Gavin Power, LLC

Gavin Residual Waste Landfill and Fly Ash Reservoir

2022 Annual Groundwater Monitoring and Corrective Action Report

Gavin Power Plant
Cheshire, Ohio

31 January 2023

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Gavin Power Plant
Cheshire, Ohio

David Shotts
Partner-in-Charge

Joseph Robb, P.G.
Project Manager

ERM Consulting & Engineering, Inc.

One Beacon Street
5th Floor
Boston, MA
02108

T: +1 617 646 7800
F: +1 617 267 6447

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Acronyms and Abbreviations

Name	Description
ASD	Alternate Source Demonstration
AMSL	Above Mean Sea Level
BAP	Bottom Ash Pond
CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
ERM	ERM Consulting and Engineering, Inc.
FAR	Fly Ash Reservoir
Gavin	Gavin Power, LLC
H1	First half of year
H2	Second half of year
K	Hydraulic conductivity
OEPA	Ohio Environmental Protection Agency
Plant	General James M. Gavin Power Plant
PTI	Permit to Install
RWL	Residual Waste Landfill
SSI	Statistically significant increase
TGM	Technical Guidance Manual

EXECUTIVE SUMMARY

On behalf of Gavin Power, LLC (Gavin), ERM Consulting and Engineering, Inc. (ERM) has prepared this *2022 Annual Groundwater Monitoring and Corrective Action Report* summarizing groundwater monitoring activities at the Residual Waste Landfill (RWL) and Fly Ash Reservoir (FAR) at the General James M. Gavin Power Plant (Plant) located in Cheshire, Ohio. The RWL and FAR are 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. In 2021, ERM certified an updated combined monitoring well network for the RWL and FAR, as allowed by 40 CFR 257.91 and as documented in the *Updated Groundwater Monitoring System Evaluation and Certification—40 CFR 257.91* (ERM 2021a). Previously, Gavin maintained and monitored two separate (though adjacent) monitoring networks for the RWL and FAR.

Review comments on the RWL and FAR 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 RWL and FAR, 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.
- Identification of key activities for the coming year.

The combined RWL and FAR CCR unit groundwater monitoring program began calendar year 2022 in "detection monitoring" program status as defined by 40 CFR § 257.94 and remains in detection monitoring at the end of the 2022 reporting period. Groundwater monitoring in 2022 consisted of two semi-annual monitoring events completed in the spring and fall of 2022, which included groundwater level measurements and subsequent groundwater sampling. Groundwater level measurements were used to construct updated groundwater potentiometric surface maps for each of the geologic units monitored.

Groundwater samples were collected for laboratory analysis of CCR Rule Appendix III constituents, and the results were compared to previously calculated upgradient interwell prediction limits to identify statistically significant increases (SSIs) for downgradient wells.

No SSIs were detected for the calendar year of 2022 in the combined RWL and FAR monitoring well network, and as a result no alternate source demonstrations (ASD) are submitted with this report. Therefore, the RWL/FAR network remains 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 Plant (Plant) is located in southeast Ohio along the western bank of the Ohio River (Figure 1-1) near Cheshire, Ohio. 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 (BAP). An updated groundwater monitoring system was certified in August 2021 to monitor for potential releases from the RWL and FAR. Previously, Gavin maintained and monitored two separate (though adjacent) groundwater monitoring networks for the RWL and FAR but certified the combined monitoring network on 31 August 2021 with submittal of *Updated Groundwater Monitoring System Evaluation and Certification—40 CFR 257.91* (ERM 2021a). The BAP has a separate monitoring system (ERM 2021b) and is not addressed in this report.

This report was produced by ERM Consulting and Engineering, Inc. (ERM) on behalf of Gavin Power, LLC and documents the status of the groundwater monitoring program for the RWL-FAR network, including 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.
- 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 (OEPA) 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 combined RWL and FAR 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 the 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-Reference Table

Regulatory Citation in 40 CFR Part 257, Subpart D	Requirement (paraphrased)	Where Addressed in this Report
§ 257.90(e)(6)	Current status of the groundwater monitoring program.	Section 2
§ 257.90(e)	Summarize key actions completed.	Section 4
§ 257.90(e)	Describe any problems encountered and actions taken to resolve problems.	Section 4.3
§ 257.90(e)	Key activities for upcoming year.	Section 6.0
§ 257.90(e)(1)	Map, aerial image, or diagram of coal combustion residual (CCR) unit and all background and downgradient monitoring wells.	Figure 3-2 and 3-3
§ 257.90(e)(2)	Identification of new monitoring wells installed or abandoned during the preceding year and narrative description.	Figure 3-2 and 3-3
§ 257.90(e)(3)	Summary of groundwater data, wells sampled, date sampled, and whether sampling was required under detection or assessment monitoring.	Section 2, 3, 4 and Appendix C and D
§ 257.90(e)(4)	Narrative discussion of any transition between monitoring programs (i.e., from detection to assessment monitoring).	N/A
§ 257.93(c) (via § 257.90(e)(5))	Rate and direction of groundwater flow each time groundwater is sampled	Section 5.1 and 5.2
§ 257.94(e)(2) (via § 257.90(e)(5))	Any alternate source demonstration reports and related certifications pertaining to a detection monitoring program.	N/A
§ 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 combined RWL and FAR began with the 2022 reporting period in detection monitoring. No SSIs were identified for the combined RWL-FAR groundwater monitoring network in 2022; therefore, the RWL and FAR remain in detection monitoring at the end of the 2022 reporting period.

3. BACKGROUND

3.1 Description of CCR Units

The RWL is approximately 400 acres in size and is located about 1.25 miles northwest of the Plant (Figure 3-1) and is permitted by the OEPA to accept and dispose of CCR material as a Class 3 Landfill. Approximately 98 percent of this material is Flue Gas Desulfurization byproduct (consisting of scrubber cake, fly ash, and lime) and the remaining 2 percent is other approved materials (bottom ash, lime ball mill rejects, coal pulverizer rejects, and BAP sediments).

The FAR is approximately 300 acres in size and is located about 2.5 miles northwest of the Plant (Figure 3-1). From the mid-1970s until January 1995, fly ash was sluiced to the FAR and the settled CCR materials were retained behind the Stingy Run Fly Ash Dam that formed the FAR. The facility was closed in place, and the closure was completed in 2021.

3.2 Geology and Hydrogeology

The shallowest geologic materials at the FAR/RWL include residual soils, mine spoil, fill, and weathered and fractured bedrock (ERM 2021a). The weathered and fractured bedrock includes the Pomeroy Sandstone and Coal, the Pittsburgh Sandstone and Coal, the Bellaire Sandstone, and the Connellsville Sandstone units. Although some of these units may be partially or fully saturated in the vicinity of the FAR and RWL, these formations generally are not capable of yielding usable quantities of groundwater, and thus are not considered part of the uppermost aquifer at the FAR/RWL. The Ohio Department of Natural Resources has records showing the locations of historical mines within and surrounding the FAR and RWL. Evidence of horizontal seam coal mining was observed at borings 2019-06 and 2019-07, which were advanced west of the RWL in 2019. Previous studies found that the lateral extent of underground mining exceeds the area indicated by public records (Geosyntec 2012). These mines were typically auger mining accessed from high walls.

Beneath the Connellsville are the Clarksburg Red Beds, which is a regionally extensive aquitard (low-permeability rock layer), with a typical thickness of approximately 50 feet, that hydraulically isolates the shallower formations from the underlying aquifers.

Beneath the Clarksburg Red Beds are the Morgantown Sandstone and the Cow Run Sandstone. Together these are interpreted as the uppermost aquifer beneath the RWL and FAR (Geosyntec 2016a, 2016b).

The Morgantown Sandstone has an average thickness of approximately 30 feet, is located at elevations between approximately 550 to 650 feet above mean sea level (ft amsl) and is composed of two thin sandstone beds separated by clay shale. Groundwater within the Morgantown Sandstone generally flows from the northwest to the southeast under the FAR and the RWL. To the west of the FAR/RWL, groundwater flows from west to east before joining the overall flow pattern to the southeast. There is a potentiometric trough that extends from the FAR through the RWL that is interpreted to be the result of reduced recharge due to suppression of infiltration through the cap at the FAR, and the liner system at the RWL. There is a potentiometric ridge located along the eastern border of the RWL that divides groundwater flow, with water to the northeast of this ridge flowing to the northeast, and water to the southwest of the ridge flowing to the southwest before joining the overall flow pattern to the southeast.

East of the RWL, the Morgantown Sandstone is absent (removed through erosion), and groundwater migrating eastward within the Morgantown Sandstone discharges to the alluvial aquifer located along the Stingy Creek valley. In these areas the alluvial aquifer (i.e., where the Morgantown Sandstone is absent) is also considered part of the uppermost aquifer.

Below the Morgantown Sandstone is a unit of approximately 60 feet of interbedded claystone/clay shale and non-crystalline limestone layers, known as the Round Knob Shale. The limestone layers are typically found as calcareous claystone with limestone nodules throughout. These strata extend to the top of the Cow Run Sandstone.

The Cow Run Sandstone has an average thickness of 30 feet, is located at elevations between approximately 475 to 550 ft amsl and is characterized regionally as a coarse-grained sandstone and sandy shale. The Cow Run Sandstone unit is continuous under the FAR/RWL and considered the base of the uppermost aquifer. Groundwater within the Cow Run Sandstone generally flows from the northwest to the southeast under the FAR and the RWL. To the west of the FAR/RWL, groundwater flows from west to east before joining the overall flow pattern to the southeast. There is a potentiometric trough that extends from the FAR through the RWL that is interpreted to be the result of reduced recharge due to the suppression of infiltration through the cap at the FAR, and the liner system at the RWL. There is a potentiometric ridge located along the eastern border of the RWL that divides groundwater flow, with water to the northeast of this ridge flowing to the northeast, and water to the southwest of the ridge flowing to the southwest before joining the overall flow pattern to the southeast.

Beneath the Cow Run Sandstone are the Portersville Limestone and the Anderson Clay, which consist primarily of shale, claystone and clay shale (Geosyntec 2012). These low permeability formations are interpreted to comprise the lower hydraulic boundary of the uppermost aquifer.

3.3 Monitoring Well Network

The RWL and FAR had previously been monitored using separate groundwater monitoring networks as described in the documents: *Groundwater Monitoring Network Evaluation—Residual Waste Landfill* (Geosyntec 2016a) and the *Groundwater Monitoring Network Evaluation—Fly Ash Reservoir* (Geosyntec 2016b). Annual Groundwater Monitoring and Corrective Action Reports for 2020 under these separate monitoring systems were prepared for the RWL (ERM 2021c) and FAR (ERM 2021d) and were posted to the Plant operating record on 31 January 2021. Because of the ongoing expansion of the RWL, several monitoring wells along the northern and western RWL boundaries were removed and a portion of the RWL was expanded over the FAR. To account for these changes and provide an adequate groundwater monitoring system for both units, a combined network for the two CCR units was identified and certified in August 2021 (ERM 2021a).

The combined network which monitors both the RWL (Figures 3-2) and FAR (Figure 3-3) currently contains 24 upgradient and 15 downgradient monitoring wells located in the Morgantown Sandstone, Alluvium, and Cow Run Sandstone. The upgradient wells are placed to accurately represent the quality of background groundwater that has not been affected by potential leakage from the RWL and FAR units, while the downgradient wells in the network are positioned at the downgradient boundary of waste to detect potential release of CCR constituents from the CCR units into groundwater in the uppermost aquifer. There are an additional 19 monitoring wells that are gauged and/or sampled, as required, to provide supplemental information to the monitoring network. These wells typically are not located at the downgradient limit of waste or do not recover to reliably provide sufficient water for sampling.

3.4 Previous Groundwater Monitoring Activities

The RWL and FAR wells were initially sampled eight times between August 2016 and July 2017 to establish upgradient well baseline data. Prediction limits were developed using the baseline data and compared to the July 2017 downgradient well results, consistent with the CCR Rule and the *Statistical Analysis Plan* developed for Gavin (ERM 2017). This comparison resulted in the identification of statistically significant increases (SSI) for Appendix III analytes in downgradient RWL and FAR wells, which were reported in the *2017 Annual Groundwater Monitoring and Corrective Action Reports* for the

RWL and FAR (ERM 2018a and ERM 2018b). Based on a detailed review of groundwater elevations and resulting groundwater flow using the expanded well network, the hydraulic positions of monitoring wells within the RWL and FAR networks were reevaluated to take into account newly obtained information on hydraulic conditions, including groundwater elevations. A limited number of wells were reclassified as either upgradient or downgradient, and tolerance limits were updated based on the newly defined upgradient dataset. The hydraulic analysis and the derivation of the updated tolerance limits are presented in the first Alternate Source Demonstration reports for the FAR and RWL (ERM 2018c and ERM 2018d). Such ongoing assessment of groundwater flow is a normal part of developing and refining a conceptual site model as new information is collected, especially at a site with multiple aquifers, variable topography, and a history of underground activities. Subsequent sampling and comparison to background values were completed in 2018, 2019, 2020, and 2021.

Following the certification of the combined network, in December 2021 an addendum to the 2020 Annual Groundwater Monitoring and Corrective Action Reports for the FAR and RWL was prepared that evaluated the 2020 data based on the combined groundwater monitoring network (ERM 2021e). While this addendum was not required, it was prepared proactively to identify if the changes to the program resulted in any retroactive SSIs for 2020. Only one SSI was identified when evaluating the data collected in 2020 from the combined monitoring network: boron at monitoring well 2018-01 in March 2020. Although technically not applicable to 2020 (because the combined network was not certified until August 2021), ERM nevertheless prepared an ASD for the boron SSI to determine whether that finding would have changed the monitoring status of either CCR unit. The ASD identified regional brine as the source of boron and identified the use of cement-bentonite grout for well installation as the catalyst for the localized mobilization of previously adsorbed boron. Thus, even if the combined monitoring well network had been in effect in 2020, the RWL and FAR would have remained in detection monitoring at the conclusion of 2020.

4. MONITORING ACTIVITIES

4.1 Monitoring Well Installation and Abandonment

Nineteen additional monitoring wells were proposed for installation in key areas around the RWL and FAR for 2022 (Figure 3-1 and 3-2). Fourteen of the 19 proposed wells were successfully installed using a sonic drill rig. Selection of well screen intervals was based on identification of target strata (e.g., Morgantown, Cow Run and Alluvium). In the case of bedrock wells, downhole geophysics (acoustic televiewer, caliper, resistivity, and natural gamma) was also used to support the selection of well screen intervals. Well construction information for the new monitoring wells is presented in Appendix A and boring logs and construction logs are provided in Appendix B.

Four monitoring wells, installed as Morgantown/Cow Run couplets, were installed along the boundary between the RWL and FAR (2022-02/03 and 2022-04/05). The wells were drilled following a geophysical survey along the boundary to identify suitable drilling areas outside of the RWL landfill liner, outside of the FAR engineered cover, and where historical fly ash was not observed. Two additional wells, 2022-08 and 2022-09 were also proposed to be installed along this boundary near new Pond #6 but were not due to the identification of ash in the subsurface in this area.

Installation of two additional wells in the Cow Run Sandstone (2022-01 and 2022-11) was attempted but not completed due to the lack of water observed in the boreholes at the target depths. The 2022-01 borehole was advanced into the Cow Run and after several days the amount of groundwater recharge was insufficient to justify installing a monitoring well at that location. Two boreholes were advanced at boring 2022-11 and recharge was not sufficient to support installation of a monitoring well in either location. Two boreholes were also advanced at 2022-13; the first attempt was abandoned due to slow recharge and the second attempt intersected a productive fracture which allowed for the successful construction of monitoring well 2022-13. Boreholes at 2022-01 and 2022-11 were abandoned according to Chapter 9 of the OEPA Technical Guidance Manual (TGM; OEPA 2016). These observations support the interpretation that the bedrock aquifer transmissivity is driven by the connectivity and conductivity of the fracture sets, and in some areas, fractures are not large enough or interconnected enough (low transmissivity) to allow the successful construction of a producing and useful monitoring well.

Installation of alluvium well 2022-07 was attempted but not completed due to the lack of transmissive materials at the target depth; only fine-grained sediments were observed in this area from the ground surface to the top of bedrock. This borehole was abandoned according to the OEPA TGM.

Six monitoring wells from the existing combined network were abandoned and replaced in 2022. The wells were abandoned by tremie grouting according to the OEPA TGM. Wells 9396 (Cow Run) and 96156 (Morgantown) were abandoned and replaced with wells 2022-19 and 2022-18, respectively. The wells were abandoned due to damaged well casings. Wells 2016-08 (Cow Run), 2016-09 (Cow Run), 2019-02 (Morgantown), and 2018-01 (Cow Run) were abandoned due to persistently elevated pH from well construction and were replaced with wells 2022-15, 2022-16, 2022-14, and 2022-17, respectively. Cement-based grouts were not used for well construction in 2022 (bentonite only seals were used instead) in order to avoid elevated pH issues associated with well construction.

4.2 Groundwater Hydraulic Testing and Monitoring

Following well installation activities, slug tests were completed by ERM at three previously installed monitoring wells (2018-03, 2018-04, and MW-15) and five wells installed in 2022 (2022-04, 2022-05, 2022-06, 2022-12, and 2022-13), in both the Morgantown and Cow Run. 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 tests. Water levels were recorded 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.

In additional to the slug tests, electronic programmable data loggers equipped with a pressure-sensitive water level transducer were installed at Morgantown/Cow Run well couplets 2022-04/05, MW-16/17, and adjacent wells 2018-02 and 2018-03. Gavin intends to use this data in the future to evaluate seasonality of groundwater elevation changes and to assess the aquifer response to precipitation events in locations thought to act as recharge areas.

4.3 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 provides a summary of the 2022 sample dates and the well gradient designation (upgradient or downgradient) relative to the CCR units. Samples were collected by bladder pump, submersible pump, Snap sampler, or Geomon pump. In addition, the samples were not filtered in the field or at the laboratory per the requirement of § 257.93(i) and were managed under chain-of-custody procedures from the field to the laboratory.

Some monitoring wells could not be sampled in 2022 due to insufficient water, pump failure, and/or damaged casings. In an effort to resolve these and other sampling challenges that resulted in the inability to collect samples in 2022, potential well replacement, and pump inspection, repair, and replacement is planned for 2023. In many cases, poor recharge and significant depth to groundwater resulted in short water columns that made it challenging to produce enough groundwater to collect sufficient sample volume. In these cases, pumps will be selected to maximize the chances of successfully collecting a sample.

Table 4-1. 2022 Sampling Dates for RWL-FAR Combined Network

Monitoring Well	Geologic Unit	Location	Sampling Dates	
			H1	H2
2000	Morgantown	Downgradient	23 March 2022	20 September 2022
2003	Morgantown	Upgradient	23 March 2022	20 September 2022
9396	Cow Run	Upgradient	NS[1]	NS[2]
9631	Cow Run	Downgradient	NS[3]	NS[3]
9801	Cow Run	Upgradient	25 March 2022	19 September 2022
9802	Alluvium	Downgradient	25 March 2022	19 September 2022
9806	Morgantown	Downgradient	24 March 2022	20 September 2022
9910	Morgantown	Upgradient	NS[4]	14 September 2022[5]
93100	Cow Run	Upgradient	28 March 2022	16 September 2022
93108	Morgantown	Downgradient	28 March 2022	19 September 2022

Monitoring Well	Geologic Unit	Location	Sampling Dates	
			H1	H2
94136	Cow Run	Downgradient	23 March 2022	21 September 2022
94137	Alluvium	Downgradient	23 March 2022	21 September 2022
94139	Morgantown	Upgradient	23 March 2022	16 September 2022
96152	Morgantown	Upgradient	31 March 2022	21 September 2022
96153R	Morgantown	Upgradient	30 March 2022	13 September 2022 25 October 2022[6]
96154R	Morgantown	Upgradient	30 March 2022	19 October 2022
96156	Morgantown	Upgradient	NS[1]	NS[2]
96157	Alluvium	Downgradient	29 March 2022	12 September 2022
96158	Cow Run	Downgradient	29 March 2022	12 September 2022
2016-03	Morgantown	Upgradient	28 March 2022	12 September 2022
2016-04	Cow Run	Upgradient	28 March 2022	12 September 2022
2016-05	Morgantown	Downgradient	NS[4]	NS[4]
2016-06	Cow Run	Downgradient	28 March 2022	12 September 2022
2016-07	Morgantown	Upgradient	29 March 2022	13 September 2022 20 October 2022[6]
2016-08	Cow Run	Upgradient	29 March 2022	NS[2]
2016-09	Cow Run	Upgradient	30 March 2022	NS[2]
2016-10	Cow Run	Upgradient	30 March 2022	20 October 2022
2016-11	Morgantown	Upgradient	NS[4]	NS[4]
2018-01	Cow Run	Downgradient	25 March 2022	21 September 2022
2018-02	Morgantown	Downgradient	20 April 2022	NS[4]
2018-03	Cow Run	Downgradient	20 April 2022	13 September 2022 29 September 2022[7]
2018-04	Morgantown	Downgradient	20 April 2022	NS[4]
2019-02	Morgantown	Upgradient	25 March 2022	NS[2]
2019-06	Morgantown	Upgradient	NS[4]	16 September 2022
2019-07	Cow Run	Upgradient	24 March 2022	15 September 2022
2019-09	Cow Run	Upgradient	24 March 2022	16 September 2022
MW-16	Morgantown	Upgradient	NS[4]	NS[4]
MW-17	Cow Run	Upgradient	24 March 2022	19 September 2022
MW-20	Cow Run	Upgradient	30 March 2022	13 September 2022 25 October 2022[6]

Notes: H1 = spring; H2 = fall; NS = Not Sampled

1. Not sampled due to damaged casing which prohibits sampling with dedicated Geomon pump.
2. Abandoned in H2 2022.
3. Not sampled due to pump failure.
4. Insufficient volume of water to allow collection of samples.
5. The sample had insufficient volume for analysis of all Appendix III constituents. Analysis was limited to chloride, fluoride, sulfate, and TDS.
6. Initial sample was not received by the laboratory with sufficient time to run the analysis for general chemistry parameters within the maximum holding time. Resamples were collected and run for general chemistry parameters only due to limited volume.
7. The initial sample had insufficient volume for analysis of radium. A resample was collected and run for radium only.

In addition to the semiannual groundwater monitoring events at the Site required under 40 CFR § 257.94, supplemental samples were collected at wells in the combined monitoring network under 40 CFR § 257.94(b). Samples were collected on a monthly or bi-monthly basis throughout 2022 from existing wells that were recently added to the network towards the required minimum of eight independent samples for each background well for the constituents listed in Appendices III and IV.

4.4 Data Quality Review

ERM reviewed field and laboratory documentation to assess the validity, reliability, and usability of the analytical results. Samples collected in 2022 were analyzed by the Eurofins Canton laboratory, located in Barberton Ohio. Data quality information reviewed for these results included field sampling forms, chain-of-custody documentation, holding times, laboratory methods, cooler temperatures, laboratory method blanks, laboratory control sample recoveries, field duplicate samples, matrix spikes/matrix spike duplicates, and equipment blanks. Data qualifiers were appended to 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). ERM's 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

Depth to groundwater measurements were collected in March and September 2022 at each monitoring well prior to each sampling event. Resulting groundwater elevations 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 Morgantown Sandstone (and alluvium) and Cow Run Sandstone are presented on Figures 5-1 and 5-2 (2022 H1) and Figures 5-3 and 5-4 (2022 H2).

The principal direction of groundwater flow in the uppermost aquifer system under the RWL (both in the Morgantown Sandstone and in Cow Run Sandstone) is from the north and northwest to the south and southeast, towards the Ohio River which is the local discharge boundary. Groundwater velocity estimates are presented in the next sections.

5.2 Groundwater Velocity Calculation

Previous estimates of groundwater velocity were calculated using estimated hydraulic conductivity values from packer tests from Geosyntec (Geosyntec 2012). Slug tests were completed by ERM in 2022 at four previously installed monitoring wells and four wells installed in 2022, in both the Morgantown and Cow Run. As provided in Tables 5-1 and 5-2 below, the range of hydraulic conductivity values from packer tests and from the slug tests were similar; however, the average values calculated from the slug tests were higher.

Table 5-1. Estimated hydraulic conductivity values for Morgantown Sandstone

	Average K	Low K	High K
Packer Tests (Geosyntec 2012)	7.18E-05 cm/sec	2.2E-08 cm/sec	4.6E-04 cm/sec
Slug Tests (2022)	3.08E-03 cm/sec	9.60E-07 cm/sec	7.24E-03 cm/sec

Notes: cm/sec = centimeters per second; K = hydraulic conductivity
1. Geosyntec 2012 values derived from packer tests (10-foot interval) completed in boreholes across mainly the northern part of the RWL.
2. ERM 2022 values derived from slug tests completed at Morgantown wells 2018-04, 2022-04, 2022-12, and MW-15.

Table 5-2. Estimated hydraulic conductivity values for Cow Run Sandstone

	Average K	Low K	High
Packer Tests (Geosyntec 2016)	2.92E-05 cm/sec	5.0E-08 cm/sec	5.9E-04 cm/sec
Slug Tests (2022)	7.29E-03 cm/sec	3.49E-08 cm/sec	2.90E-02 cm/sec

Notes: cm/sec = centimeters per second; K = hydraulic conductivity
1. Geosyntec 2012 values derived from packer tests (10-foot interval) completed in boreholes across mainly the northern part of the RWL.
2. ERM 2022 values derived from slug tests completed at Cow Run wells 2018-03, 2022-05, 2022-06, and 2022-13.

5.2.1 Morgantown Sandstone Groundwater Velocity

Horizontal hydraulic gradients were calculated for the Morgantown Sandstone using groundwater elevations calculated at wells 96154R and 2018-02 for both the spring and fall sampling events. The velocity of groundwater through the Morgantown sandstone is estimated based on the measured horizontal hydraulic gradient, estimated hydraulic conductivity of 7.18×10^{-5} centimeters per second (Geosyntec 2012), and an estimated effective porosity value of 0.01 for fractured bedrock. For both the spring and fall sampling events, a horizontal hydraulic gradient of 0.011 was calculated, resulting in an estimated groundwater velocity of 78 feet/year. Groundwater velocities in 2022 are similar to those calculated in 2021 (77 to 78 feet/year).

5.2.2 Cow Run Sandstone Groundwater Velocity

Horizontal hydraulic gradients were calculated for the Cow Run Sandstone using groundwater elevations calculated at wells 96149 and 9631 for both the spring and fall sampling events. The velocity of groundwater through the Cow Run sandstone is estimated based on the measured horizontal hydraulic gradient, the estimated hydraulic conductivity of 2.92×10^{-5} centimeters per second (Geosyntec 2012), and an effective porosity value of 0.01 for fractured bedrock. Horizontal hydraulic gradients of 0.015 and 0.014 were calculated for the spring and fall 2022 sampling events, respectively, resulting in an estimated groundwater velocity of 43 to 47 feet/year. Groundwater velocities in 2022 are slightly higher than those calculated in 2021 (36 to 39 feet/year).

Previous groundwater velocity calculations were made using monitoring well 2016-09 as the upgradient well. Well 2016-09 was abandoned in fall 2022 and a replacement well 2022-16 was being installed during the fall 2022 gauging event. Well 96149 is being utilized as a replacement while the replacement well is finished.

5.3 Comparison of Results to Prediction Limits

Consistent with the CCR Rule and with Gavin's *Statistical Analysis Plan* (ERM 2017), 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. Documentation of the development of the upper prediction limits and lower prediction limit is provided in the *2018 Alternate Source Demonstration* (ERM 2018c).

5.3.1 2022 Sampling Event Results

Tables 5-3 and 5-4 summarize SSIs observed in the Morgantown and Cow Run downgradient wells for the semiannual sampling events of 2022. The spring field sampling event was conducted between 23 March and 20 April 2022 and the fall field sampling event was conducted between 12 September and 25 October 2022.

Table 5-3: SSIs from 2022 Sampling Events—Morgantown/Alluvium

	Monitoring Well																	
	2000		93108		94137		96157		9802		9806		2016-05		2018-02		2018-04	
Analyte/Event	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1[1]	H2	H1	H2	H1	H2
Boron	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	NS	ϕ	ϕ	ϕ	ϕ	ϕ
Calcium	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	NS	ϕ	ϕ	ϕ	ϕ	ϕ
Chloride	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	NS	ϕ	ϕ	ϕ	ϕ	ϕ
Fluoride	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	NS	ϕ	ϕ	ϕ	ϕ	ϕ
pH	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	NS	ϕ	ϕ	ϕ	ϕ	ϕ
Sulfate	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	NS	ϕ	ϕ	ϕ	ϕ	ϕ
Total Dissolved Solids	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	NS	ϕ	ϕ	ϕ	ϕ	ϕ

Notes: H1 = spring; H2 = fall; NS = Not Sampled; ϕ = No SSI; X = SSI; SSI = statistically significant increase
1. Well had insufficient volume to sample.

