	Water	PrecSep_0	
240-169224-10	BOTTOM ASH POND-F-20220629-MS2 and MSI	Total/NA	Water	PrecSep_0	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Rad (Continued)

Prep Batch: 572892 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169224-11	BOTTOM ASH POND-F-20220629-MS3 and MS1	Total/NA	Water	PrecSep_0	
240-169224-12	RECLAIMPOND-F-20220629-01	Total/NA	Water	PrecSep_0	
240-169224-13	RIVER-F-20220629-01	Total/NA	Water	PrecSep_0	
MB 160-572892/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-572892/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-572892/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: MW-6-F-20220628-01

Lab Sample ID: 240-169224-1

Date Collected: 06/28/22 12:52

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:24	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:20	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 17:36	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/14/22 19:44	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:08	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573982	07/14/22 10:57	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: DUP-001-MW-6-F-20220628-01

Lab Sample ID: 240-169224-2

Date Collected: 06/28/22 12:59

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:36	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:30	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 17:40	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/14/22 20:49	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:08	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573982	07/14/22 10:57	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: BAC-01-F-20220628-01

Lab Sample ID: 240-169224-3

Date Collected: 06/28/22 13:36

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:38	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:32	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 17:56	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/14/22 21:11	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:08	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573982	07/14/22 10:57	FLC	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-01-F-20220628-01

Lab Sample ID: 240-169224-3

Date Collected: 06/28/22 13:36

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: BAC-02-F-20220628-01

Lab Sample ID: 240-169224-4

Date Collected: 06/28/22 14:58

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:46	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:34	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:01	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/14/22 21:32	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:09	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573982	07/14/22 10:57	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: BAC-06-F-20220628-01

Lab Sample ID: 240-169224-5

Date Collected: 06/28/22 15:49

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:48	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:36	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:05	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/14/22 21:54	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:10	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573982	07/14/22 10:57	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: BAC-07-F-20220628-01

Lab Sample ID: 240-169224-6

Date Collected: 06/28/22 16:35

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:51	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:38	MRL	TAL CAN

Eurofins Canton

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BAC-07-F-20220628-01

Lab Sample ID: 240-169224-6

Date Collected: 06/28/22 16:35

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:10	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/14/22 22:16	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:10	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573982	07/14/22 10:57	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: B-0903-F-20220628-01

Lab Sample ID: 240-169224-7

Date Collected: 06/28/22 17:26

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:53	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:41	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:14	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/14/22 23:21	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:10	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573979	07/14/22 11:01	EMH	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: BOTTOM ASH POND-F-20220629-01

Lab Sample ID: 240-169224-8

Date Collected: 06/29/22 17:38

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:55	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:43	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:18	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/14/22 23:43	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:10	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573979	07/14/22 11:01	EMH	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-MS1 and MSD1-01

Lab Sample ID: 240-169224-9

Date Collected: 06/29/22 17:40

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 12:58	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:45	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:22	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/15/22 00:04	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:10	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573979	07/14/22 11:02	EMH	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: BOTTOM ASH POND-F-20220629-MS2 and MSD2-01

Lab Sample ID: 240-169224-10

Date Collected: 06/29/22 17:42

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 13:00	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:51	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:26	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/15/22 00:26	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:11	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573979	07/14/22 11:02	EMH	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: BOTTOM ASH POND-F-20220629-MS3 and MSD3-01

Lab Sample ID: 240-169224-11

Date Collected: 06/29/22 17:44

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 13:03	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:53	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:30	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/15/22 00:48	JMB	TAL CAN

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Client Sample ID: BOTTOM ASH POND-F-20220629-MS3 and MSD3-01

Lab Sample ID: 240-169224-11

Date Collected: 06/29/22 17:44

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575778	07/30/22 07:11	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573979	07/14/22 11:02	EMH	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: RECLAIMPOND-F-20220629-01

Lab Sample ID: 240-169224-12

Date Collected: 06/29/22 18:10

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 13:05	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:55	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:34	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/15/22 01:09	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575779	07/30/22 07:25	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573979	07/14/22 11:03	EMH	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Client Sample ID: RIVER-F-20220629-01

Lab Sample ID: 240-169224-13

Date Collected: 06/29/22 18:20

Matrix: Water

Date Received: 07/01/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			533382	07/05/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	533690	07/06/22 13:08	AJC	TAL CAN
Total/NA	Prep	7470A			533383	07/05/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	533799	07/07/22 11:57	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	533680	07/05/22 18:42	MMS	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	534735	07/15/22 01:31	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			572891	07/06/22 13:46	MS	TAL SL
Total/NA	Analysis	9315		1	575779	07/30/22 07:25	CLP	TAL SL
Total/NA	Prep	PrecSep_0			572892	07/06/22 14:04	MS	TAL SL
Total/NA	Analysis	9320		1	573979	07/14/22 11:03	EMH	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	576055	08/01/22 14:50	SCB	TAL SL

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

TAL 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
 Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-20-22
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	07-24-22
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	07-27-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	07-01-22 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-22 *
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-169224-1

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
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22 *
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-22 *
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

1.7/1/2

Eurofins Canton
 180 S Van Buren Avenue
 Barberton, OH 44203
 Phone: 330-497-9396 Fax: 330-497-0772



Chain of Custody Record



Environment Testing America

Client Information		Lab PM: Cisneros, Roxanne		COC No: 240-94765-34853.2								
Company: Lightstone Generation Gavin Power LLC		E-Mail: roxanne.cisneros@et.eurofinsus.com		Page: Page 2 of 3								
Address: 7397 OH-7		State of Origin:		Job #:								
City: Cheshire		Compliance Project: Δ Yes Δ No		Preservation Codes:								
State: OH, 45620		PO #: 2935505		A - HCL								
Phone: 740-925-3171(Tel)		WOC #:		B - NaOH								
Email: taylor.huffman@lightstonegen.com		Project #:		C - Zn Acetate								
Project Name: Gavin CCR		24019633		D - Nitric Acid								
Site:		SSOW#:		E - NaHSO4								
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, On-water, As-ship)	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	300.0 28D - Fluoride	2320B - Alkalinity	9316_Ra226_9320_Ra228_Ra226Ra228_GFPc	Analysis Requested	Total Number of Containers	Special Instructions/Note:
MW-6-F-20220628-01	6-28-22	1252	G	Water	X	X					5	AP-1V
Dup-001-MW-6-F-20220628-01	6-28-22	1259	G	Water	X	X					5	
BAC-01-F-20220628-01	6-28-22	1336	G	Water	X	X					5	
BAC-02-F-20220628-01	6-28-22	1458	G	Water	X	X					5	
BAC-06-F-20220628-01	6-28-22	1549	G	Water	X	X					5	
BAC-07-F-20220628-01	6-28-22	1635	G	Water	X	X					5	
B-0903-F-20220628-01	6-28-22	1716	G	Water	X	X					5	
Bottom Ash Pond-F-20220629-01	6-29-22	1738	G	Water	X	X					5	
Bottom Ash Pond-F-20220629-MS140				Water	X	X					5	
Bottom Ash Pond-F-20220629-MS141	6-29-22	1740	G	Water	X	X					5	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological												
Deliverable Requested: I, II, III, IV, Other (specify)												
Empty Kit Relinquished by:												
Relinquished by: [Signature]												
Relinquished by: [Signature]												
Relinquished by: [Signature]												
Custody Seal No.: Δ Yes Δ No												
Custody Seals Intact:												
Cooler Temperature(s) °C and Other Remarks:												
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months												
Special Instructions/QC Requirements:												
Method of Shipment: Date/Time: 6-30-22 9:00 Date/Time: 7-1-22 9:50 Date/Time: [] Company: ETK Company: EETPC Company: []												





Chain of Custody Record

1-2-17

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eurolfins Environment Testing America

eurolfins

Client Information
 Client Contact: Taylor Huffman
 Company: Lightstone Generation Gavin Power LLC
 Address: 7387 OH-7
 City: Cheshire
 State, Zip: OH, 45620
 Phone: 740-925-317 (Tel)
 Email: taylor.huffman@lightstonegen.com
 Project Name: Gavin CCR
 Site:

Sampler: *Shain*
 Lab PM: Cisneros, Roxanne
 E-Mail: roxanne.cisneros@et.eurolfins.com
 Carrier Tracking No(s): 240-94765-34853.2
 State of Origin:
 Page: Page 2 of 3
 Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)		D	N	I	D	Total Number of Containers	Special Instructions/Note:
						300.0_28D - Fluoride	23208 - Alkalinity						
Bottom Ash Pond - F-20220629-MS2 And	6-29-22	1742	G	Water	X	X	6020, 7470A	1	1	1	1	5	AP-1V
Bottom Ash Pond - F-20220629-MS2 And	6-29-22	1742	G	Water	X	X	6020, 7470A	1	1	1	1	5	AP-1V
Bottom Ash Pond - F-20220629-MS2 And	6-29-22	1744	G	Water	X	X	6020, 7470A	1	1	1	1	5	AP-1V
Bottom Ash Pond - F-20220629-MS2 And	6-29-22	1810	G	Water	X	X	6020, 7470A	1	1	1	1	5	AP-1V
Bottom Ash Pond - F-20220629-MS3 And	6-29-22	1820	G	Water	X	X	6020, 7470A	1	1	1	1	5	AP-1V
Recycled Pond - F-20220629-01				Water									
River - F-20220629-01				Water									
				Water									
				Water									
				Water									
				Water									
				Water									

Analysis Requested
 Preservation Codes:
 A - HCL, 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, X - EDTA, Y - EDA, Z - other (specify)
 Other:

Special Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *Shain* Date: 6/30/22
 Relinquished by: *Shain* Date: 6/30/22
 Relinquished by: _____ Date: _____

Relinquished by: _____ Date: _____

Received by: _____ Date: 6-30-22
 Received by: *Shain* Date: 6-30-22
 Received by: _____ Date: _____

Company: *ETA*
 Company: *ETA*
 Company: _____

Method of Shipment:
 Cooler Temperature(s) °C and Other Remarks:
 Cooler Temperature(s) °C and Other Remarks:

Custody Seal No.: _____
 Δ Yes Δ No

Eurofins - Canton Sample Receipt Form/Narrative
Barberton Facility

Login # : 169224

Client Lightstone Site Name _____ Cooler unpacked by: Nancy Boyer
 Cooler Received on 7-1-22 Opened on 7-1-22
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 12 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# IR-13 (CF 0.0 °C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 1.2 °C
 IR GUN #IR-15 (CF -0.7°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
 -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 NA
 -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)? Yes No
 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# HC178690
 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 - Canton Sample Receipt Multiple Cooler Form										
Cooler Description (Circle)				IR Gun # (Circle)		Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA	Client	Box	Other	IR-13	IR-15	1.2	1.2	Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15	0.8	0.8	Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15	1.4	1.4	Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15	1.8	1.8	Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15	1.6	1.6	Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15	1.4	1.4	Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	
TA	Client	Box	Other	IR-13	IR-15			Wet Ice	Blue Ice	Dry Ice
								Water	None	

See Temperature Excursion Form

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
BOTTOMASHPOND-F-2022062 9-MSD3-01	240-169224-C-11	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
BOTTOMASHPOND-F-2022062 9-MSD3-01	240-169224-D-11	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
BOTTOMASHPOND-F-2022062 9-MSD3-01	240-169224-E-11	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220629--0 1	240-169224-C-12	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220629--0 1	240-169224-D-12	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RECLAIMPOND-F-20220629--0 1	240-169224-E-12	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RIVER-F-20220629-01	240-169224-C-13	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
RIVER-F-20220629-01	240-169224-D-13	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
RIVER-F-20220629-01	240-169224-E-13	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Eurofins Canton
 180 S. Van Buren Avenue
 Barberton, OH 44203
 Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record



Environment Testing
 America

Client Information (Sub Contract Lab)		Lab PM Cisneros, Roxanne	Carrier Tracking No(s) 240-154151.1								
Shipping/Receiving		State of Origin Ohio	COC No. 240-154151.1								
Company TestAmerica Laboratories, Inc.		Accreditations Required (See note):	Page Page 1 of 2								
Address 13715 Rider Trail North,		Job # 240-169224-1									
City Earth City		Preservation Codes:									
State, Zip MO, 63045		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 Other:									
Phone 314-298-8566(Tel) 314-298-8757(Fax)		M - Hexane N - None O - Ash/O2 P - Na2O/S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)									
Email											
Project Name Gavin CCR App IV											
Site SSOW#:											
Due Date Requested: 7/18/2022		Analysis Requested									
TAT Requested (days):											
PO #:											
WO #:											
Project # 24019633											
SSOW#:											
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315 Ra226/PreSep, 21 Radium-226 (GFPC)	9320 Ra228/PreSep, 0 Radium-228 (GFPC)	Ra228Ra226 GFPC/Combined Radium-226 and Radium-228	Total Number of Containers	Special Instructions/Note:
MW-6-F-20220628-01 (240-169224-1)	6/28/22	12:52 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
DUP-001-MW-6-F-20220628-01 (240-169224-2)	6/28/22	12:59 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-01-F-20220628-01 (240-169224-3)	6/28/22	13:36 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-02-F-20220628-01 (240-169224-4)	6/28/22	14:58 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-06-F-20220628-01 (240-169224-5)	6/28/22	15:49 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-07-F-20220628-01 (240-169224-6)	6/28/22	16:35 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
B-0903-F-20220628-01 (240-169224-7)	6/28/22	17:26 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BOTTOM ASH POND-F-20220629-01 (240-169224-8)	6/29/22	17:38 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BOTTOM ASH POND-F-20220629-MS1 and MSD1-01 (240-169224-8)	6/29/22	17:40 Eastern	Water	Water	X	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out 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/estimatix 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
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Empty Kit Relinquished by: _____
 Date: _____
 Primary Deliverable Rank: 2
 Special Instructions/QC Requirements: _____
 Method of Shipment: _____
 Time: _____
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Relinquished by: A.H.	Date/Time: 7-1-22	Company: ETA
Relinquished by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:
Custody Seals Intact: Yes No	Custody Seal No.:	
Received by: Sara Worthington	Date/Time: JUL 05 2022 0835	Company: ETA
Received by:	Date/Time:	Company:
Cooler Temperature(s) °C and Other Remarks:		



Eurofins Canton
 180 S. Van Buren Avenue
 Barborton, OH 44203
 Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab) Client Contact: Lab PM: Cisneros, Roxanne Shipping/Receiving: Phone: E-Mail: roxanne.cisneros@el.eurofins.com Company: Address: roxanne.cisneros@el.eurofins.com Ohio TestAmerica Laboratories, Inc. City: State of Origin: Address: 13715 Rider Trail North, City: Ohio City: State, Zip: MC, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:			Carrier Tracking No(s): COC No: 240-154151.2 Page: Page 2 of 2 Job #: 240-169224-1		
Due Date Requested: 7/18/2022 TAT Requested (days):			Preservation Codes: M - Hexane N - None O - AsNgO2 P - Na2O4S Q - Nitric Acid R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - Trizma Y - EDTA Z - other (specify) Other:		
Analysis Requested					
Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Field Filtered Sample (Yes or No)
BOTTOM ASH POND-F-20220629-MS2 and MSD2-01 (240-1692)	6/29/22	17:42 Eastern	Water	Water	Performs MS/MSD (Yes or No)
BOTTOM ASH POND-F-20220629-MS3 and MSD3-01 (240-1692)	6/29/22	17:44 Eastern	Water	Water	Performs MS/MSD (Yes or No)
RECLAIMPOND-F-20220629-01 (240-169224-12)	6/29/22	18:10 Eastern	Water	Water	Performs MS/MSD (Yes or No)
RIVER-F-20220629-01 (240-169224-13)	6/29/22	18:20 Eastern	Water	Water	Performs MS/MSD (Yes or No)
					Field Filtered Sample (Yes or No)
					9315_Ra228/PrecSep_21 Radium-226 (GFP)
					9320_Ra228/PrecSep_0 Radium-226 (GFP)
					Ra228Ra228_GFP/Combined Radium-226 and
					Radium-228
					Special Instructions/Note: Recount of TAR after 21 day ingrowth if > action limit; save planchet Recount of TAR after 21 day ingrowth if > action limit; save planchet Recount of TAR after 21 day ingrowth if > action limit; save planchet Recount of TAR after 21 day ingrowth if > action limit; save planchet
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out 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/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 Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2 Empty Kit Relinquished by: _____ Date: _____ Relinquished by: _____ Date: _____ Relinquished by: _____ Date: _____ Custody Seals Intact: _____ Custody Seal No.: _____ Δ Yes Δ No					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:					
Received by: _____ Date/Time: _____ Received by: Sana Worthington Date/Time: JUL 05 2022 0835 Received by: _____ Date/Time: _____ Cooler Temperature(s) °C and Other Remarks:					



Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-169224-1

Login Number: 169224

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 07/05/22 10:50 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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?	True	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-174590-1
Client Project/Site: Federal CCR Wells - App III

For:
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
10/28/2022 8:38:44 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

LINKS

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results through



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

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.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Job ID: 240-174590-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-174590-1

Receipt

The samples were received on 10/13/2022 9:43 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 0.1°C, 0.6°C, 0.7°C, 0.8°C, 1.1°C, 1.3°C and 2.0°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.



Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CAN
6020B	Metals (ICP/MS)	SW846	EET CAN
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-174590-1	BAC-21-F-20221010-01	Water	10/10/22 14:56	10/13/22 09:43
240-174590-2	BAC-09-F-20221011-01	Water	10/11/22 12:00	10/13/22 09:43
240-174590-3	BAC-23-F-20221011-01	Water	10/11/22 14:39	10/13/22 09:43
240-174590-4	BAC-22-F-20221012-01	Water	10/12/22 09:34	10/13/22 09:43
240-174590-5	BAC-08-F-20221012-01	Water	10/12/22 11:15	10/13/22 09:43
240-174590-6	BAC-13-F-20221012-01	Water	10/12/22 15:39	10/13/22 09:43

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-21-F-20221010-01

Lab Sample ID: 240-174590-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	330		100	57	ug/L	1		6010D	Total Recoverable
Calcium	130000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	29000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	72		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.059		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	140		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	550		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-09-F-20221011-01

Lab Sample ID: 240-174590-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	260		100	57	ug/L	1		6010D	Total Recoverable
Calcium	760000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	180000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	10000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2300000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	73		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	73		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	6700		50	14	mg/L	50		300.0	Total/NA
Fluoride	0.73		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	42		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	9500		100	78	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-23-F-20221011-01

Lab Sample ID: 240-174590-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	250		100	57	ug/L	1		6010D	Total Recoverable
Calcium	120000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	15000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	19000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	220		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	44		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.13		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	140		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	490		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-22-F-20221012-01

Lab Sample ID: 240-174590-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	200		100	57	ug/L	1		6010D	Total Recoverable
Calcium	140000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	18000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	2500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	21000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	49		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.077		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	220		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	640		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-08-F-20221012-01

Lab Sample ID: 240-174590-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	98	J	100	57	ug/L	1		6010D	Total Recoverable
Calcium	86000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	11000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	200		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	200		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	19		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.14		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	79		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	370		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-13-F-20221012-01

Lab Sample ID: 240-174590-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	290		100	57	ug/L	1		6010D	Total Recoverable
Calcium	170000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	37000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	6900		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	840000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	54		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	54		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1800		20	5.7	mg/L	20		300.0	Total/NA
Fluoride	0.65		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	3.1		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	2900		50	39	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-21-F-20221010-01

Lab Sample ID: 240-174590-1

Date Collected: 10/10/22 14:56

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	330		100	57	ug/L		10/14/22 12:00	10/19/22 03:14	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	130000		1000	580	ug/L		10/14/22 12:00	10/17/22 22:07	1
Magnesium	16000		1000	200	ug/L		10/14/22 12:00	10/17/22 22:07	1
Potassium	3300		1000	220	ug/L		10/14/22 12:00	10/17/22 22:07	1
Sodium	29000		1000	330	ug/L		10/14/22 12:00	10/17/22 22:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	230		5.0	2.6	mg/L			10/17/22 17:54	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	230		5.0	2.6	mg/L			10/17/22 17:54	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 17:54	1
Chloride (MCAWW 300.0)	72		1.0	0.28	mg/L			10/26/22 12:45	1
Fluoride (MCAWW 300.0)	0.059		0.050	0.024	mg/L			10/26/22 12:45	1
Sulfate (MCAWW 300.0)	140		1.0	0.35	mg/L			10/26/22 12:45	1
Total Dissolved Solids (SM 2540C)	550		10	7.8	mg/L			10/14/22 09:50	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-09-F-20221011-01

Lab Sample ID: 240-174590-2

Date Collected: 10/11/22 12:00

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	260		100	57	ug/L		10/14/22 12:00	10/19/22 03:18	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	760000		1000	580	ug/L		10/14/22 12:00	10/17/22 22:10	1
Magnesium	180000		1000	200	ug/L		10/14/22 12:00	10/17/22 22:10	1
Potassium	10000		1000	220	ug/L		10/14/22 12:00	10/17/22 22:10	1
Sodium	2300000		1000	330	ug/L		10/14/22 12:00	10/17/22 22:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	73		5.0	2.6	mg/L			10/17/22 18:12	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	73		5.0	2.6	mg/L			10/17/22 18:12	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 18:12	1
Chloride (MCAWW 300.0)	6700		50	14	mg/L			10/26/22 13:45	50
Fluoride (MCAWW 300.0)	0.73		0.25	0.12	mg/L			10/26/22 13:25	5
Sulfate (MCAWW 300.0)	42		5.0	1.7	mg/L			10/26/22 13:25	5
Total Dissolved Solids (SM 2540C)	9500		100	78	mg/L			10/17/22 10:10	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-23-F-20221011-01

Lab Sample ID: 240-174590-3

Date Collected: 10/11/22 14:39

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	250		100	57	ug/L		10/14/22 12:00	10/19/22 03:23	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	120000		1000	580	ug/L		10/14/22 12:00	10/17/22 22:12	1
Magnesium	15000		1000	200	ug/L		10/14/22 12:00	10/17/22 22:12	1
Potassium	1800		1000	220	ug/L		10/14/22 12:00	10/17/22 22:12	1
Sodium	19000		1000	330	ug/L		10/14/22 12:00	10/17/22 22:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	220		5.0	2.6	mg/L			10/17/22 18:16	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	220		5.0	2.6	mg/L			10/17/22 18:16	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/17/22 18:16	1
Chloride (MCAWW 300.0)	44		1.0	0.28	mg/L			10/26/22 14:05	1
Fluoride (MCAWW 300.0)	0.13		0.050	0.024	mg/L			10/26/22 14:05	1
Sulfate (MCAWW 300.0)	140		1.0	0.35	mg/L			10/26/22 14:05	1
Total Dissolved Solids (SM 2540C)	490		10	7.8	mg/L			10/17/22 10:10	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-22-F-20221012-01

Lab Sample ID: 240-174590-4

Date Collected: 10/12/22 09:34

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200		100	57	ug/L		10/14/22 12:00	10/19/22 02:54	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	140000		1000	580	ug/L		10/14/22 12:00	10/17/22 21:51	1
Magnesium	18000		1000	200	ug/L		10/14/22 12:00	10/17/22 21:51	1
Potassium	2500		1000	220	ug/L		10/14/22 12:00	10/17/22 21:51	1
Sodium	21000		1000	330	ug/L		10/14/22 12:00	10/17/22 21:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	230		5.0	2.6	mg/L			10/18/22 17:57	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	230		5.0	2.6	mg/L			10/18/22 17:57	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/18/22 17:57	1
Chloride (MCAWW 300.0)	49		1.0	0.28	mg/L			10/26/22 14:25	1
Fluoride (MCAWW 300.0)	0.077		0.050	0.024	mg/L			10/26/22 14:25	1
Sulfate (MCAWW 300.0)	220		5.0	1.7	mg/L			10/26/22 16:06	5
Total Dissolved Solids (SM 2540C)	640		10	7.8	mg/L			10/18/22 10:11	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-08-F-20221012-01

Lab Sample ID: 240-174590-5

Date Collected: 10/12/22 11:15

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	98	J	100	57	ug/L		10/14/22 12:00	10/19/22 03:35	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	86000		1000	580	ug/L		10/14/22 12:00	10/17/22 22:15	1
Magnesium	12000		1000	200	ug/L		10/14/22 12:00	10/17/22 22:15	1
Potassium	1200		1000	220	ug/L		10/14/22 12:00	10/17/22 22:15	1
Sodium	11000		1000	330	ug/L		10/14/22 12:00	10/17/22 22:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	200		5.0	2.6	mg/L			10/18/22 18:01	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	200		5.0	2.6	mg/L			10/18/22 18:01	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/18/22 18:01	1
Chloride (MCAWW 300.0)	19		1.0	0.28	mg/L			10/26/22 17:06	1
Fluoride (MCAWW 300.0)	0.14		0.050	0.024	mg/L			10/26/22 17:06	1
Sulfate (MCAWW 300.0)	79		1.0	0.35	mg/L			10/26/22 17:06	1
Total Dissolved Solids (SM 2540C)	370		10	7.8	mg/L			10/18/22 10:11	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-13-F-20221012-01