Table 5-4: SSIs from 2022 Sampling Events—Cow Run

	Monitoring Well											
	94136		96158		9631		2016-06		2018-01		2018-03	
Analyte/Event	H1	H2	H1	H2	H1[1]	H2[1]	H1	H2	H1	H2	H1	H2
Boron	ϕ	ϕ	ϕ	ϕ	NS	NS	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ
Calcium	ϕ	ϕ	ϕ	ϕ	NS	NS	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ
Chloride	ϕ	ϕ	ϕ	ϕ	NS	NS	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ
Fluoride	ϕ	ϕ	ϕ	ϕ	NS	NS	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ
pH	ϕ	ϕ	ϕ	ϕ	NS	NS	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ
Sulfate	ϕ	ϕ	ϕ	ϕ	NS	NS	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ
Total Dissolved Solids	ϕ	ϕ	ϕ	ϕ	NS	NS	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ

Notes: H1 = spring; H2 = fall; NS = not sampled; ϕ = No SSI; X = SSI; SSI = statistically significant increase
1. Well not sampled due to pump failure.

No SSIs were detected for the RWL-FAR groundwater monitoring network in 2022. A summary of all analytical results obtained from the RWL-FAR groundwater monitoring is provided in Appendix C. Laboratory analytical reports from both the spring and the fall sampling events as well as the supplemental sampling events are provided in Appendix D.

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 RWL/FAR 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 combined monitoring network.
- Dedicated groundwater sampling pumps will be inspected, repaired, or replaced.

Groundwater Hydraulic Monitoring

- New monitoring wells will be gauged along with existing monitoring wells to establish relative hydraulic positions and evaluate areas of interest (e.g., the hydraulic ridge east of RWL).
- Transducers will be downloaded, and the data processed and evaluated to support updates to 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

7. REFERENCES

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ERM. 2018c. *Gavin Residual Waste Landfill Alternate Source Demonstration Report,* dated 7-3-2018.

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Geosyntec. 2012. “Final Permit-To-Install Application. Expansion of the Gavin Plant Residual Waste Landfill*.” Hydrogeologic Study Report. OAC 3745-30-05(C)(4).*

Geosyntec. 2016a. *Groundwater Monitoring Network Evaluation, Gavin Site—Residual Waste Landfill, Cheshire, Ohio*.

Geosyntec. 2016b. *Groundwater Monitoring Network Evaluation, Gavin Site—Fly Ash Reservoir, Cheshire, Ohio*.

OEPA. 2016. Technical Guidance Manual for Hydrogeologic Investigations and Groundwater Monitoring, Chapter 9: Sealing Boreholes and Decommissioned Monitoring Wells, September 2016.

FIGURES

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

ERM

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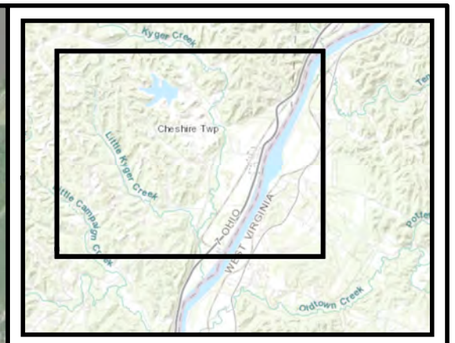
Fly Ash Reservoir

Residual Waste Landfill

Bottom Ash Pond

Ohio River



Legend

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

NOTES:
1. Aerial Imagery: ESRI World Imagery
   Reproduced under license in ArcGIS 10.8

N

0 500 1,000 2,000 3,000 4,000
Feet

Figure 3-1: RWL and FAR Locations
Gavin Generating Station
Cheshire, Ohio

ERM

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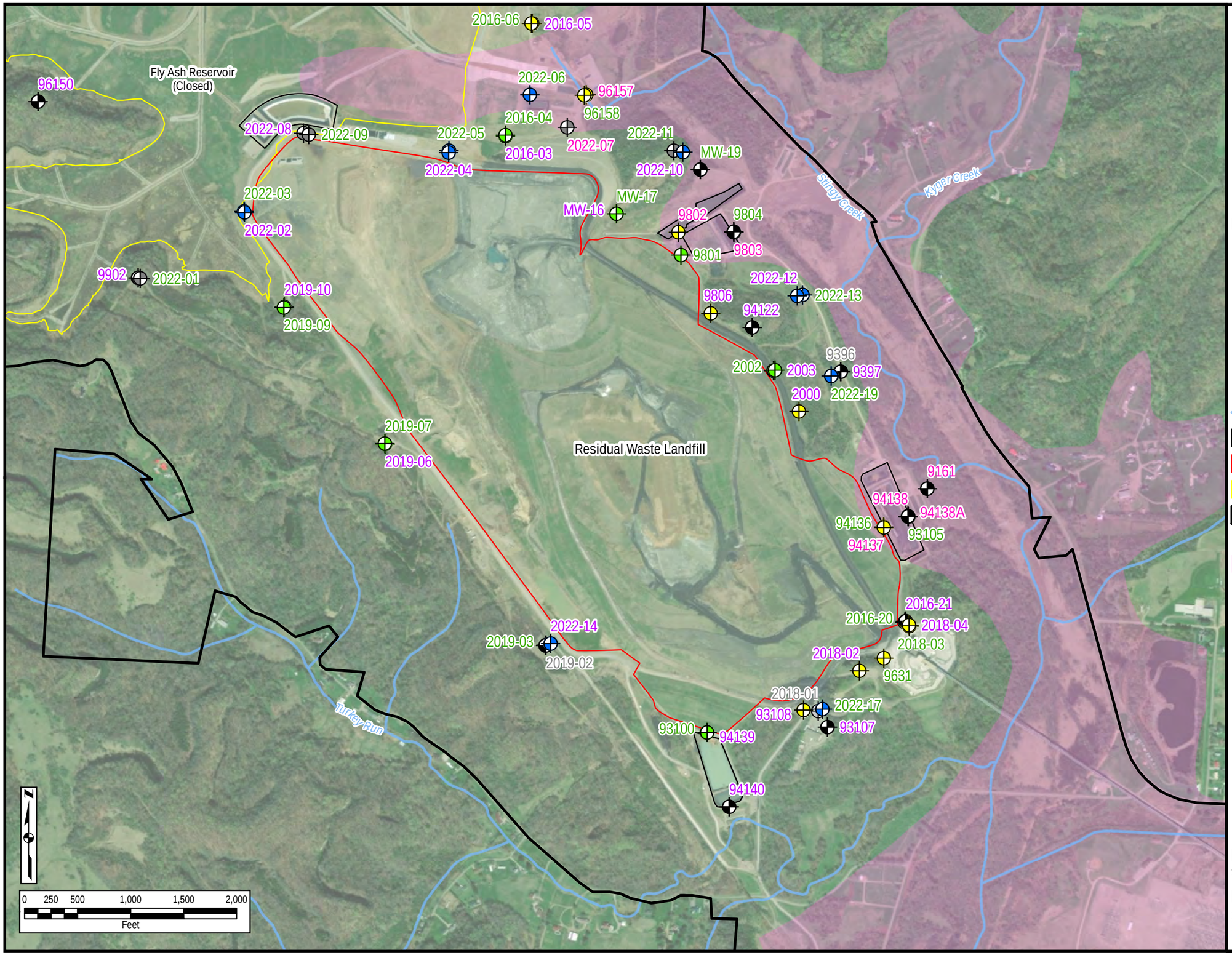

Figure 3-2: Federal Monitoring Well Locations
Residual Waste Landfill Area
Gavin Power, LLC
Cheshire, Ohio

ERM

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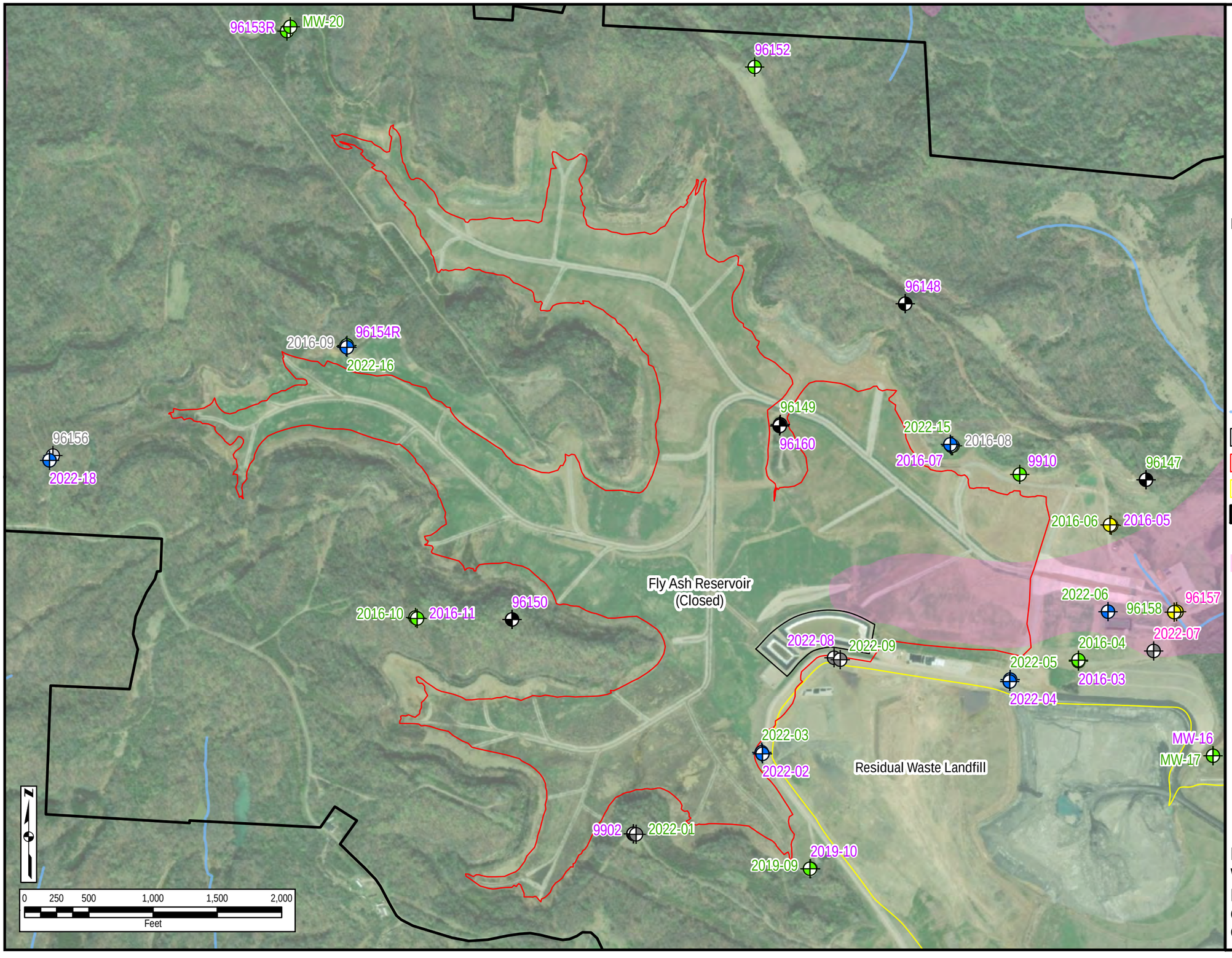

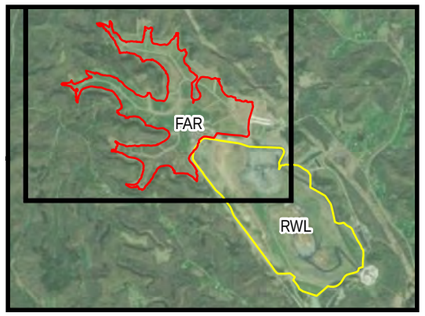

Legend

- New/Replacement Monitoring Well
- Proposed Monitoring Well (Not Installed)
- Federal Upgradient Monitoring Well
- Federal Downgradient Monitoring Well
- Monitoring Well (Not in Federal Program)
- Abandoned Well
- Stream/Creek
- Pond Area
- Fly Ash Reservoir
- Residual Waste Landfill
- Gavin Property Boundary
- Interpreted area where the Morgantown Sandstone has been eroded and is not present (based on borehole logs and topographic analysis)
- 94138 Alluvium Monitoring Well
- 93108 Morgantown Monitoring Well
- 93105 Cow Run Monitoring Well
- 96156 Abandoned Well

NOTE:
- Aerial Imagery: ESRI World Imagery
  Reproduced under license in ArcGIS 10.8

Figure 3-3: Federal Monitoring Well Locations
Fly Ash Reservoir Area
Gavin Power, LLC
Cheshire, Ohio

ERM

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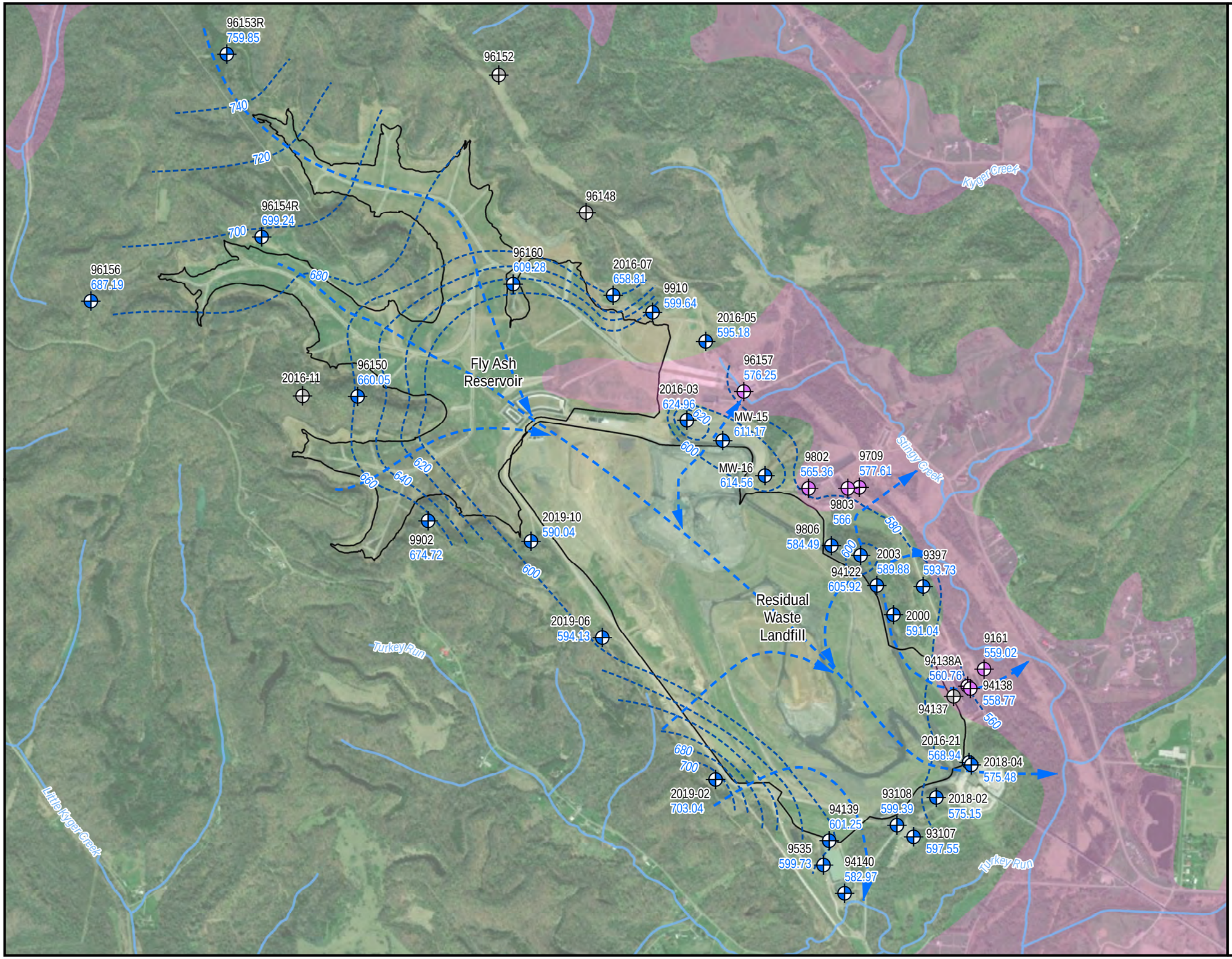
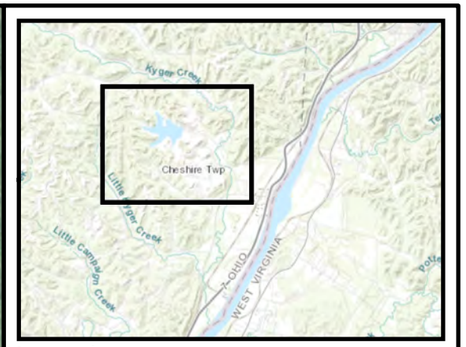




Legend

- Morgantown Sandstone Monitoring Well
- Morgantown Sandstone Monitoring Well - Low Recharge, Dry, Data Anomaly, or Not Gauged
- Alluvium Monitoring Well
- 605.82 Groundwater Elevation (ft)
- Interpreted Groundwater Potentiometric Contour
- Interpreted Generalized Groundwater Flow Direction
- Stream/Creek
- Coal Combustion Residual Unit
- Interpreted area where the Morgantown Sandstone has been eroded and is not present (based on borehole logs and topographic analysis)

NOTES:

- Interpreted contours based on groundwater gauging conducted on 3/21/2022 and 3/22/2022.
- Some groundwater elevation contours were interpreted using historical groundwater elevation trends in monitoring wells that were not gauged in March 2022.
- Where the Morgantown SS is absent, the contours represent the potentiometric surface in the alluvial aquifer because these aquifers are hydraulically connected.
- Interpreted groundwater flow directions include potential influence from GWIs.

N

0 500 1,000 2,000

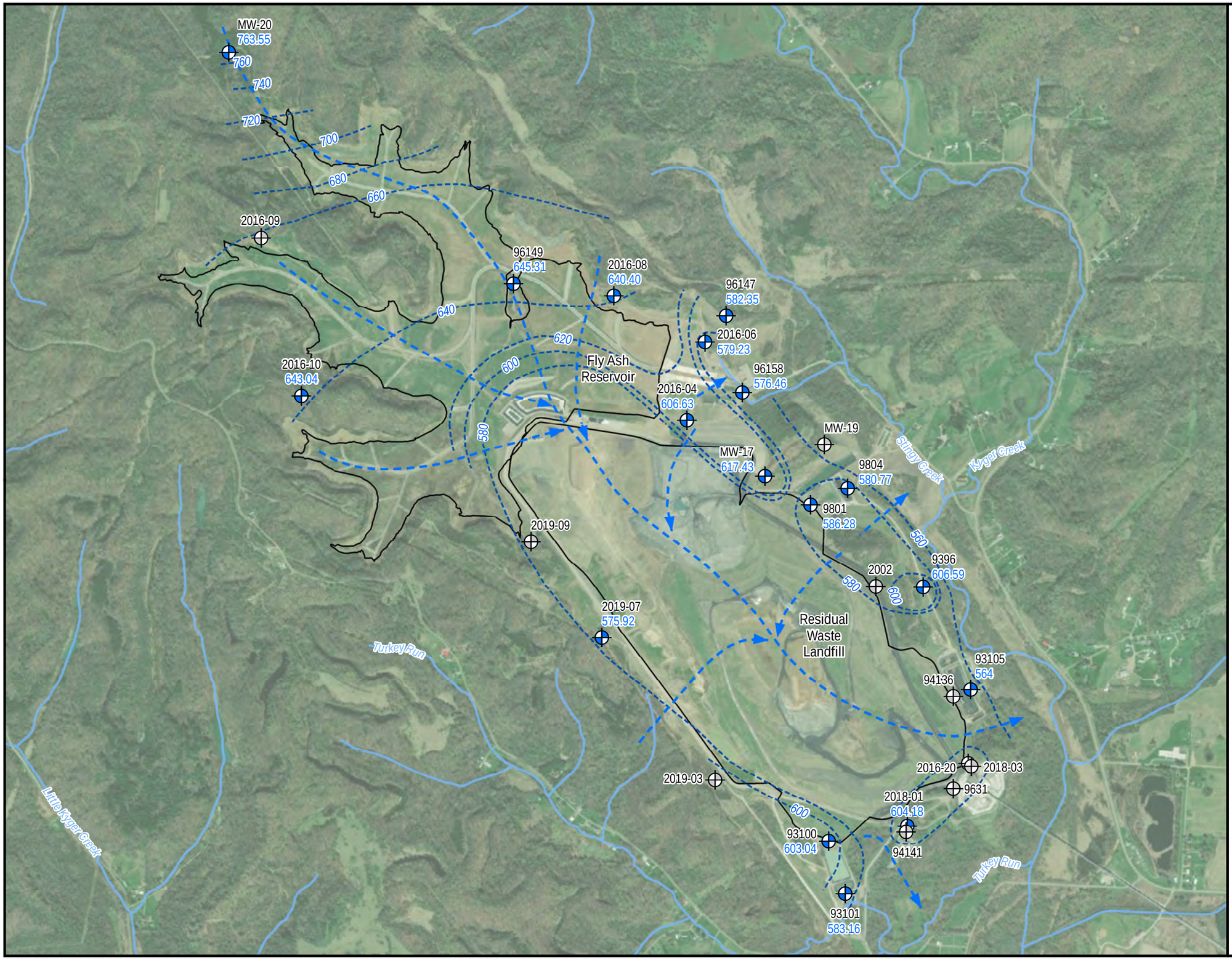
Feet

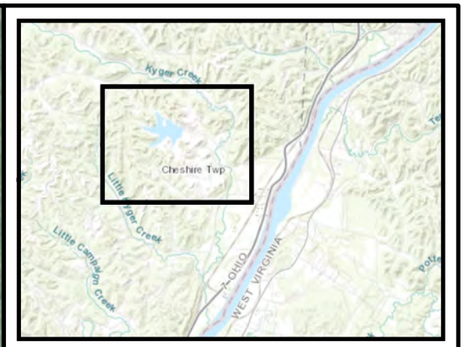
Figure **5-1**: Morgantown Sandstone Groundwater Flow Directions Spring 2022

Gavin Power, LLC

Cheshire, Ohio

ERM





Legend

- Cow Run Sandstone Monitoring Well
- Cow Run Sandstone Well - Low Recharge, Dry, or Data Anomaly
- 605.82 Groundwater Elevation (ft)
- Interpreted Groundwater Potentiometric Contour
- Interpreted Generalized Groundwater Flow Direction
- Stream/Creek
- Coal Combustion Residual Unit

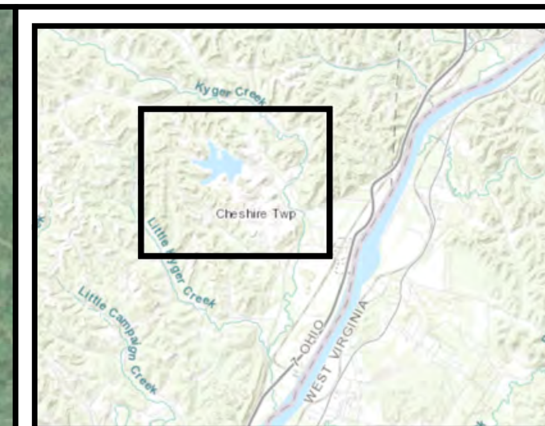
NOTES:
- Cow Run Sandstone is present through entire site.
- Interpreted contours based on groundwater gauging conducted on 3/21/2022 and 3/22/2022.
- Some groundwater elevation contours were interpreted using historical groundwater elevation trends in monitoring wells that were not gauged in March 2022.

N

0 500 1,000 2,000
Feet

Figure 5-2: Cow Run Sandstone Groundwater Flow Directions Spring 2022
Gavin Power, LLC
Cheshire, Ohio

ERM



Legend

- Morgantown Sandstone Monitoring Well
- Morgantown Sandstone Monitoring Well - Low Recharge, Dry, Data Anomaly, or Not Gauged
- Morgantown Sandstone Abandoned Well
- Alluvium Monitoring Well
- 605.82 Groundwater Elevation (ft)
- Interpreted Groundwater Potentiometric Contour
- Interpreted Generalized Groundwater Flow Direction
- Stream/Creek
- Coal Combustion Residual Unit
- Interpreted area where the Morgantown Sandstone has been eroded and is not present (based on borehole logs and topographic analysis)

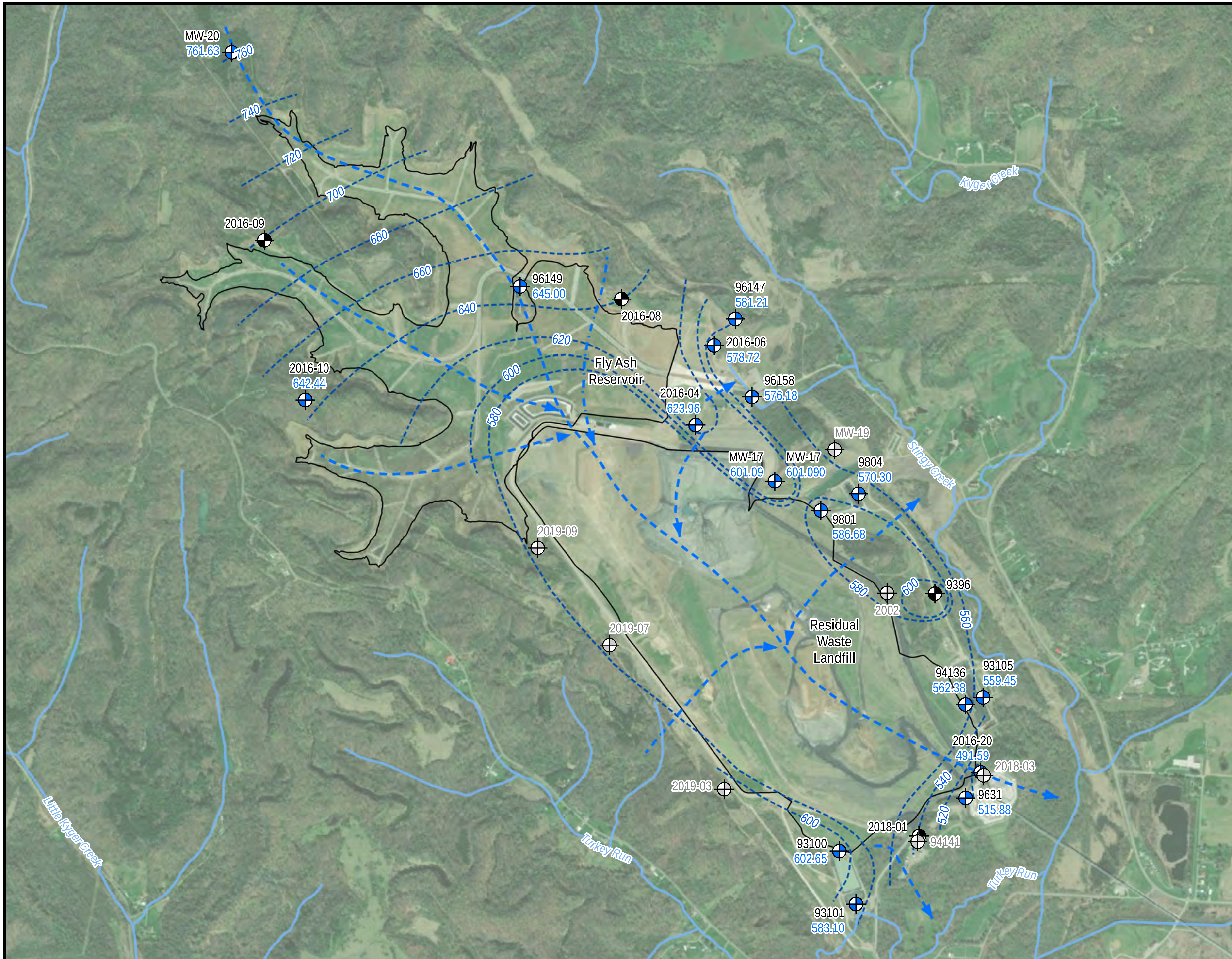
NOTES:
- Interpreted contours based on groundwater gauging conducted on 9/8/2022.
- Some groundwater elevation contours were interpreted using historical groundwater elevation trends in monitoring wells that were not gauged in September 2022.
- Where the Morgantown SS is absent, the contours represent the potentiometric surface in the alluvial aquifer because these aquifers are hydraulically connected.
- Interpreted groundwater flow directions include potential influence from GWIs.

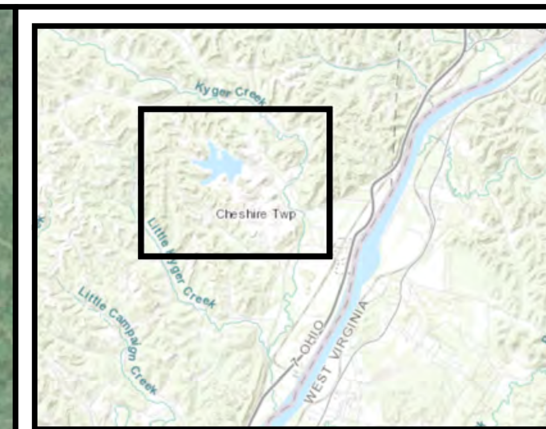
N

0 500 1,000 2,000
Feet

Figure 5-3: Morgantown Sandstone Groundwater Flow Directions
Fall 2022
Gavin Power, LLC
Cheshire, Ohio

ERM





Legend

- Cow Run Sandstone Monitoring Well
- Cow Run Sandstone Well - Low Recharge, Dry, or Data Anomaly
- Cow Run Sandstone Abandoned Well
- 605.82 Groundwater Elevation (ft)
- Interpreted Groundwater Potentiometric Contour
- Interpreted Generalized Groundwater Flow Direction
- Stream/Creek
- Coal Combustion Residual Unit

NOTES:
- Cow Run Sandstone is present through entire site.
- Interpreted contours based on groundwater gauging conducted on 9/8/2022.
- Some groundwater elevation contours were interpreted using historical groundwater elevation trends in monitoring wells that were not gauged in September 2022.

N

0 500 1,000 2,000
Feet

Figure 5-4: Cow Run Sandstone Groundwater Flow Directions Fall 2022
Gavin Power, LLC
Cheshire, Ohio

ERM

APPENDIX A WELL CONSTRUCTION SUMMARY

Appendix A
Well Construction Details
Gavin Residual Waste Landfill and Fly Ash Reservoir
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													
2022-02	9/12/2022	Morgantown	RWL/FAR	350043.6197	2067462.41	745.60	748.23	141.00	622	607	15	2	PVC SCH 40
2022-03	9/11/2022	Cow Run	RWL/FAR	350054.0373	2067458.572	745.43	748.00	195.00	567	552	15	2	PVC SCH 40
2022-04	10/4/2022	Morgantown	RWL/FAR	350607.317	2069387.817	732.43	734.84	141.00	610	595	15	2	PVC SCH 40
2022-05	10/6/2022	Cow Run	RWL/FAR	350622.4817	2069391.444	732.36	734.87	191.00	553	543	10	2	PVC SCH 40
2022-06	8/4/2022	Cow Run	FAR	351151.8389	2070153.902	613.86	616.04	80.00	546	536	10	2	PVC SCH 40
2022-10	8/22/2022	Morgantown	RWL	350611.9774	2071598.263	740.13	742.50	142.00	610	600	10	2	PVC SCH 40
2022-12	7/28/2022	Morgantown	RWL	349256.8742	2072676.67	612.52	614.68	40.00	585	575	10	2	PVC SCH 40
2022-13	8/3/2022	Cow Run	RWL	349262.6609	2072727.054	609.73	612.40	94.00	533	518	15	2	PVC SCH 40
2022-14	7/24/2022	Morgantown	RWL	345975.5035	2070349.795	740.42	743.04	180.00	582	562	20	2	PVC SCH 40
2022-15	8/5/2022	Cow Run	FAR	352451.0853	2068926.25	729.55	732.09	194.00	548	538	10	2	PVC SCH 40
2022-16	8/9/2022	Cow Run	FAR	353206.6888	2064228.927	736.19	738.37	189.00	559	549	10	2	PVC SCH 40
2022-17	9/14/2022	Cow Run	RWL	345353.3472	2072913.835	733.39	735.83	257.00	498	478	20	2	PVC SCH 40
2022-18	8/18/2022	Morgantown	FAR	352327.0836	2061913.471	852.04	854.41	211.00	653	643	10	2	PVC SCH 40
2022-19	7/26/2022	Cow Run	RWL	348497.3409	2072997.258	613.58	616.04	119.00	507	497	10	2	PVC SCH 40
Federal CCR Monitoring Wells													
2000	2/10/2000	Morgantown	RWL	2072693.04	348163.03	716.68	718.43	150.4	119.6	148.6	29	2	PVC SCH 40
2003	3/7/2000	Morgantown	RWL	2072467.35	348553.78	724.28	726.56	143.98	122.7	141.7	19	2	PVC SCH 40
9396	2/8/1993	Cow Run	RWL	2073087.37	348540.79	613.61	616.22	121.4	114.8	116.8	2	1	NA
9631	10/17/1996	Cow Run	RWL	2073493.05	345839.57	706.7	709.15	227.9	187.1	225.9	38.8	2	NA
9801	12/3/1998	Cow Run	RWL	2071580.02	349642.02	609.77	611.37	130.00	109.4	129	19.6	2	PVC SCH 40
9802	12/2/1998	Alluvium	RWL	2071555.02	349857.02	610.39	612.39	51.1	39	49.1	10.1	2	PVC SCH 40
9806	12/29/1998	Morgantown	RWL	2071860.03	349092.02	718.29	720.29	142	111	140	29	2	PVC SCH 40
9910	8/4/1999	Morgantown	FAR	2069464.98	352217.01	NA	697.07	102.07	57.07	102.07	45	2	PVC SCH 80
93100	7/20/1994	Cow Run	RWL	2071823.04	345135.01	612.00	614.04	114.29	73.35	112.25	38.9	2	PVC SCH 40
93108	8/10/1993	Morgantown	RWL	2072737.05	345345.02	716.72	718.48	151.66	129.9	149.9	20	2	PVC SCH 40
94136	9/8/1994	Cow Run	RWL	2073492.06	347074.03	594.00	596.25	120.75	79.4	118.5	39.1	2	PVC SCH 40
94137	9/7/1994	Alluvium	RWL	2073494.06	347070.03	594.00	596.27	55.17	44	52.9	8.9	2	PVC SCH 40
94139	7/21/1994	Morgantown	RWL	2071828.04	345135.01	612.00	614.11	62.26	41.25	60.15	18.9	2	PVC SCH 40
96152	6/25/1996	Morgantown	FAR	2067403.94	355388.99	777.28	779.44	168.16	127	166	39	2	PVC SCH 40
96153R	2/29/2016	Morgantown	FAR	2063762.89	355668.96	771.91	773.88	116.97	102	112	10	2	PVC SCH 80
96154R	3/3/2016	Morgantown	FAR	2064229.90	353220.96	736.25	738.21	101.86	86	96	10	2	PVC SCH 80
96156	1/3/1996	Morgantown	FAR	2061940.88	352363.94	851.81	854.2	224.49	220.1	222.1	2	1	PVC SCH 80
96157	11/21/1995	Alluvium	FAR	2070687.00	351151.01	584.6	586.52	48.63	37.7	46.7	9	2	PVC SCH 40
96158	11/29/1995	Cow Run	FAR	2070668.00	351145.01	584.7	586.5	60.96	50.2	59.2	9	2	PVC SCH 40
2016-03	3/23/2016	Morgantown	FAR	2069923.99	350764.01	659.06	661.11	56.05	42	52	10	2	PVC SCH 80
2016-04	3/28/2016	Cow Run	FAR	2069923.99	350773.01	658.98	661.04	137.06	123	133	10	2	PVC SCH 80
2016-05	3/29/2016	Morgantown	FAR	2070176.99	351823.01	648.70	650.97	58.27	44	54	10	2	PVC SCH 80
2016-06	3/29/2016	Cow Run	FAR	2070167.99	351825.01	649.02	651.1	126.08	112	122	10	2	PVC SCH 80
2016-07	3/29/2016	Morgantown	FAR	2068933.97	352440.00	728.84	731.45	107.61	93	103	10	2	PVC SCH 80
2016-08	3/23/2016	Cow Run	FAR	2068943.97	352440.00	728.84	731.38	196.54	182	192	10	2	PVC SCH 80
2016-09	3/3/2016	Cow Run	FAR	2064221.9	353215.96	736.83	739.22	191.39	177	187	10	2	PVC SCH 80
2016-10	3/4/2016	Cow Run	FAR	2064761.92	351103.96	864.62	866.97	311.35	294	304	10	2	PVC SCH 80
2016-11	3/4/2016	Morgantown	FAR	2064774.92	351096.96	864.51	866.88	260.37	245	255	10	2	PVC SCH 80
2018-01	12/5/2018	Cow Run	RWL	2072876.05	345335.88	735	735.781	260.00	235	255.5	20.5	2	PVC SCH 40
2018-02	10/24/2018	Morgantown	RWL	2073262.43	345715.60	755	757.316	195.00	182.5	194.5	12	2	PVC SCH 40
2018-03	11/19/2018	Cow Run	RWL	2073732.79	346138.61	707	708.807	226.00	197.8	221.5	23.7	2	PVC SCH 40
2018-04	11/1/2018	Morgantown	RWL	2073732.35	346148.53	707	708.182	137.5	124	134	10	2	PVC SCH 40

Appendix A
Well Construction Details
Gavin Residual Waste Landfill and Fly Ash Reservoir
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
2019-02	2/20/2020	Morgantown	RWL	2070306.50	345958.13	739.55	742.347	178	158	178	20	2	PVC SCH 40
2019-06	1/28/2020	Morgantown	RWL	2068790.41	347858.46	813.07	815.915	224	194	224	30	2	PVC SCH 40
2019-07	1/20/2020	Cow Run	RWL	2068786.90	347861.86	812.91	815.91	270	250	270	20	2	PVC SCH 40
2019-09	11/26/2019	Cow Run	RWL	2067834.23	349146.48	747.77	750.767	220	200	220	20	2	PVC SCH 40
MW-16	10/5/2016	Morgantown	RWL	2070971.09	350029.07	727.96	730.76	121.4	109	119	10	2	PVC SCH 40
MW-17	10/3/2016	Cow Run	RWL	2070971.09	350029.07	727.73	730.64	215.4	203	213	10	2	PVC SCH 40
MW-20	5/8/2012	Cow Run	FAR	2063789.89	355701.96	771.80	774.3	222.5	210	220	10	2	PVC SCH 80

Notes: Datum is SP/NAD83/NGVD29.

For lithology at well 2003, see the boring log for well 2002.

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 **OHIO POWER COMPANY**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

COORDINATES **N 351,118.0 E 2,070,648.6**

GROUND ELEVATION **584.6** SYSTEM **STATE PLANE**

WATER LEVEL	▽ 38.6	▽	▽
TIME			
DATE	11-21-95		

BORING NO. **96157** DATE SHEET **1** OF **1**

BORING START **11/20/95** BORING FINISH **11/21/95**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **1.93** DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **37.7** BOTTOM **46.7**

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

FIELD PARTY **TJH-REB** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	2.5	4.0	5-7-9	1.1							38.6 SWL over nite. 7.2 SWL 12-3-96.
2	SS	7.5	9.0	2-4-4	1.2		5		CL	**BROWN AND RED SILTY CLAY** Moist.		Latitude 38 57 48.52170 N. = Longitude 082 08 26.71347 W.
3	SS	12.5	14.0	2-3-5	1.1		10		SM	**BROWN SILTY SAND** Wet.		
4	SS	17.5	18.7	6-8-10	1.3		15		CL	**GRAY SILTY CLAY** Moist.		
5	SS	22.5	24.0	6-12-18	1.0		20			**GRAY CLAY** Moist.		
6	SS	27.5	29.0	4-6-9	1.1		25			**REDDISH BROWN CLAY** Wet.		26.7 Top of seal.
7	SS	32.5	34.0	4-6-8	1.0		30			**GRAY SILTY CLAY** Wet with rock fragments.		31.2 Top of sand.
8	SS	37.5	39.0	4-7-9	1.2		35		SP	**BROWN SAND** Saturated, fine grain.		37.5 Top of screen.
9	SS	42.5	44.0	4-7-10	1.2		40		CL	**GRAY CLAY** Moist.		
10	SS	47.5	48.0	77	?		45			**GRAY SANDY CLAY** Wet.		46.7 Bottom of screen 47.8 Bottom of sand.
										GRAY CLAY SHALE Dry.		

TYPE OF CASING USED

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

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 **REB**

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

COORDINATES **N 351,115.0 E 2,070,634.8**

GROUND ELEVATION **584.7** SYSTEM **STATE PLANE**

WATER LEVEL	▽ 7.3	▼	▼
TIME			
DATE	11-29-95		

BORING NO. **96158** DATE SHEET **1** OF **2**

BORING START **11/27/95** BORING FINISH **11/29/95**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **1.76** DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **50.2** BOTTOM **59.2**

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

FIELD PARTY **TJH-WEB** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							5		CL	**BROWN AND RED SILTY CLAY** Moist.		Latitude 38 57 48.49213 N. = Longitude 082 08 26.88801 W.
							10		SM	**BROWN SILTY SAND** Wet.		
							15		CL	**GRAY SILTY CLAY** Moist.		
							20			**GRAY CLAY** Moist.		
							25			**REDDISH BROWN CLAY** Wet.		
							30			**GRAY SILTY CLAY** Wet with rock fragments.		
							35		SP	**BROWN SAND** Saturated, fine grain.		
							40		CL	**GRAY CLAY** Moist.		
							45			**GRAY SANDY CLAY** Wet.		46.0 Top of seal.
1	NQ	47.5	49.5		1.4	40				**GRAY SANDY CLAYSHALE** **GRAY SHALEY SANDSTONE** Hard.		48.5 Top of sand.

Continued Next Page

TYPE OF CASING USED

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

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 **WEB**

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY**

BORING NO. **96158** DATE SHEET **2** OF **2**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

BORING START **11/27/95** BORING FINISH **11/29/95**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
2	NQ	49.5	55.3		5.6	62	55			**GRAY CLAY SHAEL** Hard, except of 2 small sandstone lenses between 50' and 51' and soft shale layers from 51.7 and 52.4.		50.2 Top of screen.
3	NQ	55.3	60.3		5.0	62	60			**GRAY CLAY SHALE** Hard.		59.2 Bottom of screen. 61.3 Bottom of sand.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

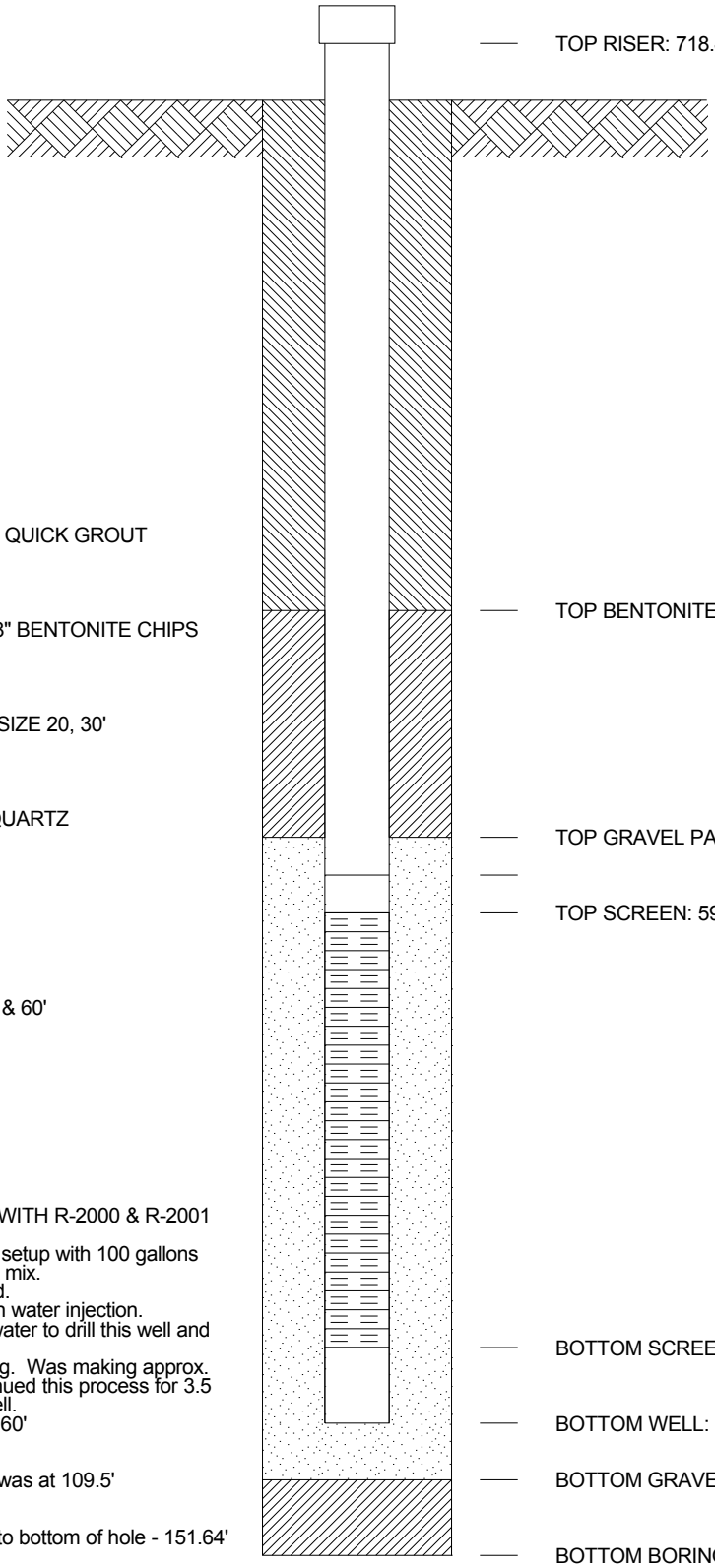
COMPANY _____ WELL No. **R-2000** BORING No. **R-2000** INSTALLED **2/10/00**

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 348,126.9 E 2,104,157.6**

SYSTEM **State Plane using NADA27**

GROUND ELEVATION 716.68 FT.



GROUT SEAL: 250 GALLONS QUICK GROUT

BENTONITE SEAL: 150 lbs 3/8" BENTONITE CHIPS

SCREEN: 2" dia., PVC, SLOT SIZE 20, 30'

GRAVEL PACK: 1050 lbs #4 QUARTZ

RISER PIPE: 2", dia., PVC

SPACERS, DEPTH: 130', 115' & 60'

Notes:
THIS IS A CLUSTERED SITE WITH R-2000 & R-2001

Deconned rig and tools prior to setup with 100 gallons potable water and alconox mix.
Water source was G-5 belthead.
Used 8" downhole hammer with water injection.
Used approx. 1500 gallons of water to drill this well and flush clean.
Used compressor to flush boring. Was making approx. 12 gallons/minute. Continued this process for 3.5 hours prior to installing well.
Spider spacers at 130', 115', & 60'
Seal hydrated by drill crew.

SWL at installation on 2/17/00 was at 109.5'
SWL at 129.2' on 2/23/00

Measurement from top of pipe to bottom of hole - 151.64'

GEOMCNST R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY AMERICAN ELECTRIC POWER

PROJECT GAVIN LANDFILL

COORDINATES N 348,126.9 E 2,104,157.6

GROUND ELEVATION 716.7 SYSTEM State Plane using NADA27

WATER LEVEL	▽	▼	▼
TIME			
DATE			

BORING NO. R-2000 DATE 7/14/00 SHEET 1 OF 4

BORING START 1/18/00 BORING FINISH 2/10/00

PIEZOMETER TYPE SS WELL TYPE OW

HGT. RISER ABOVE GROUND 1.75 DIA 2"

DEPTH TO TOP OF WELL SCREEN 119.6 BOTTOM 148.6

WELL DEVELOPMENT BACKFILL

FIELD PARTY TJH/REB RIG CME-75

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	2.7	4.2	4-6-10	1.3		5		SP	BROWN FINE GRAIN SAND Fill Material, Dry		
2	SS	7.7	9.2	5-8-11	1.4		10		CL	GRAY SILTY CLAY Fill Material, Dry		
3	SS	12.7	14.2	10-12-18	1.3		15			DARK GRAY WEATHERED CLAY SHALE Fill Material		
4	SS	17.7	18.2	50/.5	0.5	0				GRAY WEATHERED CLAY SHALE Random Fill, Dry		Auger refusal at 18.3'; started coring.
5	NQ-2	18.3	20.0		0.6		20			N5 MEDIUM GRAY LIMESTONE Broken up		
6	NQ-2	20.0	25.0		5.0	68				N6 MEDIUM LIGHT GRAY WEATHERED CLAY SHALE With limestone nodules		
7	NQ-2	25.0	32.7		2.5	72	25					
8	NQ-2	32.7	35.0		1.9	37	30			RED & GRAY CLAY SHALE		
9	NQ-2	35.0	40.0		3.9	77	35			N6 MEDIUM LIGHT GRAY SHALE		
10	NQ-2	40.0	45.0		5.0	74	40			N6 MEDIUM LIGHT GRAY SANDY SHALE		
11	NQ-2	45.0	50.0		4.5	44	45			N6 MEDIUM LIGHT GRAY CLAY SHALE N6 MEDIUM LIGHT GRAY SANDY SHALE N6 MEDIUM LIGHT GRAY CLAY SHALE N6 MEDIUM LIGHT GRAY SANDY SHALE Vertical crack & iron stain 44.0'-44.8' N6 MEDIUM LIGHT GRAY CLAY SHALE N6 MEDIUM LIGHT GRAY SANDY SHALE		

Continued Next Page

JT 7/14/00

AEP GAVINLF.GPJ

TYPE OF CASING USED

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

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

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

RECORDER REB

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY AMERICAN ELECTRIC POWER

PROJECT GAVIN LANDFILL

BORING NO. R-2000 DATE 7/14/00 SHEET 2 OF 4

BORING START 1/18/00 BORING FINISH 2/10/00

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
12	NQ-2	50.0	55.0		3.0	0				Vertical crack, iron stain and partial water loss at 49.0'		Drill tool malfunction
										RED & GRAY CLAY SHALE		
13	NQ-2	55.0	60.0		3.5	0	55			5R 4/2 GRAYISH RED CLAY SHALE		
14	NQ-2	60.0	65.0		4.7	77	60					
										N6 MEDIUM LIGHT GRAY SANDY SHALE		
15	NQ-2	65.0	70.0		4.9	61	65			N6 MEDIUM LIGHT GRAY SANDSTONE Shaley		At 65', cored into a loose sand with some pore pressure (flushing boring)
										N6 MEDIUM LIGHT GRAY CLAY SHALE		
16	NQ-2	70.0	75.0		4.2	29	70			RED & GRAY CLAY SHALE		No water return
17	NQ-2	75.0	85.0		9.2	50	75			N6 MEDIUM LIGHT GRAY WEATHERED CLAY SHALE Badly broken		
							80			5GY 4/1 DARK GREENISH GRAY CLAY SHALE Not weathered		
										REDDISH to MULTI COLORED CLAY SHALE		
18	NQ-2	85.0	94.5		5.6	48	85			5R 4/2 GRAYISH RED SHALE With limestone nodules throughout		
							90					
19	NQ-2	94.7	100.0		4.2	50	95			5R 4/2 GRAYISH RED SHALE Weathered & broken		
20	NQ-2	100.0	105.0		2.7	0	100					
21	NQ-2	105.0	110.0		3.9	31	105			5R 4/2 GRAYISH RED CLAYSTONE Broken, but hard in places		No water return
22	NQ-2	110.0	115.0		5.0	42	110			HARD REDDISH to MULTI COLORED CLAY SHALE Limestone nodules throughout		

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY AMERICAN ELECTRIC POWER

PROJECT GAVIN LANDFILL

BORING NO. R-2000 DATE 7/14/00 SHEET 3 OF 4

BORING START 1/18/00 BORING FINISH 2/10/00

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
23	NQ-2	115.0	125.0		10.0	50				5R 4/2 GRAYISH RED CLAYSTONE N6 MEDIUM LIGHT GRAY SANDY SHALE Morgantown 5R 4/2 GRAYISH RED SHALE With limestone nodules and red claystone		
							120					
24	NQ-2	125.0	135.0		10.0	78	125			5R 4/2 GRAYISH RED CLAYSTONE		
							130			N6 MEDIUM LIGHT GRAY SANDY SHALE (132.7'-134.1' Morgantown)		
25	NQ-2	135.0	138.9		3.9	50	135			N6 MEDIUM LIGHT GRAY CLAY SHALE 5R 4/2 GRAYISH RED CLAYSTONE		No water return
26	NQ-2	138.9	145.0		6.0	70				N6 MEDIUM LIGHT GRAY LIMESTONE		
							140			N6 MEDIUM LIGHT GRAY CLAY SHALE Medium hardness		
27	NQ-2	145.0	148.3		2.9	17	145			5R 4/2 GRAYISH RED CLAYSTONE		
28	NQ-2	148.3	155.0		5.5	27				5R 4/2 GRAYISH RED CLAYSTONE With limestone nodules & lenses throughout		
							150					
29	NQ-2	155.0	160.0		3.6	19	155			RED & BROWN SHALE Badly broken		No water return
30	NQ-2	160.0	165.0		3.1	0	160			5R 4/2 GRAYISH RED CLAY SHALE Broken up		SWL at 119.7' on 2/7/00; static over weekend
31	NQ-2	165.0	170.0		2.0	0	165			RED, BROWN & GRAY (MULTI COLORED) CLAYSTONE		Pulled rods, pumped hole full with Quick grout, trying to keep rods from chattering.
32	NQ-2	170.0	175.0		4.2	55	170			5R 4/2 GRAYISH RED CLAYSTONE N5 MEDIUM GRAY CLAYSTONE		No water return
33	NQ-2	175.0	180.0		5.0	30	175			N5 MEDIUM GRAY CLAY SHALE With limestone nodules		

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY AMERICAN ELECTRIC POWER

PROJECT GAVIN LANDFILL

BORING NO. R-2000 DATE 7/14/00 SHEET 4 OF 4

BORING START 1/18/00 BORING FINISH 2/10/00

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
34	NQ-2	180.0	185.0		2.5	44				RED & GRAY CLAY SHALE Limestone nodules		
35	NQ-2	185.0	190.0		4.2	0	185			5R 3/4 DUSKY RED CLAY SHALE Badly broken		
36	NQ-2	190.0	195.0				190			RED & GRAY CLAY SHALE		SWL at 61.5' on 2/9/2000 No water return
										N5 MEDIUM GRAY SANDY CLAY SHALE Limestone nodules		
37	NQ-2	195.0	200.0		5.0	84	195			N5 MEDIUM GRAY CLAY SHALE Hard		
38	NQ-2	200.0	210.0		9.0	91	200					No water return
							205					
39	NQ-2	210.0	215.0		5.0	60	210					
40	NQ-2	215.0	217.4		1.4	64	215					
41	NQ-2	217.4	219.0		1.6	75			CL	CLAY SEAM at 217.0'-217.3'		
42	NQ-2	219.0	224.0		4.0	23	220		CL	CLAY SEAM at 218.8'-219.0'		
										RED, GRAY & BROWN CLAY SHALE		Bottom of boring at 224.0' Used approx. 6000 gallons of water to core this boring.

AEP GAVINLF.GPJ AEP.GDT 7/14/00

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 348,513.9 E 2,103,918.7**

GROUND ELEVATION **724.2** SYSTEM **State Plane using NADA27**

Water Level, ft	▽	▼	▼
TIME			
DATE			

BORING NO. **R-2002** DATE **11/24/10** SHEET **1** OF **10**

BORING START **2/7/00** BORING FINISH **2/19/00**

PIEZOMETER TYPE **SS** WELL TYPE **OW**

HGT. RISER ABOVE GROUND **1.85** DIA **2"**

DEPTH TO TOP OF WELL SCREEN **193.6** BOTTOM **232.6**

WELL DEVELOPMENT BACKFILL

FIELD PARTY **MCR/PK** RIG **BK-81**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	1.7	3.2	6-7-8	1.4				SP	**LIGHT BROWN FINE to MEDIUM GRAIN SAND** With some 1/2" size fragments, dry		Deconned rig and tools at G-5 belt head using Leading Creek potable water and liqui-nox before drilling. Used Leading Creek potable water for drilling.
2	SS	6.7	8.2	5-6-6	1.5		5					
3	SS	11.7	13.2	13-13-15	1.4		10		SP	**GRAY to BROWN MEDIUM GRAIN SANDSTONE FRAGMENTS** Dry		
4	SS	16.7	18.2	7-8-10	1.5		15		SP	**BROWN FINE to MEDIUM GRAIN SAND** Dry		

TYPE OF CASING USED

X	NQ-2 ROCK CORE	
X	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 **MCR**

AEP R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-2002** DATE **11/24/10** SHEET **2** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
5	SS	21.7	23.2	8-10-9	1.4		25		SP	**GRAY to BROWN FINE to MEDIUM GRAIN SAND** With approx 50% of sample being fragments, dry		
6	SS	26.7	28.2	6-7-30	1.5				SP	**GRAY FINE to MEDIUM GRAIN SAND** Some brown, with approx 50% of sample being fragments, dry		
7	SS	31.7	33.2	10-11-14	1.4		30					
8	SS	36.7	38.2	16-22-22	1.4		35					
9	SS	41.7	43.2	9-21-32	1.5		40		SP	**LIGHT to MEDIUM BROWN MEDIUM GRAIN SANDSTONE FRAGMENTS** With fine grain sand layers		
10	SS	44.1	45.6	8-8-11	1.5		45			**BROWN STIFF CLAY with COAL, SANDSTONE FRAGMENTS, & GRAVEL MINE SPOIL** Dry		Started adding drilling mud inside of augers at 43.2' to help with drilling.