Lab Sample ID: 240-174590-6

Date Collected: 10/12/22 15:39

Matrix: Water

Date Received: 10/13/22 09:43

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	290		100	57	ug/L		10/14/22 12:00	10/19/22 03:40	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	170000		1000	580	ug/L		10/14/22 12:00	10/17/22 22:17	1
Magnesium	37000		1000	200	ug/L		10/14/22 12:00	10/17/22 22:17	1
Potassium	6900		1000	220	ug/L		10/14/22 12:00	10/17/22 22:17	1
Sodium	840000		1000	330	ug/L		10/14/22 12:00	10/17/22 22:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	54		5.0	2.6	mg/L			10/18/22 18:05	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	54		5.0	2.6	mg/L			10/18/22 18:05	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/18/22 18:05	1
Chloride (MCAWW 300.0)	1800		20	5.7	mg/L			10/26/22 17:47	20
Fluoride (MCAWW 300.0)	0.65		0.10	0.048	mg/L			10/26/22 17:26	2
Sulfate (MCAWW 300.0)	3.1		2.0	0.70	mg/L			10/26/22 17:26	2
Total Dissolved Solids (SM 2540C)	2900		50	39	mg/L			10/18/22 10:11	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-547165/1-A
Matrix: Water
Analysis Batch: 547695

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 547165

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/14/22 12:00	10/19/22 02:45	1

Lab Sample ID: LCS 240-547165/2-A
Matrix: Water
Analysis Batch: 547695

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 547165

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	955		ug/L		96	80 - 120

Lab Sample ID: 240-174590-4 MS
Matrix: Water
Analysis Batch: 547695

Client Sample ID: BAC-22-F-20221012-01
Prep Type: Total Recoverable
Prep Batch: 547165

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	200		1000	1190		ug/L		99	75 - 125

Lab Sample ID: 240-174590-4 MSD
Matrix: Water
Analysis Batch: 547695

Client Sample ID: BAC-22-F-20221012-01
Prep Type: Total Recoverable
Prep Batch: 547165

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	200		1000	1200		ug/L		100	75 - 125	1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-547165/1-A
Matrix: Water
Analysis Batch: 547508

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 547165

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/14/22 12:00	10/17/22 21:46	1
Magnesium	1000	U	1000	200	ug/L		10/14/22 12:00	10/17/22 21:46	1
Potassium	1000	U	1000	220	ug/L		10/14/22 12:00	10/17/22 21:46	1
Sodium	1000	U	1000	330	ug/L		10/14/22 12:00	10/17/22 21:46	1

Lab Sample ID: LCS 240-547165/3-A
Matrix: Water
Analysis Batch: 547508

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 547165

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	23400		ug/L		94	80 - 120
Magnesium	25000	23900		ug/L		95	80 - 120
Potassium	25000	23200		ug/L		93	80 - 120
Sodium	25000	24200		ug/L		97	80 - 120

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-174590-4 MS
Matrix: Water
Analysis Batch: 547508

Client Sample ID: BAC-22-F-20221012-01
Prep Type: Total Recoverable
Prep Batch: 547165

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Calcium	140000		25000	161000	4	ug/L		82	80 - 120	
Magnesium	18000		25000	40000		ug/L		86	80 - 120	
Potassium	2500		25000	24400		ug/L		88	80 - 120	
Sodium	21000		25000	42800		ug/L		88	80 - 120	

Lab Sample ID: 240-174590-4 MSD
Matrix: Water
Analysis Batch: 547508

Client Sample ID: BAC-22-F-20221012-01
Prep Type: Total Recoverable
Prep Batch: 547165

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits			
Calcium	140000		25000	174000	4	ug/L		134	80 - 120	8	20	
Magnesium	18000		25000	42800		ug/L		98	80 - 120	7	20	
Potassium	2500		25000	26300		ug/L		95	80 - 120	8	20	
Sodium	21000		25000	46000		ug/L		101	80 - 120	7	20	

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-547557/30
Matrix: Water
Analysis Batch: 547557

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/17/22 16:25	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 16:25	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 16:25	1

Lab Sample ID: MB 240-547557/4
Matrix: Water
Analysis Batch: 547557

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/17/22 14:38	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 14:38	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 14:38	1

Lab Sample ID: MB 240-547557/56
Matrix: Water
Analysis Batch: 547557

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/17/22 18:02	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 18:02	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/17/22 18:02	1

Lab Sample ID: LCS 240-547557/29
Matrix: Water
Analysis Batch: 547557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Total Alkalinity	146	141		mg/L		97	86 - 123	

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: LCS 240-547557/55
Matrix: Water
Analysis Batch: 547557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	146	139		mg/L		95	86 - 123

Lab Sample ID: 240-174590-2 DU
Matrix: Water
Analysis Batch: 547557

Client Sample ID: BAC-09-F-20221011-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	73		72.4		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	73		72.4		mg/L		2	20
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Lab Sample ID: MB 240-548052/3
Matrix: Water
Analysis Batch: 548052

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/18/22 16:24	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/18/22 16:24	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/18/22 16:24	1

Lab Sample ID: LCS 240-548052/2
Matrix: Water
Analysis Batch: 548052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	146	142		mg/L		97	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-548499/3
Matrix: Water
Analysis Batch: 548499

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.28	mg/L			10/26/22 07:43	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/26/22 07:43	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/26/22 07:43	1

Lab Sample ID: LCS 240-548499/4
Matrix: Water
Analysis Batch: 548499

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	2.54		mg/L		102	90 - 110
Sulfate	50.0	51.3		mg/L		103	90 - 110

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-174590-4 MS
Matrix: Water
Analysis Batch: 548499

Client Sample ID: BAC-22-F-20221012-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	49		50.0	101		mg/L		103	80 - 120
Fluoride	0.077		2.50	2.82		mg/L		110	80 - 120

Lab Sample ID: 240-174590-4 MS
Matrix: Water
Analysis Batch: 548499

Client Sample ID: BAC-22-F-20221012-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	220		250	468		mg/L		100	80 - 120

Lab Sample ID: 240-174590-4 MSD
Matrix: Water
Analysis Batch: 548499

Client Sample ID: BAC-22-F-20221012-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	49		50.0	101		mg/L		104	80 - 120	0	15
Fluoride	0.077		2.50	2.86		mg/L		111	80 - 120	1	15

Lab Sample ID: 240-174590-4 MSD
Matrix: Water
Analysis Batch: 548499

Client Sample ID: BAC-22-F-20221012-01
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	465		mg/L		99	80 - 120	1	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-547111/1
Matrix: Water
Analysis Batch: 547111

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	10	U	10	7.8	mg/L			10/14/22 09:50	1

Lab Sample ID: LCS 240-547111/2
Matrix: Water
Analysis Batch: 547111

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	493	470		mg/L		95	80 - 120

Lab Sample ID: MB 240-547342/1
Matrix: Water
Analysis Batch: 547342

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	1.0	U	1.0	0.78	mg/L			10/17/22 10:10	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-547342/2
Matrix: Water
Analysis Batch: 547342

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	493	474		mg/L		96	80 - 120

Lab Sample ID: MB 240-547564/1
Matrix: Water
Analysis Batch: 547564

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	10	U	10	7.8	mg/L			10/18/22 10:11	1

Lab Sample ID: LCS 240-547564/2
Matrix: Water
Analysis Batch: 547564

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	493	483		mg/L		98	80 - 120

Lab Sample ID: 240-174590-4 DU
Matrix: Water
Analysis Batch: 547564

Client Sample ID: BAC-22-F-20221012-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	640		623		mg/L		3	20

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Metals

Prep Batch: 547165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-1	BAC-21-F-20221010-01	Total Recoverable	Water	3005A	
240-174590-2	BAC-09-F-20221011-01	Total Recoverable	Water	3005A	
240-174590-3	BAC-23-F-20221011-01	Total Recoverable	Water	3005A	
240-174590-4	BAC-22-F-20221012-01	Total Recoverable	Water	3005A	
240-174590-5	BAC-08-F-20221012-01	Total Recoverable	Water	3005A	
240-174590-6	BAC-13-F-20221012-01	Total Recoverable	Water	3005A	
MB 240-547165/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-547165/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-547165/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-174590-4 MS	BAC-22-F-20221012-01	Total Recoverable	Water	3005A	
240-174590-4 MS	BAC-22-F-20221012-01	Total Recoverable	Water	3005A	
240-174590-4 MSD	BAC-22-F-20221012-01	Total Recoverable	Water	3005A	
240-174590-4 MSD	BAC-22-F-20221012-01	Total Recoverable	Water	3005A	

Analysis Batch: 547508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-1	BAC-21-F-20221010-01	Total Recoverable	Water	6020B	547165
240-174590-2	BAC-09-F-20221011-01	Total Recoverable	Water	6020B	547165
240-174590-3	BAC-23-F-20221011-01	Total Recoverable	Water	6020B	547165
240-174590-4	BAC-22-F-20221012-01	Total Recoverable	Water	6020B	547165
240-174590-5	BAC-08-F-20221012-01	Total Recoverable	Water	6020B	547165
240-174590-6	BAC-13-F-20221012-01	Total Recoverable	Water	6020B	547165
MB 240-547165/1-A	Method Blank	Total Recoverable	Water	6020B	547165
LCS 240-547165/3-A	Lab Control Sample	Total Recoverable	Water	6020B	547165
240-174590-4 MS	BAC-22-F-20221012-01	Total Recoverable	Water	6020B	547165
240-174590-4 MSD	BAC-22-F-20221012-01	Total Recoverable	Water	6020B	547165

Analysis Batch: 547695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-1	BAC-21-F-20221010-01	Total Recoverable	Water	6010D	547165
240-174590-2	BAC-09-F-20221011-01	Total Recoverable	Water	6010D	547165
240-174590-3	BAC-23-F-20221011-01	Total Recoverable	Water	6010D	547165
240-174590-4	BAC-22-F-20221012-01	Total Recoverable	Water	6010D	547165
240-174590-5	BAC-08-F-20221012-01	Total Recoverable	Water	6010D	547165
240-174590-6	BAC-13-F-20221012-01	Total Recoverable	Water	6010D	547165
MB 240-547165/1-A	Method Blank	Total Recoverable	Water	6010D	547165
LCS 240-547165/2-A	Lab Control Sample	Total Recoverable	Water	6010D	547165
240-174590-4 MS	BAC-22-F-20221012-01	Total Recoverable	Water	6010D	547165
240-174590-4 MSD	BAC-22-F-20221012-01	Total Recoverable	Water	6010D	547165

General Chemistry

Analysis Batch: 547111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-1	BAC-21-F-20221010-01	Total/NA	Water	SM 2540C	
MB 240-547111/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547111/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 547342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-2	BAC-09-F-20221011-01	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

General Chemistry (Continued)

Analysis Batch: 547342 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-3	BAC-23-F-20221011-01	Total/NA	Water	SM 2540C	
MB 240-547342/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547342/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 547557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-1	BAC-21-F-20221010-01	Total/NA	Water	2320B-1997	
240-174590-2	BAC-09-F-20221011-01	Total/NA	Water	2320B-1997	
240-174590-3	BAC-23-F-20221011-01	Total/NA	Water	2320B-1997	
MB 240-547557/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-547557/4	Method Blank	Total/NA	Water	2320B-1997	
MB 240-547557/56	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-547557/29	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-547557/55	Lab Control Sample	Total/NA	Water	2320B-1997	
240-174590-2 DU	BAC-09-F-20221011-01	Total/NA	Water	2320B-1997	

Analysis Batch: 547564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-4	BAC-22-F-20221012-01	Total/NA	Water	SM 2540C	
240-174590-5	BAC-08-F-20221012-01	Total/NA	Water	SM 2540C	
240-174590-6	BAC-13-F-20221012-01	Total/NA	Water	SM 2540C	
MB 240-547564/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547564/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-174590-4 DU	BAC-22-F-20221012-01	Total/NA	Water	SM 2540C	

Analysis Batch: 548052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-4	BAC-22-F-20221012-01	Total/NA	Water	2320B-1997	
240-174590-5	BAC-08-F-20221012-01	Total/NA	Water	2320B-1997	
240-174590-6	BAC-13-F-20221012-01	Total/NA	Water	2320B-1997	
MB 240-548052/3	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548052/2	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 548499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174590-1	BAC-21-F-20221010-01	Total/NA	Water	300.0	
240-174590-2	BAC-09-F-20221011-01	Total/NA	Water	300.0	
240-174590-2	BAC-09-F-20221011-01	Total/NA	Water	300.0	
240-174590-3	BAC-23-F-20221011-01	Total/NA	Water	300.0	
240-174590-4	BAC-22-F-20221012-01	Total/NA	Water	300.0	
240-174590-4	BAC-22-F-20221012-01	Total/NA	Water	300.0	
240-174590-5	BAC-08-F-20221012-01	Total/NA	Water	300.0	
240-174590-6	BAC-13-F-20221012-01	Total/NA	Water	300.0	
240-174590-6	BAC-13-F-20221012-01	Total/NA	Water	300.0	
MB 240-548499/3	Method Blank	Total/NA	Water	300.0	
LCS 240-548499/4	Lab Control Sample	Total/NA	Water	300.0	
240-174590-4 MS	BAC-22-F-20221012-01	Total/NA	Water	300.0	
240-174590-4 MS	BAC-22-F-20221012-01	Total/NA	Water	300.0	
240-174590-4 MSD	BAC-22-F-20221012-01	Total/NA	Water	300.0	
240-174590-4 MSD	BAC-22-F-20221012-01	Total/NA	Water	300.0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-21-F-20221010-01

Lab Sample ID: 240-174590-1

Date Collected: 10/10/22 14:56

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/19/22 03:14
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 22:07
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 17:54
Total/NA	Analysis	300.0		1	548499	JWW	EET CAN	10/26/22 12:45
Total/NA	Analysis	SM 2540C		1	547111	MS	EET CAN	10/14/22 09:50

Client Sample ID: BAC-09-F-20221011-01

Lab Sample ID: 240-174590-2

Date Collected: 10/11/22 12:00

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/19/22 03:18
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 22:10
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 18:12
Total/NA	Analysis	300.0		5	548499	JWW	EET CAN	10/26/22 13:25
Total/NA	Analysis	300.0		50	548499	JWW	EET CAN	10/26/22 13:45
Total/NA	Analysis	SM 2540C		1	547342	MS	EET CAN	10/17/22 10:10

Client Sample ID: BAC-23-F-20221011-01

Lab Sample ID: 240-174590-3

Date Collected: 10/11/22 14:39

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/19/22 03:23
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 22:12
Total/NA	Analysis	2320B-1997		1	547557	MMS	EET CAN	10/17/22 18:16
Total/NA	Analysis	300.0		1	548499	JWW	EET CAN	10/26/22 14:05
Total/NA	Analysis	SM 2540C		1	547342	MS	EET CAN	10/17/22 10:10

Client Sample ID: BAC-22-F-20221012-01

Lab Sample ID: 240-174590-4

Date Collected: 10/12/22 09:34

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/19/22 02:54
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 21:51

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1

Client Sample ID: BAC-22-F-20221012-01

Lab Sample ID: 240-174590-4

Date Collected: 10/12/22 09:34

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320B-1997		1	548052	JMB	EET CAN	10/18/22 17:57
Total/NA	Analysis	300.0		1	548499	JWW	EET CAN	10/26/22 14:25
Total/NA	Analysis	300.0		5	548499	JWW	EET CAN	10/26/22 16:06
Total/NA	Analysis	SM 2540C		1	547564	MS	EET CAN	10/18/22 10:11

Client Sample ID: BAC-08-F-20221012-01

Lab Sample ID: 240-174590-5

Date Collected: 10/12/22 11:15

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/19/22 03:35
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 22:15
Total/NA	Analysis	2320B-1997		1	548052	JMB	EET CAN	10/18/22 18:01
Total/NA	Analysis	300.0		1	548499	JWW	EET CAN	10/26/22 17:06
Total/NA	Analysis	SM 2540C		1	547564	MS	EET CAN	10/18/22 10:11

Client Sample ID: BAC-13-F-20221012-01

Lab Sample ID: 240-174590-6

Date Collected: 10/12/22 15:39

Matrix: Water

Date Received: 10/13/22 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6010D		1	547695	RKT	EET CAN	10/19/22 03:40
Total Recoverable	Prep	3005A			547165	SHB	EET CAN	10/14/22 12:00
Total Recoverable	Analysis	6020B		1	547508	DSH	EET CAN	10/17/22 22:17
Total/NA	Analysis	2320B-1997		1	548052	JMB	EET CAN	10/18/22 18:05
Total/NA	Analysis	300.0		2	548499	JWW	EET CAN	10/26/22 17:26
Total/NA	Analysis	300.0		20	548499	JWW	EET CAN	10/26/22 17:47
Total/NA	Analysis	SM 2540C		1	547564	MS	EET CAN	10/18/22 10:11

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174590-1


Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

Chain of Custody Record

Client Information		Lab PM: Cisneros, Roxanne		COC No: 240-93465-34577.1					
Client Contact: Bobby Caste		E-Mail: roxanne.cisneros@Eurofins.com		Page: Page 1 of 1					
Phone: 740-373-4308		State of Origin:		Job #:					
Company: Taylor Huffman		PWSID:		Camer Tracking No(s):					
Address: Lightstone Generation Gavin Power LLC		Due Date Requested:		Analysis Requested					
7397 OH-7		TAT Requested (days):		Preservation Codes:					
City: Cheshire		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		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 Other:					
State, Zip: OH, 45620		PC #: 2935505		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)					
Phone: 740-925-3171(Tel)		WO #:		Total Number of containers					
Email: taylor.huffman@lightstonegen.com		Project #: 24019633		Special Instructions/Note:					
Project Name: Federal CCR Wells - App III		SOW#:							
Site: Gav.h									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=oil, T=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calc'd, 300.0_28D	2320B - Alkalinity
BAC-21-F-20221010-01		10-10-22	1456	G	W	X	X	D	N
BAC-09-F-20221011-01		10-11-22	1200	G	W	X	X	N	N
BAC-23-F-20221011-01		10-11-22	1439	G	W	X	X	N	N
BAC-22-F-20221012-01		10-12-22	0934	G	W	X	X	N	N
BAC-22-F-20221012-MS		10-12-22	0934	G	W	X	X	N	N
BAC-22-F-20221012-MSD		10-12-22	0934	G	W	X	X	N	N
BAC-08-F-20221012-01		10-12-22	1115	G	W	X	X	N	N
BAC-13-F-20221012-01		10-12-22	1539	G	W	X	X	N	N



240-174590 Chain of Custody

<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by: _____ Date: _____ Time: _____		Special Instructions/QC Requirements: _____	
Relinquished by: <i>Bobby Caste</i> Date/Time: 10/13/22 0630 Company: KEMRON		Relinquished by: <i>Walter Ellett</i> Date/Time: 10/13/22 0630 Company: KEMRON	
Relinquished by: <i>Walter Ellett</i> Date/Time: 10/13/22 0543 Company: KEMRON		Relinquished by: <i>Walter Ellett</i> Date/Time: 10/13/22 0943 Company: KEMRON	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: _____	

Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Brandon

Cooler Received on 10-13-22 Opened on 10-13-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # HA 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# IR-13 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-15 (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)? Yes No
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# HC286797
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes ← 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 - Canton Sample Receipt Multiple Cooler Form									
Cooler Description (Circle)				IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
<u>TA</u>	<u>Client</u>	<u>Box</u>	<u>Other</u>	IR-13 IR-15	0.1	0.1	<u>Wet Ice</u>	Blue Ice	Dry Ice
							Water	None	
<u>TA</u>	<u>Client</u>	<u>Box</u>	<u>Other</u>	IR-13 IR-15	0.7	0.7	<u>Wet Ice</u>	Blue Ice	Dry Ice
							Water	None	
<u>TA</u>	<u>Client</u>	<u>Box</u>	<u>Other</u>	IR-13 IR-15	1.3	1.3	<u>Wet Ice</u>	Blue Ice	Dry Ice
							Water	None	
<u>TA</u>	<u>Client</u>	<u>Box</u>	<u>Other</u>	IR-13 IR-15	0.6	0.6	<u>Wet Ice</u>	Blue Ice	Dry Ice
							Water	None	
<u>TA</u>	<u>Client</u>	<u>Box</u>	<u>Other</u>	IR-13 IR-15	1.1	1.1	<u>Wet Ice</u>	Blue Ice	Dry Ice
							Water	None	
<u>TA</u>	<u>Client</u>	<u>Box</u>	<u>Other</u>	IR-13 IR-15	2.0	2.0	<u>Wet Ice</u>	Blue Ice	Dry Ice
							Water	None	
<u>TA</u>	<u>Client</u>	<u>Box</u>	<u>Other</u>	IR-13 IR-15	0.8	0.8	<u>Wet Ice</u>	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	

See Temperature Excursion Form



ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire Ohio 45620

Generated 11/22/2022 1:26:53 PM

JOB DESCRIPTION

Federal CCR Wells - App IV

JOB NUMBER

240-174841-1



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

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.
U	Indicates the analyte was analyzed for but not detected.

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.
U	Indicates the analyte was analyzed for but not detected.

Rad

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Job ID: 240-174841-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-174841-1

Comments

The SW846 Method 9315 Radium-226, SW846 Method 9320 Radium-228 (GFPC), and Ra226_Ra228 Combined Radium 226 and Radium 228 analyses were performed at the Eurofins St. Louis laboratory.

Receipt

The samples were received on 10/18/2022 12:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.1°C, 0.1°C, 0.1°C, 0.2°C, 0.7°C and 1.5°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 160-587124The following samples were prepared at a reduced aliquot due to Matrix: BAC-03-F-20221013-01 (240-174841-1), BAC-10-F-20221013-01 (240-174841-2), BAC-17-F-20221013-01 (240-174841-3), BAC-16-F-20221013-01 (240-174841-4), BAC-15-F-20221013-01 (240-174841-5), BAC-18-F-20221014-01 (240-174841-8) and B-0904-F-20221014-01 (240-174841-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method 9315_Ra226: Radium-226 batch 587124Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference DateBAC-03-F-20221013-01 (240-174841-1), BAC-10-F-20221013-01 (240-174841-2), BAC-17-F-20221013-01 (240-174841-3), BAC-16-F-20221013-01 (240-174841-4), BAC-15-F-20221013-01 (240-174841-5), BAC-07-F-20221014-01 (240-174841-6), BAC-19-F-20221014-01 (240-174841-7), BAC-18-F-20221014-01 (240-174841-8), B-0904-F-20221014-01 (240-174841-9), (LCS 160-587124/2-A), (LCSD 160-587124/3-A) and (MB 160-587124/1-A)

Method 9320_Ra228: Radium-228 Prep Batch 160-587133The following samples were prepared at a reduced aliquot due to Matrix: BAC-03-F-20221013-01 (240-174841-1), BAC-10-F-20221013-01 (240-174841-2), BAC-17-F-20221013-01 (240-174841-3), BAC-16-F-20221013-01 (240-174841-4), BAC-15-F-20221013-01 (240-174841-5), BAC-18-F-20221014-01 (240-174841-8) and B-0904-F-20221014-01 (240-174841-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method 9320_Ra228: Radium-228 batch 587133The detection goal was not met for the following sample(s). Samples were prepped at a reduced volume due to the presence of matrix interferences: BAC-03-F-20221013-01 (240-174841-1), BAC-10-F-20221013-01 (240-174841-2), BAC-17-F-20221013-01 (240-174841-3), BAC-16-F-20221013-01 (240-174841-4), BAC-15-F-20221013-01 (240-174841-5), BAC-18-F-20221014-01 (240-174841-8) and B-0904-F-20221014-01 (240-174841-9). Analytical results are reported with the detection limit achieved.

Method 9320_Ra228: Radium-228 batch 587133The LCS recovered at (136%). 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 (62-148%) per method requirements. The LCS passes, no further action is required (LCS 160-587133/2-A)

Method 9320_Ra228: Radium-228 batch 587133The LCS/LCSD precision was outside control limits however the recovery was within acceptable QC limits demonstrating method performance.(LCSD 160-587133/3-A)

Method 9320_Ra228: Radium-228 batch 587133Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Job ID: 240-174841-1 (Continued)

Laboratory: Eurofins Canton (Continued)

Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date BAC-03-F-20221013-01 (240-174841-1), BAC-10-F-20221013-01 (240-174841-2), BAC-17-F-20221013-01 (240-174841-3), BAC-16-F-20221013-01 (240-174841-4), BAC-15-F-20221013-01 (240-174841-5), BAC-07-F-20221014-01 (240-174841-6), BAC-19-F-20221014-01 (240-174841-7), BAC-18-F-20221014-01 (240-174841-8), B-0904-F-20221014-01 (240-174841-9), (LCS 160-587133/2-A), (LCSD 160-587133/3-A) and (MB 160-587133/1-A)

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.