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-2002** DATE **11/24/10** SHEET **3** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
11	SS	46.7	48.2	8-9-12	1.5							
12	SS	51.7	53.2	9-11-10	1.5		50					
13	SS	56.7	58.2	8-12-11	1.5		55					
14	SS	61.7	63.2	9-13-19	1.5		60		CL	**RED SHALEY CLAY**		
15	SS	66.7	67.4	28-50/.2	0.6		65			**RED CLAY SHALE**		
16	SS	68.9	69.0	50/0	0	63				**10YR 7/4 GRAYISH ORANGE CLAY SHALE** Soft		Drilling to this point was using 6.25"HSA. Pulled HSA's and installed 6" SW casing. Cleaned inside of casing with 6" roller bit.
17	NQ-2	69.0	74.8		6.2		70			**N7 LIGHT GRAY FINE GRAIN SANDSTONE** Hard		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **R-2002** DATE **11/24/10** SHEET **4** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										10R 6/2 PALE RED CLAY SHALE		
18	NQ-2	74.8	79.8		3.6	33	75			**10R 5/4 PALE REDDISH BROWN CLAY SHALE**		
										N6 MEDIUM LIGHT GRAY CLAY SHALE		
19	NQ-2	79.8	84.8		5.8	78	80			**5B 7/1 LIGHT BLUISH GRAY CLAY SHALE**		
										5G 6/1 GREENISH GRAY CLAY SHALE		
20	NQ-2	84.8	90.8		6.5	66	85			**10YR 6/2 PALE OLIVE CLAY SHALE** Medium hard		SWL at 9.8' on 2/15/00 at 7:30AM; NQ hole depth at 84.8'
										10R 6/2 PALE RED CLAY SHALE Medium to hard		
21	NQ-2	90.8	94.8		1.7	24	90			**10R 6/2 PALE RED CLAY SHALE** Soft to medium hard		
22	NQ-2	94.8	97.3		1.0	60	95					
23	NQ-2	97.3	98.3		0.6	0						

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **R-2002** DATE **11/24/10** SHEET **5** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
24	NQ-2	98.3	103.3		1.0	0						Used 2000 gallons of water to this point - 98.3'
							100					
25	NQ-2	103.3	108.3		4.2	95						
							105					
26	NQ-2	108.3	114.8		7.1	76						
							110					
27	NQ-2	114.8	117.8		3.0	80	115			**10R 6/2 PALE RED CLAY SHALE** Soft to medium hard, slightly weathered		
28	NQ-2	117.8	125.0		7.4	9				**CLAY SHALE** Badly broken, medium hard		SWL at 16.8' on 2/16/00 at 7:30 am; NQ hole to 117.8'
							120					
										SILTY FINE GRAIN SANDSTONE Hard		
										5R 6/2 PALE RED CLAY SHALE Medium hard, badly broken		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-2002** DATE **11/24/10** SHEET **6** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							125					
29	NQ-2	125.0	130.0		4.5	56				**5R 5/4 MODERATE RED CLAY SHALE**		
										N7 LIGHT GRAY CLAY SHALE		
30	NQ-2	130.0	140.0		9.6	22	130			**5R 5/4 MODERATE RED CLAY SHALE** Medium to hard		
										5B 7/1 GRAY SILTY CLAY SHALE		
							135			**REDDISH CLAY SHALE** Medium to hard		
										GRAY SILTY CLAY SHALE Hard		
31	NQ-2	140.0	145.0		4.7	55	140			**5B 7/1 LIGHT BLUISH GRAY FINE GRAIN SILTY SANDSTONE**		
										5R 5/4 MODERATE RED CLAY SHALE		
32	NQ-2	145.0	155.0		8.8	15	145					Used 5000 gallons of water to this point - 145'
										5B 7/1 LIGHT BLUISH GRAY CLAY SHALE Medium hard		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-2002** DATE **11/24/10** SHEET **7** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							155					
33	NQ-2	155.0	159.0		4.6	61				**5R 5/4 MODERATE RED CLAY SHALE** Medium hard		
34	NQ-2	159.0	165.0		5.0	36	160			**5Y 5/2 LIGHT OLIVE GRAY CLAY SHALE** Soft		
							165					
35	NQ-2	165.0	170.0		4.8	17				**5R 6/2 PALE RED CLAY SHALE** Soft		
36	NQ-2	170.0	174.0		2.9	28	170			**5R 5/4 MODERATE RED CLAY SHALE** Soft		
37	NQ-2	174.0	180.0		5.1	55	175					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-2002** DATE **11/24/10** SHEET **8** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							180					
38	NQ-2	180.0	190.0		9.7	29				**10R 6/2 PALE RED CLAY SHALE** Hard		
							185					
										5B 7/1 LIGHT BLUISH GRAY CLAY SHALE Hard		
										10R 6/2 PALE RED CLAY SHALE Hard		
39	NQ-2	190.0	196.5		5.3	58	190			**10R 6/2 PALE RED CLAY SHALE** Soft		
							195					
40	NQ-2	196.5	205.0		8.2	56						
										5B 5/1 MEDIUM BLUISH GRAY FINE GRAIN SANDY SILTSTONE Hard		
							200					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **R-2002** DATE **11/24/10** SHEET **9** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							205					
41	NQ-2	205.0	213.5		8.4	81						SWL at 18.7' on 2/19/00 at 7:30am - NQ hole to 205'
							210					
42	NQ-2	213.5	223.5		10	76						
							215					
							220					
43	NQ-2	223.5	233.5		9.9	69						
							225					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-2002** DATE **11/24/10** SHEET **10** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/7/00** BORING FINISH **2/19/00**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
								× × × ×				
										10R 4/6 MODERATE REDDISH BROWN CLAY SHALE Medium hard		
							230					Stopped boring at 233.5' on 2/19/00. Used approx. 10,000 gallons of water to drill hole. Monitoring well to be installed at a later date.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

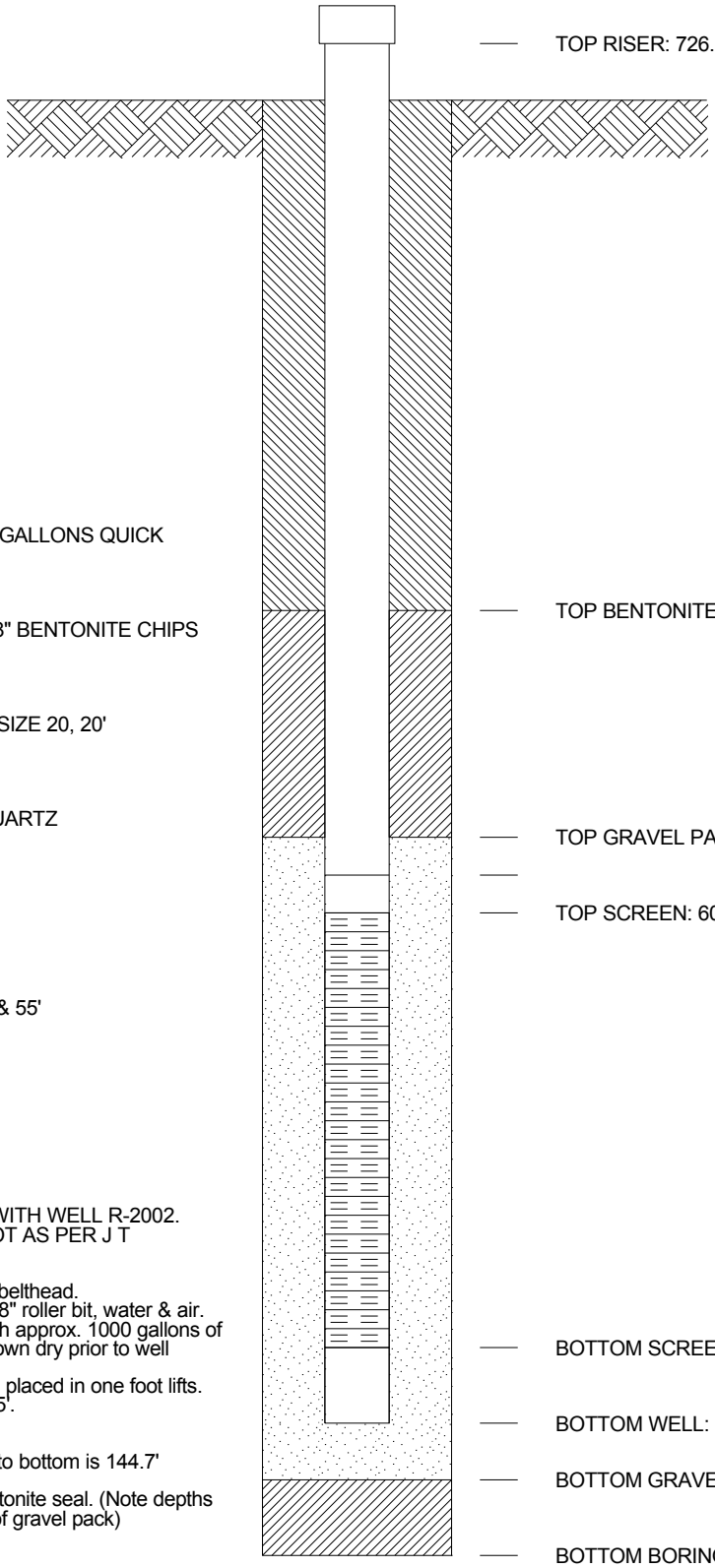
COMPANY _____ WELL No. **R-2003** BORING No. **R-2003** INSTALLED **3/7/00**

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 348,517.2 E 2,103,917.1**

SYSTEM **State Plane using NADA27**

GROUND ELEVATION 724.28 FT.



GROUT SEAL: APPROX. 200 GALLONS QUICK GROUT

BENTONITE SEAL: 100 lbs 3/8" BENTONITE CHIPS

SCREEN: 2" dia., PVC, SLOT SIZE 20, 20'

GRAVEL PACK: 550 lbs #4 QUARTZ

RISER PIPE: 2", dia., PVC

SPACERS, DEPTH: 135', 85', & 55'

Notes:
THIS WELL IS CLUSTERED WITH WELL R-2002.
THIS INSTALLATION WAS NOT AS PER J T MASSEY-NORTON

Potable water supply from G-5 belthead.
This well was drilled with a 5 7/8" roller bit, water & air.
The well boring was flushed with approx. 1000 gallons of potable water and then blown dry prior to well installation.
Bentonite seal was hydrated as placed in one foot lifts.
Spider spacers at 135', 85' & 55'.

SWL at installation was at 142'
Measurement from top of pipe to bottom is 144.7'

**5.3' of screen exposed to bentonite seal. (Note depths on top of screen and top of gravel pack)

GEOMCNST R1R2.GPJ AEP.GDT 11/24/10

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WELL 2018-01

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0472342
Project Location: Cheshire, OH

DATE STARTED: 11/27/2018
DATE COMPLETED: 12/5/2018
DRILLING CONTRACTOR: Terracon
DRILLING METHODS: Mud Rotary/ Rock Coring
LOGGED BY: R. Baisden
CHECKED BY: H. Usle
NOTES: Additional drilling and formation water removed during drawdown test prior to well installation.

TOTAL DEPTH: 260 feet bgs
DIAMETER: 4 inches
GROUND ELEVATION: 735 feet amsl (approx.)
PVC ELEVATION: 735.78 feet amsl
NORTHING: 345328.751
EASTING: 2104378.726

WELL DEVELOPMENT
METHOD(S): Pump
DATE STARTED: 03/01/2019
DATE ENDED: 09/05/2019
DTW AT START: NM
DTW AT END: NM
VOLUME PURGED: 90 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
5	730				CL-ML		Dark Brown, CLAY AND SILT, fine-grained.	
10	725	MR	NA				10.0	NM
15	720							
20	715							
25	710						BEDROCK observed in drill cuttings.	
30	705	MR	NA					NM
35	700							

WELL DIAGRAM:
- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Well Riser (to 235 feet bgs) (2" SCH 40 PVC)
- Bentonite Grout Seal

SAMPLE TYPE
- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND
- Silty Clay
- Bedrock
- Mudstone
- Sandstone
- Siltstone

ACRONYM LEGEND
amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PID = photoionization detector
ppm = parts per million
PVC = polyvinyl chloride

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Boston, MA 02108
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Client: Gavin Power, LLC **Project Name:** Residual Waste Landfill Monitoring Well Installation

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
40	695								
45	690								
50	685	MR	NA				BEDROCK observed in drill cuttings. *(continued)*	NM	Well Riser (to 235 feet bgs) (2" SCH 40 PVC)
55	680								Bentonite Grout Seal
60	675								
65	670								
70	665	MR	NA					NM	
75	660								

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Bedrock
- Mudstone
- Sandstone
- Siltstone

ACRONYM LEGEND

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WELL 2018-01

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
80	655								
85	650								
90	645	MR	NA				BEDROCK observed in drill cuttings. *(continued)*	NM	Well Riser (to 235 feet bgs) (2" SCH 40 PVC)
95	640								Bentonite Grout Seal
100	635								
105	630								
110	625	MR	NA					NM	
115	620								

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Bedrock
- Mudstone
- Sandstone
- Siltstone

ACRONYM LEGEND

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WELL 2018-01

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
120	615								
125	610								
130	605	MR	NA					NM	
135	600						BEDROCK observed in drill cuttings. *(continued)*		Well Riser (to 235 feet bgs) (2" SCH 40 PVC)
140	595								Bentonite Grout Seal
145	590								
150	585	MR	NA					NM	
155	580								

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Bedrock
- Mudstone
- Sandstone
- Siltstone

ACRONYM LEGEND

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WELL 2018-01

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
160	575								
165	570								Well Riser (to 235 feet bgs) (2" SCH 40 PVC)
170	565	MR	NA				BEDROCK observed in drill cuttings. *(continued)*	NM	Bentonite Grout Seal
175	560								
180	555								
185	550								
190	545	MR	NA					NM	
195	540								

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Bedrock
- Mudstone
- Sandstone
- Siltstone

ACRONYM LEGEND

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bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
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PID = photoionization detector
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WELL 2018-01

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
200	535								
205	530								
210	525	MR	NA				BEDROCK observed in drill cuttings. *(continued)*	NM	
215	520								
220	515						220.0		
225	510	RC (1)	36	0				NM	
230	505	RC (2)	44	0			Round Knob, Red Brown, MUDSTONE, fine-grained, laminated, moderate to weak, moderately disintegrated, moderately decomposed to fresh, conformable.	NM	
235	500	RC (3)	15	0			235.0	NM	
240	495	RC (4)	117	42			Cow Run, Gray To Light Gray, SANDSTONE, fine-grained, thinly bedded, moderate to strong, fresh, conformable, silt interbeds, silt content increasing with depth, pyrite mineralization from 235 to 236 feet bgs, fracture at 237.5 feet bgs.	NM	

Well Riser (to 235 feet bgs) (2" SCH 40 PVC)

Bentonite Grout Seal

Bentonite Seal

Filter Sand (#0 and #1)

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Bedrock
- Mudstone
- Sandstone
- Siltstone

ACRONYM LEGEND

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DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PID = photoionization detector
ppm = parts per million
PVC = polyvinyl chloride

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WELL 2018-01

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
245	490								
250	485	RC (5)	114	43			Cow Run, Gray To Light Gray, SANDSTONE, fine-grained, thinly bedded, moderate to strong, fresh, conformable, silt interbeds, silt content increasing with depth, pyrite mineralization from 235 to 236 feet bgs, fracture at 237.5 feet bgs. *(continued)*	NM	Well Screen (235 to 255 feet bgs) (2" SCH 40 PVC/ 0.01 slot)
255	480						255.5		Sump
260	475	RC (6)	60	0			Gray To Red Brown, SILTSTONE, fine-grained, laminated, weak, slightly decomposed, slightly disintegrated, conformable. 260.0	NM	
							Bottom of Boring @ 260.00 feet bgs		
265	470								
270	465								
275	460								
280	455								

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Bedrock
- Mudstone
- Sandstone
- Siltstone

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PID = photoionization detector
ppm = parts per million
PVC = polyvinyl chloride

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WELL 2018-02

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0472342
Project Location: Cheshire, OH

DATE STARTED: 10/10/2018
DATE COMPLETED: 10/24/2018
DRILLING CONTRACTOR: Terracon
DRILLING METHODS: Mud Rotary/ Rock Coring
LOGGED BY: R. Baisden
CHECKED BY: H. Usle
NOTES: Additional drilling and formation water removed during drawdown test prior to well installation.

TOTAL DEPTH: 195 feet bgs
DIAMETER: 4 inches
GROUND ELEVATION: 755 feet amsl (approx.)
PVC ELEVATION: 757.32 feet amsl
NORTHING: 345708.471
EASTING: 2104765.115

WELL DEVELOPMENT
METHOD(S): Bailer
DATE STARTED: 11/6/2018 11:20:00 AM
DATE ENDED: 11/6/2018 12:15:00 PM
DTW AT START: 182.03 feet bgs
DTW AT END: 182.19 feet bgs
VOLUME PURGED: 6 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
5	750				CL-ML		Dark Brown, CLAY AND SILT, fine-grained.	
10	745	MR	NA					NM
							11.5	
15	740						Pomeroy, Light Brown, SANDSTONE, fine- to medium-grained, massive, strong, fresh, conformable.	
							18.0	
20	735						Pomeroy, Gray, SILTSTONE, trace fine sand, fine-grained, thinly bedded, moderate, fresh, conformable.	
25	730						25.0	
30	725	MR	NA				Pomeroy, COAL, fine-grained, thinly bedded, moderate, fresh, conformable, organic-rich laminated coal beds.	NM
							32.0	
35	720						Pomeroy, Gray To Light Brown, SANDSTONE, fine-grained, thin to medium bedded, strong, fresh, conformable.	
							35.0	

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Well Riser (to 182 feet bgs) (2" SCH 40 PVC)
- Bentonite Grout Seal

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Sandstone
- Siltstone
- Coal
- Shale
- Limestone

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PID = photoionization detector
ppm = parts per million
PVC = polyvinyl chloride

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

WELL 2018-02

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
40	715						Pomeroy, Gray To Light Brown, SANDSTONE, fine-grained, thin to medium bedded, strong, fresh, comfortable, gray to black silt and clay crossbeds. *(continued)*		
							40.0		
							Pomeroy, Dark Gray, CLAYSTONE, fine-grained, thinly bedded, moderate, fresh, conformable, micaceous.		
							42.0		
45	710						Pomeroy, Gray, SANDSTONE, some silt, fine to medium grained, thinly bedded, strong, fresh, conformable.		
							49.0		
50	705	MR	NA				Pomeroy, Black, SHALE, fine-grained, laminated, moderate, fresh, conformable.	NM	Well Riser (to 182 feet bgs) (2" SCH 40 PVC)
							49.8		
							Pomeroy, Black, COAL, weak, fresh, conformable.		
							52.0		
55	700								Bentonite Grout Seal
60	695								
65	690						Pittsburg Undifferentiated Units, Dark Gray To Gray, SHALE, fine-grained, laminated, moderate, fresh, conformable, 2-4" coal seams at 60 and 68 feet bgs, transtions to organic-rich shale with nodules at 70 feet bgs.		
70	685	MR	NA					NM	
75	680						75.0		
							Pittsburg, Gray, LIMESTONE, fine-grained, massive, moderate, fresh, conformable.		

SAMPLE TYPE

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WELL 2018-02

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
80	675						Pittsburg, Gray, LIMESTONE, fine-grained, massive, moderate, fresh, conformable. *(continued)*		
							80.0		
85	670						Pittsburg Undifferentiated Units, Dark Red, MUDSTONE, fine-grained, thinly bedded, weak, fresh, conformable.		
							88.0		
90	665	MR	NA				Pittsburg Undifferentiated Units, Gray To Dark Gray, SHALE, fine-grained, thinly bedded, strong, fresh, conformable, nodules of limestone from 90 to 95 feet bgs, 5-10 mm pyrite inclusions from 95 to 97.5 feet bgs.	NM	Well Riser (to 182 feet bgs) (2" SCH 40 PVC)
95	660								Bentonite Grout Seal
							97.5		
100	655						Connellsville, Gray To Light Gray, SANDSTONE, fine-grained, thickly bedded, strong, fresh, conformable, clay interbeds.		
							103.0		
105	650						Connellsville, Dark Gray, SILTSTONE, fine-grained, laminated, moderate to strong, slightly decomposed, conformable.		
110	645	MR	NA					NM	
115	640						115.0		
							Connellsville, Gray, LIMESTONE, fine-grained, massive, moderate, fresh, conformable.		
							116.0		
							Connellsville, Gray, SANDSTONE, fine-grained, thickly bedded, strong, fresh, conformable, clay interbeds.		

SAMPLE TYPE

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WELL 2018-02

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
120	635						Connellsville, Gray, SANDSTONE, fine-grained, thickly bedded, strong, fresh, conformable, clay interbeds. *(continued)*		
							121.0		
125	630						Connellsville, Dark Red, MUDSTONE, fine-grained, thinly bedded, moderate, fresh, conformable.		
							126.0		
							Connellsville, Gray, SANDSTONE, fine-grained, thinly bedded, strong, fresh, conformable, clay interbeds, micaceous.		
130	625	MR	NA				130.0	NM	
							Connellsville, Dark Gray, LIMESTONE, fine-grained, massive, strong, slightly decomposed, slightly disintegrated, conformable, inclusions.		
135	620						135.0		Well Riser (to 182 feet bgs) (2" SCH 40 PVC)
140	615								Bentonite Grout Seal
145	610						Clarksburg, Red To Dark Brown, MUDSTONE, fine-grained, laminated, moderately disintegrated, moderately decomposed, conformable, decomposition fluctuates throughout, gravel and sand inclusions from 162 to 164 feet bgs.		
150	605	MR	NA					NM	
155	600								

SAMPLE TYPE

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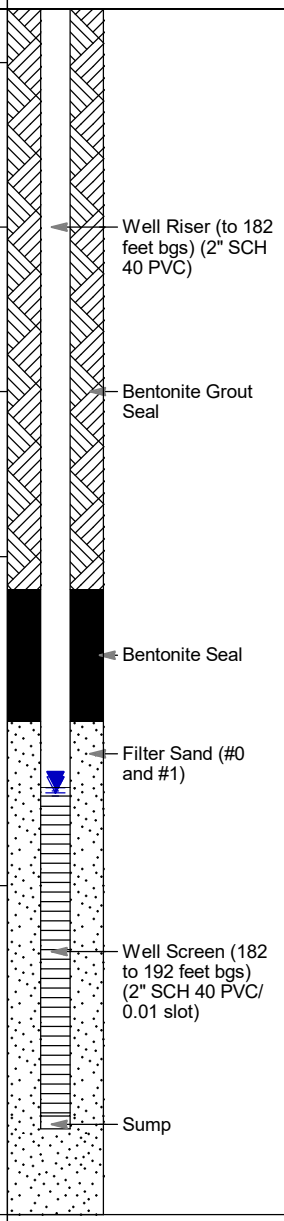
WELL 2018-02

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
160	595								
165	590	RC (1)	54	50				NM	
170	585	RC (2)	50	7			Clarksburg, Red To Dark Brown, MUDSTONE, fine-grained, laminated, moderately disintegrated, moderately decomposed, conformable, decomposition fluctuates throughout, gravel and sand inclusions from 162 to 164 feet bgs. *(continued)*	NM	
175	580	RC (3)	55	13				NM	
180	575	RC (4)	113	58				NM	
185	570						182.5 Morgantown, Dark Gray, SANDSTONE, fine-grained, thinly bedded, moderate to strong, fresh, conformable, silt bands near 182.5 feet bgs, silt decreases with depth, micaceous, pyrite inclusions from 187 to 187.8 feet bgs, fracture at 183 feet bgs.		
190	565	RC (5)	113	77			188.5 Morgantown, Gray To Red Brown, SILTSTONE, trace fine sand, fine-grained, thinly bedded, moderate, fresh to slightly decomposed, conformable.	NM	
195	560						194.5 195.0 Round Knob, Red To Dark Brown, MUDSTONE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable. *Bottom of Boring @ 195.00 feet bgs*		



SAMPLE TYPE

- Mud Rotary
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WELL 2018-03

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0472342
Project Location: Cheshire, OH

DATE STARTED: 10/31/2018
DATE COMPLETED: 11/19/2018
DRILLING CONTRACTOR: Terracon
DRILLING METHODS: Mud Rotary/ Rock Coring
LOGGED BY: R. Baisden
CHECKED BY: H. Usle
NOTES: Additional drilling and formation water removed during drawdown test prior to well installation.

TOTAL DEPTH: 226 feet bgs
DIAMETER: 4 inches
GROUND ELEVATION: 706.81 feet amsl (approx.)
PVC ELEVATION: 708.81 feet amsl
NORTHING: 346131.471
EASTING: 2105235.482

WELL DEVELOPMENT
METHOD(S): Bailer
DATE STARTED: 11/29/2018 9:00:00 AM
DATE ENDED: 11/29/2018 12:00:00 PM
DTW AT START: 200.74 feet bgs
DTW AT END: 222 feet bgs
VOLUME PURGED: 9 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
5	702				CL-ML		Dark Brown, CLAY AND SILT, fine-grained.	
							6.0	
10	697	MR	NA					NM
15	692							
20	687						BEDROCK observed in drill cuttings from 2018-04.	
25	682							
30	677	MR	NA					NM
35	672							

WELL DIAGRAM:
- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Well Riser (to 197 feet bgs) (2" SCH 40 PVC)
- Bentonite Grout Seal

SAMPLE TYPE
- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND
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WELL 2018-03

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
40	667								
45	662								
50	657	MR	NA					NM	Well Riser (to 197 feet bgs) (2" SCH 40 PVC)
55	652						BEDROCK observed in drill cuttings from 2018-04. *(continued)*		Bentonite Grout Seal
60	647								
65	642								
70	637	MR	NA					NM	
75	632								

SAMPLE TYPE

- Mud Rotary
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GRAPHIC LOG LEGEND

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WELL 2018-03

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

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
80	627								
85	622								
90	617	MR	NA					NM	Well Riser (to 197 feet bgs) (2" SCH 40 PVC)
95	612						BEDROCK observed in drill cuttings from 2018-04. *(continued)*		Bentonite Grout Seal
100	607								
105	602								
110	597	MR	NA					NM	
115	592						115.0 Clarksburg, Red To Dark Brown, MUDSTONE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable, decomposition and disintegration fluctuate throughout, more competent from 125 to 125.9 feet bgs,.		

SAMPLE TYPE

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
120	587						Clarksburg, Red To Dark Brown, MUDSTONE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable, decomposition and disintegration fluctuate throughout, more competent from 125 to 125.9 feet bgs,. *(continued)*		
125	582						125.9 Morgantown, Gray, SILTSTONE, some fine sand, fine-grained, thinly bedded, strong, fresh, conformable.		
							127.8 Morgantown, Red, SILTSTONE, fine-grained, thinly bedded, strong, fresh, conformable. 128.8		
130	577	MR	NA				Morgantown, Gray, SANDSTONE, with silt, fine-grained, thinly bedded, strong, fresh, conformable. 132.5	NM	
135	572						Round Knob, Reddish Brown, MUDSTONE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable, pyrite inclusions from 135.5 to 139.5 feet bgs.		Well Riser (to 197 feet bgs) (2" SCH 40 PVC)
140	567						139.5		Bentonite Grout Seal
145	562								
150	557	MR	NA				Round Knob, Reddish Brown, SHALE, lithology inferred from cuttings.	NM	
155	552								

SAMPLE TYPE

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
160	547								
165	542								Well Riser (to 197 feet bgs) (2" SCH 40 PVC)
170	537	MR	NA					NM	Bentonite Grout Seal
175	532						Round Knob, Reddish Brown, SHALE, lithology inferred from cuttings. *(continued)*		
180	527								
185	522	MR	NA					NM	
190	517								
							191.0		
195	512	RC (1)	110	10			Round Knob, Reddish Brown, SHALE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable, grayish green with pyrite inclusions from 191.3 to 195.8 feet bgs.	NM	Bentonite Seal Filter Sand (#0 and #1)
							197.8		
							Cow Run, Dark Gray To Green, SILTSTONE, some fine sand, fine-grained, thinly bedded, moderate to strong, fresh, conformable, fluctuating fine sand content with sand lenses throughout, pyrite inclusions from 215 to 216 feet bgs.		

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

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WELL 2018-03

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
200	507								
205	502	RC (2)	111	23			Cow Run, Dark Gray To Green, SILTSTONE, some fine sand, fine-grained, thinly bedded, moderate to strong, fresh, conformable, fluctuating fine sand content with sand lenses throughout, pyrite inclusions from 215 to 216 feet bgs. *(continued)*	NM	
210	497								Well Screen (197 to 222 feet bgs) (2" SCH 40 PVC/ 0.01 slot)
215	492	RC (3)	51	0				NM	
							216.0		
220	487	RC (4)	112	12			Dark Green, SILTSTONE, fine-grained, thinly bedded, moderate to strong, fresh, conformable.	NM	
							221.5		Sump
225	482						Red Brown, SHALE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable.		
							226.0		
							Bottom of Boring @ 226.00 feet bgs		
230	477								
235	472								
240	467								

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WELL 2018-04

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0472342
Project Location: Cheshire, OH

DATE STARTED: 10/25/2018
DATE COMPLETED: 11/1/2018
DRILLING CONTRACTOR: Terracon
DRILLING METHODS: Mud Rotary/ Rock Coring
LOGGED BY: R.Baisden
CHECKED BY: H. Usle
NOTES: Additional drilling and formation water removed during drawdown test prior to well installation.

TOTAL DEPTH: 140 feet bgs
DIAMETER: 4 inches
GROUND ELEVATION: 704.38 feet amsl (approx.)
PVC ELEVATION: 708.18 feet amsl
NORTHING: 346141.386
EASTING: 2105235.044

WELL DEVELOPMENT
METHOD(S): Bailer
DATE STARTED: 11/29/2018 12:15:00 PM
DATE ENDED: 11/29/2018 12:45:00 PM
DTW AT START: 132.19 feet bgs
DTW AT END: 133.5 feet bgs
VOLUME PURGED: 4.5 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
5	699				CL-ML		Light Brown To Medium Brown, CLAY AND SILT, fine-grained.	
10	694	MR	NA				10.0	NM
							Black, COAL, observed in drill cuttings. 11.0	
15	689							
20	684							
25	679						Gray To Dark Gray, MUDSTONE, slightly silty, observed in drill cuttings.	
30	674	MR	NA					NM
							32.5	
35	669						Light Gray, SANDSTONE, medium-grained observed in drill cuttings.	

WELL DIAGRAM

- Concrete Pad and 6" Aluminum Stickup Protective Casing
- Well Riser (to 123.5 feet bgs) (2" SCH 40 PVC)
- Bentonite Grout Seal

SAMPLE TYPE

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- Wireline Rock Coring

GRAPHIC LOG LEGEND

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- Coal
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- Sandstone
- Siltstone

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WELL 2018-04

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
							Light Gray, SANDSTONE, medium-grained observed in drill cuttings. *(continued)*		
							38.0		
40	664						Gray, SILTSTONE, medium sand lenses, observed in drill cuttings.		
							40.0		
45	659								
							Gray, SILTSTONE, observed in drill cuttings.		
50	654	MR	NA					NM	Well Riser (to 123.5 feet bgs) (2" SCH 40 PVC)
55	649						55.0		Bentonite Grout Seal
							Red, MUDSTONE, observed in drill cuttings.		
60	644								
							64.0		
65	639						SANDSTONE, fine to medium grained, observed in drill cuttings.		
							66.0		
70	634	MR	NA				Red Brown, MUDSTONE, drill slows down around 75 feet bgs, observed in drill cuttings.	NM	
75	629								

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WELL 2018-04

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

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
80	624						Red Brown, MUDSTONE, drill slows down around 75 feet bgs, observed in drill cuttings. *(continued)*		
							82.0		
85	619								
90	614	MR	NA					NM	Well Riser (to 123.5 feet bgs) (2" SCH 40 PVC)
95	609								Bentonite Grout Seal
100	604						Clarksburg, Red Brown, SILTSTONE, observed in drill cuttings.		
105	599								
		MR	NA					NM	
110	594								
115	589						115.0		
							Clarksburg, Red To Dark Brown, MUDSTONE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable, decomposition fluctuates throughout, more competent from 125 to 125.9 feet bgs.		

SAMPLE TYPE

- Mud Rotary
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GRAPHIC LOG LEGEND

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WELL 2018-04

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
120	584	RC (1)	55	30				NM	Bentonite Seal
125	579	RC (2)	45	35			Clarksburg, Red To Dark Brown, MUDSTONE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable, decomposition fluctuates throughout, more competent from 125 to 125.9 feet bgs. *(continued)*	NM	Filter Sand (#0 and #1)
130	574	RC (3)	60	97			125.9 Morgantown, Gray, SILTSTONE, some fine sand, fine-grained, thinly bedded, strong, fresh, conformable. 127.8 Morgantown, Red, SILTSTONE, fine-grained, thinly bedded, strong, fresh, conformable. 128.8	NM	Well Screen (123.5 to 133.5 feet bgs) (2" SCH 40 PVC/ 0.01 slot)
135	569	RC (4)	58	88			Morgantown, Gray, SANDSTONE, with silt, fine-grained, thinly bedded, strong, fresh, conformable, unfractured. 132.5	NM	Sump
140	564	RC (5)	60	82			Round Knob, Reddish Brown, MUDSTONE, fine-grained, laminated, moderate, moderately disintegrated, moderately decomposed, conformable, pyrite inclusions from 135.5 to 139.5 feet bgs. 140.0	NM	
145	559						*Bottom of Boring @ 140.00 feet bgs*		
150	554								
155	549								

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Coal
- Mudstone
- Sandstone
- Siltstone

ACRONYM LEGEND

amsl = above mean sea level
bgs = below ground surface
DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PID = photoionization detector
ppm = parts per million
PVC = polyvinyl chloride

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WELL 2018-05

Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0472342
Project Location: Cheshire, OH

DATE STARTED: 12/6/2018
DATE COMPLETED: 12/12/2018
DRILLING CONTRACTOR: Terracon
DRILLING METHODS: Mud Rotary/ Rock Coring
LOGGED BY: R.Baisden
CHECKED BY: H. Usle
NOTES: Additional drilling and formation water removed during drawdown test prior to well installation.

TOTAL DEPTH: 200 feet bgs
DIAMETER: 4 inches
GROUND ELEVATION: feet amsl (approx.)
PVC ELEVATION: feet amsl
NORTHING:
EASTING:

WELL DEVELOPMENT
METHOD(S): Bailer
DATE STARTED: 12/18/2018 9:45:00 AM
DATE ENDED: 12/19/2018 3:15:00 PM
DTW AT START: 39.0 feet bgs
DTW AT END: 184.05 feet bgs
VOLUME PURGED: 70 gallons

DEPTH (feet)	SAMPLE TYPE & RUN	RECOVERY (inches)	U.S.C.S.	MATERIAL DESCRIPTION	PID (ppm)
5					
10	MR	NA	CL-ML	Dark Brown, CLAY AND SILT, fine-grained, logged from drill cuttings.	NM
15					
20					
25				25.0	
30	MR	NA		Black, ASH, logged from drill cuttings, void at 25 feet bgs.	NM
35					

WELL DIAGRAM

MONITORING WELL ABANDONED POST INSTALLATION Following a lithologic review, monitoring well properly abandoned by overdrilling, removal, and tremie grouting.

Well Riser (to 175 feet bgs) (2" SCH 40 PVC)

Bentonite Grout Seal

SAMPLE TYPE
- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND
- Silty Clay
- Coal
- Bedrock
- Mudstone
- Siltstone

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WELL 2018-05

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	SAMPLE TYPE & RUN	RECOVERY (inches)	PID (ppm)	MATERIAL DESCRIPTION
40				
45				
50	MR	NA	NM	
55				
60				Black, ASH, logged from drill cuttings, void at 25 feet bgs. *(continued)*
65				
70	MR	NA	NM	
75				
80				

WELL DIAGRAM: Well Riser (to 175 feet bgs) (2" SCH 40 PVC); Bentonite Grout Seal

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Coal
- Bedrock
- Mudstone
- Siltstone

ACRONYM LEGEND

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WELL 2018-05

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
85									
90		MR	NA					NM	
95									
100									Well Riser (to 175 feet bgs) (2" SCH 40 PVC)
105							Black, ASH, logged from drill cuttings, void at 25 feet bgs. *(continued)*		Bentonite Grout Seal
110		MR	NA					NM	
115									
120									
125									

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Coal
- Bedrock
- Mudstone
- Siltstone

ACRONYM LEGEND

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ppm = parts per million
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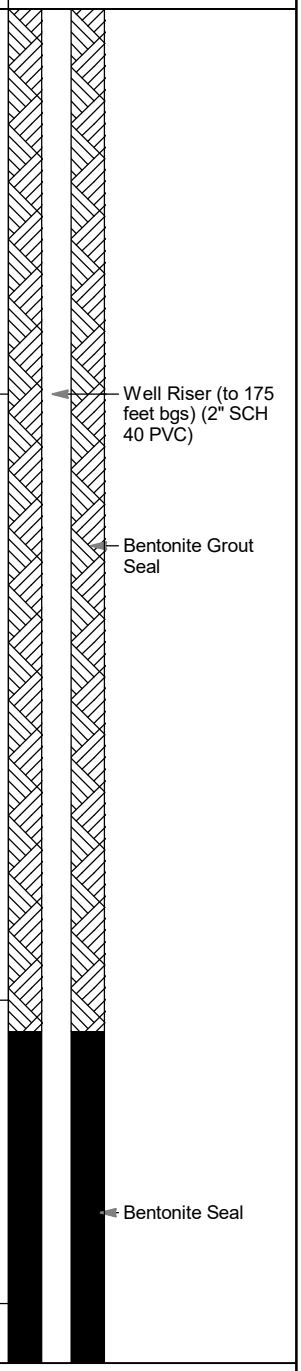
WELL 2018-05

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	SAMPLE TYPE & RUN	RECOVERY (inches)	MATERIAL DESCRIPTION	PID (ppm)
130	MR	NA	Black, ASH, logged from drill cuttings, void at 25 feet bgs. *(continued)*	NM
134.5				
140			BEDROCK observed in drill cuttings.	
145				
150	MR	NA		NM
153.0				
155				
160			Round Knob, Red Brown, MUDSTONE, fine-grained, laminated, moderate to weak, very decomposed, very disintegrated, conformable, becomes moderately disintegrated and decomposed from 170 to 175 feet bgs.	
165	MR	NA		NM
170				



SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Coal
- Bedrock
- Mudstone
- Siltstone

ACRONYM LEGEND

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WELL 2018-05

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

Project Number: 0472342 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
175		RC (1)	45				Round Knob, Red Brown, MUDSTONE, fine-grained, laminated, moderate to weak, very decomposed, very disintegrated, conformable, becomes moderately disintegrated and decomposed from 170 to 175 feet bgs. *(continued)*	NM	Filter Sand (#0 and #1)
							175.0		
180		RC (2)	53	23				NM	
185		RC (3)	115	49			Cow Run, Dark Gray To Green, SILTSTONE, some fine sand, fine-grained, thinly bedded, strong, moderately decomposed, conformable, silt interbeds, content increasing with depth, healed fracture at 176.5 feet bgs, healed vertical fracture from 193.5 to 195 feet bgs.	NM	Well Screen (175 to 195 feet bgs) (2" SCH 40 PVC/ 0.01 slot)
190									
195		RC (4)	54	40				NM	
							194.0		
200		RC (5)	44	7			Gray To Red Brown, MUDSTONE, fine-grained, laminated, weak, slightly decomposed, slightly disintegrated, conformable.	NM	Sump
							200.0		
							Bottom of Boring @ 200.00 feet bgs		
205									
210									
215									

SAMPLE TYPE

- Mud Rotary
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- Silty Clay
- Coal
- Bedrock
- Mudstone
- Siltstone

ACRONYM LEGEND

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WELL 2019-02

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

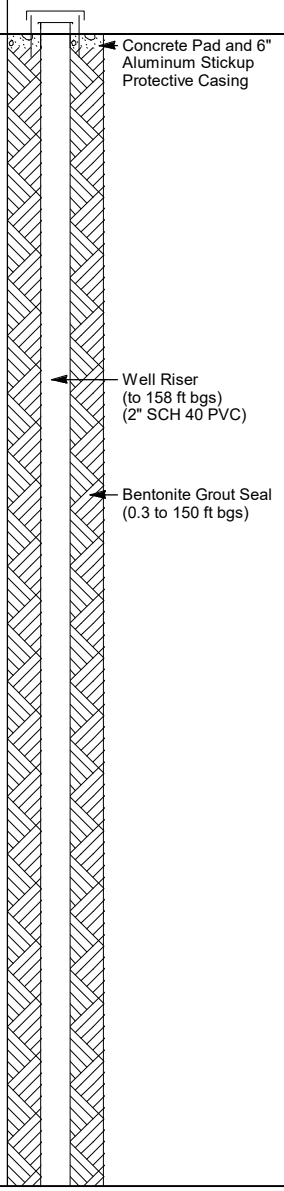
DATE STARTED: 2/14/2020
DATE COMPLETED: 2/20/2020
DRILLING CONTRACTOR: Frontz Drilling, Inc.
DRILLING METHODS: Sonic Drilling/ Rock Coring
LOGGED BY: L. Velasquez
CHECKED BY: H. Usle
NOTES: Steel casing (6") advanced to 148 ft bgs; 4" rock coring to termination depth.

TOTAL DEPTH: 178 ft bgs
DIAMETER: 4-6 inches
GROUND ELEVATION: 739.55 ft amsl (approx.)
PVC ELEVATION: 742.35 ft amsl
NORTHING: 345950.995
EASTING: 2101809.107

WELL DEVELOPMENT
METHOD(S): Air Lift, Grundfos & Buffalo Pump
DATE STARTED: 3/2/2020
DATE ENDED: 4/21/2020
DTW AT START: 29.9 ft bgs
DTW AT END: 141.4 ft bgs
VOLUME PURGED: 48.5 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
5	735	SC					Overburden and Bedrock logging not conducted from ground surface to 148 ft bgs.
10	730						
15	725	SC					
20	720						
25	715						

WELL DIAGRAM



SAMPLE TYPE
- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND
- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

ACRONYM LEGEND
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PVC = polyvinyl chloride
U.S.C.S. = Unified Soil Classification System

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WELL 2019-02

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	710	SC					Overburden and Bedrock logging not conducted from ground surface to 148 ft bgs. *(continued)*	Well Riser (to 158 ft bgs) (2" SCH 40 PVC)
35	705	SC						
40	700							Bentonite Grout Seal (0.3 to 150 ft bgs)
45	695	SC						
50	690							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

ACRONYM LEGEND

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WELL 2019-02

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	685	SC					Overburden and Bedrock logging not conducted from ground surface to 148 ft bgs. *(continued)*	Well Riser (to 158 ft bgs) (2" SCH 40 PVC)
60	680							
65	675	SC						
70	670							Bentonite Grout Seal (0.3 to 150 ft bgs)
75	665	SC						
80	660							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

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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	655	SC					Overburden and Bedrock logging not conducted from ground surface to 148 ft bgs. *(continued)*	Well Riser (to 158 ft bgs) (2" SCH 40 PVC)
90	650							
95	645	SC						
100	640							Bentonite Grout Seal (0.3 to 150 ft bgs)
105	635	SC						
110	630							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

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WELL 2019-02

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
115	625	SC						
120	620							
125	615	SC					Overburden and Bedrock logging not conducted from ground surface to 148 ft bgs. *(continued)*	Well Riser (to 158 ft bgs) (2" SCH 40 PVC)
130	610							Bentonite Grout Seal (0.3 to 150 ft bgs)
135	605	SC						
140	600							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

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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
145	595	SC					Overburden and Bedrock logging not conducted from ground surface to 148 ft bgs. *(continued)*
							148.0
							NO RECOVERY.
							149.0
150	590						Reddish Brown, SANDSTONE TO SILTSTONE, fine-grained, moderate strength, 10% bedding planes. (Clarksburg), soft.
		RC (1)	108	68			153.0
							Grayish Green, SILTSTONE AND SANDSTONE, very fine-grained, interbedded, moderate strength, fresh, competent, 20% bedding planes at 154 ft bgs. (Morgantown), hard.
							154.5
155	585						Grayish Green, SANDSTONE, fine-grained, strong, healed fracture/joint observed at 155 ft bgs. (Morgantown).
							155.5
							Grayish Green, SILTSTONE AND SANDSTONE, interbedded, moderate strength, fresh, competent, 10% bedding planes. (Morgantown).
							157.0
							Grayish Green, SHALE, minor siltstone, moderate strength, (Morgantown), soft.
							158.0
160	580						NO RECOVERY.
							162.0
		RC (2)	72	35			Grayish Green, SANDSTONE, minor siltstone, fine-grained, interbedded, fresh, competent.
							164.0
165	575						Reddish Brown, SANDSTONE TO SILTSTONE, fine-grained, interbedded, moderate strength, soft.
							165.0
							Grayish Green, SANDSTONE, minor shale, fine-grained, interbedded, fresh, competent, hard.
							166.0
							Grayish Green, SHALE, minor siltstone, interbedded, moderate strength, soft.
							168.0
170	570						NO RECOVERY.

WELL DIAGRAM

- Bentonite Seal (150 to 156 ft bgs)
- Filter Sand (#0 and #1) (156 to 178 ft bgs)
- Well Screen (158 to 178 ft bgs) (2" SCH 40 PVC/ 0.01" slot)

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

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WELL 2019-02

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
175	565	RC (3)	NR				NO RECOVERY. *(continued)*	Well Screen (158 to 178 ft bgs) (2" SCH 40 PVC/ 0.01" slot)
							178.0	End Cap
							Bottom of Boring @ 178.00 feet bgs	
180	560							
185	555							
190	550							
195	545							
200	540							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

ACRONYM LEGEND

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WELL 2019-06

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

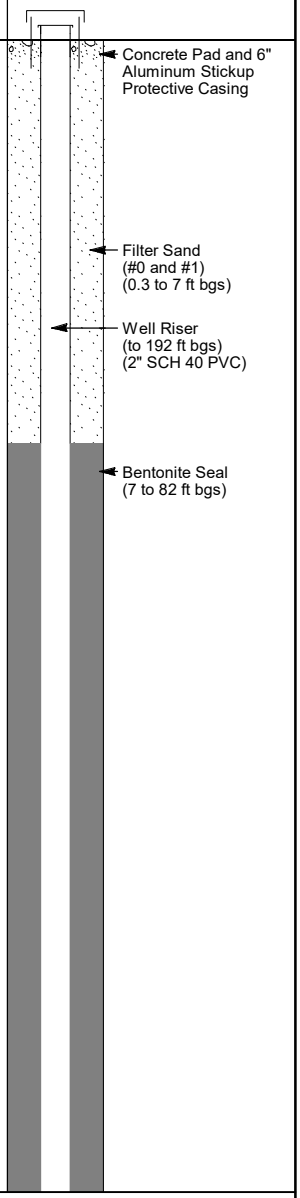
DATE STARTED: 1/20/2020
DATE COMPLETED: 1/28/2020
DRILLING CONTRACTOR: Frontz Drilling, Inc.
DRILLING METHODS: Sonic Drilling/ Rock Coring
LOGGED BY: L. Velasquez
CHECKED BY: H. Usle
NOTES: Steel casing (6") advanced to 178 ft bgs; 4" rock coring to termination depth.

TOTAL DEPTH: 228 ft bgs
DIAMETER: 4-6 inches
GROUND ELEVATION: 813.07 ft amsl (approx.)
PVC ELEVATION: 815.92 ft amsl
NORTHING: 347851.285
EASTING: 2100292.973

WELL DEVELOPMENT
METHOD(S): Air Lift, PVC Bailer
DATE STARTED: 3/5/2020
DATE ENDED: 5/22/2020
DTW AT START: 86.4 ft bgs
DTW AT END: 191.6 ft bgs
VOLUME PURGED: 33.5 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
5	808	SC					Overburden and Bedrock logging not conducted from ground surface to 178 ft bgs. Potential 3 ft void observed at 75 ft bgs.
10	803						
15	798	SC					
20	793						

WELL DIAGRAM



SAMPLE TYPE
- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND
- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

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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
25	788	SC					Overburden and Bedrock logging not conducted from ground surface to 178 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Well Riser (to 192 ft bgs) (2" SCH 40 PVC)
30	783							
35	778	SC						Bentonite Seal (7 to 82 ft bgs)
40	773							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

ACRONYM LEGEND

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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
45	768	SC						
50	763							
55	758	SC					Overburden and Bedrock logging not conducted from ground surface to 178 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Well Riser (to 192 ft bgs) (2" SCH 40 PVC)
60	753							Bentonite Seal (7 to 82 ft bgs)
65	748	SC						

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

ACRONYM LEGEND

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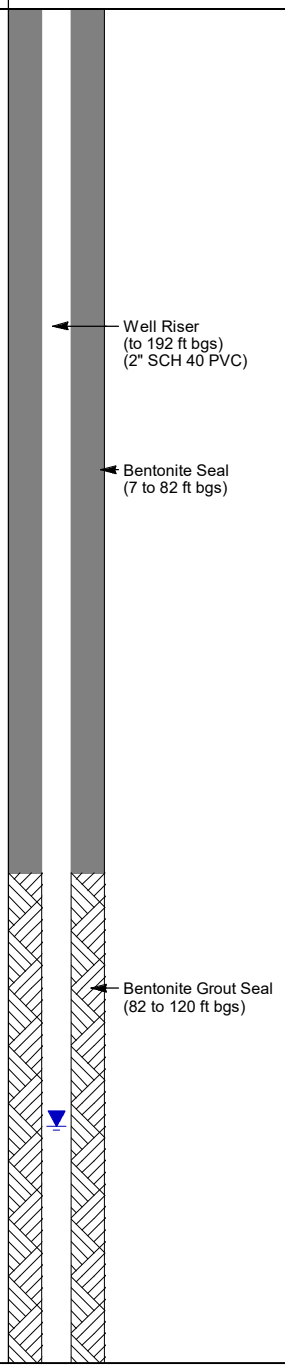
Client: Gavin Power, LLC **Project Name:** Residual Waste Landfill Monitoring Well Installation

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
70	743							
75	738	SC						
80	733						Overburden and Bedrock logging not conducted from ground surface to 178 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	
85	728	SC						
90	723							



SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- SHALE Shale

ACRONYM LEGEND

amsl = above mean sea level
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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
95	718	SC					Overburden and Bedrock logging not conducted from ground surface to 178 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Well Riser (to 192 ft bgs) (2" SCH 40 PVC)
100	713							
105	708	SC						Bentonite Grout Seal (82 to 120 ft bgs)
110	703							

SAMPLE TYPE

- Sonic Drilling
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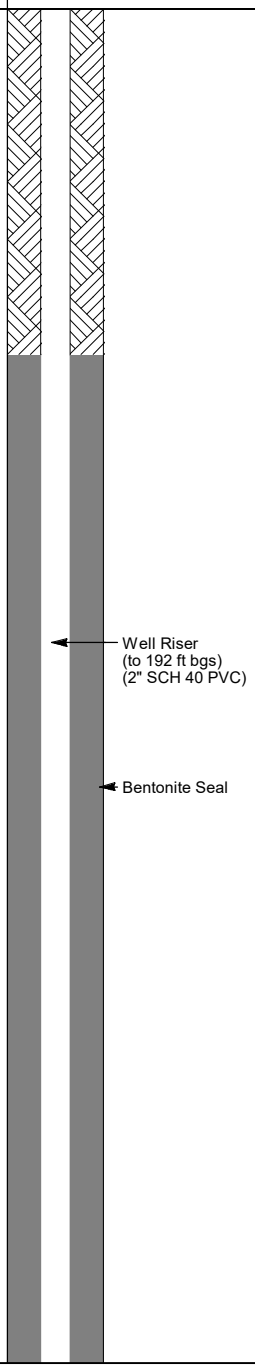
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
115	698	SC					Overburden and Bedrock logging not conducted from ground surface to 178 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*
120	693						
125	688	SC					
130	683						
135	678	SC					

WELL DIAGRAM



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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
140	673							
145	668	SC						Well Riser (to 192 ft bgs) (2" SCH 40 PVC)
150	663						Overburden and Bedrock logging not conducted from ground surface to 178 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Bentonite Grout Seal (82 to 120 ft bgs)
155	658	SC						
160	653							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
165	648	SC					Overburden and Bedrock logging not conducted from ground surface to 178 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	"Well Riser (to 192 ft bgs) (2"" SCH 40 PVC)"
170	643							
175	638	SC						Bentonite Grout Seal (82 to 120 ft bgs)
							178.0	
							NO RECOVERY.	
180	633						180.0	
		RC (1)	96	52			Reddish Brown, SANDSTONE TO SILTSTONE, with interbedded shale, fine-grained, weak to moderate strength, moderately decomposed, red and light green discoloration, soft.	
							183.0	
							Grayish Green, SANDSTONE TO SILTSTONE, with interbedded shale, fine-grained, weak to moderate strength, moderately decomposed, red and light green discoloration from 186 to 188 ft bgs, soft.	

SAMPLE TYPE

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- Wireline Rock Coring

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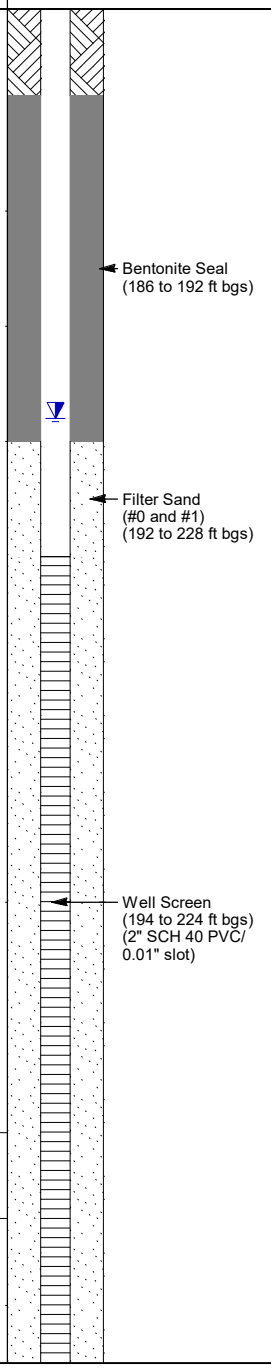
Project Number: 0488799 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
185	628						Grayish Green, SANDSTONE TO SILTSTONE, with interbedded shale, fine-grained, weak to moderate strength, moderately decomposed, red and light green discoloration from 186 to 188 ft bgs, soft. *(continued)*
							188.0
							NO RECOVERY.
190	623						190.0
							Reddish Brown, SANDSTONE TO SILTSTONE, with shale, fine-grained, weak to moderate strength, moderately decomposed, red and light green discoloration, soft.
							192.0
		RC (2)	96	61			
195	618						Grayish Green, SANDSTONE, with interbedded claystone and shale, fine- to medium-grained, moderate strength, moderately decomposed, competent, red and light green discoloration, thinly laminated from 193 to 196 ft bgs, rubble zone from 192 to 198 ft bgs. (Morgantown), hard.
200	613						200.0
		RC (3)	108	64			Grayish Green to Reddish Brown, SANDSTONE, with interbedded shale, fine- to medium-grained, weak to moderate strength, competent, fresh from 200 to 202 ft bgs, moderately decomposed from 202 to 204 ft bgs, thinly laminated (possibly drilling induced), extends 2 millimeters within, hard.
							204.0
205	608						Reddish Brown, SILTSTONE WITH SHALE, interbedded weak to moderate strength, moderately decomposed, rubble zone, soft.
							205.5
							Grayish Green, SILTSTONE WITH SHALE, interbedded moderate strength, soft.
							207.0
							NO RECOVERY.
							208.0



SAMPLE TYPE

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WELL 2019-06

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

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

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
210	603	RC (4)	120	50			Reddish Brown, SILTY SANDSTONE, with interbedded shale, fine-grained, moderate strength, moderately decomposed. *(continued)*	
							212.0	
							Grayish Green, SANDSTONE, some interbedded claystone, fine- to medium-grained, fresh, competent, hard.	Filter Sand (#0 and #1) (192 to 228 ft bgs)
							213.5	
215	598						Grayish Green, SILTSTONE WITH SHALE, interbedded moderate strength, soft.	
							217.0	
							Grayish Green, SHALE, moderate strength, soft.	
							218.0	
		RC (5)	111	48			Grayish Green, SILTSTONE WITH SHALE, interbedded moderate strength, soft.	
							219.0	
220	593						Grayish Green, SANDSTONE, interbedded fine- to medium-grained, fresh, competent, hard.	Well Screen (194 to 224 ft bgs) (2" SCH 40 PVC/ 0.01" slot)
							224.0	End Cap
225	588						Grayish Green, CLAYSTONE AND SHALE, moderate strength, pyrite mineralization, soft.	
							227.3	
							NO RECOVERY.	
							228.0	
230	583						*Bottom of Boring @ 228.00 feet bgs*	

SAMPLE TYPE

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- Wireline Rock Coring

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WELL 2019-07

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

DATE STARTED: 1/6/2020
DATE COMPLETED: 1/20/2020
DRILLING CONTRACTOR: Frontz Drilling, Inc.
DRILLING METHODS: Sonic Drilling/ Rock Coring
LOGGED BY: L. Velasquez
CHECKED BY: H. Usle