- 1
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Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CAN
7470A	Mercury (CVAA)	SW846	EET CAN
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0-1993 R2.1	Anions, Ion Chromatography	EPA	EET CAN
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 CAN
7470A	Preparation, Mercury	SW846	EET CAN
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 CAN = Eurofins Canton, 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 - App IV

Job ID: 240-174841-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-174841-1	BAC-03-F-20221013-01	Water	10/13/22 10:16	10/18/22 12:05
240-174841-2	BAC-10-F-20221013-01	Water	10/13/22 11:47	10/18/22 12:05
240-174841-3	BAC-17-F-20221013-01	Water	10/13/22 13:09	10/18/22 12:05
240-174841-4	BAC-16-F-20221013-01	Water	10/13/22 14:09	10/18/22 12:05
240-174841-5	BAC-15-F-20221013-01	Water	10/13/22 14:54	10/18/22 12:05
240-174841-6	BAC-07-F-20221014-01	Water	10/14/22 10:31	10/18/22 12:05
240-174841-7	BAC-19-F-20221014-01	Water	10/14/22 12:07	10/18/22 12:05
240-174841-8	BAC-18-F-20221014-01	Water	10/14/22 13:06	10/18/22 12:05
240-174841-9	B-0904-F-20221014-01	Water	10/14/22 14:10	10/18/22 12:05

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-03-F-20221013-01

Lab Sample ID: 240-174841-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	11		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	180		5.0	2.2	ug/L	1		6020B	Total Recoverable
Beryllium	0.64	J	1.0	0.62	ug/L	1		6020B	Total Recoverable
Cadmium	0.22	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chromium	16		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	14		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	26		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	13		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	17000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	1.1	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	3400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	31000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.20	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	86		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	86		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.055		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-10-F-20221013-01

Lab Sample ID: 240-174841-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.57	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Arsenic	7.8		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	110		5.0	2.2	ug/L	1		6020B	Total Recoverable
Beryllium	1.8		1.0	0.62	ug/L	1		6020B	Total Recoverable
Cadmium	0.38	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chromium	9.2		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	10		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	6.9		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	8.9		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	28000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	1.4	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	2500		1000	220	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-10-F-20221013-01 (Continued)

Lab Sample ID: 240-174841-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	1.9	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	57000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	1.7		1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.16		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-17-F-20221013-01

Lab Sample ID: 240-174841-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.3	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	45		5.0	2.2	ug/L	1		6020B	Total Recoverable
Beryllium	1.3		1.0	0.62	ug/L	1		6020B	Total Recoverable
Cadmium	0.27	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Cobalt	41		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	1.5		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	5.5	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	30000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	22000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.53	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	44		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	44		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.088		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-16-F-20221013-01

Lab Sample ID: 240-174841-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	8.0		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	120		5.0	2.2	ug/L	1		6020B	Total Recoverable
Beryllium	0.86	J	1.0	0.62	ug/L	1		6020B	Total Recoverable
Cadmium	0.23	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chromium	13		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	9.9		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	7.8		1.0	0.45	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-16-F-20221013-01 (Continued)

Lab Sample ID: 240-174841-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	11		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	3.1	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	2800		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	1.4	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.27	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	170		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	170		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.056		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-15-F-20221013-01

Lab Sample ID: 240-174841-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.1	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Arsenic	42		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	400		5.0	2.2	ug/L	1		6020B	Total Recoverable
Beryllium	3.7		1.0	0.62	ug/L	1		6020B	Total Recoverable
Cadmium	0.77	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chromium	77		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	46		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	69		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	50		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	21000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	7.5		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	8700		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	3.9	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	11000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.79	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Mercury	0.22		0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	85		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	85		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.051		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174841-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.81	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Barium	47		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cobalt	1.5		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	4.9	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	1.8	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	1400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.074		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-19-F-20221014-01

Lab Sample ID: 240-174841-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.6	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Barium	420		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cobalt	0.22	J	1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	24		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	14000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	16		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	3200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	410000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	130		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	130		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.45		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-18-F-20221014-01

Lab Sample ID: 240-174841-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	55		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	3.2	J	5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	5.9		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	3.1		1.0	0.45	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-18-F-20221014-01 (Continued)

Lab Sample ID: 240-174841-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	7.5	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	1.2	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	92		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	92		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.049	J	0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: B-0904-F-20221014-01

Lab Sample ID: 240-174841-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	14		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	260		5.0	2.2	ug/L	1		6020B	Total Recoverable
Beryllium	1.4		1.0	0.62	ug/L	1		6020B	Total Recoverable
Cadmium	0.29	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chromium	43		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	13		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	18		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	23		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	13000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	2.2	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	4500		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	1.7	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	15000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.35	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Mercury	0.13	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	30		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	30		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.039	J	0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-03-F-20221013-01

Lab Sample ID: 240-174841-1

Date Collected: 10/13/22 10:16

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 18:28	1
Arsenic	11		5.0	0.75	ug/L		10/19/22 12:00	10/20/22 18:28	1
Barium	180		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 18:28	1
Beryllium	0.64	J	1.0	0.62	ug/L		10/19/22 12:00	10/20/22 18:28	1
Cadmium	0.22	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 18:28	1
Chromium	16		5.0	2.5	ug/L		10/19/22 12:00	10/20/22 18:28	1
Cobalt	14		1.0	0.19	ug/L		10/19/22 12:00	10/20/22 18:28	1
Lead	26		1.0	0.45	ug/L		10/19/22 12:00	10/20/22 18:28	1
Lithium	13		8.0	1.7	ug/L		10/19/22 12:00	10/20/22 18:28	1
Magnesium	17000		1000	200	ug/L		10/19/22 12:00	10/20/22 18:28	1
Molybdenum	1.1	J	5.0	1.1	ug/L		10/19/22 12:00	10/20/22 18:28	1
Potassium	3400		1000	220	ug/L		10/19/22 12:00	10/20/22 18:28	1
Selenium	5.0	U	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 18:28	1
Sodium	31000		1000	330	ug/L		10/19/22 12:00	10/20/22 18:28	1
Thallium	0.20	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 18:28	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	86		5.0	2.6	mg/L			10/24/22 15:54	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	86		5.0	2.6	mg/L			10/24/22 15:54	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 15:54	1
Fluoride (EPA 300.0-1993 R2.1)	0.055		0.050	0.024	mg/L			11/09/22 09:33	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.472	U	0.448	0.450	1.00	0.696	pCi/L	10/24/22 14:11	11/18/22 21:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					10/24/22 14:11	11/18/22 21:42	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	5.12	* G	1.90	1.96	1.00	2.36	pCi/L	10/24/22 14:34	11/15/22 09:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					10/24/22 14:34	11/15/22 09:50	1
Y Carrier	83.7		40 - 110					10/24/22 14:34	11/15/22 09:50	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-03-F-20221013-01

Lab Sample ID: 240-174841-1

Date Collected: 10/13/22 10:16

Matrix: Water

Date Received: 10/18/22 12:05

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	5.59		1.95	2.01	5.00	2.36	pCi/L		11/21/22 22:15	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-10-F-20221013-01

Lab Sample ID: 240-174841-2

Date Collected: 10/13/22 11:47

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.57	J	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 18:59	1
Arsenic	7.8		5.0	0.75	ug/L		10/19/22 12:00	10/20/22 18:59	1
Barium	110		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 18:59	1
Beryllium	1.8		1.0	0.62	ug/L		10/19/22 12:00	10/20/22 18:59	1
Cadmium	0.38	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 18:59	1
Chromium	9.2		5.0	2.5	ug/L		10/19/22 12:00	10/20/22 18:59	1
Cobalt	10		1.0	0.19	ug/L		10/19/22 12:00	10/20/22 18:59	1
Lead	6.9		1.0	0.45	ug/L		10/19/22 12:00	10/20/22 18:59	1
Lithium	8.9		8.0	1.7	ug/L		10/19/22 12:00	10/20/22 18:59	1
Magnesium	28000		1000	200	ug/L		10/19/22 12:00	10/20/22 18:59	1
Molybdenum	1.4	J	5.0	1.1	ug/L		10/19/22 12:00	10/20/22 18:59	1
Potassium	2500		1000	220	ug/L		10/19/22 12:00	10/20/22 18:59	1
Selenium	1.9	J	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 18:59	1
Sodium	57000		1000	330	ug/L		10/19/22 12:00	10/20/22 18:59	1
Thallium	1.7		1.0	0.20	ug/L		10/19/22 12:00	10/20/22 18:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	230		5.0	2.6	mg/L			10/24/22 15:58	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	230		5.0	2.6	mg/L			10/24/22 15:58	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 15:58	1
Fluoride (EPA 300.0-1993 R2.1)	0.16		0.050	0.024	mg/L			11/08/22 15:27	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	0.738		0.477	0.482	1.00	0.645	pCi/L	10/24/22 14:11	11/18/22 21:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					10/24/22 14:11	11/18/22 21:43	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	4.05	G *	1.72	1.76	1.00	2.25	pCi/L	10/24/22 14:34	11/15/22 09:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					10/24/22 14:34	11/15/22 09:50	1
Y Carrier	87.1		40 - 110					10/24/22 14:34	11/15/22 09:50	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-10-F-20221013-01

Lab Sample ID: 240-174841-2

Date Collected: 10/13/22 11:47

Matrix: Water

Date Received: 10/18/22 12:05

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	4.79		1.78	1.82	5.00	2.25	pCi/L		11/21/22 22:15	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-17-F-20221013-01

Lab Sample ID: 240-174841-3

Date Collected: 10/13/22 13:09

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 19:03	1
Arsenic	1.3	J	5.0	0.75	ug/L		10/19/22 12:00	10/20/22 19:03	1
Barium	45		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 19:03	1
Beryllium	1.3		1.0	0.62	ug/L		10/19/22 12:00	10/20/22 19:03	1
Cadmium	0.27	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:03	1
Chromium	5.0	U	5.0	2.5	ug/L		10/19/22 12:00	10/20/22 19:03	1
Cobalt	41		1.0	0.19	ug/L		10/19/22 12:00	10/20/22 19:03	1
Lead	1.5		1.0	0.45	ug/L		10/19/22 12:00	10/20/22 19:03	1
Lithium	5.5	J	8.0	1.7	ug/L		10/19/22 12:00	10/20/22 19:03	1
Magnesium	30000		1000	200	ug/L		10/19/22 12:00	10/20/22 19:03	1
Molybdenum	5.0	U	5.0	1.1	ug/L		10/19/22 12:00	10/20/22 19:03	1
Potassium	1300		1000	220	ug/L		10/19/22 12:00	10/20/22 19:03	1
Selenium	5.0	U	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 19:03	1
Sodium	22000		1000	330	ug/L		10/19/22 12:00	10/20/22 19:03	1
Thallium	0.53	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:03	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	44		5.0	2.6	mg/L			10/24/22 16:01	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	44		5.0	2.6	mg/L			10/24/22 16:01	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 16:01	1
Fluoride (EPA 300.0-1993 R2.1)	0.088		0.050	0.024	mg/L			11/08/22 16:07	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	0.247	U	0.201	0.202	1.00	0.297	pCi/L	10/24/22 14:11	11/19/22 09:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.2		40 - 110					10/24/22 14:11	11/19/22 09:27	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	3.80	* G	0.975	1.04	1.00	1.02	pCi/L	10/24/22 14:34	11/15/22 09:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.2		40 - 110					10/24/22 14:34	11/15/22 09:45	1
Y Carrier	86.7		40 - 110					10/24/22 14:34	11/15/22 09:45	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-17-F-20221013-01

Lab Sample ID: 240-174841-3

Date Collected: 10/13/22 13:09

Matrix: Water

Date Received: 10/18/22 12:05

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	4.04		0.996	1.06	5.00	1.02	pCi/L		11/21/22 22:15	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-16-F-20221013-01

Lab Sample ID: 240-174841-4

Date Collected: 10/13/22 14:09

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 19:16	1
Arsenic	8.0		5.0	0.75	ug/L		10/19/22 12:00	10/20/22 19:16	1
Barium	120		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 19:16	1
Beryllium	0.86	J	1.0	0.62	ug/L		10/19/22 12:00	10/20/22 19:16	1
Cadmium	0.23	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:16	1
Chromium	13		5.0	2.5	ug/L		10/19/22 12:00	10/20/22 19:16	1
Cobalt	9.9		1.0	0.19	ug/L		10/19/22 12:00	10/20/22 19:16	1
Lead	7.8		1.0	0.45	ug/L		10/19/22 12:00	10/20/22 19:16	1
Lithium	11		8.0	1.7	ug/L		10/19/22 12:00	10/20/22 19:16	1
Magnesium	21000		1000	200	ug/L		10/19/22 12:00	10/20/22 19:16	1
Molybdenum	3.1	J	5.0	1.1	ug/L		10/19/22 12:00	10/20/22 19:16	1
Potassium	2800		1000	220	ug/L		10/19/22 12:00	10/20/22 19:16	1
Selenium	1.4	J	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 19:16	1
Sodium	15000		1000	330	ug/L		10/19/22 12:00	10/20/22 19:16	1
Thallium	0.27	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:16	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	170		5.0	2.6	mg/L			10/24/22 16:05	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	170		5.0	2.6	mg/L			10/24/22 16:05	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 16:05	1
Fluoride (EPA 300.0-1993 R2.1)	0.056		0.050	0.024	mg/L			11/09/22 01:11	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.418	U	0.382	0.384	1.00	0.591	pCi/L	10/24/22 14:11	11/19/22 09:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					10/24/22 14:11	11/19/22 09:28	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	3.96	* G	1.55	1.60	1.00	1.97	pCi/L	10/24/22 14:34	11/15/22 09:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					10/24/22 14:34	11/15/22 09:45	1
Y Carrier	87.1		40 - 110					10/24/22 14:34	11/15/22 09:45	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-16-F-20221013-01

Lab Sample ID: 240-174841-4

Date Collected: 10/13/22 14:09

Matrix: Water

Date Received: 10/18/22 12:05

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	4.37		1.60	1.65	5.00	1.97	pCi/L		11/21/22 22:15	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-15-F-20221013-01

Lab Sample ID: 240-174841-5

Date Collected: 10/13/22 14:54

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.1	J	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 19:21	1
Arsenic	42		5.0	0.75	ug/L		10/19/22 12:00	10/20/22 19:21	1
Barium	400		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 19:21	1
Beryllium	3.7		1.0	0.62	ug/L		10/19/22 12:00	10/20/22 19:21	1
Cadmium	0.77	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:21	1
Chromium	77		5.0	2.5	ug/L		10/19/22 12:00	10/20/22 19:21	1
Cobalt	46		1.0	0.19	ug/L		10/19/22 12:00	10/20/22 19:21	1
Lead	69		1.0	0.45	ug/L		10/19/22 12:00	10/20/22 19:21	1
Lithium	50		8.0	1.7	ug/L		10/19/22 12:00	10/20/22 19:21	1
Magnesium	21000		1000	200	ug/L		10/19/22 12:00	10/20/22 19:21	1
Molybdenum	7.5		5.0	1.1	ug/L		10/19/22 12:00	10/20/22 19:21	1
Potassium	8700		1000	220	ug/L		10/19/22 12:00	10/20/22 19:21	1
Selenium	3.9	J	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 19:21	1
Sodium	11000		1000	330	ug/L		10/19/22 12:00	10/20/22 19:21	1
Thallium	0.79	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.22		0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	85		5.0	2.6	mg/L			10/24/22 16:09	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	85		5.0	2.6	mg/L			10/24/22 16:09	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 16:09	1
Fluoride (EPA 300.0-1993 R2.1)	0.051		0.050	0.024	mg/L			11/09/22 01:31	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	0.791		0.514	0.519	1.00	0.702	pCi/L	10/24/22 14:11	11/19/22 09:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.1		40 - 110					10/24/22 14:11	11/19/22 09:28	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	1.89	U * G	1.65	1.66	1.00	2.61	pCi/L	10/24/22 14:34	11/15/22 09:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.1		40 - 110					10/24/22 14:34	11/15/22 09:48	1
Y Carrier	90.1		40 - 110					10/24/22 14:34	11/15/22 09:48	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-15-F-20221013-01

Lab Sample ID: 240-174841-5

Date Collected: 10/13/22 14:54

Matrix: Water

Date Received: 10/18/22 12:05

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2 σ +/-)	Total Uncert. (2 σ +/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.68		1.73	1.74	5.00	2.61	pCi/L		11/21/22 22:15	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174841-6

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.81	J	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 19:25	1
Arsenic	5.0	U	5.0	0.75	ug/L		10/19/22 12:00	10/20/22 19:25	1
Barium	47		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 19:25	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/19/22 12:00	10/20/22 19:25	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:25	1
Chromium	5.0	U	5.0	2.5	ug/L		10/19/22 12:00	10/20/22 19:25	1
Cobalt	1.5		1.0	0.19	ug/L		10/19/22 12:00	10/20/22 19:25	1
Lead	1.0	U	1.0	0.45	ug/L		10/19/22 12:00	10/20/22 19:25	1
Lithium	4.9	J	8.0	1.7	ug/L		10/19/22 12:00	10/20/22 19:25	1
Magnesium	20000		1000	200	ug/L		10/19/22 12:00	10/20/22 19:25	1
Molybdenum	1.8	J	5.0	1.1	ug/L		10/19/22 12:00	10/20/22 19:25	1
Potassium	1400		1000	220	ug/L		10/19/22 12:00	10/20/22 19:25	1
Selenium	5.0	U	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 19:25	1
Sodium	15000		1000	330	ug/L		10/19/22 12:00	10/20/22 19:25	1
Thallium	1.0	U	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:25	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	140		5.0	2.6	mg/L			10/24/22 18:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	140		5.0	2.6	mg/L			10/24/22 18:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:00	1
Fluoride (EPA 300.0-1993 R2.1)	0.074		0.050	0.024	mg/L			11/09/22 01:51	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.0376	U	0.0847	0.0848	1.00	0.154	pCi/L	10/24/22 14:11	11/19/22 09:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					10/24/22 14:11	11/19/22 09:28	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	2.06	*	0.555	0.586	1.00	0.647	pCi/L	10/24/22 14:34	11/15/22 09:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					10/24/22 14:34	11/15/22 09:48	1
Y Carrier	87.9		40 - 110					10/24/22 14:34	11/15/22 09:48	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174841-6

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

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	2.10		0.561	0.592	5.00	0.647	pCi/L		11/21/22 22:15	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-19-F-20221014-01

Lab Sample ID: 240-174841-7

Date Collected: 10/14/22 12:07

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.6	J	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 19:30	1
Arsenic	5.0	U	5.0	0.75	ug/L		10/19/22 12:00	10/20/22 19:30	1
Barium	420		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 19:30	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/19/22 12:00	10/20/22 19:30	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:30	1
Chromium	5.0	U	5.0	2.5	ug/L		10/19/22 12:00	10/20/22 19:30	1
Cobalt	0.22	J	1.0	0.19	ug/L		10/19/22 12:00	10/20/22 19:30	1
Lead	1.0	U	1.0	0.45	ug/L		10/19/22 12:00	10/20/22 19:30	1
Lithium	24		8.0	1.7	ug/L		10/19/22 12:00	10/20/22 19:30	1
Magnesium	14000		1000	200	ug/L		10/19/22 12:00	10/20/22 19:30	1
Molybdenum	16		5.0	1.1	ug/L		10/19/22 12:00	10/20/22 19:30	1
Potassium	3200		1000	220	ug/L		10/19/22 12:00	10/20/22 19:30	1
Selenium	5.0	U	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 19:30	1
Sodium	410000		1000	330	ug/L		10/19/22 12:00	10/20/22 19:30	1
Thallium	1.0	U	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:30	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	130		5.0	2.6	mg/L			10/24/22 18:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	130		5.0	2.6	mg/L			10/24/22 18:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:04	1
Fluoride (EPA 300.0-1993 R2.1)	0.45		0.050	0.024	mg/L			11/09/22 02:11	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	0.346		0.151	0.154	1.00	0.180	pCi/L	10/24/22 14:11	11/19/22 09:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					10/24/22 14:11	11/19/22 09:28	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	3.53	*	0.647	0.724	1.00	0.536	pCi/L	10/24/22 14:34	11/15/22 09:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.3		40 - 110					10/24/22 14:34	11/15/22 09:48	1
Y Carrier	85.2		40 - 110					10/24/22 14:34	11/15/22 09:48	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-19-F-20221014-01

Lab Sample ID: 240-174841-7

Date Collected: 10/14/22 12:07

Matrix: Water

Date Received: 10/18/22 12:05

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	3.87		0.664	0.740	5.00	0.536	pCi/L		11/21/22 22:15	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-18-F-20221014-01

Lab Sample ID: 240-174841-8

Date Collected: 10/14/22 13:06

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 19:34	1
Arsenic	1.8	J	5.0	0.75	ug/L		10/19/22 12:00	10/20/22 19:34	1
Barium	55		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 19:34	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/19/22 12:00	10/20/22 19:34	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:34	1
Chromium	3.2	J	5.0	2.5	ug/L		10/19/22 12:00	10/20/22 19:34	1
Cobalt	5.9		1.0	0.19	ug/L		10/19/22 12:00	10/20/22 19:34	1
Lead	3.1		1.0	0.45	ug/L		10/19/22 12:00	10/20/22 19:34	1
Lithium	7.5	J	8.0	1.7	ug/L		10/19/22 12:00	10/20/22 19:34	1
Magnesium	20000		1000	200	ug/L		10/19/22 12:00	10/20/22 19:34	1
Molybdenum	1.2	J	5.0	1.1	ug/L		10/19/22 12:00	10/20/22 19:34	1
Potassium	1600		1000	220	ug/L		10/19/22 12:00	10/20/22 19:34	1
Selenium	5.0	U	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 19:34	1
Sodium	15000		1000	330	ug/L		10/19/22 12:00	10/20/22 19:34	1
Thallium	1.0	U	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:34	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	92		5.0	2.6	mg/L			10/24/22 18:08	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	92		5.0	2.6	mg/L			10/24/22 18:08	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:08	1
Fluoride (EPA 300.0-1993 R2.1)	0.049	J	0.050	0.024	mg/L			11/09/22 02:51	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	0.213	U	0.202	0.203	1.00	0.314	pCi/L	10/24/22 14:11	11/19/22 09:28	1
Carrier	%Yield	Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110				10/24/22 14:11		11/19/22 09:28	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	2.27	* G	0.903	0.927	1.00	1.19	pCi/L	10/24/22 14:34	11/15/22 09:48	1
Carrier	%Yield	Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110				10/24/22 14:34		11/15/22 09:48	1
Y Carrier	85.6		40 - 110				10/24/22 14:34		11/15/22 09:48	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-18-F-20221014-01

Lab Sample ID: 240-174841-8

Date Collected: 10/14/22 13:06

Matrix: Water

Date Received: 10/18/22 12:05

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	2.48		0.925	0.949	5.00	1.19	pCi/L		11/21/22 22:15	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: B-0904-F-20221014-01

Lab Sample ID: 240-174841-9

Date Collected: 10/14/22 14:10

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 19:38	1
Arsenic	14		5.0	0.75	ug/L		10/19/22 12:00	10/20/22 19:38	1
Barium	260		5.0	2.2	ug/L		10/19/22 12:00	10/20/22 19:38	1
Beryllium	1.4		1.0	0.62	ug/L		10/19/22 12:00	10/20/22 19:38	1
Cadmium	0.29	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:38	1
Chromium	43		5.0	2.5	ug/L		10/19/22 12:00	10/20/22 19:38	1
Cobalt	13		1.0	0.19	ug/L		10/19/22 12:00	10/20/22 19:38	1
Lead	18		1.0	0.45	ug/L		10/19/22 12:00	10/20/22 19:38	1
Lithium	23		8.0	1.7	ug/L		10/19/22 12:00	10/20/22 19:38	1
Magnesium	13000		1000	200	ug/L		10/19/22 12:00	10/20/22 19:38	1
Molybdenum	2.2	J	5.0	1.1	ug/L		10/19/22 12:00	10/20/22 19:38	1
Potassium	4500		1000	220	ug/L		10/19/22 12:00	10/20/22 19:38	1
Selenium	1.7	J	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 19:38	1
Sodium	15000		1000	330	ug/L		10/19/22 12:00	10/20/22 19:38	1
Thallium	0.35	J	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 19:38	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13	J	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	30		5.0	2.6	mg/L			10/24/22 18:15	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	30		5.0	2.6	mg/L			10/24/22 18:15	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:15	1
Fluoride (EPA 300.0-1993 R2.1)	0.039	J	0.050	0.024	mg/L			11/09/22 07:13	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	0.737		0.476	0.481	1.00	0.644	pCi/L	10/24/22 14:11	11/19/22 09:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.0		40 - 110					10/24/22 14:11	11/19/22 09:28	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	9.29	* G	2.23	2.39	1.00	2.26	pCi/L	10/24/22 14:34	11/15/22 09:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.0		40 - 110					10/24/22 14:34	11/15/22 09:49	1
Y Carrier	92.3		40 - 110					10/24/22 14:34	11/15/22 09:49	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: B-0904-F-20221014-01

Lab Sample ID: 240-174841-9

Date Collected: 10/14/22 14:10

Matrix: Water

Date Received: 10/18/22 12:05

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	10.0		2.28	2.44	5.00	2.26	pCi/L		11/21/22 22:15	1