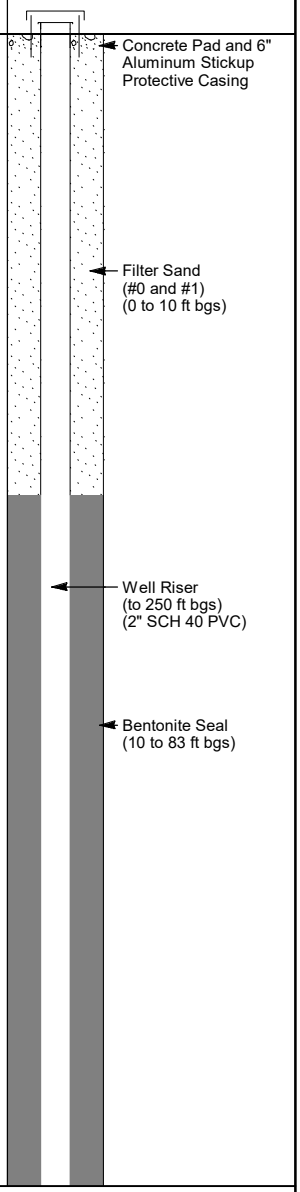
TOTAL DEPTH: 278 ft bgs
DIAMETER: 4-6 inches
GROUND ELEVATION: 812.91 ft amsl (approx.)
PVC ELEVATION: 815.91 ft amsl
NORTHING: 347854.684
EASTING: 2100289.463

WELL DEVELOPMENT
METHOD(S): Air Lift, Grundfos Pump
DATE STARTED: 3/5/2020
DATE ENDED: 5/22/2020
DTW AT START: 225.1 ft bgs
DTW AT END: 269.6 ft bgs
VOLUME PURGED: 15.5 gallons

NOTES: Steel casing (6") advanced to 80 ft bgs; 4" sonic casing to 198 ft bgs; 4" rock coring to termination depth.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
5	808	SC					
10	803						Overburden and Bedrock logging not conducted from ground surface to 198 ft bgs. Potential 3 ft void observed at 75 ft bgs.
15	798	SC					
20	793						
25	788						

WELL DIAGRAM



SAMPLE TYPE
- Sonic Drilling
- Wireline Rock Coring

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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
30	783	SC						
35	778	SC						Well Riser (to 250 ft bgs) (2" SCH 40 PVC)
40	773						Overburden and Bedrock logging not conducted from ground surface to 198 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Bentonite Seal (10 to 83 ft bgs)
45	768	SC						
50	763							

SAMPLE TYPE

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- Wireline Rock Coring

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
55	758	SC					Overburden and Bedrock logging not conducted from ground surface to 198 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Well Riser (to 250 ft bgs) (2" SCH 40 PVC)
60	753							
65	748	SC						
70	743							Bentonite Seal (10 to 83 ft bgs)
75	738	SC						
80	733							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
85	728	SC					Overburden and Bedrock logging not conducted from ground surface to 198 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Well Riser (to 250 ft bgs) (2" SCH 40 PVC)
90	723							
95	718	SC						
100	713							Bentonite Grout Seal (83 to 241 ft bgs)
105	708	SC						
110	703							

SAMPLE TYPE

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WELL 2019-07

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

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

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115	698	SC					Overburden and Bedrock logging not conducted from ground surface to 198 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Well Riser (to 250 ft bgs) (2" SCH 40 PVC)
120	693							
125	688	SC						
130	683							Bentonite Grout Seal (83 to 241 ft bgs)
135	678	SC						
140	673							

SAMPLE TYPE

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
145	668	SC					Overburden and Bedrock logging not conducted from ground surface to 198 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*	Well Riser (to 250 ft bgs) (2" SCH 40 PVC)
150	663							
155	658	SC						
160	653							Bentonite Grout Seal (83 to 241 ft bgs)
165	648	SC						
170	643							

SAMPLE TYPE

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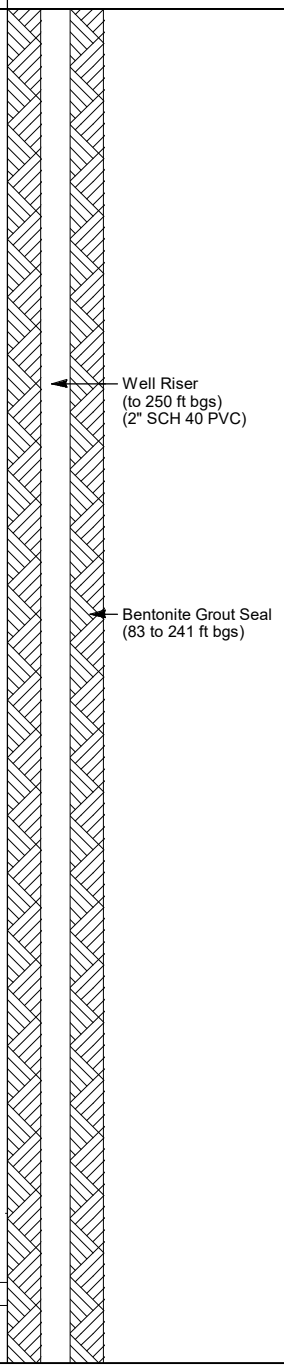
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
175	638	SC					
180	633						
185	628	SC					Overburden and Bedrock logging not conducted from ground surface to 198 ft bgs. Potential 3 ft void observed at 75 ft bgs. *(continued)*
190	623						
195	618	SC					
							198.0
							Light Grayish Green, SANDSTONE, coarse-grained, fresh, competent, hard.
							199.5
200	613						200.0 Green and Red, SILTSTONE, fine-grained, laminated, some organics.
							Dark Grayish Green, SANDSTONE, with silt, coarse-grained, laminated, weak to moderate, some red discoloration, soft.

WELL DIAGRAM



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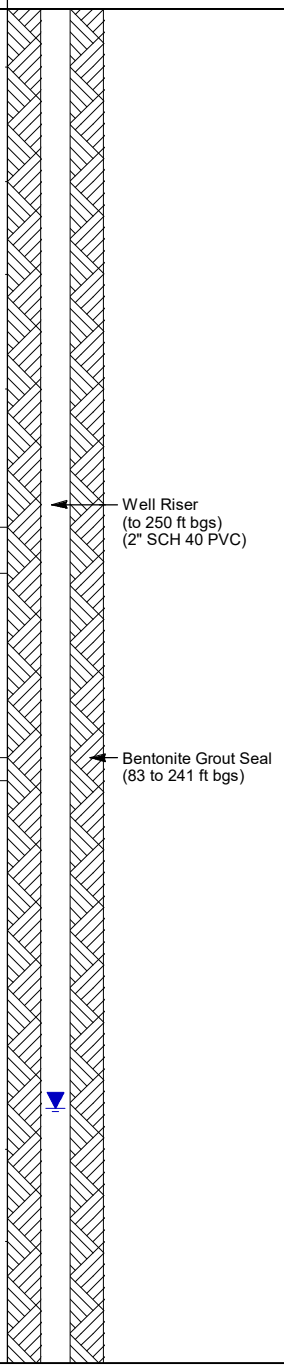
		RC (1)	108	23			Dark Grayish Green, SANDSTONE, with silt, coarse-grained, laminated, weak to moderate, some red discoloration, soft. *(continued)*
							202.5
							Reddish Brown, SILTY SANDSTONE, with clay, fine- to coarse-grained, laminated, weak to moderate, conchoidal breakage, rubble zone.
205	608						205.0
							Reddish Brown, SANDSTONE, with silt, very fine- to fine-grained, conchoidal, clay nodules present, rubble zone.
							207.0
							NO RECOVERY.
							209.5
210	603						Grayish Green to Reddish Brown, SANDSTONE WITH SHALE, interbedded very fine- to fine-grained, weak, moderately decomposed, red and light green discoloration, vertical healed joint from 210.5 to 211 ft bgs, soft.
							212.5
		RC (2)	102	51			Dark Green to Reddish Brown, CLAYSTONE, fine-grained.
							213.5
215	598						Grayish Green, SANDSTONE, fine- to medium-grained, competent, fresh, thin laminations, red and light green discoloration, hard.
							217.5
							218.0 Grayish Green to Reddish Brown, CLAYSTONE, very fine- to fine-grained.
220	593						Grayish Green, SANDSTONE, medium-grained, strong, fresh, competent, hard.
		RC (3)	120	75			
225	588						
							226.0
							Grayish Green, SANDSTONE, with interbedded claystone, fine- to medium-grained, fresh, competent, some coarse pyrite mineralization, hard.
							228.0
230	583						NO RECOVERY.

WELL DIAGRAM



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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
		RC (4)	84	22			231.0 Grayish Green, SANDSTONE, with interbedded claystone, very fine- to fine-grained, fresh, competent, some coarse pyrite mineralization, hard.
235	578						235.0 Reddish Brown, SILTSTONE, very fine-grained, strong, slightly decomposed, competent, hard.
							238.0 NO RECOVERY.
240	573						241.0 Reddish Brown, SILTSTONE, very fine-grained, strong, slightly decomposed, competent, some green discoloration, soft.
		RC (5)	84	33			243.0 Grayish Green, SHALE, some silt, some coarse-grained, moderate to weak, slightly decomposed, some red discoloration, soft.
245	568						248.0 Grayish Green to Reddish Brown, SHALE, interbedded massive, moderate to weak, moderately decomposed, some yellow green discoloration, soft.
250	563	RC (6)	120	38			253.0 Grayish Green to Reddish Brown, SHALE, moderately decomposed, rubble.
							254.0 Grayish Green to Reddish Brown, WEATHERED SHALE, massive, moderate to weak, moderately decomposed, some yellow green discoloration, easily crumbled, some coarse pyrite mineralization, soft.
255	558						258.0
							258.5 NO RECOVERY.
260	553						Grayish Green to Reddish Brown, WEATHERED SHALE, laminated, moderate to weak, moderately decomposed, some yellow green discoloration, soft.

WELL DIAGRAM

- Bentonite Seal (241 to 247 ft bgs)
- Filter Sand (#0 and #1) (247 to 272 ft bgs)
- Well Screen (250 to 270 ft bgs) (2" SCH 40 PVC/ 0.01" slot)

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- CLAYSTONE Claystone
- SHALE Shale

ACRONYM LEGEND

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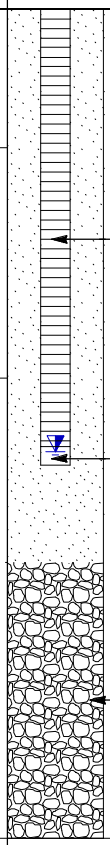
WELL 2019-07

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

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
		RC (7)	114	67			Grayish Green to Reddish Brown, WEATHERED SHALE, laminated, moderate to weak, moderately decomposed, some yellow green discoloration, soft. *(continued)*
							263.0
265	548						Grayish Green to Reddish Brown, SANDSTONE, with silt, very fine-grained, massive, moderate strength, moderately decomposed, competent, soft.
							268.0
270	543						Grayish Green to Reddish Brown, WEATHERED SHALE, laminated, moderate to weak, moderately decomposed, some yellow green and purple discoloration, healed joint at 269.5 ft bgs, shear fracture with slickensides at 271.5 ft bgs (30° dip), soft.
							272.0
		RC (8)	48	12			NO RECOVERY.
275	538						
							278.0
280	533						*Bottom of Boring @ 278.00 feet bgs*
285	528						

WELL DIAGRAM



SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SANDSTONE Sandstone
- SILTSTONE Siltstone
- CLAYSTONE Claystone
- SHALE Shale

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WELL 2019-09

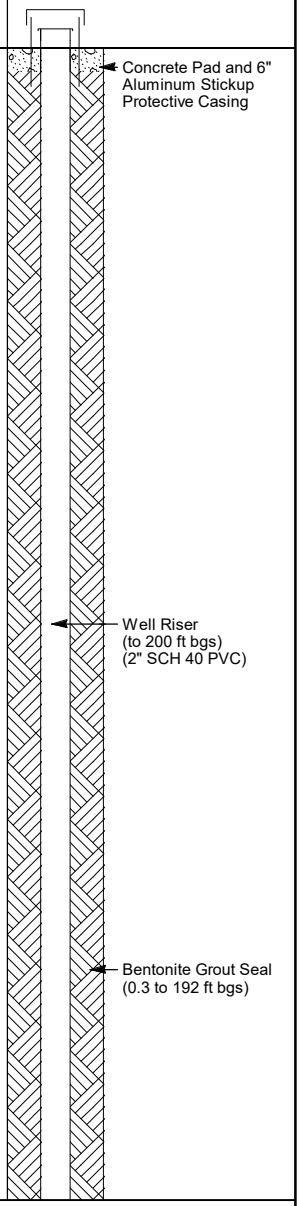
Client: Gavin Power, LLC
Project Name: Residual Waste Landfill Monitoring Well Installation
Project Number: 0488799
Project Location: Cheshire, OH

DATE STARTED: 11/19/2019
DATE COMPLETED: 11/26/2019
DRILLING CONTRACTOR: Frontz Drilling, Inc.
DRILLING METHODS: Sonic Drilling/ Rock Coring
LOGGED BY: L. Velasquez
CHECKED BY: H. Usle
NOTES: Steel casing (6") advanced to 188 ft bgs; 4" rock coring to termination depth.

TOTAL DEPTH: 238 ft bgs
DIAMETER: 4-6 inches
GROUND ELEVATION: 747.77 ft amsl (approx.)
PVC ELEVATION: 750.77 ft amsl
NORTHING: 349139.275
EASTING: 2099336.769

WELL DEVELOPMENT
METHOD(S): PVC Bailer, Grundfos & Buffalo Pump
DATE STARTED: 4/22/2020
DATE ENDED: 5/22/2020
DTW AT START: 162.0 ft bgs
DTW AT END: 206.0 ft bgs
VOLUME PURGED: 17.7 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
5	743				SC		
10	738						Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs.
15	733						



SAMPLE TYPE
- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND
- SHALE / Shale
- SANDSTONE / Sandstone

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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
20	728	SC					Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Well Riser (to 200 ft bgs) (2" SCH 40 PVC)
								Bentonite Grout Seal (0.3 to 192 ft bgs)
25	723	SC						
30	718							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SHALE Shale
- SANDSTONE Sandstone

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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
35	713	SC						
40	708						Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Well Riser (to 200 ft bgs) (2" SCH 40 PVC)
45	703	SC						Bentonite Grout Seal (0.3 to 192 ft bgs)
50	698							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

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WELL 2019-09

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	693	SC					Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Well Riser (to 200 ft bgs) (2" SCH 40 PVC)
60	688							Bentonite Grout Seal (0.3 to 192 ft bgs)
65	683	SC						

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

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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
70	678							
75	673	SC					Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Well Riser (to 200 ft bgs) (2" SCH 40 PVC); Bentonite Grout Seal (0.3 to 192 ft bgs)
80	668							
85	663	SC						

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SHALE — Shale
- SANDSTONE — Sandstone

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
90	658							Well Riser (to 200 ft bgs) (2" SCH 40 PVC)
95	653	SC					Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Bentonite Grout Seal (0.3 to 192 ft bgs)
100	648							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

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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
105	643	SC						
110	638						Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Well Riser (to 200 ft bgs) (2" SCH 40 PVC); Bentonite Grout Seal (0.3 to 192 ft bgs)
115	633	SC						
120	628							

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
125	623	SC					Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Well Riser (to 200 ft bgs) (2" SCH 40 PVC); Bentonite Grout Seal (0.3 to 192 ft bgs)
130	618							
135	613	SC						

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

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- SANDSTONE Sandstone

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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
140	608							
145	603	SC					Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Well Riser (to 200 ft bgs) (2" SCH 40 PVC)
150	598							Bentonite Grout Seal (0.3 to 192 ft bgs)
155	593	SC						

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

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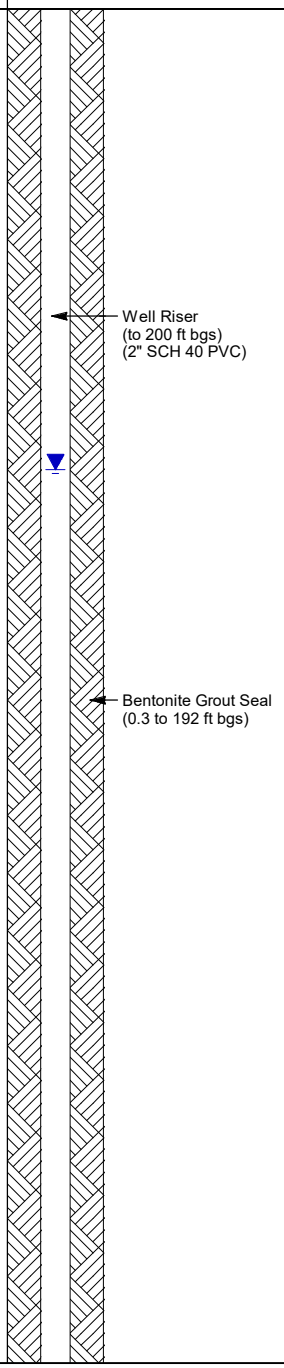
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
160	588						
165	583	SC					Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*
170	578						



SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

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- SANDSTONE Sandstone

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WELL 2019-09

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
175	573	SC						
180	568						Overburden and Bedrock logging not conducted from ground surface to 188 ft bgs. *(continued)*	Well Riser (to 200 ft bgs) (2" SCH 40 PVC)
185	563	SC						Bentonite Grout Seal (0.3 to 192 ft bgs)
							188.0	
190	558						NO RECOVERY.	
							190.5	
							Grayish Green, SHALE, massive, moderate strength, fresh, competent.	

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SHALE / Shale
- SANDSTONE / Sandstone

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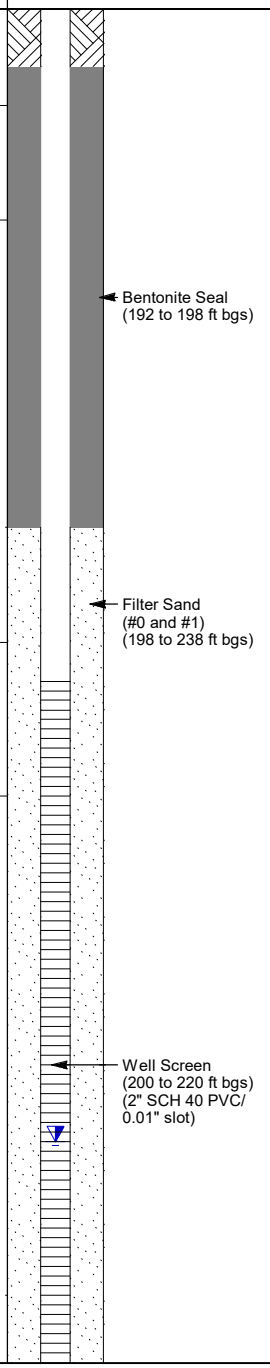
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
		RC (1)	94.8	43			Grayish Green, SHALE, massive, moderate strength, fresh, competent. *(continued)*
							192.5
							Grayish Green, SANDSTONE, fine-grained, massive, fresh, competent.
							194.0
195	553						Grayish Green, SHALE, massive, moderate strength, fresh, competent.
							198.0
							Grayish Green, SHALE, massive, moderate strength, fresh, competent.
							199.5
200	548						Grayish Green, SANDSTONE, massive, possible horizontal joint at approximately 200 ft bgs (rough fractured surface).
							201.5
		RC (2)	120	64			Grayish Green, SHALE, massive, moderate strength, fresh, competent.
205	543						
							208.0
							Grayish Green, SHALE, laminated, weak, fresh, easily crumbled.



SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SHALE / Shale
- SANDSTONE / Sandstone

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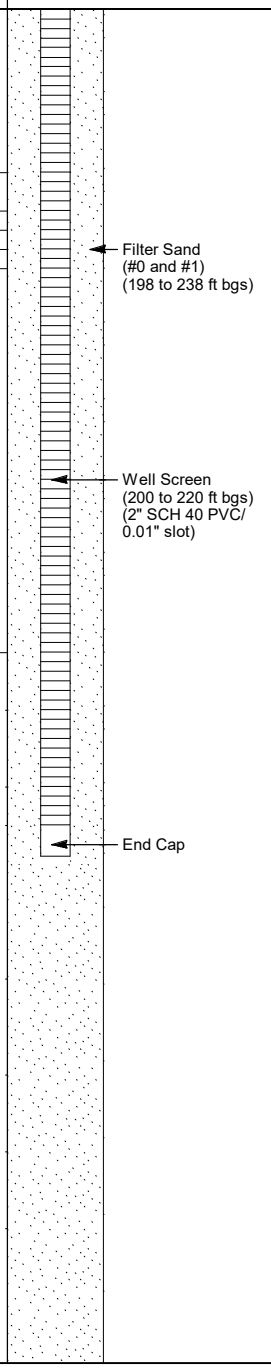
Project Number: 0488799 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
210	538						Grayish Green, SHALE, laminated, weak, fresh, easily crumbled. *(continued)*
							211.0
							Grayish Green, SANDSTONE, with silt, very fine-grained, competent.
							211.5
							211.8 Grayish Green, SHALE, very weak.
							212.0 Grayish Green, SANDSTONE, with silt, very fine-grained, competent.
							212.3 Grayish Green, SHALE, laminated, weak, fresh, easily crumbled.
		RC (3)	120	10			
215	533						Grayish Green, SANDSTONE, with silt, very fine-grained, fresh, competent, closely spaced joints from 216 to 217 ft bgs, rough fracture surface.
							217.3
							Grayish Green, SHALE, very weak, easily crumbled.
							218.0
							Grayish Green, SHALE, laminated, very weak, easily crumbled.
							219.0
							Grayish Green, SHALE, strong, fresh, competent.
							219.5
220	528						Grayish Green, SHALE, laminated, very weak, easily crumbled.
							221.5
							Grayish Green, SHALE, strong, fresh, competent.
							222.8
		RC (4)	120	20			Grayish Green, SHALE, strong, fresh, competent.
							223.8
							Grayish Green, SHALE, tight, strong, fresh, competent, possible joint, horizontal, rough texture.
							224.8
225	523						Grayish Green, SHALE, moderate strength, fresh, competent, broken fragments.

WELL DIAGRAM



SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

- SHALE / Shale
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WELL 2019-09

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
							Grayish Green, SHALE, moderate strength, fresh, competent, broken fragments. *(continued)*	
							228.0	
							Grayish Green, SHALE, very weak, clayey clusters of fragments, easily crumbled.	
							229.6	
230	518						Grayish Green, SHALE, moderate to strong, fresh, competent.	← Filter Sand (#0 and #1) (198 to 238 ft bgs)
							231.6	
							Grayish Green, SHALE, strong, fresh, competent.	
							232.6	
		RC (5)	120	66			Grayish Green, SHALE, laminated, weak to moderate, fresh, competent.	
							234.5	
235	513						Grayish Green, SHALE, very weak, easily crumbled.	
							238.0	
240	508						*Bottom of Boring @ 238.00 feet bgs*	

SAMPLE TYPE

- Sonic Drilling
- Wireline Rock Coring

GRAPHIC LOG LEGEND

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- SANDSTONE Sandstone

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 345,099.1 E 2,103,287.5**

GROUND ELEVATION **612.0** SYSTEM **STATE PLANE**

Water Level, ft	▽ 25.9	▼ 10.2	▼ 5.7
TIME	0700	2:30	7:30
DATE	7-7-94	7-11-94	7-12-94

BORING NO. **R-93100** DATE **11/24/10** SHEET **1** OF **5**

BORING START **7/6/94** BORING FINISH **7/20/94**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.04** DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **72.1** BOTTOM **111.0**

WELL DEVELOPMENT **SEE NOTES** BACKFILL **VOLCLAY**

FIELD PARTY **TJH RLY** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	2.0	1-2-8-6	1.2					**BROWN GRAY CLAY** Moist,fill.		Hole was drilled using a 5 7/8" roller bit.
2	SS	2.0	4.0	5-8-10-14	1.0					**BROWN RED SANDY CLAY** Moist fill.		
3	SS	4.0	6.0	5-7-17-14	1.0					**RED CLAY** Moist ,shale,fill.		
4	SS	6.0	8.0	5-6-7-9	1.2		5			**MULTI-COLORED RED AND BROWN CLAY** Moist,fill.	▼	
5	SS	8.0	10.0	2-3-5-7	.8					**MULTI-COLORED BROWN CLAY** Moist,fill.		
6	SS	10.0	12.0	1-2-3-5	1.0		10			**REDDISH BROWN CLAY** Moist,fill.	▼	
7	SS	12.0	14.0	3-5-6-9	1.2					**MULTI-COLORED BROWN AND GRAY SANDY CLAY** Moist, trace of gravel.		
8	SS	14.0	16.0	4-6-7-9	1.2							
9	SS	16.0	18.0	4-4-5-6	1.5		15			**DARK GRAY CLAY** Moist to wet natural material.		
10	SS	18.0	20.0	3-4-5-7	1.6					**BROWN AND GRAY CLAY** Moist.		

TYPE OF CASING USED

X	NQ-2 ROCK CORE	
	6" x 3.25 HSA	
X	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 **RLY**

AEP R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93100** DATE **11/24/10** SHEET **2** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **7/6/94** BORING FINISH **7/20/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
11	SS	20.0	22.0	3-3-5-8	2.0							
12	SS	22.0	24.0	3-5-5-5	2.0					**GRAY CLAY** Moist to wet.		
13	SS	24.0	26.0	2-4-5-6	2.0					**GRAY CLAY** Wet to moist.		
							25					
14	SS	26.0	28.0	4-6-12-13	1.5					**RED CLAYSTONE** Weathered, moist.		
15	SS	28.0	30.0	10-14-24-40	1.4							
16	SS	30.0	31.0	24-50	.6		30					
17	NQ	31.0	34.8		3.8	100				**RED CLAYSTONE** Soft.		
										GRAY AND RED SANDY SHALE Soft.		
18	NQ	34.8	44.8		9.7	87	35			**GRAY SANDSTONE** Fine grain, well cemented, hard with vertical cracks 36.2 to 37.1 broken clay on joint.		
										RED AND GRAY SANDY SHALE Medium soft.		
										RED CLAYSTONE Soft.		
							40			**GRAY SANDSTONE** Hard, well cemented, clay on joint, pyrite.		
19	NQ	44.8	49.8		5.0	96	45			**RED AND GRAY CLAYSTONE** Medium soft.		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93100** DATE **11/24/10** SHEET **3** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **7/6/94** BORING FINISH **7/20/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										GRAY SHALE Medium soft, large amount pyrite.		
										RED CLAY SHALE Medium hard.		
20	NQ	49.8	54.8		5.0	100	50					
										RED AND LIGHT BROWN CLAYSTONE With limestone nodules.		
21	NQ	54.8	59.8		5.0	96	55					
22	NQ	59.8	64.8		5.0	84	60			**RED TO LIGHT GRAY CLAY SHALE** Well cemented.		61.6 Top bentonite seal.
23	NQ	64.8	69.8		5.0	74	65			**68.2 to 68.4 soft**		68.4 Top of sand.
24	NQ	69.8	74.8		4.9		70			**RED CLAY SHALE** Well cemented, medium hard.		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93100** DATE **11/24/10** SHEET **4** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **7/6/94** BORING FINISH **7/20/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										GRAY SILTY CLAY SHALE Well cemented, medium hard.		72.1 Top screen.
25	NQ	74.8	79.8		4.9	76	75			**LIGHT GRAY TO RED CLAY SHALE** Well cemented, medium hard.		
26	NQ	79.8	84.8		4.7	84	80			**LIGHT GRAY AND RED CLAY SHALE** Medium hard, well cemented.		
27	NQ	84.8	89.8		5.0	58	85			**RED CLAYSTONE** Medium hard.		
28	NQ	89.8	94.8		5.0		90					
29	NQ	94.8	104.8		10.0	100	95					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93100** DATE **11/24/10** SHEET **5** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **7/6/94** BORING FINISH **7/20/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	SAMPLE DEPTH IN FEET TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							100			**GRAY SILTY LIMESTONE** Medium hard , well cemented some pyrite.		
										GRAY SILTY SHALE		
										GRAY SILTY SANDSTONE		
										GRAY SILTY CLAY SHALE		
30	NQ	104.8	113.7		8.1		105			**RED AND GRAY SHALE** Medium hard.		
										GRAY SHALEY SANDSTONE Hard.		
							110					111.0 Bottom of screen.
										GRAY SHALE Medium hard.		113.5 Bottom of sand.
										8-4-94 DEVELOPED WELL AND PURGED DRY. **9-07-94 SWL 14.18 8:58 PURGED DRY 9:30** **9-08-94 56 56** **pH 7.80 7.85** **COND 1445 1386** **PUMP INSTALLED 8-04-94 AT APPROXIMATELY 110.5'** **WELL WAS DEVELOPED USING A RED-FLO PUMP CONTINUOUS FLOW**		

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 345,307.0 E 2,104,199.8**

GROUND ELEVATION **716.7** SYSTEM **STATE PLANE**

Water Level, ft	▽ 20.8	▼ 88.4	▽
TIME	8:20	1:30	
DATE	8-6-93	8-9-93	

BORING NO. **R-93108** DATE **11/24/10** SHEET **1** OF **7**

BORING START **8/4/93** BORING FINISH **8/10/93**

PIEZOMETER TYPE _____ WELL TYPE **OW**

HGT. RISER ABOVE GROUND **1.69** DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **129.9** BOTTOM **149.9**

WELL DEVELOPMENT **SEE NOTES** BACKFILL **VOLCLAY**

FIELD PARTY **TJH-GCF** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	4.2	5.7	6-7-13	.9		5			**GRAY/BROWN SILTY SHALE** Road bed,dry.		Hole drilled using a 5 7/8" roller bit.
2	SS	9.2	10.7	11-17-19	.5		10			**GRAY SHALE** Mica,dry.		Well 9398 bottom of screen 83.90.
3	SS	14.2	15.7	7-5-8	.8		15			**BROWN/GRAY SILTY SHALE** Dry.		Well 93108 bottom of screen 149.9.
4	SS	19.2	20.1	26-50/.3	.6					**GRAY SHALE** Dry.		

TYPE OF CASING USED

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

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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 R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **R-93108** DATE **11/24/10** SHEET **2** OF **7**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/4/93** BORING FINISH **8/10/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
5	NQ	22.5	30.4		7.9	87				**GRAY SHALE** Weathered,soft to medium.		
							25			**COAL**		
										GRAY SHALE Weathered,soft to medium.		
6	NQ	30.4	35.4		5.0	56	30					
										BLACK SHALEY COAL Medium to hard.		
7	NQ	35.4	43.5		8.0	72	35			**GRAY SHALE** Weathered.		
										GRAY LIMESTONE Hard.		
							40			**MULTI-COLORED RED/GRAY/GREEN SHALE** Weathered,soft to medium.		
8	NQ	43.5	45.4		1.9	57						
							45					
9	NQ	45.4	55.1		7.0							

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93108** DATE **11/24/10** SHEET **3** OF **7**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/4/93** BORING FINISH **8/10/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							50					50.0 Top of bentonite seal.
										GRAY SHALEY SANDSTONE Mica.		
10	NQ	55.1	65.4		10.2	96	55					55.0 Top of gravel pack. Partial loss of drill water.
							60					2000 gallons of water used.
										GREEN SANDY SHALE Weathered,medium.		
										GRAY/RED/GREEN SHALE Weathered,medium.		
11	NQ	65.4	75.4		9.7	91	65					64.55 Top of screen. Water return back to normal.
							70					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93108** DATE **11/24/10** SHEET **4** OF **7**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/4/93** BORING FINISH **8/10/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							75					
12	NQ	75.4	85.4		9.4	89						
							80			**GRAY SANDY SHALE** Medium to hard.		4000 gallons of water used.
										GRAY/RED/GREEN SHALE Weathered,medium changing to soft to medium at 85.4.		83.90 Bottom of screen.
13	NQ	85.4	95.4		10.0	89	85					86.10 Bottom of gravel pack.
							90					
							95					
14	NQ	95.4	105.4		10.0	66						

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93108** DATE **11/24/10** SHEET **5** OF **7**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/4/93** BORING FINISH **8/10/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							100					
							105					
15	NQ	105.4	110.4		4.3	11						
							110					
16	NQ	110.4	115.4		3.4	17						
							115					
17	NQ	115.4	124.8		8.7	21						6000 gallons of water used.
							120					123.0 Top of bentonite seal.

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93108** DATE **11/24/10** SHEET **6** OF **7**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/4/93** BORING FINISH **8/10/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
~~18~~	~~NQ~~	~~124.8~~	~~134.7~~		~~9.0~~		125					8000 gallons of water used.
												128.50 Top of gravel pack.
							130			**DARK GRAY SANDSTONE**		129.9 Top of screen.
										RED/MULTI-COLOR SHALE		
~~19~~	~~NQ~~	~~134.7~~	~~143.0~~		~~8.3~~	~~86~~	135			**RED CLAY SHALE** Hard.		
20	NQ	143.0	145.4		100	91	140					
21	NQ	145.4	155.4		9.9		145			**GRAY CLAY SHALE**		
										GRAY SANDSTONE		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93108** DATE **11/24/10** SHEET **7** OF **7**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/4/93** BORING FINISH **8/10/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
												149.9 Bottom of screen.
										GRAY SANDY SHALE Hard.		
												152.0 Top of bentonite seal.
										RED/GRAY CLAY SHALE Hard.		
							155					155.4 Bottom of boring.
										6-8-94 SWL 120.02 **8-24-94 SWL 98.22** **8-25-94 SWL 99.04** **8-29-94 SWL 123.07** **8-30-94 PURGED WELL DRY** **8-31-94 TEMP 60 59** **COND 2460 2480** **pH 7.69 7.84** **9-3-94 SWL 121.1** **PUMP INSTALLED 8-2-94 APPROXIMATELY 148.4** **WELL WAS DEVELOPED USING A RED-FLO CONTINUOUS FLOW PUMP.**		

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 347,038.0 E 2,104,957.2**

GROUND ELEVATION **594.0** SYSTEM **STATE PLANE**

Water Level, ft			
TIME			
DATE			

BORING NO. **R-94136** DATE **11/24/10** SHEET **1** OF **6**

BORING START **8/30/94** BORING FINISH **9/8/94**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **75.4** BOTTOM **114.5**

WELL DEVELOPMENT **SEE NOTE** BACKFILL **VOLCLAY**

FIELD PARTY **TJH-RLY** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	8-8-8	.9					**BROWN CLAY** Moist.		Hole was drilled using a 8" air hammer.
2	SS	1.5	3.0	5-8-8	1.0							
3	SS	3.0	4.0	6-8-11	.7							
4	SS	4.5	6.0	4-4-4	.8		5					
5	SS	6.0	7.5	3-3-7	1.1							
6	SS	7.5	9.0	4-5-8								
7	SS	9.0	10.5	3-6-7	.6							
8	SS	10.5	12.0	4-4-6	.9		10					
9	SS	12.0	13.5	5-7-7	.7					**LIGHT BROWN CLAY** Moist.		
10	SS	13.5	15.0	5-9-11	.8					**TOP .04 LIGHT BROWN CLAY** With trace of lignite.		
										GRAY SAND Moist.		
11	SS	15.0	16.5	8-9-14	1.1		15			**BROWN CLAYEY SAND** Moist.		
12	SS	16.5	18.0	7-8-9	1.1					**BROWN CLAY** With sandstone gravel (mine spoil?)		
13	SS	18.0	19.5	4-5-5	.9							
14	SS	19.5	21.0	3-3-4	.7							

TYPE OF CASING USED

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

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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 **RLY**

AEP R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94136** DATE **11/24/10** SHEET **2** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/30/94** BORING FINISH **9/8/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
15	SS	21.0	22.5	3-3-5	.8					**BROWN CLAY** Moist.		
16	SS	22.5	24.0	3-3-4	1.0					**BROWN SAND** Well graded, oxidized wet.		
17	SS	24.0	25.5	2-3-4	.8		25			**BROWN CLAY** Moist.		
18	SS	25.5	27.0	3-5-6	1.1							
19	SS	27.0	28.5	4-4-4	1.0							
20	SS	28.5	30.0	2-4-4								
21	SS	30.0	31.5	3-5-6	1.2		30			**BROWN CLAYEY SILT** Moist.		
22	SS	31.5	33.0	3-3-4	1.1							
23	SS	33.0	34.5	3-3-5	1.2							
24	SS	34.5	36.0	3-4-6	1.0					**GRAY CLAY** Moist.		
25	SS	36.0	37.5	3-3-4	1.3		35					
26	SS	37.5	39.0	3-5-7						**BROWN CLAYEY SILT** Moist		
27	SS	39.0	40.5	3-5-8	1.2							
28	SS	40.5	42.0	3-5-5	1.2		40			**GRAY SILTY CLAY** Moist.		
29	SS	42.0	43.5	2-4-4	1.1							
30	SS	43.5	45.0	2-2-3	1.2							
31	SS	45.0	46.5	2-2-4	1.0		45					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94136** DATE **11/24/10** SHEET **3** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/30/94** BORING FINISH **9/8/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
32	SS	46.5	48.0	3-4-6	1.2							
33	SS	48.0	49.5	3-3-6	.9							
34	SS	49.5	51.0	2-4-4	.9		50					
35	SS	51.0	52.5	3-4-5	1.1							
36	SS	52.5	54.0	3-4-4	1.2							
37	SS	54.0	55.5	3-5-6	1.1		55					
38	SS	55.5	57.0	4-6-6	1.2							
39	SS	57.0	58.5	2-3-4	.9							
40	SS	59.5	61.0	3-3-7	1.1		60					
41	SS	61.0	62.5	6-6-6	.9							
42	SS	62.5	64.0	4-4-6	1.2							
43	SS	64.0	65.5	3-5-5	1.1		65					
44	SS	65.5	67.0	3-3-5								
45	SS	67.0	68.5	4-5-5								
46	SS	68.5	70.0	5-12-12	1.2					**TOP OF SAMPLE GRAY SILTY CLAY** **BOTTOM SAND AND SHALE GRAY**		
47	SS	70.0	71.5	12-16-16	0		70					69.1 Top of bentonite seal.
48	SS	71.5	73.0	16-15-24	0							

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94136** DATE **11/24/10** SHEET **4** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/30/94** BORING FINISH **9/8/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
49	NQ	74.2	80.0		5.8	74	75			**GRAY CLAY SHALE** Hard.		74.5 Top of sand. 75.4 Top of screen.
										GRAY SANDSTONE		
50	NQ	80.0	85.0		5.0	70	80					
										GRAY CLAY SHALE		
51	NQ	85.0	95.0		10.0	0	85					
							90					
52	NQ	95.0	105.0		10.0	39	95					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94136** DATE **11/24/10** SHEET **5** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/30/94** BORING FINISH **9/8/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							100			**DARK REDDISH BROWN CLAY SHALE**		
53	NQ	105.0	110.0		5.0	60	105					
54	NQ	110.0	115.0		5.0	92	110					
55	NQ	115.0	120.0		5.0	92	115					114.5 Bottom of screen. 116.0 Bottom of sand.
										GRAY SANDY SHALE		
56	NQ	120.0	125.0		5.0	74	120			**REDDISH BROWN CLAY SHALE**		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94136** DATE **11/24/10** SHEET **6** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **8/30/94** BORING FINISH **9/8/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							125					
57	NQ	125.0	130.0		5.0	54				**GRAY CLAY SHALE**		
58	NQ	130.0	135.0		5.0	86	130			**REDDISH BROWN CLAY SHALE**		
							135			**10-6-94 SWL 27.3 PURGED DRY** **10-7-94 SWL 27.8** **10-7-94 TEMP 58 58** **COND 1859 1849** **pH 7.34 7.45** **PUMP INSTALLED 10-6-94 APPROXIMATELY 114.0'** **WELL WAS DEVELOPED USING A RED-FLO CONTINUOUS FLOW PUMP**		135.0 Bottom of seal.

AEP R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 347,033.7 E 2,104,959.4**

GROUND ELEVATION **594.0** SYSTEM **STATE PLANE**

Water Level, ft	▽ **21.6**	▼	▼
TIME			
DATE	**9-6-94**		

BORING NO. **R-94137** DATE **11/24/10** SHEET **1** OF **6**

BORING START **9/6/94** BORING FINISH **9/7/94**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **40.0** BOTTOM **48.9**

WELL DEVELOPMENT **SEE NOTES** BACKFILL **VOLCLAY**

FIELD PARTY **TJH-REY** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							5			**BROWN CLAY** Moist.		Hole was drilled using a 5 7/8" roller bit.
							10			**LIGHT BROWN CLAY** Moist.		
										TOP .04 LIGHT BROWN CLAY With trace of lignite.		
										GRAY SAND Moist.		
							15			**BROWN CLAYEY SAND** Moist.		
										BROWN CLAY With sandstone gravel (mine spoil?)		

TYPE OF CASING USED

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

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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 **REY**

AEP R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94137** DATE **11/24/10** SHEET **2** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **9/6/94** BORING FINISH **9/7/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										BROWN CLAY Moist.		
										BROWN SAND Well graded, oxidized wet.		
										BROWN CLAY Moist.		
							25					
							30			**BROWN CLAYEY SILT** Moist.		33.3 Top bentonite seal.
							35			**GRAY CLAY** Moist.		36.0 Top of gravel.
										BROWN CLAYEY SILT Moist		
							40			**GRAY SILTY CLAY** Moist.		40.0 Top of screen.
							45					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94137** DATE **11/24/10** SHEET **3** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **9/6/94** BORING FINISH **9/7/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							50					48.9 Bottom of screen. 50.0 Bottom of gravel.
							55					
							60					
							65			**TOP OF SAMPLE GRAY SILTY CLAY** **BOTTOM SAND AND SHALE GRAY**		
							70					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94137** DATE **11/24/10** SHEET **4** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **9/6/94** BORING FINISH **9/7/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							75			**GRAY CLAY SHALE** Hard.		
										GRAY SANDSTONE		
							80					
										GRAY CLAY SHALE		
							85					
							90					
							95					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94137** DATE **11/24/10** SHEET **5** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **9/6/94** BORING FINISH **9/7/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							100			**DARK REDDISH BROWN CLAY SHALE**		
							105					
							110					
							115					
							120			**GRAY SANDY SHALE**		
										REDDISH BROWN CLAY SHALE		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94137** DATE **11/24/10** SHEET **6** OF **6**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **9/6/94** BORING FINISH **9/7/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							125			**GRAY CLAY SHALE**		
							130			**REDDISH BROWN CLAY SHALE**		
							135			**10-6-94 SWL 28.92 PUMPED DRY** **10-7-94 SWL 30.52** **TEMP 58 58** **COND 1092 1099** **pH 7.09 7.03** **PUMP WAS INSTALLED 10-6-94** **APPROXIMATELY 48.4'** **WELL WAS DEVELOPED USING A RED-FLO** **CONTINUOUS PUMP**		

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 345,099.4 E 2,103,292.9**

GROUND ELEVATION **612.0** SYSTEM **STATE PLANE**

Water Level, ft	▽	▼	▼
TIME			
DATE			

BORING NO. **R-94139** DATE **11/24/10** SHEET **1** OF **5**

BORING START **7/21/94** BORING FINISH **7/21/94**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **40.0** BOTTOM **58.9**

WELL DEVELOPMENT **SEE NOTES** BACKFILL **VOLCLAY**

FIELD PARTY **TJH REY** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										BROWN GRAY CLAY Moist,fill.		9.25" HSA TO 31.0' AND 5 7/8" ROLLER BIT TO 61.0'.
										BROWN RED SANDY CLAY Moist fill.		
										RED CLAY Moist ,shale,fill.		
							5			**MULTI-COLORED RED AND BROWN CLAY** Moist,fill.		
										MULTI-COLORED BROWN CLAY Moist,fill.		
							10			**REDDISH BROWN CLAY** Moist,fill.		
										MULTI-COLORED BROWN AND GRAY SANDY CLAY Moist, trace of gravel.		
							15			**DARK GRAY CLAY** Moist to wet natural material.		
										BROWN AND GRAY CLAY Moist.		

TYPE OF CASING USED

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

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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 **REY**

AEP R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94139** DATE **11/24/10** SHEET **2** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **7/21/94** BORING FINISH **7/21/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							25			**GRAY CLAY** Moist to wet.		
										GRAY CLAY Wet to moist.		
										RED CLAYSTONE Weathered, moist.		
							30			**RED CLAYSTONE** Soft.		31.0 Top of bentonite seal.
							35			**GRAY AND RED SANDY SHALE** Soft.		
										GRAY SANDSTONE Fine grain, well cemented, hard with vertical cracks 36.2 to 37.1 broken clay on joint.		37.3 Top of sand.
										RED AND GRAY SANDY SHALE Medium soft.		
							40			**RED CLAYSTONE** Soft.		40.0 Top of screen.
										GRAY SANDSTONE Hard, well cemented, clay on joint, pyrite.		
							45			**RED AND GRAY CLAYSTONE** Medium soft.		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94139** DATE **11/24/10** SHEET **3** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **7/21/94** BORING FINISH **7/21/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	SAMPLE DEPTH IN FEET TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							50			**GRAY SHALE** Medium soft, large amount pyrite.		
										RED CLAY SHALE Medium hard.		
							55			**RED AND LIGHT BROWN CLAYSTONE** With limestone nodules.		58.9 Bottom of screen.
							60			**RED TO LIGHT GRAY CLAY SHALE** Well cemented.		61.0 Bottom of sand.
							65			**68.2 to 68.4 soft**		
							70			**RED CLAY SHALE** Well cemented, medium hard.		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94139** DATE **11/24/10** SHEET **4** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **7/21/94** BORING FINISH **7/21/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							75			**GRAY SILTY CLAY SHALE** Well cemented, medium hard.		
										LIGHT GRAY TO RED CLAY SHALE Well cemented, medium hard.		
							80			**LIGHT GRAY AND RED CLAY SHALE** Medium hard, well cemented.		
							85			**RED CLAYSTONE** Medium hard.		
							90					
							95					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-94139** DATE **11/24/10** SHEET **5** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **7/21/94** BORING FINISH **7/21/94**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										GRAY SILTY LIMESTONE Medium hard , well cemented some pyrite.		
							100			**GRAY SILTY SHALE**		
										GRAY SILTY SANDSTONE		
										GRAY SILTY CLAY SHALE		
							105			**RED AND GRAY SHALE** Medium hard.		
										GRAY SHALEY SANDSTONE Hard.		
							110			**GRAY SHALE** Medium hard.		
										8-25-94 SWL 14.19 10:11 AM **9-7-94 SWL 13.83 7:30 AM** **DEVELOPED, PURGED DRY** **9-8-94 SWL 14.95** **TEMP 59 57** **COND 1216 1219** **pH 7.25 7.48** **WELL DEVELOPED USING A RED-FLO CONTINUOUS FLOW PUMP** **PUMP INSTALLED 9-25-94 AT APPROXIMATELY 58.5'**		

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY**

PROJECT **GAVIN FGD RETROFIT PROJECT**

COORDINATES **N 349,605.8 E 2,103,045.0**

GROUND ELEVATION **609.8** SYSTEM **State Plane using NADA27**

Water Level, ft	▽ 30.9	▼	▼
TIME			
DATE	11-12-98		

BORING NO. **R-9801** DATE **11/24/10** SHEET **1** OF **6**

BORING START **11/10/98** BORING FINISH **12/3/98**

PIEZOMETER TYPE **N\A** WELL TYPE **OW**

HGT. RISER ABOVE GROUND **1.6** DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **109.4** BOTTOM **129.0**

WELL DEVELOPMENT **Yes** BACKFILL **Quick grout**

FIELD PARTY **TJH-REB** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	2.4		2-3-4	1.2				CL	**BROWN SANDY CLAY** Moist.		
2	SS	7.4	8.9	4-5-7	1.1		5					
3	SS	12.4	13.9	4-7-7	1.2		10					
4	SS	17.4	18.9	4-5-7	1.1		15		CL	**RED AND BROWN SANDY CLAY**		

TYPE OF CASING USED

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

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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 **REB**

AEP_GAVIN_FGD_BORINGS.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9801** DATE **11/24/10** SHEET **2** OF **6**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **11/10/98** BORING FINISH **12/3/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
5	SS	22.4	23.9	2-4-5	1.2				CL	**RED SANDY CLAY** Soft.		
6	SS	27.4	28.9	3-5-7	1.2		25		CL	**BROWN AND GRAY SANDY CLAY** Dry		
7	SS	32.4	33.9	3-4-6	1.1		30		CL	**MULTICOLORED RED GRAY BROWN SANDY CLAY** Moist.		
8	SS	37.4	38.9	4-7-10	1.2		35		CL	**RED, BROWN SANDY CLAY** Moist.		
9	SS	42.4	43.9	13-25-33	1.2		40			**MULTICOLORED RED, GRAY, YELLOWISH BROWN CLAY SHALE**		
							45					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9801** DATE **11/24/10** SHEET **3** OF **6**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **11/10/98** BORING FINISH **12/3/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
10	SS	47.4	48.9	30-30-30	1.2					**RED AND GRAY CLAY SHALE** Dry , weathered.		
11	NQ-2	48.9	55.0		6.0	100	50			**MULTICOLORED RED, GRAY, YELLOWISH BROWN CLAY SHALE**		
12	NQ-2	55.0	59.5		3.3	100	55			**RED AND BROWN CLAY SHALE**		
13	NQ-2	59.5	68.7		3.1	35	60			**10R-4\2 GRAYISH RED CLAY SHALE**		
14	NQ-2	68.7	70.0		1.1	100	65			**RED AND GRAY CLAY SHALE**		
15	NQ-2	70.0	75.0		3.5	100	70			**10R 4\2 GRAYISH RED CLAY SHALE** **MULTICOLORED RED, GRAY, BROWN CLAY SHALE**		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9801** DATE **11/24/10** SHEET **4** OF **6**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **11/10/98** BORING FINISH **12/3/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
16	NQ-2	75.0	80.0		5.0	48	75			**N5 MEDIUM GRAY CLAY SHALE** Pyrite. **N5 MEDIUM GRAY LIMESTONE** **10R 4\2 GRAYISH RED CLAY SHALE** **N5 MEDIUM GRAY CLAY SHALE**		
17	NQ-2	80.0	85.0		5	44	80			**N5 MEDIUM GRAY SANDY CLAY SHALE** With .3 limestone at 81.3'.		
18	NQ-2	85.0	95.0		10	75	85			**N5 MEDIUM GRAY CLAY SHALE** Soft clay seam at 94.1 to 94.7.		
							90					
19	NQ-2	95.0	101.5		6.4	60	95					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9801** DATE **11/24/10** SHEET **5** OF **6**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **11/10/98** BORING FINISH **12/3/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
												98.0 top of bentonite seal.
20	NQ-2	101.5	105.0		3.5	88	100			**MULTICOLORED REDDISH, GREENISH,MEDIUM GRAY CLAY SHALE**		
										N5 MEDIUM GRAY CLAY SHALE		104.4 top of sand.
21	NQ-2	105.0	111.7		6.6	37	105					
										N5 MEDIUM GRAY CLAY SHALE Soft.		109.4 top of screen.
22	NQ-2	111.7	118.9		4	0	110			**REDDISH BROWN CLAY SHALE** Soft, small .5-1.0 mm pyrite common just above limestone.		
23	NQ-2	118.9	120.0		1.1	100	115			**N5 MEDIUM GRAY LIMESTONE**		
24	NQ-2	120.0	125.0		3.9	58	120			**N5 MEDIUM GRAY SANDY SHALE**		
										N5 MEDIUM GRAY SANDSTONE		
										N5 MEDIUM GRAY SHALEY SANDSTONE		
										N5 MEDIUM GRAY CLAY SHALE		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9801** DATE **11/24/10** SHEET **6** OF **6**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **11/10/98** BORING FINISH **12/3/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							125			**10R 4\6 MODERATE REDDISH BROWN CLAY SHALE**		
25	NQ-2	125.0	130.0		4.3	46				**N7 LIGHT GRAY CLAY SHALE**		129 bottom of screen.
							130					130 bottom of well.
												131 bottom of sand.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9802** DATE **11/24/10** SHEET **2** OF **2**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **12/1/98** BORING FINISH **12/2/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
6	SS	27.9	29.4	4.4.7	1.2				CL	**GRAY SANDY CLAY** Soft.		
7	SS	32.9	34.4	5.11.15	1.2		30		CL	**GRAY AND BROWN CLAY** Stiff.		
8	SS	37.9	39.4	6.9.12	1.1		35			**MULTI COLORED RED, GRAY, BROWNISH YELLOWISH WEATHERED CLAY SHALE.**		35 top of bentonite seal. 37 top of sand. 39 top of screen.
9	SS	42.9	44.4	5.7.9	1.1		40					
10	SS	47.9	49.4	15.25.30	1.1		45			**MULTI COLORED RED, GRAY, BROWN SANDY CLAY** With embedded gravel, moist.		48.5 bottom of screen. 49.6 bottom of well. 50 bottom of sand.
							50					

AEP GAVIN_FGD_BORINGS.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY**

PROJECT **GAVIN FGD RETROFIT PROJECT**

COORDINATES **N 349,056.1 E 2,103,324.6**

GROUND ELEVATION **718.3** SYSTEM **State Plane using NADA27**

Water Level, ft	▽	▼	▼
TIME			
DATE			

BORING NO. **R-9806** DATE **11/24/10** SHEET **1** OF **7**

BORING START **12/22/98** BORING FINISH **12/29/98**

PIEZOMETER TYPE **N\A** WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.0** DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **111.0** BOTTOM **140.0**

WELL DEVELOPMENT **Yes** BACKFILL **Quick grout**

FIELD PARTY **TJH-REB** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										See boring R-9805 for lithology.		