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Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
240-174841-1	BAC-03-F-20221013-01	77.5	
240-174841-2	BAC-10-F-20221013-01	84.6	
240-174841-3	BAC-17-F-20221013-01	90.2	
240-174841-4	BAC-16-F-20221013-01	91.4	
240-174841-5	BAC-15-F-20221013-01	71.1	
240-174841-6	BAC-07-F-20221014-01	88.7	
240-174841-7	BAC-19-F-20221014-01	85.3	
240-174841-8	BAC-18-F-20221014-01	90.4	
240-174841-9	B-0904-F-20221014-01	77.0	
LCS 160-587124/2-A	Lab Control Sample	91.4	
LCSD 160-587124/3-A	Lab Control Sample Dup	89.0	
MB 160-587124/1-A	Method Blank	96.6	
Tracer/Carrier Legend			
Ba = Ba Carrier			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
240-174841-1	BAC-03-F-20221013-01	77.5	83.7
240-174841-2	BAC-10-F-20221013-01	84.6	87.1
240-174841-3	BAC-17-F-20221013-01	90.2	86.7
240-174841-4	BAC-16-F-20221013-01	91.4	87.1
240-174841-5	BAC-15-F-20221013-01	71.1	90.1
240-174841-6	BAC-07-F-20221014-01	88.7	87.9
240-174841-7	BAC-19-F-20221014-01	85.3	85.2
240-174841-8	BAC-18-F-20221014-01	90.4	85.6
240-174841-9	B-0904-F-20221014-01	77.0	92.3
LCS 160-587133/2-A	Lab Control Sample	91.4	81.9
LCSD 160-587133/3-A	Lab Control Sample Dup	89.0	82.6
MB 160-587133/1-A	Method Blank	96.6	80.7
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-547765/1-A
Matrix: Water
Analysis Batch: 548140

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 547765

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	2.0	U	2.0	0.57	ug/L		10/19/22 12:00	10/20/22 18:07	1
Arsenic	5.0	U	5.0	0.75	ug/L		10/19/22 12:00	10/20/22 18:07	1
Barium	5.0	U	5.0	2.2	ug/L		10/19/22 12:00	10/20/22 18:07	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/19/22 12:00	10/20/22 18:07	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 18:07	1
Chromium	5.0	U	5.0	2.5	ug/L		10/19/22 12:00	10/20/22 18:07	1
Cobalt	1.0	U	1.0	0.19	ug/L		10/19/22 12:00	10/20/22 18:07	1
Lead	1.0	U	1.0	0.45	ug/L		10/19/22 12:00	10/20/22 18:07	1
Lithium	8.0	U	8.0	1.7	ug/L		10/19/22 12:00	10/20/22 18:07	1
Magnesium	1000	U	1000	200	ug/L		10/19/22 12:00	10/20/22 18:07	1
Molybdenum	5.0	U	5.0	1.1	ug/L		10/19/22 12:00	10/20/22 18:07	1
Potassium	1000	U	1000	220	ug/L		10/19/22 12:00	10/20/22 18:07	1
Selenium	5.0	U	5.0	0.89	ug/L		10/19/22 12:00	10/20/22 18:07	1
Sodium	1000	U	1000	330	ug/L		10/19/22 12:00	10/20/22 18:07	1
Thallium	1.0	U	1.0	0.20	ug/L		10/19/22 12:00	10/20/22 18:07	1

Lab Sample ID: LCS 240-547765/2-A
Matrix: Water
Analysis Batch: 548140

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 547765

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	922		ug/L		92	80 - 120
Barium	1000	891		ug/L		89	80 - 120
Beryllium	500	464		ug/L		93	80 - 120
Cadmium	500	462		ug/L		92	80 - 120
Chromium	500	462		ug/L		92	80 - 120
Cobalt	500	464		ug/L		93	80 - 120
Lead	500	461		ug/L		92	80 - 120
Lithium	500	456		ug/L		91	80 - 120
Magnesium	25000	23700		ug/L		95	80 - 120
Molybdenum	500	453		ug/L		91	80 - 120
Potassium	25000	23800		ug/L		95	80 - 120
Selenium	1000	920		ug/L		92	80 - 120
Sodium	25000	23800		ug/L		95	80 - 120
Thallium	1000	934		ug/L		93	80 - 120

Lab Sample ID: 240-174841-1 MS
Matrix: Water
Analysis Batch: 548140

Client Sample ID: BAC-03-F-20221013-01
Prep Type: Total Recoverable
Prep Batch: 547765

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	11		1000	905		ug/L		89	80 - 120
Barium	180		1000	1070		ug/L		89	80 - 120
Beryllium	0.64	J	500	440		ug/L		88	80 - 120
Cadmium	0.22	J	500	447		ug/L		89	80 - 120
Chromium	16		500	461		ug/L		89	80 - 120
Cobalt	14		500	450		ug/L		87	80 - 120

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-174841-1 MS
Matrix: Water
Analysis Batch: 548140

Client Sample ID: BAC-03-F-20221013-01
Prep Type: Total Recoverable
Prep Batch: 547765

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Lead	26		500	465		ug/L		88	80 - 120	
Lithium	13		500	454		ug/L		88	80 - 120	
Magnesium	17000		25000	40300		ug/L		95	80 - 120	
Molybdenum	1.1	J	500	453		ug/L		90	80 - 120	
Potassium	3400		25000	27400		ug/L		96	80 - 120	
Selenium	5.0	U	1000	875		ug/L		87	80 - 120	
Sodium	31000		25000	54000		ug/L		94	80 - 120	
Thallium	0.20	J	1000	894		ug/L		89	80 - 120	

Lab Sample ID: 240-174841-1 MSD
Matrix: Water
Analysis Batch: 548140

Client Sample ID: BAC-03-F-20221013-01
Prep Type: Total Recoverable
Prep Batch: 547765

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
Antimony	2.0	U	100	98.3		ug/L		98	80 - 120		3	20
Arsenic	11		1000	933		ug/L		92	80 - 120		3	20
Barium	180		1000	1110		ug/L		92	80 - 120		4	20
Beryllium	0.64	J	500	445		ug/L		89	80 - 120		1	20
Cadmium	0.22	J	500	459		ug/L		92	80 - 120		3	20
Chromium	16		500	473		ug/L		91	80 - 120		3	20
Cobalt	14		500	465		ug/L		90	80 - 120		3	20
Lead	26		500	474		ug/L		90	80 - 120		2	20
Lithium	13		500	461		ug/L		90	80 - 120		2	20
Magnesium	17000		25000	41800		ug/L		101	80 - 120		4	20
Molybdenum	1.1	J	500	469		ug/L		94	80 - 120		3	20
Potassium	3400		25000	28100		ug/L		99	80 - 120		3	20
Selenium	5.0	U	1000	901		ug/L		90	80 - 120		3	20
Sodium	31000		25000	55700		ug/L		100	80 - 120		3	20
Thallium	0.20	J	1000	921		ug/L		92	80 - 120		3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-547766/1-A
Matrix: Water
Analysis Batch: 548036

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 547766

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Mercury	0.20	U	0.20	0.13	ug/L		10/19/22 12:00	10/20/22 14:27		1

Lab Sample ID: LCS 240-547766/2-A
Matrix: Water
Analysis Batch: 548036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 547766

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec	
							Result	Qualifier
Mercury	5.00	5.18		ug/L		104	80 - 120	

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-174841-1 MS
 Matrix: Water
 Analysis Batch: 548036

Client Sample ID: BAC-03-F-20221013-01
 Prep Type: Total/NA
 Prep Batch: 547766

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U	1.00	1.18		ug/L		118	80 - 120

Lab Sample ID: 240-174841-1 MSD
 Matrix: Water
 Analysis Batch: 548036

Client Sample ID: BAC-03-F-20221013-01
 Prep Type: Total/NA
 Prep Batch: 547766

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.20	U	1.00	1.07		ug/L		107	80 - 120	9	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548679/30
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1

Lab Sample ID: MB 240-548679/56
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1

Lab Sample ID: MB 240-548679/83
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1

Lab Sample ID: LCS 240-548679/55
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	146	141		mg/L		97	86 - 123

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: LCS 240-548679/82
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	146	139		mg/L		96	86 - 123

Lab Sample ID: 240-174841-8 DU
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: BAC-18-F-20221014-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	92		93.5		mg/L		1	20
Bicarbonate Alkalinity as CaCO3	92		93.5		mg/L		1	20
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-550924/15
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	0.024	mg/L			11/08/22 17:08	1

Lab Sample ID: MB 240-550924/3
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	0.024	mg/L			11/08/22 13:06	1

Lab Sample ID: LCS 240-550924/16
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.52		mg/L		101	90 - 110

Lab Sample ID: LCS 240-550924/4
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.56		mg/L		103	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-587124/1-A
 Matrix: Water
 Analysis Batch: 590568

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 587124

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0000	U	0.0837	0.0837	1.00	0.171	pCi/L	10/24/22 14:11	11/18/22 21:40	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: MB 160-587124/1-A
 Matrix: Water
 Analysis Batch: 590568

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 587124

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.6		40 - 110	10/24/22 14:11	11/18/22 21:40	1

Lab Sample ID: LCS 160-587124/2-A
 Matrix: Water
 Analysis Batch: 590568

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 587124

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.07		1.12	1.00	0.138	pCi/L	89	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.4		40 - 110

Lab Sample ID: LCSD 160-587124/3-A
 Matrix: Water
 Analysis Batch: 590568

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 587124

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	Limit
Radium-226	11.3	10.39		1.15	1.00	0.171	pCi/L	92	75 - 125	0.14	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	89.0		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-587133/1-A
 Matrix: Water
 Analysis Batch: 590174

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 587133

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2088	U	0.364	0.364	1.00	0.623	pCi/L	10/24/22 14:34	11/15/22 10:17	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.6		40 - 110	10/24/22 14:34	11/15/22 10:17	1
Y Carrier	80.7		40 - 110	10/24/22 14:34	11/15/22 10:17	1

Lab Sample ID: LCS 160-587133/2-A
 Matrix: Water
 Analysis Batch: 590174

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 587133

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.44	11.49		1.53	1.00	0.629	pCi/L	136	75 - 125

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-587133/2-A
Matrix: Water
Analysis Batch: 590174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 587133

Carrier	LCS		Limits
	%Yield	Qualifier	
Ba Carrier	91.4		40 - 110
Y Carrier	81.9		40 - 110

Lab Sample ID: LCSD 160-587133/3-A
Matrix: Water
Analysis Batch: 590174

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 587133

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec		RER
									Limits	RER	Limit
Radium-228	8.44	6.398	*	1.04	1.00	0.620	pCi/L	76	75 - 125	1.98	1

Carrier	LCSD		Limits
	%Yield	Qualifier	
Ba Carrier	89.0		40 - 110
Y Carrier	82.6		40 - 110

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Metals

Prep Batch: 547765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-1	BAC-03-F-20221013-01	Total Recoverable	Water	3005A	
240-174841-2	BAC-10-F-20221013-01	Total Recoverable	Water	3005A	
240-174841-3	BAC-17-F-20221013-01	Total Recoverable	Water	3005A	
240-174841-4	BAC-16-F-20221013-01	Total Recoverable	Water	3005A	
240-174841-5	BAC-15-F-20221013-01	Total Recoverable	Water	3005A	
240-174841-6	BAC-07-F-20221014-01	Total Recoverable	Water	3005A	
240-174841-7	BAC-19-F-20221014-01	Total Recoverable	Water	3005A	
240-174841-8	BAC-18-F-20221014-01	Total Recoverable	Water	3005A	
240-174841-9	B-0904-F-20221014-01	Total Recoverable	Water	3005A	
MB 240-547765/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-547765/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-174841-1 MS	BAC-03-F-20221013-01	Total Recoverable	Water	3005A	
240-174841-1 MSD	BAC-03-F-20221013-01	Total Recoverable	Water	3005A	

Prep Batch: 547766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-1	BAC-03-F-20221013-01	Total/NA	Water	7470A	
240-174841-2	BAC-10-F-20221013-01	Total/NA	Water	7470A	
240-174841-3	BAC-17-F-20221013-01	Total/NA	Water	7470A	
240-174841-4	BAC-16-F-20221013-01	Total/NA	Water	7470A	
240-174841-5	BAC-15-F-20221013-01	Total/NA	Water	7470A	
240-174841-6	BAC-07-F-20221014-01	Total/NA	Water	7470A	
240-174841-7	BAC-19-F-20221014-01	Total/NA	Water	7470A	
240-174841-8	BAC-18-F-20221014-01	Total/NA	Water	7470A	
240-174841-9	B-0904-F-20221014-01	Total/NA	Water	7470A	
MB 240-547766/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-547766/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-174841-1 MS	BAC-03-F-20221013-01	Total/NA	Water	7470A	
240-174841-1 MSD	BAC-03-F-20221013-01	Total/NA	Water	7470A	

Analysis Batch: 548036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-1	BAC-03-F-20221013-01	Total/NA	Water	7470A	547766
240-174841-2	BAC-10-F-20221013-01	Total/NA	Water	7470A	547766
240-174841-3	BAC-17-F-20221013-01	Total/NA	Water	7470A	547766
240-174841-4	BAC-16-F-20221013-01	Total/NA	Water	7470A	547766
240-174841-5	BAC-15-F-20221013-01	Total/NA	Water	7470A	547766
240-174841-6	BAC-07-F-20221014-01	Total/NA	Water	7470A	547766
240-174841-7	BAC-19-F-20221014-01	Total/NA	Water	7470A	547766
240-174841-8	BAC-18-F-20221014-01	Total/NA	Water	7470A	547766
240-174841-9	B-0904-F-20221014-01	Total/NA	Water	7470A	547766
MB 240-547766/1-A	Method Blank	Total/NA	Water	7470A	547766
LCS 240-547766/2-A	Lab Control Sample	Total/NA	Water	7470A	547766
240-174841-1 MS	BAC-03-F-20221013-01	Total/NA	Water	7470A	547766
240-174841-1 MSD	BAC-03-F-20221013-01	Total/NA	Water	7470A	547766

Analysis Batch: 548140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-1	BAC-03-F-20221013-01	Total Recoverable	Water	6020B	547765
240-174841-2	BAC-10-F-20221013-01	Total Recoverable	Water	6020B	547765
240-174841-3	BAC-17-F-20221013-01	Total Recoverable	Water	6020B	547765

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Metals (Continued)

Analysis Batch: 548140 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-4	BAC-16-F-20221013-01	Total Recoverable	Water	6020B	547765
240-174841-5	BAC-15-F-20221013-01	Total Recoverable	Water	6020B	547765
240-174841-6	BAC-07-F-20221014-01	Total Recoverable	Water	6020B	547765
240-174841-7	BAC-19-F-20221014-01	Total Recoverable	Water	6020B	547765
240-174841-8	BAC-18-F-20221014-01	Total Recoverable	Water	6020B	547765
240-174841-9	B-0904-F-20221014-01	Total Recoverable	Water	6020B	547765
MB 240-547765/1-A	Method Blank	Total Recoverable	Water	6020B	547765
LCS 240-547765/2-A	Lab Control Sample	Total Recoverable	Water	6020B	547765
240-174841-1 MS	BAC-03-F-20221013-01	Total Recoverable	Water	6020B	547765
240-174841-1 MSD	BAC-03-F-20221013-01	Total Recoverable	Water	6020B	547765

General Chemistry

Analysis Batch: 548679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-1	BAC-03-F-20221013-01	Total/NA	Water	2320B-1997	
240-174841-2	BAC-10-F-20221013-01	Total/NA	Water	2320B-1997	
240-174841-3	BAC-17-F-20221013-01	Total/NA	Water	2320B-1997	
240-174841-4	BAC-16-F-20221013-01	Total/NA	Water	2320B-1997	
240-174841-5	BAC-15-F-20221013-01	Total/NA	Water	2320B-1997	
240-174841-6	BAC-07-F-20221014-01	Total/NA	Water	2320B-1997	
240-174841-7	BAC-19-F-20221014-01	Total/NA	Water	2320B-1997	
240-174841-8	BAC-18-F-20221014-01	Total/NA	Water	2320B-1997	
240-174841-9	B-0904-F-20221014-01	Total/NA	Water	2320B-1997	
MB 240-548679/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/56	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548679/55	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/82	Lab Control Sample	Total/NA	Water	2320B-1997	
240-174841-8 DU	BAC-18-F-20221014-01	Total/NA	Water	2320B-1997	

Analysis Batch: 550924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-1	BAC-03-F-20221013-01	Total/NA	Water	300.0-1993 R2.1	
240-174841-2	BAC-10-F-20221013-01	Total/NA	Water	300.0-1993 R2.1	
240-174841-3	BAC-17-F-20221013-01	Total/NA	Water	300.0-1993 R2.1	
240-174841-4	BAC-16-F-20221013-01	Total/NA	Water	300.0-1993 R2.1	
240-174841-5	BAC-15-F-20221013-01	Total/NA	Water	300.0-1993 R2.1	
240-174841-6	BAC-07-F-20221014-01	Total/NA	Water	300.0-1993 R2.1	
240-174841-7	BAC-19-F-20221014-01	Total/NA	Water	300.0-1993 R2.1	
240-174841-8	BAC-18-F-20221014-01	Total/NA	Water	300.0-1993 R2.1	
240-174841-9	B-0904-F-20221014-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-550924/15	Method Blank	Total/NA	Water	300.0-1993 R2.1	
MB 240-550924/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-550924/16	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
LCS 240-550924/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 587124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-1	BAC-03-F-20221013-01	Total/NA	Water	PrecSep-21	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Rad (Continued)

Prep Batch: 587124 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-2	BAC-10-F-20221013-01	Total/NA	Water	PrecSep-21	
240-174841-3	BAC-17-F-20221013-01	Total/NA	Water	PrecSep-21	
240-174841-4	BAC-16-F-20221013-01	Total/NA	Water	PrecSep-21	
240-174841-5	BAC-15-F-20221013-01	Total/NA	Water	PrecSep-21	
240-174841-6	BAC-07-F-20221014-01	Total/NA	Water	PrecSep-21	
240-174841-7	BAC-19-F-20221014-01	Total/NA	Water	PrecSep-21	
240-174841-8	BAC-18-F-20221014-01	Total/NA	Water	PrecSep-21	
240-174841-9	B-0904-F-20221014-01	Total/NA	Water	PrecSep-21	
MB 160-587124/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-587124/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-587124/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 587133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174841-1	BAC-03-F-20221013-01	Total/NA	Water	PrecSep_0	
240-174841-2	BAC-10-F-20221013-01	Total/NA	Water	PrecSep_0	
240-174841-3	BAC-17-F-20221013-01	Total/NA	Water	PrecSep_0	
240-174841-4	BAC-16-F-20221013-01	Total/NA	Water	PrecSep_0	
240-174841-5	BAC-15-F-20221013-01	Total/NA	Water	PrecSep_0	
240-174841-6	BAC-07-F-20221014-01	Total/NA	Water	PrecSep_0	
240-174841-7	BAC-19-F-20221014-01	Total/NA	Water	PrecSep_0	
240-174841-8	BAC-18-F-20221014-01	Total/NA	Water	PrecSep_0	
240-174841-9	B-0904-F-20221014-01	Total/NA	Water	PrecSep_0	
MB 160-587133/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-587133/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-587133/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-03-F-20221013-01

Lab Sample ID: 240-174841-1

Date Collected: 10/13/22 10:16

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 18:28
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:31
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 15:54
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 09:33
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590567	FLC	EET SL	11/18/22 21:42
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:50
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Client Sample ID: BAC-10-F-20221013-01

Lab Sample ID: 240-174841-2

Date Collected: 10/13/22 11:47

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 18:59
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:38
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 15:58
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/08/22 15:27
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590567	FLC	EET SL	11/18/22 21:43
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:50
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Client Sample ID: BAC-17-F-20221013-01

Lab Sample ID: 240-174841-3

Date Collected: 10/13/22 13:09

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 19:03
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:41
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 16:01
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/08/22 16:07
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590654	SCB	EET SL	11/19/22 09:27
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:45

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-17-F-20221013-01

Lab Sample ID: 240-174841-3

Date Collected: 10/13/22 13:09

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Client Sample ID: BAC-16-F-20221013-01

Lab Sample ID: 240-174841-4

Date Collected: 10/13/22 14:09

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 19:16
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:43
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 16:05
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 01:11
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590654	SCB	EET SL	11/19/22 09:28
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:45
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Client Sample ID: BAC-15-F-20221013-01

Lab Sample ID: 240-174841-5

Date Collected: 10/13/22 14:54

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 19:21
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:45
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 16:09
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 01:31
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590654	SCB	EET SL	11/19/22 09:28
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:48
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174841-6

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 19:25
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:47

Eurofins Canton

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174841-6

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:00
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 01:51
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590654	SCB	EET SL	11/19/22 09:28
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:48
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Client Sample ID: BAC-19-F-20221014-01

Lab Sample ID: 240-174841-7

Date Collected: 10/14/22 12:07

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 19:30
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:53
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:04
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 02:11
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590654	SCB	EET SL	11/19/22 09:28
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:48
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Client Sample ID: BAC-18-F-20221014-01

Lab Sample ID: 240-174841-8

Date Collected: 10/14/22 13:06

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 19:34
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:55
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:08
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 02:51
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590654	SCB	EET SL	11/19/22 09:28
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:48
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Client Sample ID: B-0904-F-20221014-01

Lab Sample ID: 240-174841-9

Date Collected: 10/14/22 14:10

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547765	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548140	DSH	EET CAN	10/20/22 19:38
Total/NA	Prep	7470A			547766	SHB	EET CAN	10/19/22 12:00
Total/NA	Analysis	7470A		1	548036	MRL	EET CAN	10/20/22 14:57
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:15
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 07:13
Total/NA	Prep	PrecSep-21			587124	BMP	EET SL	10/24/22 14:11
Total/NA	Analysis	9315		1	590654	SCB	EET SL	11/19/22 09:28
Total/NA	Prep	PrecSep_0			587133	BMP	EET SL	10/24/22 14:34
Total/NA	Analysis	9320		1	590172	FLC	EET SL	11/15/22 09:49
Total/NA	Analysis	Ra226_Ra228		1	590901	EMH	EET SL	11/21/22 22:15

Laboratory References:

EET CAN = Eurofins Canton, 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
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	11-30-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-174841-1

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
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Chain of Custody Record



Client Information		Sampler: <u>Bobby Coste</u>		Lab PM: <u>Cisneros, Roxanne</u>		COC No: <u>240-93466-34578.1</u>	
Client Contact: <u>Taylor Huffman</u>		Phone: <u>740-373-4308</u>		E-Mail: <u>roxanne.cisneros@Eurofinset.com</u>		Page: <u>1 of 1</u>	
Company: <u>Lightstone Generation Gavin Power LLC</u>		Address: <u>7397 OH-7</u>		City: <u>Cheshire</u>		State of Origin: _____	
State, Zip: <u>OH, 45620</u>		Phone: <u>740-925-3171(Tel)</u>		PO #: <u>2935505</u>		Job #: _____	
Email: <u>taylor.huffman@lightstonegen.com</u>		Compliance Project: <u>Δ Yes Δ No</u>		TAT Requested (days): _____		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____	
Project Name: <u>Federal CCR Wells - App IV</u>		Project #: <u>24019633</u>		Matrix (Water, Swallow, Or waste/oil, or tissue, Asst)		Special Instructions/Note: _____	
Site: <u>Gavin</u>		SSOW#: _____		Sample Date		Total Number of Containers: _____	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested
<u>BAC-03-F-20221013-01</u>	<u>10-13-22</u>	<u>1416</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	<u>9315_Ra226, 9320_Ra228, Ra226Ra228_GFPc</u>
<u>BAC-10-F-20221013-01</u>	<u>10-13-22</u>	<u>1147</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	<u>300.0_28D - Fluoride</u>
<u>BAC-17-F-20221013-01</u>	<u>10-13-22</u>	<u>1309</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	<u>6020, 7470A</u>
<u>BAC-16-F-20221013-01</u>	<u>10-13-22</u>	<u>1409</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	<u>2320B - Alkalinity</u>
<u>BAC-15-F-20221013-01</u>	<u>10-13-22</u>	<u>1454</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	
<u>BAC-07-F-20221014-01</u>	<u>10-14-22</u>	<u>1031</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	
<u>BAC-19-F-20221014-01</u>	<u>10-14-22</u>	<u>1207</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	
<u>BAC-18-F-20221014-01</u>	<u>10-14-22</u>	<u>1306</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	
<u>B-0904-F-20221014-01</u>	<u>10-14-22</u>	<u>1410</u>	<u>6</u>	<u>W</u>	<u>M</u>	<u>X</u>	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify) _____							
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Special Instructions/QC Requirements: _____							
Empty Kit Relinquished by: _____				Date: _____			
Relinquished by: <u>Bobby Coste</u>		Date/Time: <u>10-17-22 / 0630</u>		Company: <u>KEARNEY</u>		Date/Time: <u>10-17-22 0630</u>	
Relinquished by: <u>Bobby Coste</u>		Date/Time: <u>10-17-22 1205</u>		Company: <u>KEARNEY</u>		Date/Time: <u>10-17-22 1205</u>	
Relinquished by: _____		Date/Time: _____		Company: _____		Date/Time: _____	
Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seal No.: _____		Cooler Temperature(s) °C and Other Remarks: _____		Method of Shipment: _____	



Eurofins - Canton Sample Receipt Form/Narrative		Login # : _____
Barberton Facility		
Client <u>Light Store</u>	Site Name _____	Cooler unpacked by: <u>Chen</u>
Cooler Received on <u>10-18-22</u>	Opened on <u>10-18-22</u>	
FedEx: 1 st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____		
Receipt After-hours: Drop-off Date/Time _____		Storage Location _____
Eurofins Cooler # <u>11</u>	Foam Box _____	Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____		
COOLANT: <u>Wet Ice</u> Blue Ice Dry Ice Water None		
1. Cooler temperature upon receipt		<input checked="" type="checkbox"/> See Multiple Cooler Form
IR GUN# IR-13 (CF +0.7 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (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 _____	<input checked="" type="radio"/> Yes <input type="radio"/> 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?	<input checked="" type="radio"/> Yes <input type="radio"/> No NA	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	<input checked="" type="radio"/> Yes <input type="radio"/> No NA	
-Were tamper/custody seals intact and uncompromised?	<input checked="" type="radio"/> Yes <input type="radio"/> No NA	
3. Shippers' packing slip attached to the cooler(s)?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
4. Did custody papers accompany the sample(s)?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
5. Were the custody papers relinquished & signed in the appropriate place?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
7. Did all bottles arrive in good condition (Unbroken)?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
10. Were correct bottle(s) used for the test(s) indicated?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
11. Sufficient quantity received to perform indicated analyses?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
12. Are these work share samples and all listed on the COC?	<input checked="" type="radio"/> Yes <input type="radio"/> 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?	<input checked="" type="radio"/> Yes <input type="radio"/> No NA	pH Strip Lot# HC286797
14. Were VOAs on the COC?	<input checked="" type="radio"/> Yes <input type="radio"/> No	
15. Were air bubbles >6 mm in any VOA vials? Larger than this.	<input checked="" type="radio"/> Yes <input type="radio"/> No NA	
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	<input checked="" type="radio"/> Yes <input type="radio"/> No	
17. Was a LL Hg or Me Hg trip blank present? _____	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____		
Concerning _____		

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES <input type="checkbox"/> 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: _____

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM:		Carrier Tracking No(s):		COC No:				
Shipping/Receiving		Cisneros, Roxanne		240-158924.1		240-158924.1				
Company: TestAmerica Laboratories, Inc.		E-Mail: roxanne.cisneros@et.eurofinsus.com		State of Origin: Ohio		Page: Page 1 of 1				
Address: 13715 Rider Trail North,		Due Date Requested: 10/31/2022		Accreditations Required (See note):		Job #: 240-174841-1				
City: Earth City		TAT Requested (days):		Analysis Requested		Preservation Codes:				
State, Zip: MO, 63045		PO #:		9315_Ra226/PreSep_21 Radium-226 (GFPC)		M - Hexane				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:		9320_Ra228/PreSep_0 Radium-228 (GFPC)		N - None				
Email:		Project #:		Radium-228		O - AsNaO2				
Project Name: Gavin CCR		SSOW#: 24019633		Field Filtered Samples (Yes or No)		P - Na2OAS				
Site:		Matrix (Water, Snow/I, Overstall, BT, Rain, A-As)		9315_Ra226/PreSep_21 Radium-226 (GFPC)		Q - Na2SO3				
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code:	Field Filtered Samples (Yes or No) <th>9320_Ra228/PreSep_0 Radium-228 (GFPC) <th>9315_Ra226/PreSep_21 Radium-226 (GFPC) <th>Radium-228</th> <th>Total Number of Containers</th> <th>Special Instructions/Note:</th> </th></th>	9320_Ra228/PreSep_0 Radium-228 (GFPC) <th>9315_Ra226/PreSep_21 Radium-226 (GFPC) <th>Radium-228</th> <th>Total Number of Containers</th> <th>Special Instructions/Note:</th> </th>	9315_Ra226/PreSep_21 Radium-226 (GFPC) <th>Radium-228</th> <th>Total Number of Containers</th> <th>Special Instructions/Note:</th>	Radium-228	Total Number of Containers	Special Instructions/Note:
BAC-03-F-20221013-01 (240-174841-1)	10/13/22	10:16 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-10-F-20221013-01 (240-174841-2)	10/13/22	11:47 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-17-F-20221013-01 (240-174841-3)	10/13/22	13:09 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-16-F-20221013-01 (240-174841-4)	10/13/22	14:09 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-15-F-20221013-01 (240-174841-5)	10/13/22	14:54 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-07-F-20221014-01 (240-174841-6)	10/14/22	10:31 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-19-F-20221014-01 (240-174841-7)	10/14/22	12:07 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-18-F-20221014-01 (240-174841-8)	10/14/22	13:06 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
B-0904-F-20221014-01 (240-174841-9)	10/14/22	14:10 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet

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/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
 Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: _____ Date: _____ Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____ Received by: *Sara Woodington* Date/Time: *09/19/2022 0900*
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No



Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-174841-1

Login Number: 174841

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 10/19/22 10:48 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?	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins Canton

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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 11/22/2022 1:26:53 PM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(615)301-5761

ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-174842-1
Client Project/Site: Federal CCR Wells - App III

For:
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
11/4/2022 11:39:25 AM

Roxanne Cisneros, Senior Project Manager
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Job ID: 240-174842-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-174842-1

Receipt

The samples were received on 10/18/2022 12:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.1°C, 0.1°C, 0.1°C, 0.2°C, 0.7°C and 1.5°C

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 2540C_Calcd: LCS failed high for the batch. Samples will be reported for in hold results. Samples will be re-analyzed out of hold with passing QC. BAC-10-F-20221013-01 (240-174842-1), BAC-17-F-20221013-01 (240-174842-2), BAC-16-F-20221013-01 (240-174842-3), BAC-15-F-20221013-01 (240-174842-4), BAC-07-F-20221014-01 (240-174842-5), BAC-19-F-20221014-01 (240-174842-6), BAC-18-F-20221014-01 (240-174842-7)

Method 2540C_Calcd: Reanalysis of the following samples was performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis. BAC-10-F-20221013-01 (240-174842-1), BAC-17-F-20221013-01 (240-174842-2), BAC-16-F-20221013-01 (240-174842-3), BAC-15-F-20221013-01 (240-174842-4) and BAC-19-F-20221014-01 (240-174842-6)

Method 2540C_Calcd: Reanalysis of the following samples was performed outside of the analytical holding time to confirm the initial result. : BAC-07-F-20221014-01 (240-174842-5), BAC-18-F-20221014-01 (240-174842-7)

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 - App III

Job ID: 240-174842-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CAN
6020B	Metals (ICP/MS)	SW846	EET CAN
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-174842-1	BAC-10-F-20221013-01	Water	10/13/22 11:47	10/18/22 12:05
240-174842-2	BAC-17-F-20221013-01	Water	10/13/22 13:09	10/18/22 12:05
240-174842-3	BAC-16-F-20221013-01	Water	10/13/22 14:09	10/18/22 12:05
240-174842-4	BAC-15-F-20221013-01	Water	10/13/22 14:54	10/18/22 12:05
240-174842-5	BAC-07-F-20221014-01	Water	10/14/22 10:31	10/18/22 12:05
240-174842-6	BAC-19-F-20221014-01	Water	10/14/22 12:07	10/18/22 12:05
240-174842-7	BAC-18-F-20221014-01	Water	10/14/22 13:06	10/18/22 12:05

- 1
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- 3
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- 7
- 8
- 9
- 10
- 11
- 12
- 13

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-10-F-20221013-01

Lab Sample ID: 240-174842-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	670		100	57	ug/L	1		6010D	Total Recoverable
Calcium	110000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	26000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	2300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	52000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	51		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.16		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	240		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	630	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	650	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-17-F-20221013-01

Lab Sample ID: 240-174842-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	4200		100	57	ug/L	1		6010D	Total Recoverable
Calcium	49000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	29000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	20000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	54		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	54		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	21		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.074		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	240		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	420	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	420	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-16-F-20221013-01

Lab Sample ID: 240-174842-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1400		100	57	ug/L	1		6010D	Total Recoverable
Calcium	92000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	2600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	14000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	170		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	170		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	25		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.051		0.050	0.024	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-16-F-20221013-01 (Continued)

Lab Sample ID: 240-174842-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	190		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	490	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	460	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-15-F-20221013-01

Lab Sample ID: 240-174842-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	440		100	57	ug/L	1		6010D	Total Recoverable
Calcium	42000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	4100		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	12000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	98		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	98		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1.2		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.049	J	0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	98		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	250	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	260	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174842-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1000		100	57	ug/L	1		6010D	Total Recoverable
Calcium	89000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	19000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	14000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	26		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.069		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	180		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	420	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	420	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-19-F-20221014-01

Lab Sample ID: 240-174842-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	190		100	57	ug/L	1		6010D	Total Recoverable
Calcium	78000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	14000		1000	200	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-19-F-20221014-01 (Continued)

Lab Sample ID: 240-174842-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	3000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	380000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	780		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	0.60		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	3.7		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	1300	*+	20	16	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	930	H	20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-18-F-20221014-01

Lab Sample ID: 240-174842-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1400		100	57	ug/L	1		6010D	Total Recoverable
Calcium	77000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	14000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	92		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	92		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	26		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.042	J	0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	200		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	370	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	400	H	10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-10-F-20221013-01

Lab Sample ID: 240-174842-1

Date Collected: 10/13/22 11:47

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	670		100	57	ug/L		10/19/22 12:00	10/20/22 15:48	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110000		1000	580	ug/L		10/19/22 12:00	10/22/22 02:03	1
Magnesium	26000		1000	200	ug/L		10/19/22 12:00	10/22/22 02:03	1
Potassium	2300		1000	220	ug/L		10/19/22 12:00	10/22/22 02:03	1
Sodium	52000		1000	330	ug/L		10/19/22 12:00	10/22/22 02:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	230		5.0	2.6	mg/L			10/24/22 16:13	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	230		5.0	2.6	mg/L			10/24/22 16:13	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 16:13	1
Chloride (MCAWW 300.0)	51		1.0	0.28	mg/L			11/01/22 01:31	1
Fluoride (MCAWW 300.0)	0.16		0.050	0.024	mg/L			11/01/22 01:31	1
Sulfate (MCAWW 300.0)	240		5.0	1.7	mg/L			11/01/22 01:53	5
Total Dissolved Solids (SM 2540C)	630	*+	10	7.8	mg/L			10/20/22 10:33	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	650	H	10	7.8	mg/L			10/28/22 09:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-17-F-20221013-01

Lab Sample ID: 240-174842-2

Date Collected: 10/13/22 13:09

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4200		100	57	ug/L		10/19/22 12:00	10/20/22 15:52	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	49000		1000	580	ug/L		10/19/22 12:00	10/22/22 02:07	1
Magnesium	29000		1000	200	ug/L		10/19/22 12:00	10/22/22 02:07	1
Potassium	1200		1000	220	ug/L		10/19/22 12:00	10/22/22 02:07	1
Sodium	20000		1000	330	ug/L		10/19/22 12:00	10/22/22 02:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	54		5.0	2.6	mg/L			10/24/22 16:19	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	54		5.0	2.6	mg/L			10/24/22 16:19	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 16:19	1
Chloride (MCAWW 300.0)	21		1.0	0.28	mg/L			11/01/22 02:58	1
Fluoride (MCAWW 300.0)	0.074		0.050	0.024	mg/L			11/01/22 02:58	1
Sulfate (MCAWW 300.0)	240		5.0	1.7	mg/L			11/01/22 03:20	5
Total Dissolved Solids (SM 2540C)	420	*+	10	7.8	mg/L			10/20/22 10:44	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	420	H	10	7.8	mg/L			10/28/22 09:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-16-F-20221013-01

Lab Sample ID: 240-174842-3

Date Collected: 10/13/22 14:09

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1400		100	57	ug/L		10/19/22 12:00	10/20/22 15:56	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	92000		1000	580	ug/L		10/19/22 12:00	10/22/22 02:12	1
Magnesium	20000		1000	200	ug/L		10/19/22 12:00	10/22/22 02:12	1
Potassium	2600		1000	220	ug/L		10/19/22 12:00	10/22/22 02:12	1
Sodium	14000		1000	330	ug/L		10/19/22 12:00	10/22/22 02:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	170		5.0	2.6	mg/L			10/24/22 16:32	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	170		5.0	2.6	mg/L			10/24/22 16:32	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 16:32	1
Chloride (MCAWW 300.0)	25		1.0	0.28	mg/L			11/01/22 03:42	1
Fluoride (MCAWW 300.0)	0.051		0.050	0.024	mg/L			11/01/22 03:42	1
Sulfate (MCAWW 300.0)	190		1.0	0.35	mg/L			11/01/22 03:42	1
Total Dissolved Solids (SM 2540C)	490	*+	10	7.8	mg/L			10/20/22 10:44	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	460	H	10	7.8	mg/L			10/28/22 09:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-15-F-20221013-01

Lab Sample ID: 240-174842-4

Date Collected: 10/13/22 14:54

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	440		100	57	ug/L		10/19/22 12:00	10/20/22 16:00	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	42000		1000	580	ug/L		10/19/22 12:00	10/22/22 02:16	1
Magnesium	16000		1000	200	ug/L		10/19/22 12:00	10/22/22 02:16	1
Potassium	4100		1000	220	ug/L		10/19/22 12:00	10/22/22 02:16	1
Sodium	12000		1000	330	ug/L		10/19/22 12:00	10/22/22 02:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	98		5.0	2.6	mg/L			10/24/22 16:36	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	98		5.0	2.6	mg/L			10/24/22 16:36	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 16:36	1
Chloride (MCAWW 300.0)	1.2		1.0	0.28	mg/L			11/01/22 00:26	1
Fluoride (MCAWW 300.0)	0.049	J	0.050	0.024	mg/L			11/01/22 00:26	1
Sulfate (MCAWW 300.0)	98		1.0	0.35	mg/L			11/01/22 00:26	1
Total Dissolved Solids (SM 2540C)	250	*+	10	7.8	mg/L			10/20/22 10:44	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	260	H	10	7.8	mg/L			10/28/22 09:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174842-5

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1000		100	57	ug/L		10/19/22 12:00	10/20/22 16:05	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	89000		1000	580	ug/L		10/19/22 12:00	10/22/22 02:21	1
Magnesium	19000		1000	200	ug/L		10/19/22 12:00	10/22/22 02:21	1
Potassium	1300		1000	220	ug/L		10/19/22 12:00	10/22/22 02:21	1
Sodium	14000		1000	330	ug/L		10/19/22 12:00	10/22/22 02:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	140		5.0	2.6	mg/L			10/24/22 18:19	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	140		5.0	2.6	mg/L			10/24/22 18:19	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:19	1
Chloride (MCAWW 300.0)	26		1.0	0.28	mg/L			11/01/22 04:25	1
Fluoride (MCAWW 300.0)	0.069		0.050	0.024	mg/L			11/01/22 04:25	1
Sulfate (MCAWW 300.0)	180		1.0	0.35	mg/L			11/01/22 04:25	1
Total Dissolved Solids (SM 2540C)	420	*+	10	7.8	mg/L			10/20/22 10:44	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	420	H	10	7.8	mg/L			10/31/22 10:16	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-19-F-20221014-01

Lab Sample ID: 240-174842-6

Date Collected: 10/14/22 12:07

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	190		100	57	ug/L		10/19/22 12:00	10/20/22 16:09	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	78000		1000	580	ug/L		10/19/22 12:00	10/22/22 02:25	1
Magnesium	14000		1000	200	ug/L		10/19/22 12:00	10/22/22 02:25	1
Potassium	3000		1000	220	ug/L		10/19/22 12:00	10/22/22 02:25	1
Sodium	380000		1000	330	ug/L		10/19/22 12:00	10/22/22 02:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	140		5.0	2.6	mg/L			10/24/22 18:23	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	140		5.0	2.6	mg/L			10/24/22 18:23	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:23	1
Chloride (MCAWW 300.0)	780		10	2.8	mg/L			11/01/22 05:30	10
Fluoride (MCAWW 300.0)	0.60		0.050	0.024	mg/L			11/01/22 05:09	1
Sulfate (MCAWW 300.0)	3.7		1.0	0.35	mg/L			11/01/22 05:09	1
Total Dissolved Solids (SM 2540C)	1300	*+	20	16	mg/L			10/21/22 09:53	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	930	H	20	16	mg/L			10/26/22 15:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-18-F-20221014-01

Lab Sample ID: 240-174842-7

Date Collected: 10/14/22 13:06

Matrix: Water

Date Received: 10/18/22 12:05

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1400		100	57	ug/L		10/19/22 12:00	10/20/22 16:21	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	77000		1000	580	ug/L		10/19/22 12:00	10/22/22 02:30	1
Magnesium	20000		1000	200	ug/L		10/19/22 12:00	10/22/22 02:30	1
Potassium	1500		1000	220	ug/L		10/19/22 12:00	10/22/22 02:30	1
Sodium	14000		1000	330	ug/L		10/19/22 12:00	10/22/22 02:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	92		5.0	2.6	mg/L			10/24/22 18:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	92		5.0	2.6	mg/L			10/24/22 18:29	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:29	1
Chloride (MCAWW 300.0)	26		1.0	0.28	mg/L			11/01/22 05:52	1
Fluoride (MCAWW 300.0)	0.042	J	0.050	0.024	mg/L			11/01/22 05:52	1
Sulfate (MCAWW 300.0)	200		1.0	0.35	mg/L			11/01/22 05:52	1
Total Dissolved Solids (SM 2540C)	370	*+	10	7.8	mg/L			10/21/22 09:51	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	400	H	10	7.8	mg/L			10/31/22 10:16	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-547758/1-A
 Matrix: Water
 Analysis Batch: 548094

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/19/22 12:00	10/20/22 14:32	1

Lab Sample ID: LCS 240-547758/2-A
 Matrix: Water
 Analysis Batch: 548094

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1020		ug/L		102	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-547758/1-A
 Matrix: Water
 Analysis Batch: 548375

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/19/22 12:00	10/22/22 00:57	1
Magnesium	1000	U	1000	200	ug/L		10/19/22 12:00	10/22/22 00:57	1
Potassium	1000	U	1000	220	ug/L		10/19/22 12:00	10/22/22 00:57	1
Sodium	1000	U	1000	330	ug/L		10/19/22 12:00	10/22/22 00:57	1

Lab Sample ID: LCS 240-547758/3-A
 Matrix: Water
 Analysis Batch: 548375

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 547758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24000		ug/L		96	80 - 120
Magnesium	25000	22700		ug/L		91	80 - 120
Potassium	25000	22600		ug/L		90	80 - 120
Sodium	25000	22500		ug/L		90	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548679/30
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 13:37	1

Lab Sample ID: MB 240-548679/56
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1

Eurofins Canton

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-548679/83
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1

Lab Sample ID: LCS 240-548679/55
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCS 240-548679/82
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-549649/3
Matrix: Water
Analysis Batch: 549649

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.28	mg/L			10/31/22 13:42	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/31/22 13:42	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/31/22 13:42	1

Lab Sample ID: LCS 240-549649/4
Matrix: Water
Analysis Batch: 549649

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.68		mg/L		107	90 - 110
Sulfate	50.0	53.3		mg/L		107	90 - 110

Lab Sample ID: 240-174842-4 MS
Matrix: Water
Analysis Batch: 549649

Client Sample ID: BAC-15-F-20221013-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.049	J	2.50	2.70		mg/L		106	80 - 120
Sulfate	98		50.0	147		mg/L		98	80 - 120

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-174842-4 MSD
Matrix: Water
Analysis Batch: 549649

Client Sample ID: BAC-15-F-20221013-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1.2		50.0	52.8		mg/L		103	80 - 120	2	15
Fluoride	0.049	J	2.50	2.78		mg/L		109	80 - 120	3	15
Sulfate	98		50.0	148		mg/L		100	80 - 120	0	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-547943/1
Matrix: Water
Analysis Batch: 547943

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	10	U	10	7.8	mg/L			10/20/22 10:33	1

Lab Sample ID: LCS 240-547943/2
Matrix: Water
Analysis Batch: 547943

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	500	1070	*+	mg/L		214	80 - 120

Lab Sample ID: MB 240-547947/1
Matrix: Water
Analysis Batch: 547947

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	10	U	10	7.8	mg/L			10/20/22 10:44	1

Lab Sample ID: LCS 240-547947/2
Matrix: Water
Analysis Batch: 547947

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	250	452	*+	mg/L		181	80 - 120

Lab Sample ID: MB 240-548150/1
Matrix: Water
Analysis Batch: 548150

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	10	U	10	7.8	mg/L			10/21/22 09:51	1

Lab Sample ID: LCS 240-548150/2
Matrix: Water
Analysis Batch: 548150

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	500	831	*+	mg/L		166	80 - 120

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 240-548155/1
Matrix: Water
Analysis Batch: 548155

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	10	U	10	7.8	mg/L			10/21/22 09:53	1

Lab Sample ID: LCS 240-548155/2
Matrix: Water
Analysis Batch: 548155

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	500	868	*+	mg/L		174	80 - 120

Lab Sample ID: MB 240-548909/1
Matrix: Water
Analysis Batch: 548909

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	10	U	10	7.8	mg/L			10/26/22 15:59	1

Lab Sample ID: LCS 240-548909/2
Matrix: Water
Analysis Batch: 548909

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	388	359		mg/L		93	80 - 120

Lab Sample ID: MB 240-549265/1
Matrix: Water
Analysis Batch: 549265

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	10	U	10	7.8	mg/L			10/28/22 09:59	1

Lab Sample ID: LCS 240-549265/2
Matrix: Water
Analysis Batch: 549265

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	388	319		mg/L		82	80 - 120

Lab Sample ID: MB 240-549553/1
Matrix: Water
Analysis Batch: 549553

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	10	U	10	7.8	mg/L			10/31/22 10:16	1

Lab Sample ID: LCS 240-549553/2
Matrix: Water
Analysis Batch: 549553

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	388	370		mg/L		95	80 - 120

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Metals

Prep Batch: 547758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-1	BAC-10-F-20221013-01	Total Recoverable	Water	3005A	
240-174842-2	BAC-17-F-20221013-01	Total Recoverable	Water	3005A	
240-174842-3	BAC-16-F-20221013-01	Total Recoverable	Water	3005A	
240-174842-4	BAC-15-F-20221013-01	Total Recoverable	Water	3005A	
240-174842-5	BAC-07-F-20221014-01	Total Recoverable	Water	3005A	
240-174842-6	BAC-19-F-20221014-01	Total Recoverable	Water	3005A	
240-174842-7	BAC-18-F-20221014-01	Total Recoverable	Water	3005A	
MB 240-547758/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-547758/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-547758/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 548094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-1	BAC-10-F-20221013-01	Total Recoverable	Water	6010D	547758
240-174842-2	BAC-17-F-20221013-01	Total Recoverable	Water	6010D	547758
240-174842-3	BAC-16-F-20221013-01	Total Recoverable	Water	6010D	547758
240-174842-4	BAC-15-F-20221013-01	Total Recoverable	Water	6010D	547758
240-174842-5	BAC-07-F-20221014-01	Total Recoverable	Water	6010D	547758
240-174842-6	BAC-19-F-20221014-01	Total Recoverable	Water	6010D	547758
240-174842-7	BAC-18-F-20221014-01	Total Recoverable	Water	6010D	547758
MB 240-547758/1-A	Method Blank	Total Recoverable	Water	6010D	547758
LCS 240-547758/2-A	Lab Control Sample	Total Recoverable	Water	6010D	547758

Analysis Batch: 548375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-1	BAC-10-F-20221013-01	Total Recoverable	Water	6020B	547758
240-174842-2	BAC-17-F-20221013-01	Total Recoverable	Water	6020B	547758
240-174842-3	BAC-16-F-20221013-01	Total Recoverable	Water	6020B	547758
240-174842-4	BAC-15-F-20221013-01	Total Recoverable	Water	6020B	547758
240-174842-5	BAC-07-F-20221014-01	Total Recoverable	Water	6020B	547758
240-174842-6	BAC-19-F-20221014-01	Total Recoverable	Water	6020B	547758
240-174842-7	BAC-18-F-20221014-01	Total Recoverable	Water	6020B	547758
MB 240-547758/1-A	Method Blank	Total Recoverable	Water	6020B	547758
LCS 240-547758/3-A	Lab Control Sample	Total Recoverable	Water	6020B	547758

General Chemistry

Analysis Batch: 547943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-1	BAC-10-F-20221013-01	Total/NA	Water	SM 2540C	
MB 240-547943/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547943/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 547947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-2	BAC-17-F-20221013-01	Total/NA	Water	SM 2540C	
240-174842-3	BAC-16-F-20221013-01	Total/NA	Water	SM 2540C	
240-174842-4	BAC-15-F-20221013-01	Total/NA	Water	SM 2540C	
240-174842-5	BAC-07-F-20221014-01	Total/NA	Water	SM 2540C	
MB 240-547947/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-547947/2	Lab Control Sample	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

General Chemistry

Analysis Batch: 548150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-7	BAC-18-F-20221014-01	Total/NA	Water	SM 2540C	
MB 240-548150/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548150/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-6	BAC-19-F-20221014-01	Total/NA	Water	SM 2540C	
MB 240-548155/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548155/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-1	BAC-10-F-20221013-01	Total/NA	Water	2320B-1997	
240-174842-2	BAC-17-F-20221013-01	Total/NA	Water	2320B-1997	
240-174842-3	BAC-16-F-20221013-01	Total/NA	Water	2320B-1997	
240-174842-4	BAC-15-F-20221013-01	Total/NA	Water	2320B-1997	
240-174842-5	BAC-07-F-20221014-01	Total/NA	Water	2320B-1997	
240-174842-6	BAC-19-F-20221014-01	Total/NA	Water	2320B-1997	
240-174842-7	BAC-18-F-20221014-01	Total/NA	Water	2320B-1997	
MB 240-548679/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/56	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548679/55	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/82	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 548909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-6 - RA	BAC-19-F-20221014-01	Total/NA	Water	SM 2540C	
MB 240-548909/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548909/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 549265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-1 - RA	BAC-10-F-20221013-01	Total/NA	Water	SM 2540C	
240-174842-2 - RA	BAC-17-F-20221013-01	Total/NA	Water	SM 2540C	
240-174842-3 - RA	BAC-16-F-20221013-01	Total/NA	Water	SM 2540C	
240-174842-4 - RA	BAC-15-F-20221013-01	Total/NA	Water	SM 2540C	
MB 240-549265/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-549265/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 549553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-5 - RA	BAC-07-F-20221014-01	Total/NA	Water	SM 2540C	
240-174842-7 - RA	BAC-18-F-20221014-01	Total/NA	Water	SM 2540C	
MB 240-549553/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-549553/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 549649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-1	BAC-10-F-20221013-01	Total/NA	Water	300.0	
240-174842-1	BAC-10-F-20221013-01	Total/NA	Water	300.0	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

General Chemistry (Continued)

Analysis Batch: 549649 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174842-2	BAC-17-F-20221013-01	Total/NA	Water	300.0	
240-174842-2	BAC-17-F-20221013-01	Total/NA	Water	300.0	
240-174842-3	BAC-16-F-20221013-01	Total/NA	Water	300.0	
240-174842-4	BAC-15-F-20221013-01	Total/NA	Water	300.0	
240-174842-5	BAC-07-F-20221014-01	Total/NA	Water	300.0	
240-174842-6	BAC-19-F-20221014-01	Total/NA	Water	300.0	
240-174842-6	BAC-19-F-20221014-01	Total/NA	Water	300.0	
240-174842-7	BAC-18-F-20221014-01	Total/NA	Water	300.0	
MB 240-549649/3	Method Blank	Total/NA	Water	300.0	
LCS 240-549649/4	Lab Control Sample	Total/NA	Water	300.0	
240-174842-4 MS	BAC-15-F-20221013-01	Total/NA	Water	300.0	
240-174842-4 MSD	BAC-15-F-20221013-01	Total/NA	Water	300.0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-10-F-20221013-01

Lab Sample ID: 240-174842-1

Date Collected: 10/13/22 11:47

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 15:48
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 02:03
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 16:13
Total/NA	Analysis	300.0		1	549649	JMB	EET CAN	11/01/22 01:31
Total/NA	Analysis	300.0		5	549649	JMB	EET CAN	11/01/22 01:53
Total/NA	Analysis	SM 2540C		1	547943	MS	EET CAN	10/20/22 10:33
Total/NA	Analysis	SM 2540C	RA	1	549265	MS	EET CAN	10/28/22 09:59

Client Sample ID: BAC-17-F-20221013-01

Lab Sample ID: 240-174842-2

Date Collected: 10/13/22 13:09

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 15:52
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 02:07
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 16:19
Total/NA	Analysis	300.0		1	549649	JMB	EET CAN	11/01/22 02:58
Total/NA	Analysis	300.0		5	549649	JMB	EET CAN	11/01/22 03:20
Total/NA	Analysis	SM 2540C		1	547947	MS	EET CAN	10/20/22 10:44
Total/NA	Analysis	SM 2540C	RA	1	549265	MS	EET CAN	10/28/22 09:59

Client Sample ID: BAC-16-F-20221013-01

Lab Sample ID: 240-174842-3

Date Collected: 10/13/22 14:09

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 15:56
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 02:12
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 16:32
Total/NA	Analysis	300.0		1	549649	JMB	EET CAN	11/01/22 03:42
Total/NA	Analysis	SM 2540C		1	547947	MS	EET CAN	10/20/22 10:44
Total/NA	Analysis	SM 2540C	RA	1	549265	MS	EET CAN	10/28/22 09:59

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-15-F-20221013-01

Lab Sample ID: 240-174842-4

Date Collected: 10/13/22 14:54

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 16:00
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 02:16
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 16:36
Total/NA	Analysis	300.0		1	549649	JMB	EET CAN	11/01/22 00:26
Total/NA	Analysis	SM 2540C		1	547947	MS	EET CAN	10/20/22 10:44
Total/NA	Analysis	SM 2540C	RA	1	549265	MS	EET CAN	10/28/22 09:59

Client Sample ID: BAC-07-F-20221014-01

Lab Sample ID: 240-174842-5

Date Collected: 10/14/22 10:31

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 16:05
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 02:21
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:19
Total/NA	Analysis	300.0		1	549649	JMB	EET CAN	11/01/22 04:25
Total/NA	Analysis	SM 2540C		1	547947	MS	EET CAN	10/20/22 10:44
Total/NA	Analysis	SM 2540C	RA	1	549553	MS	EET CAN	10/31/22 10:16

Client Sample ID: BAC-19-F-20221014-01

Lab Sample ID: 240-174842-6

Date Collected: 10/14/22 12:07

Matrix: Water

Date Received: 10/18/22 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 16:09
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 02:25
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:23
Total/NA	Analysis	300.0		1	549649	JMB	EET CAN	11/01/22 05:09
Total/NA	Analysis	300.0		10	549649	JMB	EET CAN	11/01/22 05:30
Total/NA	Analysis	SM 2540C		1	548155	MS	EET CAN	10/21/22 09:53
Total/NA	Analysis	SM 2540C	RA	1	548909	MS	EET CAN	10/26/22 15:59

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Client Sample ID: BAC-18-F-20221014-01

Lab Sample ID: 240-174842-7

Date Collected: 10/14/22 13:06

Matrix: Water

Date Received: 10/18/22 12:05

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6010D		1	548094	KLC	EET CAN	10/20/22 16:21
Total Recoverable	Prep	3005A			547758	SHB	EET CAN	10/19/22 12:00
Total Recoverable	Analysis	6020B		1	548375	RKT	EET CAN	10/22/22 02:30
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:29
Total/NA	Analysis	300.0		1	549649	JMB	EET CAN	11/01/22 05:52
Total/NA	Analysis	SM 2540C		1	548150	MS	EET CAN	10/21/22 09:51
Total/NA	Analysis	SM 2540C	RA	1	549553	MS	EET CAN	10/31/22 10:16

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-174842-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

Chain of Custody Record



Client Information		Sample: <i>Bobby Caslo</i>		Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): 240-93465-34577.1				
Client Contact: Taylor Huffman		Phone: <i>14373-4308</i>		E-Mail: roxanne.cisneros@Eurofins.com	State of Origin:				
Company: Lightstone Generation Gavin Power LLC		PWSID:		COC No: 240-93465-34577.1					
Address: 7397 OH-7		Due Date Requested:		Page: 1 of 1					
City: Cheshire		TAT Requested (days):		Job #:					
State, Zip: OH, 45620		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Preservation Codes:					
Phone: 740-925-3171(Tel)		PO #: 2935505		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:					
Email: taylor.huffman@lightstonegen.com		WO #:		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - other (specify)					
Project Name: Federal CCR Wells - App III		Project #: 24019633		Special Instructions/Note:					
Site: <i>Ogwin</i>		SSOW#:		Total Number of Containers					
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, B=bio, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd, 300.0_280	2320B - Alkalinity	Analysis Requested
<i>BAC-10-F-20221013-01</i>	<i>10-13-22</i>	<i>1147</i>	<i>G</i>	<i>W</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1111</i>	<i>1111</i>	
<i>BAC-17-F-20221013-01</i>	<i>10-13-22</i>	<i>1309</i>	<i>G</i>	<i>W</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1111</i>	<i>1111</i>	
<i>BAC-16-F-20221013-01</i>	<i>10-13-22</i>	<i>1409</i>	<i>G</i>	<i>W</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1111</i>	<i>1111</i>	
<i>BAC-15-F-20221013-01</i>	<i>10-13-22</i>	<i>1454</i>	<i>G</i>	<i>W</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1111</i>	<i>1111</i>	
<i>BAC-07-F-20221014-01</i>	<i>10-14-22</i>	<i>1031</i>	<i>G</i>	<i>W</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1111</i>	<i>1111</i>	
<i>BAC-19-F-20221014-01</i>	<i>10-14-22</i>	<i>1207</i>	<i>G</i>	<i>W</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1111</i>	<i>1111</i>	
<i>BAC-18-F-20221014-01</i>	<i>10-14-22</i>	<i>1306</i>	<i>G</i>	<i>W</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>1111</i>	<i>1111</i>	
<p>Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological</p> <p>Deliverable Requested: I, II, III, IV, Other (specify)</p> <p>Empty Kit Relinquished by: _____ Date: _____</p> <p>Relinquished by: <i>Taylor Huffman</i> Date/Time: <i>10-17-22 10630</i> Company: <i>Kemuron</i></p> <p>Relinquished by: <i>Michelle Chapp</i> Date/Time: <i>10/17/22 1205</i> Company: <i>Kemuron</i></p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____</p> <p>Cooler Temperature(s) °C and Other Remarks: _____</p>									



Eurofins - Canton Sample Receipt Form/Narrative

Login # : _____

Barberton Facility

Client Light Store Site Name _____

Cooler unpacked by:

Cooler Received on 10-19-22 Opened on 10-18-22

Chanelle

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time

Storage Location

Eurofins Cooler # 77 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# IR-13 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-15 (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 _____ No NA
 -Were the seals on the outside of the cooler(s) signed & dated? No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? No NA
 -Were tamper/custody seals intact and uncompromised? No NA
- 3. Shippers' packing slip attached to the cooler(s)? No
- 4. Did custody papers accompany the sample(s)? No
- 5. Were the custody papers relinquished & signed in the appropriate place? No
- 6. Was/were the person(s) who collected the samples clearly identified on the COC? No
- 7. Did all bottles arrive in good condition (Unbroken)? No
- 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? No
- 9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? No
- 10. Were correct bottle(s) used for the test(s) indicated? No
- 11. Sufficient quantity received to perform indicated analyses? No
- 12. Are these work share samples and all listed on the COC? No

Tests that are not checked for pH by Receiving:
 VOAs
 Oil and Grease
 TOC

- If yes, Questions 13-17 have been checked at the originating laboratory.
- 13. Were all preserved sample(s) at the correct pH upon receipt? No NA pH Strip Lot# HC286797
- 14. Were VOAs on the COC? No NA
- 15. Were air bubbles >6 mm in any VOA vials? Larger than this. No NA
- 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ No NA
- 17. Was a LL Hg or Me Hg trip blank present? _____ No NA

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 - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(TA) Client Box Other	IR-13 (IR-15)	0.7	0.7	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	IR-13 (IR-15)	0.2	0.2	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	IR-13 (IR-15)	0.1	0.1	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	IR-13 (IR-15)	0.1	0.1	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	IR-13 (IR-15)	0.1	0.1	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	IR-13 (IR-15)	1.5	1.5	(Wet Ice) Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None

See Temperature Excursion Form



ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire Ohio 45620

Generated 11/22/2022 1:48:49 PM

JOB DESCRIPTION

Federal CCR Wells - App IV

JOB NUMBER

240-175047-1



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

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.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
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.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Job ID: 240-175047-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-175047-1

Comments

The SW846 Method 9315 Radium-226, SW846 Method 9320 Radium-228 (GFPC), and Ra226_Ra228 Combined Radium 226 and Radium 228 analyses were performed at the Eurofins St. Louis laboratory.

Receipt

The samples were received on 10/20/2022 9:25 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 0.2°C, 0.3°C, 0.4°C, 1.1°C and 1.2°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 160-587465: The barium carrier recovery is outside the upper control limit (110%) for the following sample: BAC-11-F-20221017-01 (240-175047-2). There was physical evidence of matrix interference apparent during the initial preparation of the sample (cloudiness noted at beginning of prep and precipitation was significantly larger than normal during the entire process). The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

Method 9315_Ra226: Radium-226 batch 587465: The Ba Carrier recovery is outside the upper control limit (110%) for the following sample: BAC-11-F-20221017-01 (240-175047-2). 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. The sample has been truncated to 100% to reduce any potential bias a high carrier recovery may have.

Method 9315_Ra226: Radium-226 batch 587465: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date: BAC-06-F-20221017-01 (240-175047-1), BAC-11-F-20221017-01 (240-175047-2), BAC-02-F-20221017-01 (240-175047-3), BAC-12-F-20221017-01 (240-175047-4), BAC-14-F-20221018-01 (240-175047-5), EB-001-F-20221018-01 (240-175047-6), (LCS 160-587465/2-A), (MB 160-587465/1-A)

Method 9320_Ra228: Radium-228 Prep Batch 160-587470: The barium carrier recovery is outside the upper control limit (110%) for the following sample: BAC-11-F-20221017-01 (240-175047-2). There was physical evidence of matrix interference apparent during the initial preparation of the sample (cloudiness noted at beginning of prep and precipitation was significantly larger than normal during the entire process). The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

Method 9320_Ra228: Radium-228 batch 587470: The detection goal was not met for the following sample(s). The samples were prepped at a reduced volume due to the presence of matrix interferences: BAC-06-F-20221017-01 (240-175047-1), BAC-02-F-20221017-01 (240-175047-3), BAC-12-F-20221017-01 (240-175047-4), BAC-14-F-20221018-01 (240-175047-5). Analytical results are reported with the detection limit achieved.

Method 9320_Ra228: Radium-228 batch 587470: The following sample has a barium carrier recovery above the 110% QC limit. Affected samples had a barium correction applied, however, there is significant concentrations of salt-like compounds (i.e. calcium, magnesium, sodium, and strontium) that can interfere with a barium sulfate recovery. The LCS (laboratory control sample) has an acceptable spike recovery demonstrating acceptable sample preparation and instrument performance. The sample has been truncated to 100% to reduce any potential bias a high carrier recovery may have. The data have been qualified and reported. BAC-11-F-20221017-01 (240-175047-2)

Method 9320_Ra228: Radium-228 batch 587470: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date: BAC-06-F-20221017-01 (240-175047-1), BAC-11-F-20221017-01 (240-175047-2), BAC-02-F-20221017-01 (240-175047-3), BAC-12-F-20221017-01 (240-175047-4),

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Job ID: 240-175047-1 (Continued)

Laboratory: Eurofins Canton (Continued)

BAC-14-F-20221018-01 (240-175047-5), EB-001-F-20221018-01 (240-175047-6), (LCS 160-587470/2-A), (MB 160-587470/1-A)

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.

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Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CAN
7470A	Mercury (CVAA)	SW846	EET CAN
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0-1993 R2.1	Anions, Ion Chromatography	EPA	EET CAN
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 CAN
7470A	Preparation, Mercury	SW846	EET CAN
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 CAN = Eurofins Canton, 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 - App IV

Job ID: 240-175047-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-175047-1	BAC-06-F-20221017-01	Water	10/17/22 10:53	10/20/22 09:25
240-175047-2	BAC-11-F-20221017-01	Water	10/17/22 12:26	10/20/22 09:25
240-175047-3	BAC-02-F-20221017-01	Water	10/17/22 13:22	10/20/22 09:25
240-175047-4	BAC-12-F-20221017-01	Water	10/17/22 15:23	10/20/22 09:25
240-175047-5	BAC-14-F-20221018-01	Water	10/18/22 09:34	10/20/22 09:25
240-175047-6	EB-001-F-20221018-01	Water	10/18/22 18:00	10/20/22 09:25

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Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175047-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	76		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cobalt	3.7		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	4.9	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	22000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	14000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	180		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	180		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.14		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175047-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	130000		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	11		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	2.7		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	2.8		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	330		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	650000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	2.0	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	26000		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	1.8	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	1000000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	13		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	13		5.0	2.6	mg/L	1		2320B-1997	Total/NA

Client Sample ID: BAC-02-F-20221017-01

Lab Sample ID: 240-175047-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.3		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	130		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cadmium	0.30	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chromium	8.7		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	4.4		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	6.4		1.0	0.45	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-02-F-20221017-01 (Continued)

Lab Sample ID: 240-175047-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	6.3	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	38000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	3500		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	1.1	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	68000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	260		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	260		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.14		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175047-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	17		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	360		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cadmium	0.34	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chromium	8.2		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	33		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	18		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	13		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	5.2		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	1.2	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	26000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.089		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175047-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	8.1		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	120		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	4.6	J	5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	3.2		1.0	0.19	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-14-F-20221018-01 (Continued)

Lab Sample ID: 240-175047-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	3.1		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	7.9	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	20000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	2.3	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	1900		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	21000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	84		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	84		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.060		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175047-6

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175047-1

Date Collected: 10/17/22 10:53

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/21/22 12:00	10/28/22 02:45	1
Arsenic	5.0	U	5.0	0.75	ug/L		10/21/22 12:00	10/28/22 02:45	1
Barium	76		5.0	2.2	ug/L		10/21/22 12:00	10/28/22 02:45	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/21/22 12:00	10/28/22 02:45	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 02:45	1
Chromium	5.0	U	5.0	2.5	ug/L		10/21/22 12:00	10/28/22 02:45	1
Cobalt	3.7		1.0	0.19	ug/L		10/21/22 12:00	10/28/22 02:45	1
Lead	1.0	U	1.0	0.45	ug/L		10/21/22 12:00	10/28/22 02:45	1
Lithium	4.9	J	8.0	1.7	ug/L		10/21/22 12:00	10/28/22 02:45	1
Magnesium	22000		1000	200	ug/L		10/21/22 12:00	10/28/22 02:45	1
Molybdenum	5.0	U	5.0	1.1	ug/L		10/21/22 12:00	10/28/22 02:45	1
Potassium	1300		1000	220	ug/L		10/21/22 12:00	10/28/22 02:45	1
Selenium	5.0	U	5.0	0.89	ug/L		10/21/22 12:00	10/28/22 02:45	1
Sodium	14000		1000	330	ug/L		10/21/22 12:00	10/28/22 02:45	1
Thallium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 02:45	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/21/22 12:00	10/24/22 16:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	180		5.0	2.6	mg/L			10/24/22 18:33	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	180		5.0	2.6	mg/L			10/24/22 18:33	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:33	1
Fluoride (EPA 300.0-1993 R2.1)	0.14		0.050	0.024	mg/L			11/09/22 04:12	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.243	U	0.274	0.274	1.00	0.445	pCi/L	10/27/22 08:16	11/19/22 22:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.3		40 - 110					10/27/22 08:16	11/19/22 22:22	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.808	U G	0.849	0.852	1.00	1.38	pCi/L	10/27/22 08:57	11/15/22 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.3		40 - 110					10/27/22 08:57	11/15/22 12:17	1
Y Carrier	84.9		40 - 110					10/27/22 08:57	11/15/22 12:17	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175047-1

Date Collected: 10/17/22 10:53

Matrix: Water

Date Received: 10/20/22 09:25

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	1.05	U	0.892	0.895	5.00	1.38	pCi/L		11/21/22 17:37	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175047-2

Date Collected: 10/17/22 12:26

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/21/22 12:00	10/28/22 02:49	1
Arsenic	5.0	U	5.0	0.75	ug/L		10/21/22 12:00	10/28/22 02:49	1
Barium	130000		5.0	2.2	ug/L		10/21/22 12:00	10/28/22 02:49	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/21/22 12:00	10/28/22 02:49	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 02:49	1
Chromium	11		5.0	2.5	ug/L		10/21/22 12:00	10/28/22 02:49	1
Cobalt	2.7		1.0	0.19	ug/L		10/21/22 12:00	10/28/22 02:49	1
Lead	2.8		1.0	0.45	ug/L		10/21/22 12:00	10/28/22 02:49	1
Lithium	330		8.0	1.7	ug/L		10/21/22 12:00	10/28/22 02:49	1
Magnesium	650000		1000	200	ug/L		10/21/22 12:00	10/28/22 02:49	1
Molybdenum	2.0	J	5.0	1.1	ug/L		10/21/22 12:00	10/28/22 02:49	1
Potassium	26000		1000	220	ug/L		10/21/22 12:00	10/28/22 02:49	1
Selenium	1.8	J	5.0	0.89	ug/L		10/21/22 12:00	10/28/22 02:49	1
Sodium	10000000		10000	3300	ug/L		10/21/22 12:00	11/01/22 16:36	10
Thallium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 02:49	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/21/22 12:00	10/24/22 16:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	13		5.0	2.6	mg/L			10/24/22 18:37	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	13		5.0	2.6	mg/L			10/24/22 18:37	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:37	1
Fluoride (EPA 300.0-1993 R2.1)	2.5	U	2.5	1.2	mg/L			11/09/22 05:32	50

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	57.0		2.31	5.62	1.00	0.399	pCi/L	10/27/22 08:16	11/19/22 22:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	188	X	40 - 110					10/27/22 08:16	11/19/22 22:22	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	140		4.70	13.7	1.00	0.700	pCi/L	10/27/22 08:57	11/15/22 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	188	X	40 - 110					10/27/22 08:57	11/15/22 12:17	1
Y Carrier	85.2		40 - 110					10/27/22 08:57	11/15/22 12:17	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175047-2

Date Collected: 10/17/22 12:26

Matrix: Water

Date Received: 10/20/22 09:25

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	197		5.24	14.8	5.00	0.700	pCi/L		11/21/22 17:37	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-02-F-20221017-01

Lab Sample ID: 240-175047-3

Date Collected: 10/17/22 13:22

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/21/22 12:00	10/28/22 02:54	1
Arsenic	6.3		5.0	0.75	ug/L		10/21/22 12:00	10/28/22 02:54	1
Barium	130		5.0	2.2	ug/L		10/21/22 12:00	10/28/22 02:54	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/21/22 12:00	10/28/22 02:54	1
Cadmium	0.30	J	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 02:54	1
Chromium	8.7		5.0	2.5	ug/L		10/21/22 12:00	10/28/22 02:54	1
Cobalt	4.4		1.0	0.19	ug/L		10/21/22 12:00	10/28/22 02:54	1
Lead	6.4		1.0	0.45	ug/L		10/21/22 12:00	10/28/22 02:54	1
Lithium	6.3	J	8.0	1.7	ug/L		10/21/22 12:00	10/28/22 02:54	1
Magnesium	38000		1000	200	ug/L		10/21/22 12:00	10/28/22 02:54	1
Molybdenum	5.0	U	5.0	1.1	ug/L		10/21/22 12:00	10/28/22 02:54	1
Potassium	3500		1000	220	ug/L		10/21/22 12:00	10/28/22 02:54	1
Selenium	1.1	J	5.0	0.89	ug/L		10/21/22 12:00	10/28/22 02:54	1
Sodium	68000		1000	330	ug/L		10/21/22 12:00	10/28/22 02:54	1
Thallium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 02:54	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/21/22 12:00	10/24/22 16:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	260		5.0	2.6	mg/L			10/24/22 18:42	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	260		5.0	2.6	mg/L			10/24/22 18:42	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:42	1
Fluoride (EPA 300.0-1993 R2.1)	0.14		0.050	0.024	mg/L			11/09/22 06:12	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	0.248	U	0.208	0.210	1.00	0.304	pCi/L	10/27/22 08:16	11/19/22 22:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.1		40 - 110					10/27/22 08:16	11/19/22 22:23	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	1.26	U G	0.927	0.934	1.00	1.42	pCi/L	10/27/22 08:57	11/15/22 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.1		40 - 110					10/27/22 08:57	11/15/22 12:17	1
Y Carrier	84.9		40 - 110					10/27/22 08:57	11/15/22 12:17	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-02-F-20221017-01

Lab Sample ID: 240-175047-3

Date Collected: 10/17/22 13:22

Matrix: Water

Date Received: 10/20/22 09:25

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		0.950	0.957	5.00	1.42	pCi/L		11/21/22 17:37	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175047-4

Date Collected: 10/17/22 15:23

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/21/22 12:00	10/28/22 02:58	1
Arsenic	17		5.0	0.75	ug/L		10/21/22 12:00	10/28/22 02:58	1
Barium	360		5.0	2.2	ug/L		10/21/22 12:00	10/28/22 02:58	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/21/22 12:00	10/28/22 02:58	1
Cadmium	0.34	J	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 02:58	1
Chromium	8.2		5.0	2.5	ug/L		10/21/22 12:00	10/28/22 02:58	1
Cobalt	33		1.0	0.19	ug/L		10/21/22 12:00	10/28/22 02:58	1
Lead	18		1.0	0.45	ug/L		10/21/22 12:00	10/28/22 02:58	1
Lithium	13		8.0	1.7	ug/L		10/21/22 12:00	10/28/22 02:58	1
Magnesium	16000		1000	200	ug/L		10/21/22 12:00	10/28/22 02:58	1
Molybdenum	5.2		5.0	1.1	ug/L		10/21/22 12:00	10/28/22 02:58	1
Potassium	3300		1000	220	ug/L		10/21/22 12:00	10/28/22 02:58	1
Selenium	1.2	J	5.0	0.89	ug/L		10/21/22 12:00	10/28/22 02:58	1
Sodium	26000		1000	330	ug/L		10/21/22 12:00	10/28/22 02:58	1
Thallium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 02:58	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/21/22 12:00	10/24/22 16:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	110		5.0	2.6	mg/L			10/24/22 18:46	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	110		5.0	2.6	mg/L			10/24/22 18:46	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:46	1
Fluoride (EPA 300.0-1993 R2.1)	0.089		0.050	0.024	mg/L			11/09/22 06:53	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	1.43		0.461	0.479	1.00	0.374	pCi/L	10/27/22 08:16	11/19/22 22:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	48.8		40 - 110					10/27/22 08:16	11/19/22 22:23	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	2.36	G	1.37	1.39	1.00	1.99	pCi/L	10/27/22 08:57	11/15/22 12:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	48.8		40 - 110					10/27/22 08:57	11/15/22 12:18	1
Y Carrier	87.9		40 - 110					10/27/22 08:57	11/15/22 12:18	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175047-4

Date Collected: 10/17/22 15:23

Matrix: Water

Date Received: 10/20/22 09:25

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	3.80		1.45	1.47	5.00	1.99	pCi/L		11/21/22 17:37	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175047-5

Date Collected: 10/18/22 09:34

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/21/22 12:00	10/28/22 03:02	1
Arsenic	8.1		5.0	0.75	ug/L		10/21/22 12:00	10/28/22 03:02	1
Barium	120		5.0	2.2	ug/L		10/21/22 12:00	10/28/22 03:02	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/21/22 12:00	10/28/22 03:02	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 03:02	1
Chromium	4.6	J	5.0	2.5	ug/L		10/21/22 12:00	10/28/22 03:02	1
Cobalt	3.2		1.0	0.19	ug/L		10/21/22 12:00	10/28/22 03:02	1
Lead	3.1		1.0	0.45	ug/L		10/21/22 12:00	10/28/22 03:02	1
Lithium	7.9	J	8.0	1.7	ug/L		10/21/22 12:00	10/28/22 03:02	1
Magnesium	20000		1000	200	ug/L		10/21/22 12:00	10/28/22 03:02	1
Molybdenum	2.3	J	5.0	1.1	ug/L		10/21/22 12:00	10/28/22 03:02	1
Potassium	1900		1000	220	ug/L		10/21/22 12:00	10/28/22 03:02	1
Selenium	5.0	U	5.0	0.89	ug/L		10/21/22 12:00	10/28/22 03:02	1
Sodium	21000		1000	330	ug/L		10/21/22 12:00	10/28/22 03:02	1
Thallium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 03:02	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/21/22 12:00	10/24/22 16:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	84		5.0	2.6	mg/L			10/24/22 22:56	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	84		5.0	2.6	mg/L			10/24/22 22:56	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 22:56	1
Fluoride (EPA 300.0-1993 R2.1)	0.060		0.050	0.024	mg/L			11/12/22 19:46	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	0.504		0.279	0.283	1.00	0.347	pCi/L	10/27/22 08:16	11/19/22 22:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.9		40 - 110					10/27/22 08:16	11/19/22 22:23	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	0.515	U G	0.747	0.749	1.00	1.26	pCi/L	10/27/22 08:57	11/15/22 12:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.9		40 - 110					10/27/22 08:57	11/15/22 12:18	1
Y Carrier	86.0		40 - 110					10/27/22 08:57	11/15/22 12:18	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175047-5

Date Collected: 10/18/22 09:34

Matrix: Water

Date Received: 10/20/22 09:25

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	1.02	U	0.797	0.801	5.00	1.26	pCi/L		11/21/22 17:37	1

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Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175047-6

Date Collected: 10/18/22 18:00

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/21/22 12:00	10/28/22 03:07	1
Arsenic	5.0	U	5.0	0.75	ug/L		10/21/22 12:00	10/28/22 03:07	1
Barium	5.0	U	5.0	2.2	ug/L		10/21/22 12:00	10/28/22 03:07	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/21/22 12:00	10/28/22 03:07	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 03:07	1
Chromium	5.0	U	5.0	2.5	ug/L		10/21/22 12:00	10/28/22 03:07	1
Cobalt	1.0	U	1.0	0.19	ug/L		10/21/22 12:00	10/28/22 03:07	1
Lead	1.0	U	1.0	0.45	ug/L		10/21/22 12:00	10/28/22 03:07	1
Lithium	8.0	U	8.0	1.7	ug/L		10/21/22 12:00	10/28/22 03:07	1
Magnesium	1000	U	1000	200	ug/L		10/21/22 12:00	10/28/22 03:07	1
Molybdenum	5.0	U	5.0	1.1	ug/L		10/21/22 12:00	10/28/22 03:07	1
Potassium	1000	U	1000	220	ug/L		10/21/22 12:00	10/28/22 03:07	1
Selenium	5.0	U	5.0	0.89	ug/L		10/21/22 12:00	10/28/22 03:07	1
Sodium	1000	U	1000	330	ug/L		10/21/22 12:00	10/28/22 03:07	1
Thallium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 03:07	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/21/22 12:00	10/24/22 16:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:02	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:02	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:02	1
Fluoride (EPA 300.0-1993 R2.1)	0.050	U	0.050	0.024	mg/L			11/12/22 20:06	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	0.0541	U	0.0743	0.0744	1.00	0.125	pCi/L	10/27/22 08:16	11/19/22 22:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/27/22 08:16	11/19/22 22:23	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	0.323	U	0.276	0.278	1.00	0.431	pCi/L	10/27/22 08:57	11/15/22 12:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					10/27/22 08:57	11/15/22 12:18	1
Y Carrier	87.5		40 - 110					10/27/22 08:57	11/15/22 12:18	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175047-6

Date Collected: 10/18/22 18:00

Matrix: Water

Date Received: 10/20/22 09:25

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	0.377	U	0.286	0.288	5.00	0.431	pCi/L		11/21/22 17:37	1

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Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Method: 9315 - Radium 226 by GFPC

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
240-175047-1	BAC-06-F-20221017-01	72.3
240-175047-2	BAC-11-F-20221017-01	188 X
240-175047-3	BAC-02-F-20221017-01	69.1
240-175047-4	BAC-12-F-20221017-01	48.8
240-175047-5	BAC-14-F-20221018-01	65.9
240-175047-6	EB-001-F-20221018-01	101
LCS 160-587465/2-A	Lab Control Sample	99.3
MB 160-587465/1-A	Method Blank	103

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
240-175047-1	BAC-06-F-20221017-01	72.3	84.9
240-175047-2	BAC-11-F-20221017-01	188 X	85.2
240-175047-3	BAC-02-F-20221017-01	69.1	84.9
240-175047-4	BAC-12-F-20221017-01	48.8	87.9
240-175047-5	BAC-14-F-20221018-01	65.9	86.0
240-175047-6	EB-001-F-20221018-01	101	87.5
LCS 160-587470/2-A	Lab Control Sample	99.3	86.7
MB 160-587470/1-A	Method Blank	103	83.4

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-548216/1-A
Matrix: Water
Analysis Batch: 549264

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 548216

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	2.0	U	2.0	0.57	ug/L		10/21/22 12:00	10/28/22 01:52	1
Arsenic	5.0	U	5.0	0.75	ug/L		10/21/22 12:00	10/28/22 01:52	1
Barium	5.0	U	5.0	2.2	ug/L		10/21/22 12:00	10/28/22 01:52	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/21/22 12:00	10/28/22 01:52	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 01:52	1
Chromium	5.0	U	5.0	2.5	ug/L		10/21/22 12:00	10/28/22 01:52	1
Cobalt	1.0	U	1.0	0.19	ug/L		10/21/22 12:00	10/28/22 01:52	1
Lead	1.0	U	1.0	0.45	ug/L		10/21/22 12:00	10/28/22 01:52	1
Lithium	8.0	U	8.0	1.7	ug/L		10/21/22 12:00	10/28/22 01:52	1
Magnesium	1000	U	1000	200	ug/L		10/21/22 12:00	10/28/22 01:52	1
Molybdenum	5.0	U	5.0	1.1	ug/L		10/21/22 12:00	10/28/22 01:52	1
Potassium	1000	U	1000	220	ug/L		10/21/22 12:00	10/28/22 01:52	1
Selenium	5.0	U	5.0	0.89	ug/L		10/21/22 12:00	10/28/22 01:52	1
Sodium	1000	U	1000	330	ug/L		10/21/22 12:00	10/28/22 01:52	1
Thallium	1.0	U	1.0	0.20	ug/L		10/21/22 12:00	10/28/22 01:52	1

Lab Sample ID: LCS 240-548216/3-A
Matrix: Water
Analysis Batch: 549264

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 548216

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	909		ug/L		91	80 - 120
Barium	1000	858		ug/L		86	80 - 120
Beryllium	500	514		ug/L		103	80 - 120
Cadmium	500	431		ug/L		86	80 - 120
Chromium	500	454		ug/L		91	80 - 120
Cobalt	500	462		ug/L		92	80 - 120
Lead	500	463		ug/L		93	80 - 120
Lithium	500	508		ug/L		102	80 - 120
Magnesium	25000	22300		ug/L		89	80 - 120
Molybdenum	500	434		ug/L		87	80 - 120
Potassium	25000	22600		ug/L		90	80 - 120
Selenium	1000	893		ug/L		89	80 - 120
Sodium	25000	22200		ug/L		89	80 - 120
Thallium	1000	924		ug/L		92	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-548218/1-A
Matrix: Water
Analysis Batch: 548510

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548218

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.20	U	0.20	0.13	ug/L		10/21/22 12:00	10/24/22 16:11	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-548218/2-A
 Matrix: Water
 Analysis Batch: 548510

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 548218

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.15		ug/L		103	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548679/136
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1

Lab Sample ID: MB 240-548679/162
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1

Lab Sample ID: MB 240-548679/56
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1

Lab Sample ID: MB 240-548679/83
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1

Lab Sample ID: LCS 240-548679/161
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	146	145		mg/L		99	86 - 123

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: LCS 240-548679/82
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity	146	139		mg/L		96	86 - 123

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-550924/15
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	0.024	mg/L			11/08/22 17:08	1

Lab Sample ID: LCS 240-550924/16
 Matrix: Water
 Analysis Batch: 550924

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.52		mg/L		101	90 - 110

Lab Sample ID: MB 240-551629/3
 Matrix: Water
 Analysis Batch: 551629

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	0.024	mg/L			11/12/22 07:22	1

Lab Sample ID: LCS 240-551629/4
 Matrix: Water
 Analysis Batch: 551629

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.46		mg/L		99	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-587465/1-A
 Matrix: Water
 Analysis Batch: 590652

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 587465

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07583	U	0.0811	0.0814	1.00	0.129	pCi/L	10/27/22 08:16	11/19/22 22:20	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					10/27/22 08:16	11/19/22 22:20	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-587465/2-A
Matrix: Water
Analysis Batch: 590652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 587465

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	
Radium-226	11.3	9.722		1.06	1.00	0.147	pCi/L	86	75 - 125	
Carrier	%Yield	LCS Qualifier	Limits							
Ba Carrier	99.3		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-587470/1-A
Matrix: Water
Analysis Batch: 590173

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 587470

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3866	U	0.305	0.307	1.00	0.471	pCi/L	10/27/22 08:57	11/15/22 12:12	1
Carrier	%Yield	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	103		40 - 110			10/27/22 08:57	11/15/22 12:12	1		
Y Carrier	83.4		40 - 110			10/27/22 08:57	11/15/22 12:12	1		

Lab Sample ID: LCS 160-587470/2-A
Matrix: Water
Analysis Batch: 590173

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 587470

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.44	9.019		1.20	1.00	0.449	pCi/L	107	75 - 125
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	99.3		40 - 110						
Y Carrier	86.7		40 - 110						

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Metals

Prep Batch: 548216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-1	BAC-06-F-20221017-01	Total Recoverable	Water	3005A	
240-175047-2	BAC-11-F-20221017-01	Total Recoverable	Water	3005A	
240-175047-3	BAC-02-F-20221017-01	Total Recoverable	Water	3005A	
240-175047-4	BAC-12-F-20221017-01	Total Recoverable	Water	3005A	
240-175047-5	BAC-14-F-20221018-01	Total Recoverable	Water	3005A	
240-175047-6	EB-001-F-20221018-01	Total Recoverable	Water	3005A	
MB 240-548216/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-548216/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 548218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-1	BAC-06-F-20221017-01	Total/NA	Water	7470A	
240-175047-2	BAC-11-F-20221017-01	Total/NA	Water	7470A	
240-175047-3	BAC-02-F-20221017-01	Total/NA	Water	7470A	
240-175047-4	BAC-12-F-20221017-01	Total/NA	Water	7470A	
240-175047-5	BAC-14-F-20221018-01	Total/NA	Water	7470A	
240-175047-6	EB-001-F-20221018-01	Total/NA	Water	7470A	
MB 240-548218/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-548218/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 548510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-1	BAC-06-F-20221017-01	Total/NA	Water	7470A	548218
240-175047-2	BAC-11-F-20221017-01	Total/NA	Water	7470A	548218
240-175047-3	BAC-02-F-20221017-01	Total/NA	Water	7470A	548218
240-175047-4	BAC-12-F-20221017-01	Total/NA	Water	7470A	548218
240-175047-5	BAC-14-F-20221018-01	Total/NA	Water	7470A	548218
240-175047-6	EB-001-F-20221018-01	Total/NA	Water	7470A	548218
MB 240-548218/1-A	Method Blank	Total/NA	Water	7470A	548218
LCS 240-548218/2-A	Lab Control Sample	Total/NA	Water	7470A	548218

Analysis Batch: 549264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-1	BAC-06-F-20221017-01	Total Recoverable	Water	6020B	548216
240-175047-2	BAC-11-F-20221017-01	Total Recoverable	Water	6020B	548216
240-175047-3	BAC-02-F-20221017-01	Total Recoverable	Water	6020B	548216
240-175047-4	BAC-12-F-20221017-01	Total Recoverable	Water	6020B	548216
240-175047-5	BAC-14-F-20221018-01	Total Recoverable	Water	6020B	548216
240-175047-6	EB-001-F-20221018-01	Total Recoverable	Water	6020B	548216
MB 240-548216/1-A	Method Blank	Total Recoverable	Water	6020B	548216
LCS 240-548216/3-A	Lab Control Sample	Total Recoverable	Water	6020B	548216

Analysis Batch: 549866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-2	BAC-11-F-20221017-01	Total Recoverable	Water	6020B	548216

General Chemistry

Analysis Batch: 548679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-1	BAC-06-F-20221017-01	Total/NA	Water	2320B-1997	

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QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

General Chemistry (Continued)

Analysis Batch: 548679 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-2	BAC-11-F-20221017-01	Total/NA	Water	2320B-1997	
240-175047-3	BAC-02-F-20221017-01	Total/NA	Water	2320B-1997	
240-175047-4	BAC-12-F-20221017-01	Total/NA	Water	2320B-1997	
240-175047-5	BAC-14-F-20221018-01	Total/NA	Water	2320B-1997	
240-175047-6	EB-001-F-20221018-01	Total/NA	Water	2320B-1997	
MB 240-548679/136	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/162	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/56	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548679/161	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/82	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 550924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-1	BAC-06-F-20221017-01	Total/NA	Water	300.0-1993 R2.1	
240-175047-2	BAC-11-F-20221017-01	Total/NA	Water	300.0-1993 R2.1	
240-175047-3	BAC-02-F-20221017-01	Total/NA	Water	300.0-1993 R2.1	
240-175047-4	BAC-12-F-20221017-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-550924/15	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-550924/16	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 551629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-5	BAC-14-F-20221018-01	Total/NA	Water	300.0-1993 R2.1	
240-175047-6	EB-001-F-20221018-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-551629/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-551629/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 587465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-1	BAC-06-F-20221017-01	Total/NA	Water	PrecSep-21	
240-175047-2	BAC-11-F-20221017-01	Total/NA	Water	PrecSep-21	
240-175047-3	BAC-02-F-20221017-01	Total/NA	Water	PrecSep-21	
240-175047-4	BAC-12-F-20221017-01	Total/NA	Water	PrecSep-21	
240-175047-5	BAC-14-F-20221018-01	Total/NA	Water	PrecSep-21	
240-175047-6	EB-001-F-20221018-01	Total/NA	Water	PrecSep-21	
MB 160-587465/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-587465/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 587470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175047-1	BAC-06-F-20221017-01	Total/NA	Water	PrecSep_0	
240-175047-2	BAC-11-F-20221017-01	Total/NA	Water	PrecSep_0	
240-175047-3	BAC-02-F-20221017-01	Total/NA	Water	PrecSep_0	
240-175047-4	BAC-12-F-20221017-01	Total/NA	Water	PrecSep_0	
240-175047-5	BAC-14-F-20221018-01	Total/NA	Water	PrecSep_0	
240-175047-6	EB-001-F-20221018-01	Total/NA	Water	PrecSep_0	
MB 160-587470/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-587470/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

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Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175047-1

Date Collected: 10/17/22 10:53

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548216	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549264	DSH	EET CAN	10/28/22 02:45
Total/NA	Prep	7470A			548218	SHB	EET CAN	10/21/22 12:00
Total/NA	Analysis	7470A		1	548510	DSH	EET CAN	10/24/22 16:37
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:33
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 04:12
Total/NA	Prep	PrecSep-21			587465	BMP	EET SL	10/27/22 08:16
Total/NA	Analysis	9315		1	590655	FLC	EET SL	11/19/22 22:22
Total/NA	Prep	PrecSep_0			587470	BMP	EET SL	10/27/22 08:57
Total/NA	Analysis	9320		1	590174	FLC	EET SL	11/15/22 12:17
Total/NA	Analysis	Ra226_Ra228		1	590897	CAH	EET SL	11/21/22 17:37

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175047-2

Date Collected: 10/17/22 12:26

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548216	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549264	DSH	EET CAN	10/28/22 02:49
Total Recoverable	Prep	3005A			548216	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		10	549866	DSH	EET CAN	11/01/22 16:36
Total/NA	Prep	7470A			548218	SHB	EET CAN	10/21/22 12:00
Total/NA	Analysis	7470A		1	548510	DSH	EET CAN	10/24/22 16:39
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:37
Total/NA	Analysis	300.0-1993 R2.1		50	550924	JMB	EET CAN	11/09/22 05:32
Total/NA	Prep	PrecSep-21			587465	BMP	EET SL	10/27/22 08:16
Total/NA	Analysis	9315		1	590655	FLC	EET SL	11/19/22 22:22
Total/NA	Prep	PrecSep_0			587470	BMP	EET SL	10/27/22 08:57
Total/NA	Analysis	9320		1	590174	FLC	EET SL	11/15/22 12:17
Total/NA	Analysis	Ra226_Ra228		1	590897	CAH	EET SL	11/21/22 17:37

Client Sample ID: BAC-02-F-20221017-01

Lab Sample ID: 240-175047-3

Date Collected: 10/17/22 13:22

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548216	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549264	DSH	EET CAN	10/28/22 02:54
Total/NA	Prep	7470A			548218	SHB	EET CAN	10/21/22 12:00
Total/NA	Analysis	7470A		1	548510	DSH	EET CAN	10/24/22 16:41
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:42
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 06:12
Total/NA	Prep	PrecSep-21			587465	BMP	EET SL	10/27/22 08:16
Total/NA	Analysis	9315		1	590655	FLC	EET SL	11/19/22 22:23

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: BAC-02-F-20221017-01

Lab Sample ID: 240-175047-3

Date Collected: 10/17/22 13:22

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep_0			587470	BMP	EET SL	10/27/22 08:57
Total/NA	Analysis	9320		1	590174	FLC	EET SL	11/15/22 12:17
Total/NA	Analysis	Ra226_Ra228		1	590897	CAH	EET SL	11/21/22 17:37

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175047-4

Date Collected: 10/17/22 15:23

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548216	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549264	DSH	EET CAN	10/28/22 02:58
Total/NA	Prep	7470A			548218	SHB	EET CAN	10/21/22 12:00
Total/NA	Analysis	7470A		1	548510	DSH	EET CAN	10/24/22 16:43
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:46
Total/NA	Analysis	300.0-1993 R2.1		1	550924	JMB	EET CAN	11/09/22 06:53
Total/NA	Prep	PrecSep-21			587465	BMP	EET SL	10/27/22 08:16
Total/NA	Analysis	9315		1	590655	FLC	EET SL	11/19/22 22:23
Total/NA	Prep	PrecSep_0			587470	BMP	EET SL	10/27/22 08:57
Total/NA	Analysis	9320		1	590174	FLC	EET SL	11/15/22 12:18
Total/NA	Analysis	Ra226_Ra228		1	590897	CAH	EET SL	11/21/22 17:37

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175047-5

Date Collected: 10/18/22 09:34

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548216	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549264	DSH	EET CAN	10/28/22 03:02
Total/NA	Prep	7470A			548218	SHB	EET CAN	10/21/22 12:00
Total/NA	Analysis	7470A		1	548510	DSH	EET CAN	10/24/22 16:45
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 22:56
Total/NA	Analysis	300.0-1993 R2.1		1	551629	JMB	EET CAN	11/12/22 19:46
Total/NA	Prep	PrecSep-21			587465	BMP	EET SL	10/27/22 08:16
Total/NA	Analysis	9315		1	590655	FLC	EET SL	11/19/22 22:23
Total/NA	Prep	PrecSep_0			587470	BMP	EET SL	10/27/22 08:57
Total/NA	Analysis	9320		1	590174	FLC	EET SL	11/15/22 12:18
Total/NA	Analysis	Ra226_Ra228		1	590897	CAH	EET SL	11/21/22 17:37

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175047-6

Date Collected: 10/18/22 18:00

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548216	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549264	DSH	EET CAN	10/28/22 03:07

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Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175047-6

Date Collected: 10/18/22 18:00

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			548218	SHB	EET CAN	10/21/22 12:00
Total/NA	Analysis	7470A		1	548510	DSH	EET CAN	10/24/22 16:47
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 23:02
Total/NA	Analysis	300.0-1993 R2.1		1	551629	JMB	EET CAN	11/12/22 20:06
Total/NA	Prep	PrecSep-21			587465	BMP	EET SL	10/27/22 08:16
Total/NA	Analysis	9315		1	590655	FLC	EET SL	11/19/22 22:23
Total/NA	Prep	PrecSep_0			587470	BMP	EET SL	10/27/22 08:57
Total/NA	Analysis	9320		1	590174	FLC	EET SL	11/15/22 12:18
Total/NA	Analysis	Ra226_Ra228		1	590897	CAH	EET SL	11/21/22 17:37

Laboratory References:

EET CAN = Eurofins Canton, 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

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Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App IV

Job ID: 240-175047-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	11-30-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App IV

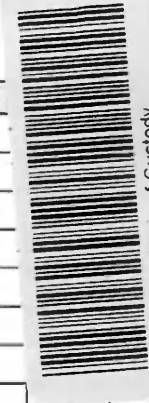
Job ID: 240-175047-1

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
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Client Information		Sampler: <u>Bobby Cesto</u>		Lab PM:	Carrier Tracking No(s):	
Client Contact:		Phone: <u>740-373-4308</u>		Cisneros, Roxanne	COC No: 240-93466-34578.1	
Taylor Huffman		E-Mail: roxanne.cisneros@Eurofins.com		State of Origin:		
Company:		PWSID:		Page 1 of 1		
Lightstone Generation Gavin Power LLC		Address:		Job #:		
7397 OH-7		TAT Requested (days):		Analysis Requested		
City: Cheshire		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Total Number of Containers		
State, Zip: OH, 45620		PO #: 2935505		Preservation Codes:		
Phone: 740-925-3171(Tel)		WO #:		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 Other:		
Email: taylor.huffman@lightstonegen.com		Project #: 24019633		M - Heane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		
Federal CCR Wells - App IV		Site:		Special Instructions/Note:		
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code:	Matrix (Water, Solid, Other)
BAC-06-F-20221017-01	10-17-22	1053	G	Water	N	Water
BAC-11-F-20221017-01	10-17-22	1226	G	Water	N	Water
BAC-02-F-20221017-01	10-17-22	1322	G	Water	N	Water
BAC-12-F-20221017-01	10-17-22	1523	G	Water	N	Water
BAC-14-F-20221018-01	10-18-22	0934	G	Water	N	Water
EB-001-F-20221018-01	10-18-22	1800	G	Water	N	Water
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)						
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: <u>Bobby Cesto</u> Date/Time: <u>10-20-22 16:45</u> Relinquished by: <u>Michelle Cheliff</u> Date/Time: <u>10-20-22 09:25</u> Relinquished by: _____ Date/Time: _____						
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)						
Sample Disposal (A fee may apply) <input type="checkbox"/> Return To Client <input type="checkbox"/> Archive For _____ Months						
Special Instructions/QC Requirements:						
Method of Shipment: _____ Received by: <u>Michelle Cheliff</u> Date/Time: <u>10-20-22 06:45</u> Received by: <u>Michelle Cheliff</u> Date/Time: <u>10-20-22 09:25</u> Received by: _____ Date/Time: _____ Cooler Temperature(s) °C and Other Remarks:						



Eurofins - Canton Sample Receipt Form/Narrative Login # : _____
Barberton Facility

Client Lightsstone Site Name _____ Cooler unpacked by: Danny Rejz
Cooler Received on 10-20-22 Opened on 10-20-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 1A 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# IR-13 (CF +0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (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 lead 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 NA
-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)? Yes No
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# HC286797
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes No NA ← Larger than this.
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 _____

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

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 - Canton Sample Receipt Multiple Cooler Form							
Cooler Description (Circle)				IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA	Client	Box	Other	IR-13 IR-15	0.2	0.2	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	0.3	0.3	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	0.4	0.4	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	1.1	1.1	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15	1.2	1.2	Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA	Client	Box	Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None

See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 - Multiple Coolers

Eurofins Canton

180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record



Environment Testing
America



Client Information (Sub Contract Lab)

Client Contact: Lab P#:
Shipping/Receiving: Cisneros, Roxanne
Phone: E-Mail: roxanne.cisneros@et.eurofinsus.com
Company: TestAmerica Laboratories, Inc.
Address: 13715 Rider Trail North,
City: Earth City
State, Zip: MO, 63045
Phone: 314-298-8566(Tel) 314-298-8757(Fax)
Email:
Project Name: Federal CCR Wells - App IV
Site:
Due Date Requested: 11/21/2022
TAT Requested (days):
PO #:
WO #:
Project #: 24019633
SSOW#:

Sampler:
Lab P#:
Cisneros, Roxanne
E-Mail:
roxanne.cisneros@et.eurofinsus.com
Accreditations Required (See note):
State of Origin: Ohio
COC No: 240-159233.1
Page: Page 1 of 1
Job #: 240-175047-1

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewage, Onwaste/soil, B1= Tissue, ABA#)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested		Total Number of Containers	Special Instructions/Note:
							9315_Ra228/PreSep_21 Radium-226 (GFP)	9320_Ra228/PreSep_0 Radium-226 (GFP)		
BAC-06-F-20221017-01 (240-175047-1)	10/17/22	10:53 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-11-F-20221017-01 (240-175047-2)	10/17/22	12:26 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-02-F-20221017-01 (240-175047-3)	10/17/22	13:22 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-12-F-20221017-01 (240-175047-4)	10/17/22	15:23 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
BAC-14-F-20221018-01 (240-175047-5)	10/18/22	09:34 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20221018-01 (240-175047-6)	10/18/22	18:00 Eastern	Water	Water	X	X	X	X	2	Recout of TAR after 21 day ingrowth if > action limit; save planchet

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/test/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

Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date/Time: _____ Method of Shipment: _____
 Relinquished by: **FED EX** Date/Time: **10/24/22 1000** Company: **FED EX**
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: _____ Custody Seal No.: _____
 Yes No

Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: **FED EX** Date/Time: **OCT 25 2022 0900** Company: **FED EX**
 Relinquished by: **Autumn R. Johnson** Date/Time: _____ Company: _____

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-175047-1

Login Number: 175047

List Number: 2

Creator: Booker, Autumn R

List Source: Eurofins St. Louis

List Creation: 10/25/22 04:50 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?	True	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Eurofins Canton

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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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11/22/2022 1:48:49 PM

Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(615)301-5761

ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-175048-1
Client Project/Site: Federal CCR Wells - App III

For:
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire, Ohio 45620

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
11/4/2022 3:26:56 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

LINKS

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results through



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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

Case Narrative

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Job ID: 240-175048-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-175048-1

Receipt

The samples were received on 10/20/2022 9:25 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 0.2°C, 0.3°C, 0.4°C, 1.1°C and 1.2°C

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 2540C_Calcd: LCS failed high for the batch. Samples will be reported for in hold results. Samples will be re-analyzed out of hold with passing QC. BAC-06-F-20221017-01 (240-175048-1), BAC-11-F-20221017-01 (240-175048-2), BAC-12-F-20221017-01 (240-175048-3)

Method 2540C_Calcd: Reanalysis of the following sample(s) was performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis. BAC-06-F-20221017-01 (240-175048-1), BAC-11-F-20221017-01 (240-175048-2) and BAC-12-F-20221017-01 (240-175048-3)

Method 300.0_28D: The following sample was diluted due to the nature of the sample matrix: BAC-11-F-20221017-01 (240-175048-2). 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.

Method Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CAN
6020B	Metals (ICP/MS)	SW846	EET CAN
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-175048-1	BAC-06-F-20221017-01	Water	10/17/22 10:53	10/20/22 09:25
240-175048-2	BAC-11-F-20221017-01	Water	10/17/22 12:26	10/20/22 09:25
240-175048-3	BAC-12-F-20221017-01	Water	10/17/22 15:23	10/20/22 09:25
240-175048-4	BAC-14-F-20221018-01	Water	10/18/22 09:34	10/20/22 09:25
240-175048-5	EB-001-F-20221018-01	Water	10/18/22 18:00	10/20/22 09:25

- 1
- 2
- 3
- 4
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- 7
- 8
- 9
- 10
- 11
- 12
- 13

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175048-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1700		100	57	ug/L	1		6010D	Total Recoverable
Calcium	120000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	27000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	16000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	25		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.11		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	230		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	530	+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	540	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175048-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	250		100	57	ug/L	1		6010D	Total Recoverable
Calcium	2900000		20000	12000	ug/L	20		6020B	Total Recoverable
Magnesium	750000		20000	4000	ug/L	20		6020B	Total Recoverable
Potassium	25000		20000	4300	ug/L	20		6020B	Total Recoverable
Sodium	10000000		20000	6600	ug/L	20		6020B	Total Recoverable
Total Alkalinity	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	190		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	27000		500	140	mg/L	500		300.0	Total/NA
Fluoride	0.63	J	1.3	0.60	mg/L	25		300.0	Total/NA
Total Dissolved Solids	400	+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	540	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175048-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2300		100	57	ug/L	1		6010D	Total Recoverable
Calcium	73000		2000	1200	ug/L	2		6020B	Total Recoverable
Magnesium	17000		2000	400	ug/L	2		6020B	Total Recoverable
Potassium	3400		2000	430	ug/L	2		6020B	Total Recoverable
Sodium	27000		2000	660	ug/L	2		6020B	Total Recoverable
Total Alkalinity	120		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	120		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	50		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.083		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.

Eurofins Canton

Detection Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-12-F-20221017-01 (Continued)

Lab Sample ID: 240-175048-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	420	*+	10	7.8	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids - RA	390	H	10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175048-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2600		100	57	ug/L	1		6010D	Total Recoverable
Calcium	74000		2000	1200	ug/L	2		6020B	Total Recoverable
Magnesium	20000		2000	400	ug/L	2		6020B	Total Recoverable
Potassium	1900		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	21000		2000	660	ug/L	2		6020B	Total Recoverable
Total Alkalinity	81		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	81		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	36		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.055		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	220		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	430		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175048-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	12		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175048-1

Date Collected: 10/17/22 10:53

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1700		100	57	ug/L		10/21/22 12:00	10/24/22 22:17	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	120000		1000	580	ug/L		10/21/22 12:00	10/26/22 22:11	1
Magnesium	27000		1000	200	ug/L		10/21/22 12:00	10/26/22 22:11	1
Potassium	1500		1000	220	ug/L		10/21/22 12:00	10/26/22 22:11	1
Sodium	16000		1000	330	ug/L		10/21/22 12:00	10/26/22 22:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	190		5.0	2.6	mg/L			10/24/22 18:50	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	190		5.0	2.6	mg/L			10/24/22 18:50	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 18:50	1
Chloride (MCAWW 300.0)	25		1.0	0.28	mg/L			11/01/22 20:35	1
Fluoride (MCAWW 300.0)	0.11		0.050	0.024	mg/L			11/01/22 20:35	1
Sulfate (MCAWW 300.0)	230		2.0	0.70	mg/L			11/02/22 16:29	2
Total Dissolved Solids (SM 2540C)	530	*+	10	7.8	mg/L			10/21/22 09:53	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	540	H	10	7.8	mg/L			10/25/22 16:00	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175048-2

Date Collected: 10/17/22 12:26

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	250		100	57	ug/L		10/21/22 12:00	10/24/22 22:29	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	2900000		20000	12000	ug/L		10/21/22 12:00	10/26/22 22:16	20
Magnesium	750000		20000	4000	ug/L		10/21/22 12:00	10/26/22 22:16	20
Potassium	25000		20000	4300	ug/L		10/21/22 12:00	10/26/22 22:16	20
Sodium	10000000		20000	6600	ug/L		10/21/22 12:00	10/26/22 22:16	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	190		5.0	2.6	mg/L			10/24/22 19:02	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	190		5.0	2.6	mg/L			10/24/22 19:02	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 19:02	1
Chloride (MCAWW 300.0)	27000		500	140	mg/L			11/01/22 21:18	500
Fluoride (MCAWW 300.0)	0.63	J	1.3	0.60	mg/L			11/02/22 16:51	25
Sulfate (MCAWW 300.0)	25	U	25	8.7	mg/L			11/02/22 16:51	25
Total Dissolved Solids (SM 2540C)	400	*+	10	7.8	mg/L			10/21/22 09:53	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	540	H	10	7.8	mg/L			10/25/22 16:00	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175048-3

Date Collected: 10/17/22 15:23

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2300		100	57	ug/L		10/21/22 12:00	10/24/22 22:34	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	73000		2000	1200	ug/L		10/21/22 12:00	10/26/22 22:20	2
Magnesium	17000		2000	400	ug/L		10/21/22 12:00	10/26/22 22:20	2
Potassium	3400		2000	430	ug/L		10/21/22 12:00	10/26/22 22:20	2
Sodium	27000		2000	660	ug/L		10/21/22 12:00	10/26/22 22:20	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	120		5.0	2.6	mg/L			10/24/22 19:12	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	120		5.0	2.6	mg/L			10/24/22 19:12	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 19:12	1
Chloride (MCAWW 300.0)	50		1.0	0.28	mg/L			11/01/22 21:40	1
Fluoride (MCAWW 300.0)	0.083		0.050	0.024	mg/L			11/01/22 21:40	1
Sulfate (MCAWW 300.0)	180		1.0	0.35	mg/L			11/01/22 21:40	1
Total Dissolved Solids (SM 2540C)	420	*+	10	7.8	mg/L			10/21/22 09:53	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	390	H	10	7.8	mg/L			10/25/22 16:00	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175048-4

Date Collected: 10/18/22 09:34

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2600		100	57	ug/L		10/21/22 12:00	10/24/22 22:38	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	74000		2000	1200	ug/L		10/21/22 12:00	10/26/22 22:25	2
Magnesium	20000		2000	400	ug/L		10/21/22 12:00	10/26/22 22:25	2
Potassium	1900		1000	220	ug/L		10/21/22 12:00	10/27/22 21:08	1
Sodium	21000		2000	660	ug/L		10/21/22 12:00	10/26/22 22:25	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	81		5.0	2.6	mg/L			10/24/22 23:10	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	81		5.0	2.6	mg/L			10/24/22 23:10	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:10	1
Chloride (MCAWW 300.0)	36		1.0	0.28	mg/L			11/01/22 22:02	1
Fluoride (MCAWW 300.0)	0.055		0.050	0.024	mg/L			11/01/22 22:02	1
Sulfate (MCAWW 300.0)	220		2.0	0.70	mg/L			11/02/22 17:13	2
Total Dissolved Solids (SM 2540C)	430		10	7.8	mg/L			10/24/22 10:05	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175048-5

Date Collected: 10/18/22 18:00

Matrix: Water

Date Received: 10/20/22 09:25

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/21/22 12:00	10/24/22 22:42	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/21/22 12:00	10/26/22 22:29	1
Magnesium	1000	U	1000	200	ug/L		10/21/22 12:00	10/26/22 22:29	1
Potassium	1000	U	1000	220	ug/L		10/21/22 12:00	10/26/22 22:29	1
Sodium	1000	U	1000	330	ug/L		10/21/22 12:00	10/26/22 22:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:14	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:14	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/24/22 23:14	1
Chloride (MCAWW 300.0)	1.0	U	1.0	0.28	mg/L			11/01/22 22:23	1
Fluoride (MCAWW 300.0)	0.050	U	0.050	0.024	mg/L			11/01/22 22:23	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			11/01/22 22:23	1
Total Dissolved Solids (SM 2540C)	12		10	7.8	mg/L			10/24/22 10:05	1

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-548228/1-A
 Matrix: Water
 Analysis Batch: 548566

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 548228

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/21/22 12:00	10/24/22 21:06	1

Lab Sample ID: LCS 240-548228/2-A
 Matrix: Water
 Analysis Batch: 548566

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 548228

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 240-548228/1-A
 Matrix: Water
 Analysis Batch: 549001

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 548228

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		10/21/22 12:00	10/26/22 20:48	1
Magnesium	1000	U	1000	200	ug/L		10/21/22 12:00	10/26/22 20:48	1
Potassium	1000	U	1000	220	ug/L		10/21/22 12:00	10/26/22 20:48	1
Sodium	1000	U	1000	330	ug/L		10/21/22 12:00	10/26/22 20:48	1

Lab Sample ID: LCS 240-548228/3-A
 Matrix: Water
 Analysis Batch: 549001

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 548228

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	25200		ug/L		101	80 - 120
Magnesium	25000	24300		ug/L		97	80 - 120
Potassium	25000	24600		ug/L		99	80 - 120
Sodium	25000	24200		ug/L		97	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548679/109
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 18:58	1

Lab Sample ID: MB 240-548679/136
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 20:50	1

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-548679/162
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 22:41	1

Lab Sample ID: MB 240-548679/56
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 15:29	1

Lab Sample ID: MB 240-548679/83
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/24/22 17:16	1

Lab Sample ID: LCS 240-548679/108
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCS 240-548679/161
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: LCS 240-548679/82
Matrix: Water
Analysis Batch: 548679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: 240-175048-2 DU
Matrix: Water
Analysis Batch: 548679

Client Sample ID: BAC-11-F-20221017-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	RPD Limit
			Result	Qualifier				
Total Alkalinity	190		188		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	190		188		mg/L		2	20

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QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: 240-175048-2 DU
 Matrix: Water
 Analysis Batch: 548679

Client Sample ID: BAC-11-F-20221017-01
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-549776/3
 Matrix: Water
 Analysis Batch: 549776

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.28	mg/L			11/01/22 10:28	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/01/22 10:28	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/01/22 10:28	1

Lab Sample ID: LCS 240-549776/4
 Matrix: Water
 Analysis Batch: 549776

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	51.3		mg/L		103	90 - 110
Fluoride	2.50	2.68		mg/L		107	90 - 110
Sulfate	50.0	53.4		mg/L		107	90 - 110

Lab Sample ID: MB 240-549810/3
 Matrix: Water
 Analysis Batch: 549810

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.28	mg/L			11/02/22 01:39	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/02/22 01:39	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/02/22 01:39	1

Lab Sample ID: MB 240-549810/42
 Matrix: Water
 Analysis Batch: 549810

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.28	mg/L			11/02/22 15:46	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/02/22 15:46	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/02/22 15:46	1

Lab Sample ID: LCS 240-549810/4
 Matrix: Water
 Analysis Batch: 549810

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	51.2		mg/L		102	90 - 110
Fluoride	2.50	2.70		mg/L		108	90 - 110
Sulfate	50.0	54.2		mg/L		108	90 - 110

QC Sample Results

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-549810/43
 Matrix: Water
 Analysis Batch: 549810

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	51.4		mg/L		103	90 - 110
Fluoride	2.50	2.72		mg/L		109	90 - 110
Sulfate	50.0	53.3		mg/L		107	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-548155/1
 Matrix: Water
 Analysis Batch: 548155

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	10	U	10	7.8	mg/L			10/21/22 09:53	1

Lab Sample ID: LCS 240-548155/2
 Matrix: Water
 Analysis Batch: 548155

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	500	868	*+	mg/L		174	80 - 120

Lab Sample ID: MB 240-548418/1
 Matrix: Water
 Analysis Batch: 548418

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	10	U	10	7.8	mg/L			10/24/22 10:05	1

Lab Sample ID: LCS 240-548418/2
 Matrix: Water
 Analysis Batch: 548418

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	500	454		mg/L		91	80 - 120

Lab Sample ID: MB 240-548703/1
 Matrix: Water
 Analysis Batch: 548703

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	10	U	10	7.8	mg/L			10/25/22 16:00	1

Lab Sample ID: LCS 240-548703/2
 Matrix: Water
 Analysis Batch: 548703

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	388	376		mg/L		97	80 - 120

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Metals

Prep Batch: 548228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total Recoverable	Water	3005A	
240-175048-2	BAC-11-F-20221017-01	Total Recoverable	Water	3005A	
240-175048-3	BAC-12-F-20221017-01	Total Recoverable	Water	3005A	
240-175048-4	BAC-14-F-20221018-01	Total Recoverable	Water	3005A	
240-175048-5	EB-001-F-20221018-01	Total Recoverable	Water	3005A	
MB 240-548228/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-548228/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-548228/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 548566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total Recoverable	Water	6010D	548228
240-175048-2	BAC-11-F-20221017-01	Total Recoverable	Water	6010D	548228
240-175048-3	BAC-12-F-20221017-01	Total Recoverable	Water	6010D	548228
240-175048-4	BAC-14-F-20221018-01	Total Recoverable	Water	6010D	548228
240-175048-5	EB-001-F-20221018-01	Total Recoverable	Water	6010D	548228
MB 240-548228/1-A	Method Blank	Total Recoverable	Water	6010D	548228
LCS 240-548228/2-A	Lab Control Sample	Total Recoverable	Water	6010D	548228

Analysis Batch: 549001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total Recoverable	Water	6020B	548228
240-175048-2	BAC-11-F-20221017-01	Total Recoverable	Water	6020B	548228
240-175048-3	BAC-12-F-20221017-01	Total Recoverable	Water	6020B	548228
240-175048-4	BAC-14-F-20221018-01	Total Recoverable	Water	6020B	548228
240-175048-5	EB-001-F-20221018-01	Total Recoverable	Water	6020B	548228
MB 240-548228/1-A	Method Blank	Total Recoverable	Water	6020B	548228
LCS 240-548228/3-A	Lab Control Sample	Total Recoverable	Water	6020B	548228

Analysis Batch: 549264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-4	BAC-14-F-20221018-01	Total Recoverable	Water	6020B	548228

General Chemistry

Analysis Batch: 548155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total/NA	Water	SM 2540C	
240-175048-2	BAC-11-F-20221017-01	Total/NA	Water	SM 2540C	
240-175048-3	BAC-12-F-20221017-01	Total/NA	Water	SM 2540C	
MB 240-548155/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548155/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-4	BAC-14-F-20221018-01	Total/NA	Water	SM 2540C	
240-175048-5	EB-001-F-20221018-01	Total/NA	Water	SM 2540C	
MB 240-548418/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548418/2	Lab Control Sample	Total/NA	Water	SM 2540C	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

General Chemistry

Analysis Batch: 548679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total/NA	Water	2320B-1997	
240-175048-2	BAC-11-F-20221017-01	Total/NA	Water	2320B-1997	
240-175048-3	BAC-12-F-20221017-01	Total/NA	Water	2320B-1997	
240-175048-4	BAC-14-F-20221018-01	Total/NA	Water	2320B-1997	
240-175048-5	EB-001-F-20221018-01	Total/NA	Water	2320B-1997	
MB 240-548679/109	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/136	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/162	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/56	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548679/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548679/108	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/161	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-548679/82	Lab Control Sample	Total/NA	Water	2320B-1997	
240-175048-2 DU	BAC-11-F-20221017-01	Total/NA	Water	2320B-1997	

Analysis Batch: 548703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1 - RA	BAC-06-F-20221017-01	Total/NA	Water	SM 2540C	
240-175048-2 - RA	BAC-11-F-20221017-01	Total/NA	Water	SM 2540C	
240-175048-3 - RA	BAC-12-F-20221017-01	Total/NA	Water	SM 2540C	
MB 240-548703/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548703/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 549776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total/NA	Water	300.0	
240-175048-2	BAC-11-F-20221017-01	Total/NA	Water	300.0	
240-175048-3	BAC-12-F-20221017-01	Total/NA	Water	300.0	
240-175048-4	BAC-14-F-20221018-01	Total/NA	Water	300.0	
240-175048-5	EB-001-F-20221018-01	Total/NA	Water	300.0	
MB 240-549776/3	Method Blank	Total/NA	Water	300.0	
LCS 240-549776/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 549810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175048-1	BAC-06-F-20221017-01	Total/NA	Water	300.0	
240-175048-2	BAC-11-F-20221017-01	Total/NA	Water	300.0	
240-175048-4	BAC-14-F-20221018-01	Total/NA	Water	300.0	
MB 240-549810/3	Method Blank	Total/NA	Water	300.0	
MB 240-549810/42	Method Blank	Total/NA	Water	300.0	
LCS 240-549810/4	Lab Control Sample	Total/NA	Water	300.0	
LCS 240-549810/43	Lab Control Sample	Total/NA	Water	300.0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-06-F-20221017-01

Lab Sample ID: 240-175048-1

Date Collected: 10/17/22 10:53

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:17
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549001	DSH	EET CAN	10/26/22 22:11
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 18:50
Total/NA	Analysis	300.0		1	549776	JMB	EET CAN	11/01/22 20:35
Total/NA	Analysis	300.0		2	549810	JMB	EET CAN	11/02/22 16:29
Total/NA	Analysis	SM 2540C		1	548155	MS	EET CAN	10/21/22 09:53
Total/NA	Analysis	SM 2540C	RA	1	548703	MED	EET CAN	10/25/22 16:00

Client Sample ID: BAC-11-F-20221017-01

Lab Sample ID: 240-175048-2

Date Collected: 10/17/22 12:26

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:29
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		20	549001	DSH	EET CAN	10/26/22 22:16
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 19:02
Total/NA	Analysis	300.0		500	549776	JMB	EET CAN	11/01/22 21:18
Total/NA	Analysis	300.0		25	549810	JMB	EET CAN	11/02/22 16:51
Total/NA	Analysis	SM 2540C		1	548155	MS	EET CAN	10/21/22 09:53
Total/NA	Analysis	SM 2540C	RA	1	548703	MED	EET CAN	10/25/22 16:00

Client Sample ID: BAC-12-F-20221017-01

Lab Sample ID: 240-175048-3

Date Collected: 10/17/22 15:23

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:34
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		2	549001	DSH	EET CAN	10/26/22 22:20
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 19:12
Total/NA	Analysis	300.0		1	549776	JMB	EET CAN	11/01/22 21:40
Total/NA	Analysis	SM 2540C		1	548155	MS	EET CAN	10/21/22 09:53
Total/NA	Analysis	SM 2540C	RA	1	548703	MED	EET CAN	10/25/22 16:00

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
 Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Client Sample ID: BAC-14-F-20221018-01

Lab Sample ID: 240-175048-4

Date Collected: 10/18/22 09:34

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:38
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		2	549001	DSH	EET CAN	10/26/22 22:25
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549264	DSH	EET CAN	10/27/22 21:08
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 23:10
Total/NA	Analysis	300.0		1	549776	JMB	EET CAN	11/01/22 22:02
Total/NA	Analysis	300.0		2	549810	JMB	EET CAN	11/02/22 17:13
Total/NA	Analysis	SM 2540C		1	548418	MS	EET CAN	10/24/22 10:05

Client Sample ID: EB-001-F-20221018-01

Lab Sample ID: 240-175048-5

Date Collected: 10/18/22 18:00

Matrix: Water

Date Received: 10/20/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6010D		1	548566	KLC	EET CAN	10/24/22 22:42
Total Recoverable	Prep	3005A			548228	SHB	EET CAN	10/21/22 12:00
Total Recoverable	Analysis	6020B		1	549001	DSH	EET CAN	10/26/22 22:29
Total/NA	Analysis	2320B-1997		1	548679	KMS	EET CAN	10/24/22 23:14
Total/NA	Analysis	300.0		1	549776	JMB	EET CAN	11/01/22 22:23
Total/NA	Analysis	SM 2540C		1	548418	MS	EET CAN	10/24/22 10:05

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Wells - App III

Job ID: 240-175048-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

Chain of Custody Record



Client Information		Sample: <u>Bobby Castro</u>	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s): 240-93465-34577.1
Taylor Huffman		Phone: <u>740-373-4308</u>	E-Mail: roxanne.cisneros@Eurofins.com	State of Origin: _____
Company: Lightstone Generation Gavin Power LLC		PW/SID: _____		
Address: 7397 OH-7		Due Date Requested: _____		
City: Cheshire		TAT Requested (days): _____		
State, Zip: OH, 45620		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Phone: 740-925-3171(Tel)		PO #: 2935505		
Email: taylor.huffman@lightstonegen.com		WO #: _____		
Project Name: Federal CCR Wells - App III		Project #: 24019633		
Site: _____		SSOW#: _____		

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=oil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd, 300.0, 280		220B - Alkalinity		Special Instructions/Note:
							D	N	D	N	
BAC-06-F-20221017-01	10-17-22	1053	G	W	X	X					
BAC-11-F-20221017-01	10-17-22	1226	G	W	X	X					
BAC-12-F-20221017-01	10-17-22	1523	G	W	X	X					
BAC-14-F-20221018-01	10-18-22	0934	G	W	X	X					
EB-001-F-20221018-01	10-18-22	1800	G	W	X	X					

240-175048 Chain of Custody

<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify) _____		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: <u>Bobby Castro</u> Relinquished by: <u>Michelle Callahan</u>		Received by: <u>Michelle Callahan</u> Date/Time: <u>10/20/22 0645</u> Received by: <u>Brendon</u> Date/Time: <u>10-20-22 0925</u> Received by: _____ Date/Time: _____
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Custody Seal No.: _____		Cooler Temperature(s) °C and Other Remarks: _____

Eurofins - Canton Sample Receipt Form/Narrative Login # : _____
Barberton Facility

Client Lightsstone Site Name _____ Cooler unpacked by: Dany Pezz
Cooler Received on 10-20-22 Opened on 10-20-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 1A 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# IR-13 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-15 (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 1 eqd 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 NA
-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)? Yes No
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# HC286797
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 _____

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

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 # : _____

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Eurofins - Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)				IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA	Client	Box	Other	IR-13 IR-15	0.2	0.2	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15	0.3	0.3	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15	0.4	0.4	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15	1.1	1.1	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15	1.2	1.2	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-13 IR-15			Wet Ice	Blue Ice	Dry Ice
							Water	None	

See Temperature Excursion Form

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