5

10

15

TYPE OF CASING USED

X	NQ-2 ROCK CORE	
X	6" x 3.25 HSA	
	9" x 6.25 HSA	
	HW CASING ADVANCER	4"
	NW CASING	3"
	SW CASING	6"
X	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 **TJH**

AEP_GAVIN_FGD_BORINGS.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9806** DATE **11/24/10** SHEET **2** OF **7**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **12/22/98** BORING FINISH **12/29/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							25					
							30					
							35					
							40					
							45					

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9806** DATE **11/24/10** SHEET **3** OF **7**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **12/22/98** BORING FINISH **12/29/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	SAMPLE DEPTH IN FEET TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							50					
							55					
							60					
							65					
							70					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9806** DATE **11/24/10** SHEET **4** OF **7**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **12/22/98** BORING FINISH **12/29/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							75					
							80					
							85					
							90					
							95					

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9806** DATE **11/24/10** SHEET **5** OF **7**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **12/22/98** BORING FINISH **12/29/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	SAMPLE DEPTH IN FEET TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							100					
							105					103.5 Top of bentonite seal.
							110					108.2 Top of sand pack.
							115					111.0 Top of screen.
							120					

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9806** DATE **11/24/10** SHEET **6** OF **7**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **12/22/98** BORING FINISH **12/29/98**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							125					
							130					
							135					
							140					140.0 Bottom of screen.
												141.0 Bottom of well and sand.
							145					149.4 Bottom of

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER **1477**

COMPANY **OHIO POWER COMPANY** BORING NO. **R-9806** DATE **11/24/10** SHEET **7** OF **7**

PROJECT **GAVIN FGD RETROFIT PROJECT** BORING START **12/22/98** BORING FINISH **12/29/98**

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

AEP GAVIN_FGD_BORINGS.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER WO#0820

COMPANY OHIO POWER COMPANY

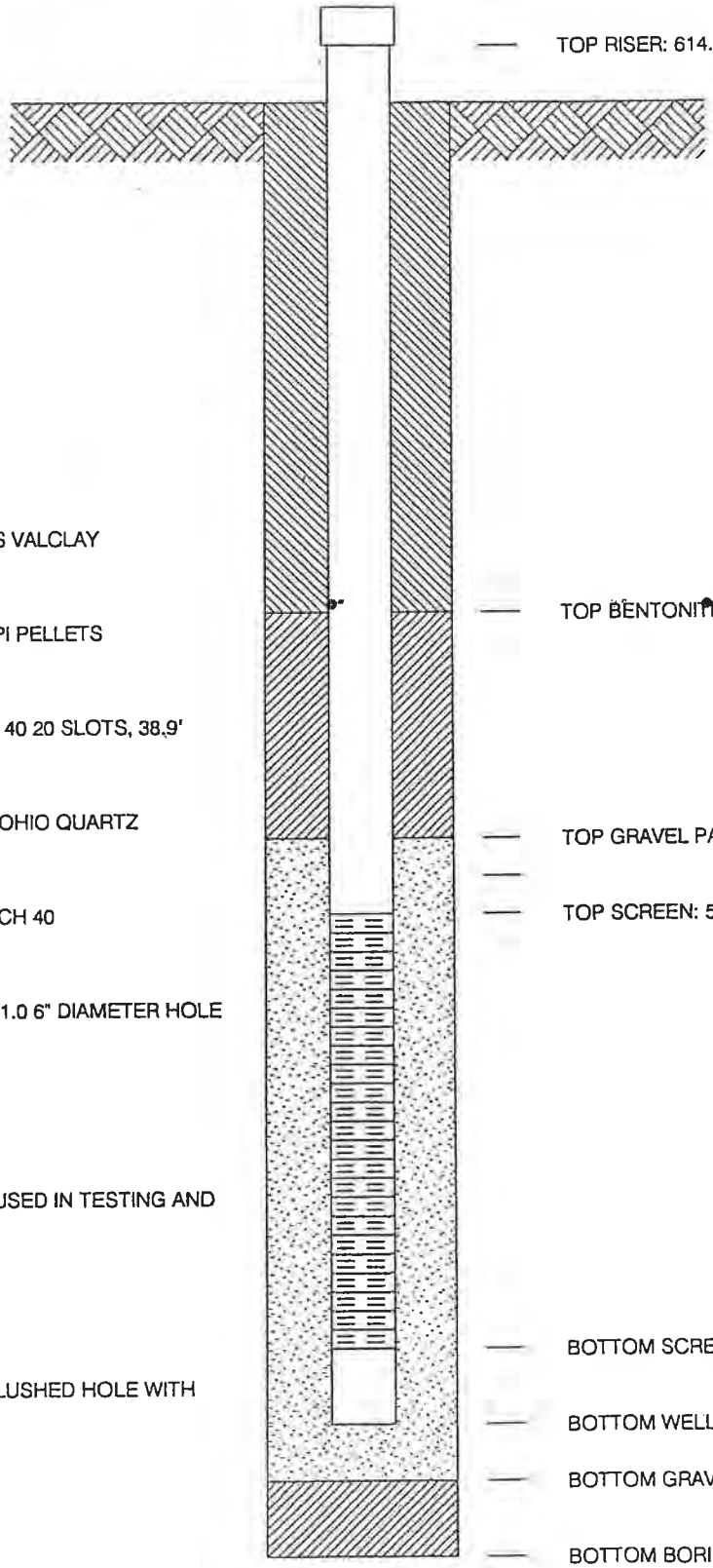
WELL No. R-93100 BORING No. R-93100 INSTALLED 07/20/94

PROJECT GAVIN FGD RETROFIT PROJECT

COORDINATES N 345,099.1 E 2,103,287.5

SYSTEM STATE PLANE

GROUND ELEVATION 612.00 FT



GROUT SEAL: 100 GALLONS VALCLAY

BENTONITE SEAL: 75 LBS. PI PELLETS

SCREEN: 2.0 DIA., PVC SCH 40 20 SLOTS, 38.9'

GRAVEL PACK: 800 LBS #4 OHIO QUARTZ

RISER PIPE: 2.0, dia., PVC SCH 40

COMMENTS: 6.25 HSA TO 31.0 6" DIAMETER HOLE
31.0 TO 114.0

6000 GALLONS OF WATER USED IN TESTING AND REAMING HOLE.

SPIDERS 111.0-72.0-35.0.. FLUSHED HOLE WITH 750-1000 GALLONS

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER WO#0820

COMPANY OHIO POWER COMPANY

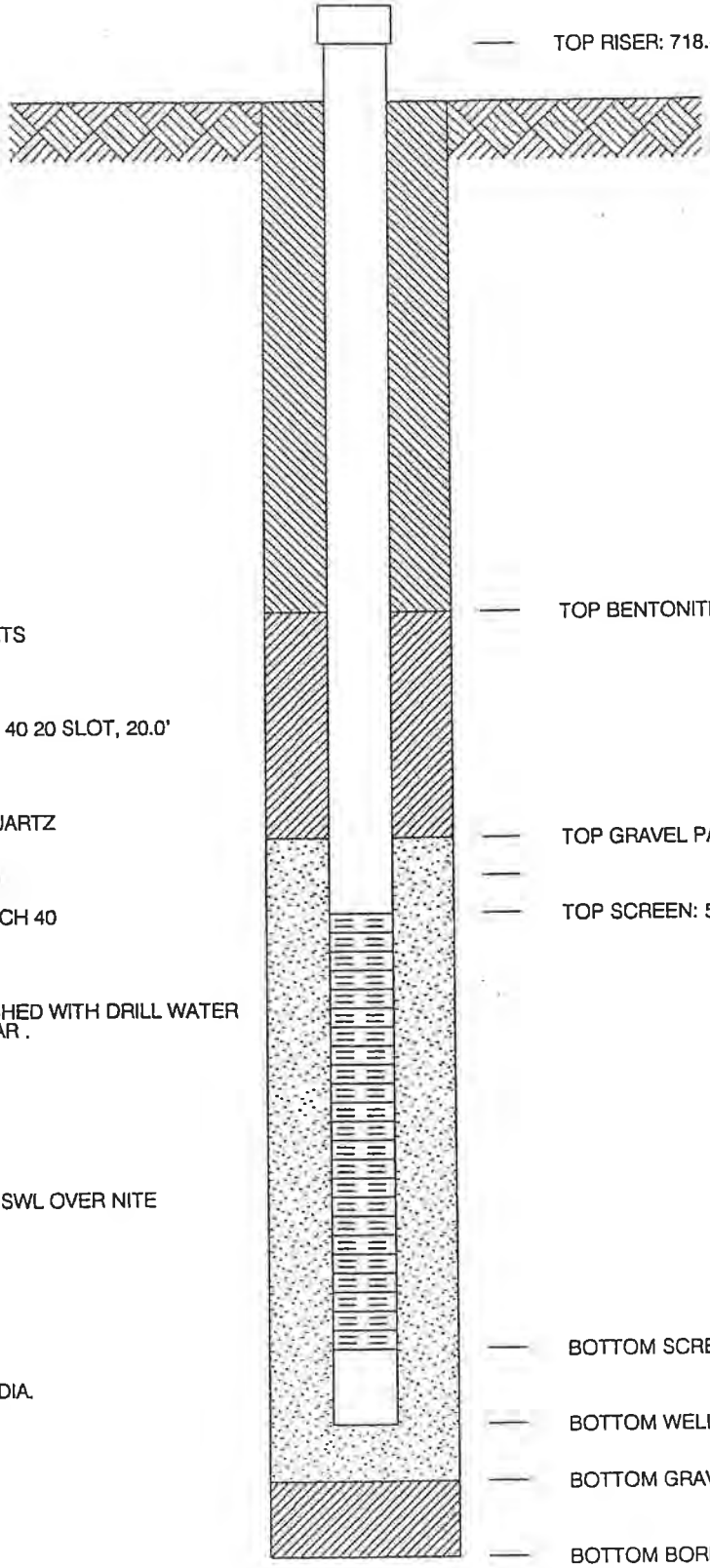
WELL No. R-93108 BORING No. R-93108 INSTALLED 08/10/93

PROJECT GAVIN FGD RETROFIT PROJECT

COORDINATES N 345,307.0 E 2,104,199.8

SYSTEM STATE PLANE

GROUND ELEVATION 716.72 FT.



GROUT SEAL: VOLCLAY

BENTONITE SEAL: PI PELLETS

SCREEN: 2.0 DIA., PVC SCH 40 20 SLOT, 20.0'

GRAVEL PACK: #4 OHIO QUARTZ

RISER PIPE: 2.0, dia., PVC SCH 40

COMMENTS: BORING FLUSHED WITH DRILL WATER UNTILL VISUALLY CLEAR .

SPIDERS 150.0,140.0,130.0. SWL OVER NITE 42.2.8-17-93 SWL 16.8

HOLE REAMED TO 5 7/8"D DIA.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER WO#0820

COMPANY OHIO POWER COMPANY

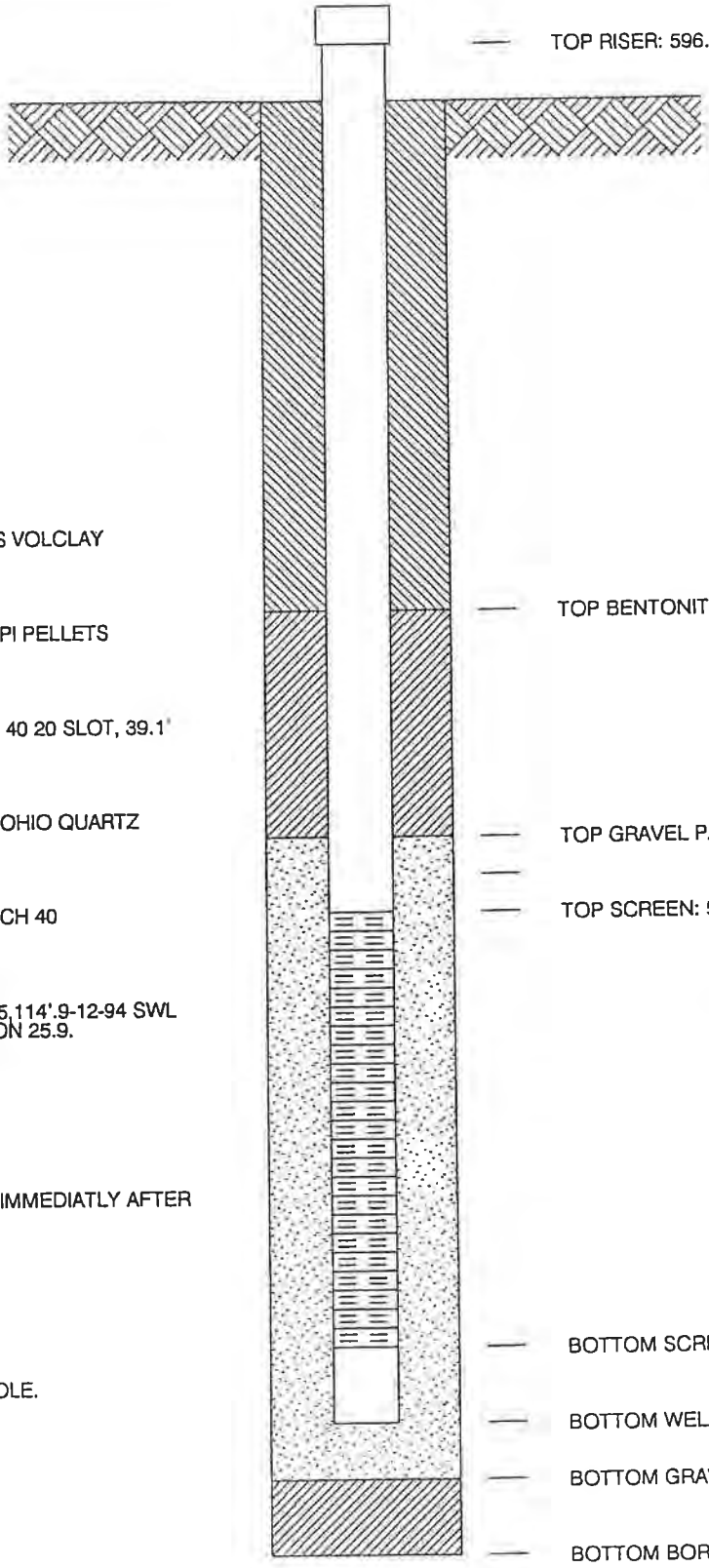
WELL No. R-94136 BORING No. R-94136 INSTALLED 09/08/94

PROJECT GAVIN FGD RETROFIT PROJECT

COORDINATES N 347,038.0 E 2,104,957.2

SYSTEM STATE PLANE

GROUND ELEVATION 594.00 FT.



GROUT SEAL: 450 GALLONS VOLCLAY

BENTONITE SEAL: 150 LBS PI PELLETS

SCREEN: 2.0 DIA., PVC SCH 40 20 SLOT, 39.1'

GRAVEL PACK: 750 LBS #4 OHIO QUARTZ

RISER PIPE: 2.0, dia., PVC SCH 40

COMMENTS: SPIDERS 25,75,114'.9-12-94 SWL PRIOR TO INSTALLATION 25.9.

SWL RECOVERED TO 27.2' IMMEDIATLY AFTER INSTALLATION.

SWL 9-12-94 25.9. 8" DIA. HOLE.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER WO#0820

COMPANY OHIO POWER COMPANY

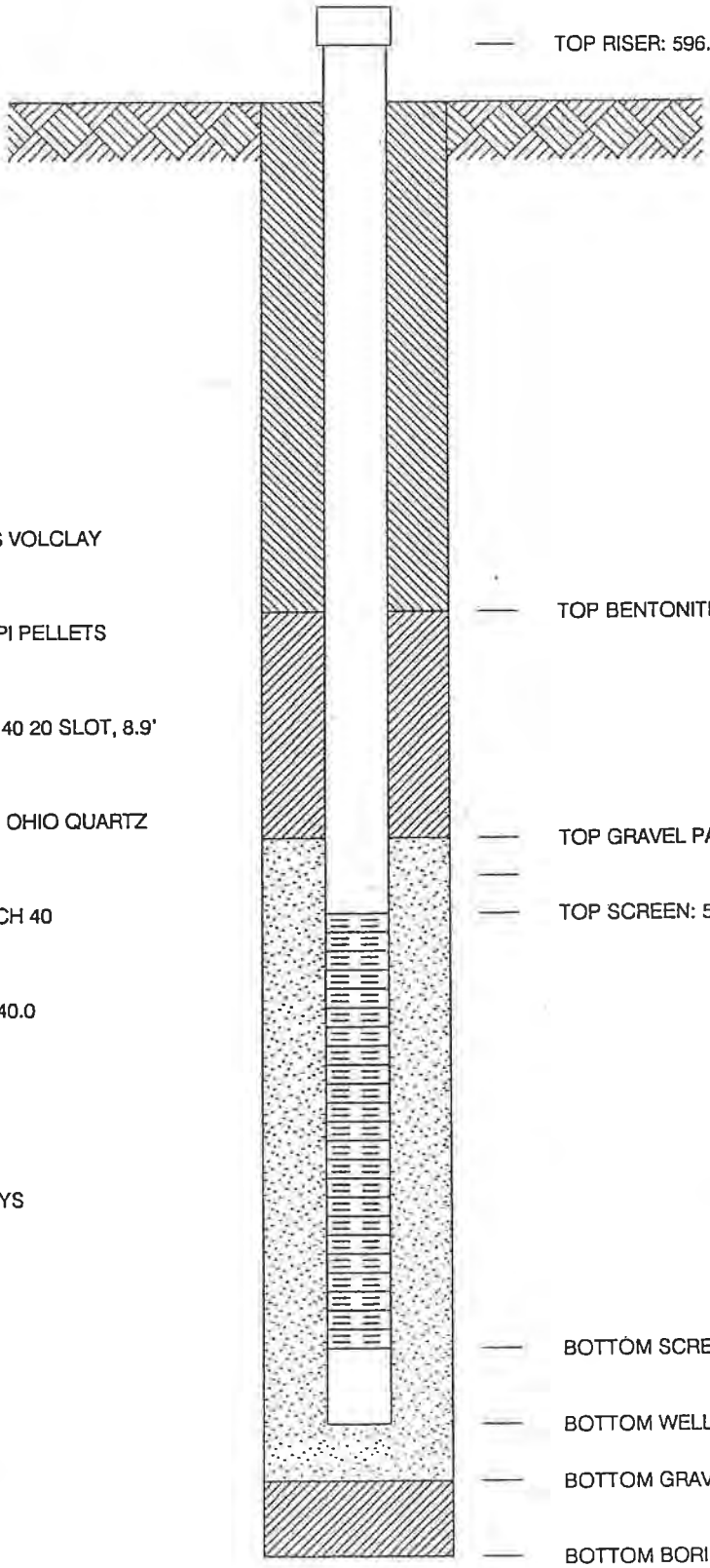
WELL No. R-94137 BORING No. R-94137 INSTALLED 09/07/94

PROJECT GAVIN FGD RETROFIT PROJECT

COORDINATES N 347,033.7 E 2,104,959.4

SYSTEM STATE PLANE

GROUND ELEVATION 594.00 FT



GROUT SEAL: 250 GALLONS VOLCLAY

BENTONITE SEAL: 150 LBS.PI PELLETS

SCREEN: 2.0 DIA., PVC SCH 40 20 SLOT, 8.9'

GRAVEL PACK: 1150 LBS #4 OHIO QUARTZ

RISER PIPE: 2.0, dia., PVC SCH 40

COMMENTS: SPIDERS 49.0,40.0

9-6-94 SWL 21.6 AFTER 5 DAYS

5 7/8" DIA. HOLE.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER WO#0820

COMPANY OHIO POWER COMPANY

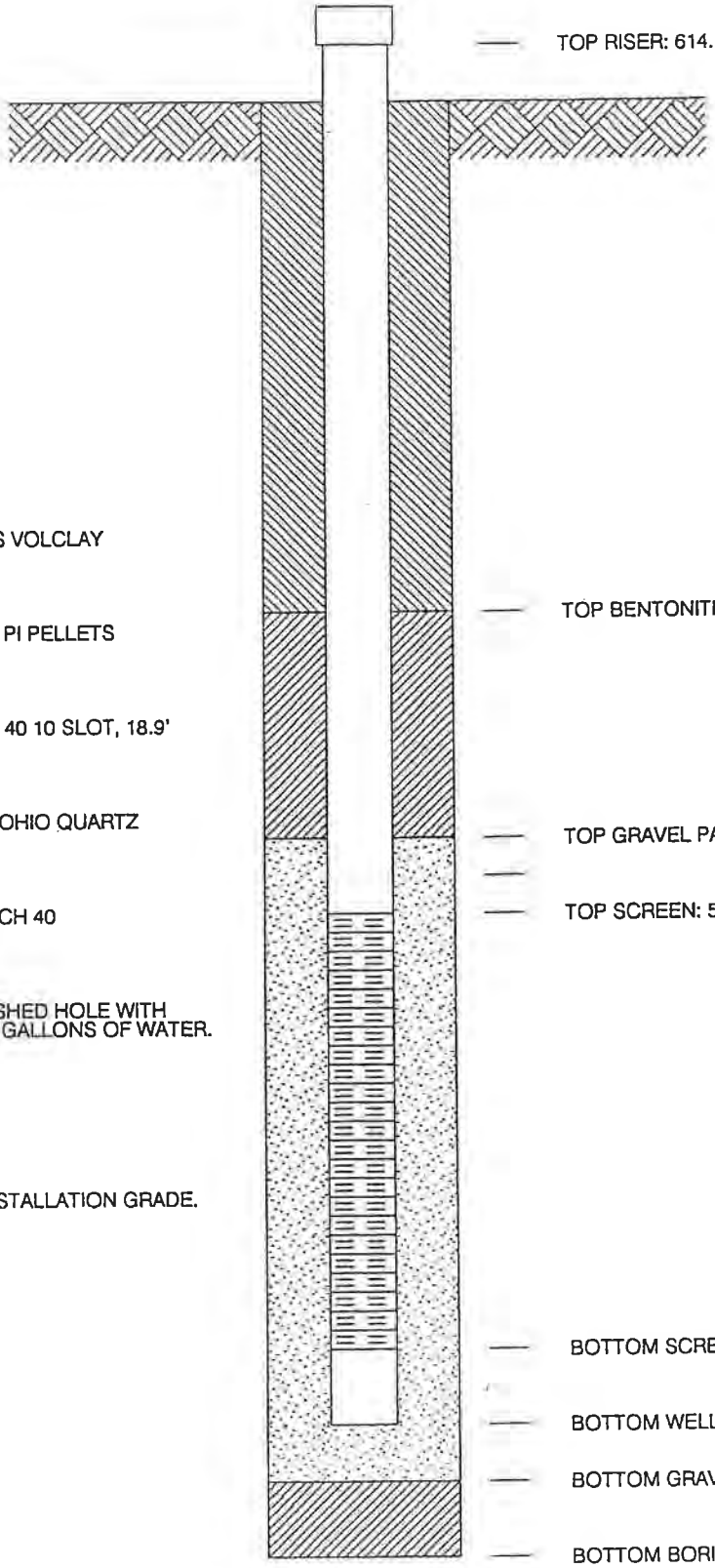
PROJECT GAVIN FGD RETROFIT PROJECT

COORDINATES N 345,099.4 E 2,103,292.9

SYSTEM STATE PLANE

WELL No. R-94139 BORING No. R-94139 INSTALLED 07/21/94

GROUND ELEVATION 612.00 FT



GROUT SEAL: 200 GALLONS VOLCLAY

BENTONITE SEAL: 150 LBS. PI PELLETS

SCREEN: 2.0 DIA., PVC SCH 40 10 SLOT, 18.9'

GRAVEL PACK: 300 LBS #4 OHIO QUARTZ

RISER PIPE: 2.0, dia., PVC SCH 40

COMMENTS: 6" HOLE. FLUSHED HOLE WITH APPROXIMATELY 1000 GALLONS OF WATER.

SPIDERS 40',60'. SWL AT INSTALLATION GRADE.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER 1461

COMPANY OHIO POWER COMPANY

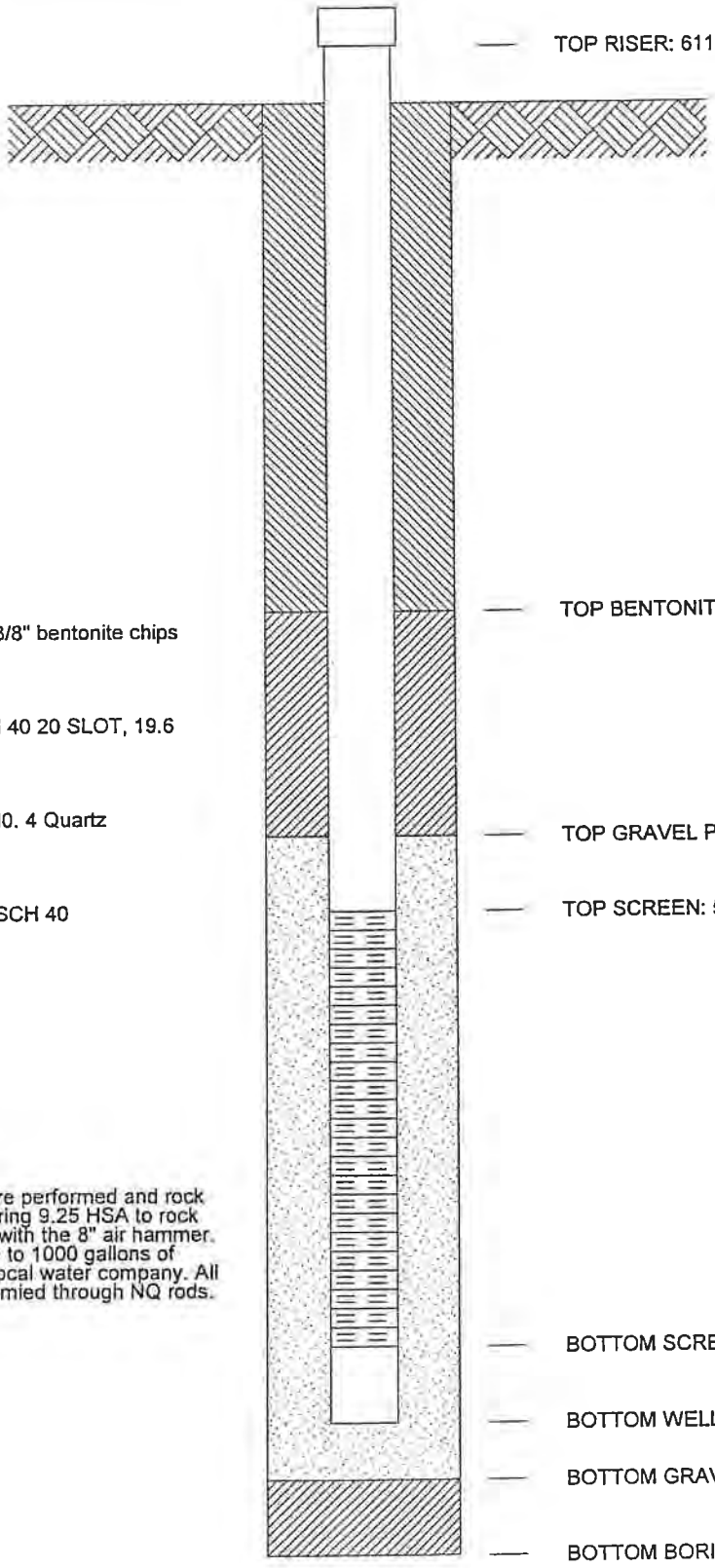
PROJECT GAVIN FGD RETROFIT PROJECT

COORDINATES N 349,605.8 E 210,345.0

SYSTEM State Plane using NADA27

WELL No. R-9801 BORING No. R-9801 INSTALLED 12/3/98

GROUND ELEVATION 609.77 FT.



GROUT SEAL: Quick Grout

BENTONITE SEAL: 150 lbs 3/8" bentonite chips

SCREEN: 2.0 dia., PVC SCH 40 20 SLOT, 19.6

GRAVEL PACK: 1550 Lbs. N0. 4 Quartz

RISER PIPE: 2.0, dia., PVC SCH 40

SPACERS, DEPTH:

Standard penetration test were performed and rock core taken prior to augering 9.25 HSA to rock and advancing the hole with the 8" air hammer. Used approximately 750 to 1000 gallons of potable water from the local water company. All back fill material was tremied through NQ rods.

GEOMCNST R1R2.GPJ FULL.GDT 2/2/99

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER 1461

COMPANY OHIO POWER COMPANY

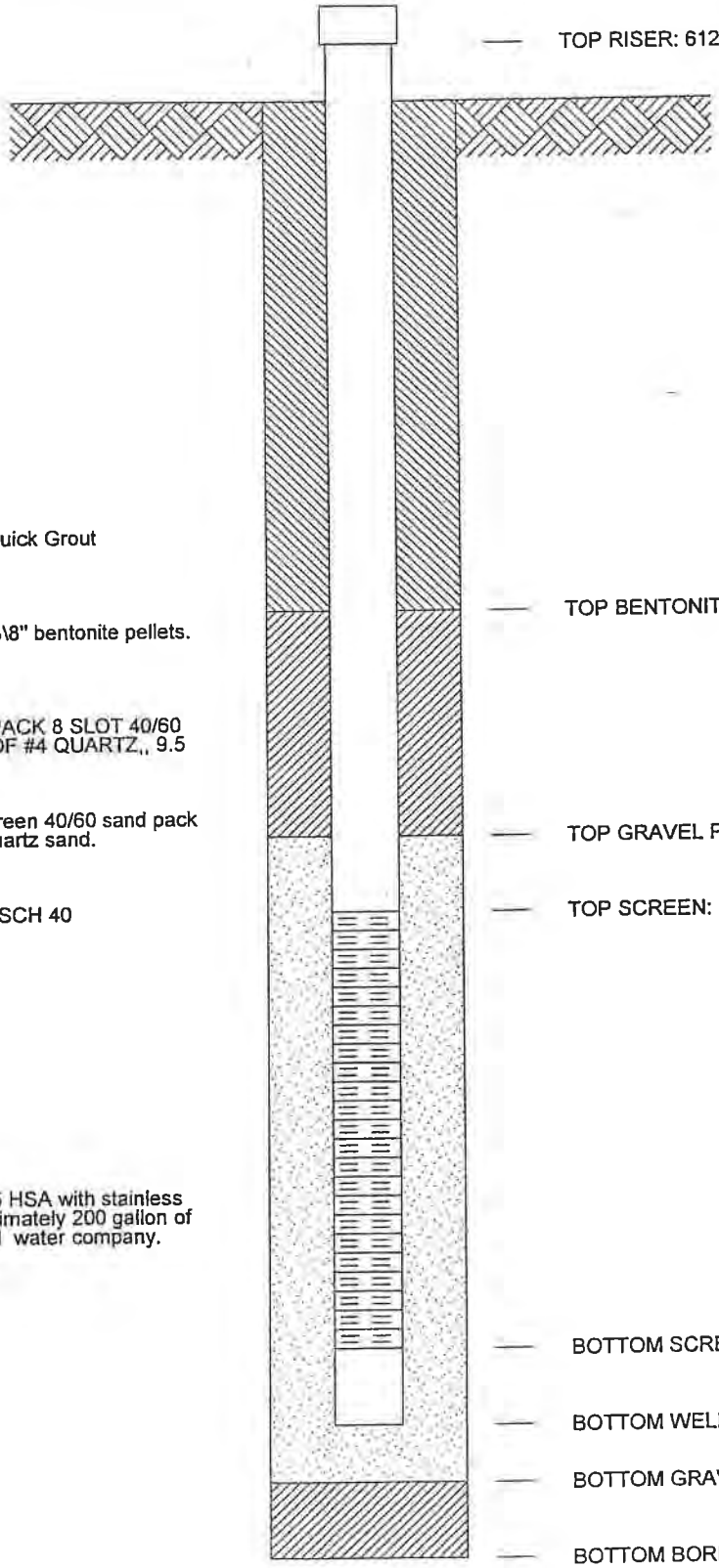
PROJECT GAVIN FGD RETROFIT PROJECT

WELL No. R-9802 BORING No. R-9802 INSTALLED 12/2/98

COORDINATES N 349,620.2 E 2,103,019.8

SYSTEM State Plane using NADA27

GROUND ELEVATION 610.39 FT.



GROUT SEAL: 50 Gallons Quick Grout

BENTONITE SEAL: 75 lbs. 3\8" bentonite pellets.

SCREEN: 4 x 5.2 dia., PREPACK 8 SLOT 40/60 PACK PLUS 400 LBS OF #4 QUARTZ,, 9.5

GRAVEL PACK: Prepack screen 40/60 sand pack with 400 lbs. of No. 4 quartz sand.

RISER PIPE: 4.0, dia., PVC SCH 40

SPACERS, DEPTH:

Well was installed using 9.25 HSA with stainless knock out plate. Approximately 200 gallon of potable water from local water company.

GEOMCNST R1R2.GI: FULL.GDT 2/2/99

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER 1461

COMPANY OHIO POWER COMPANY

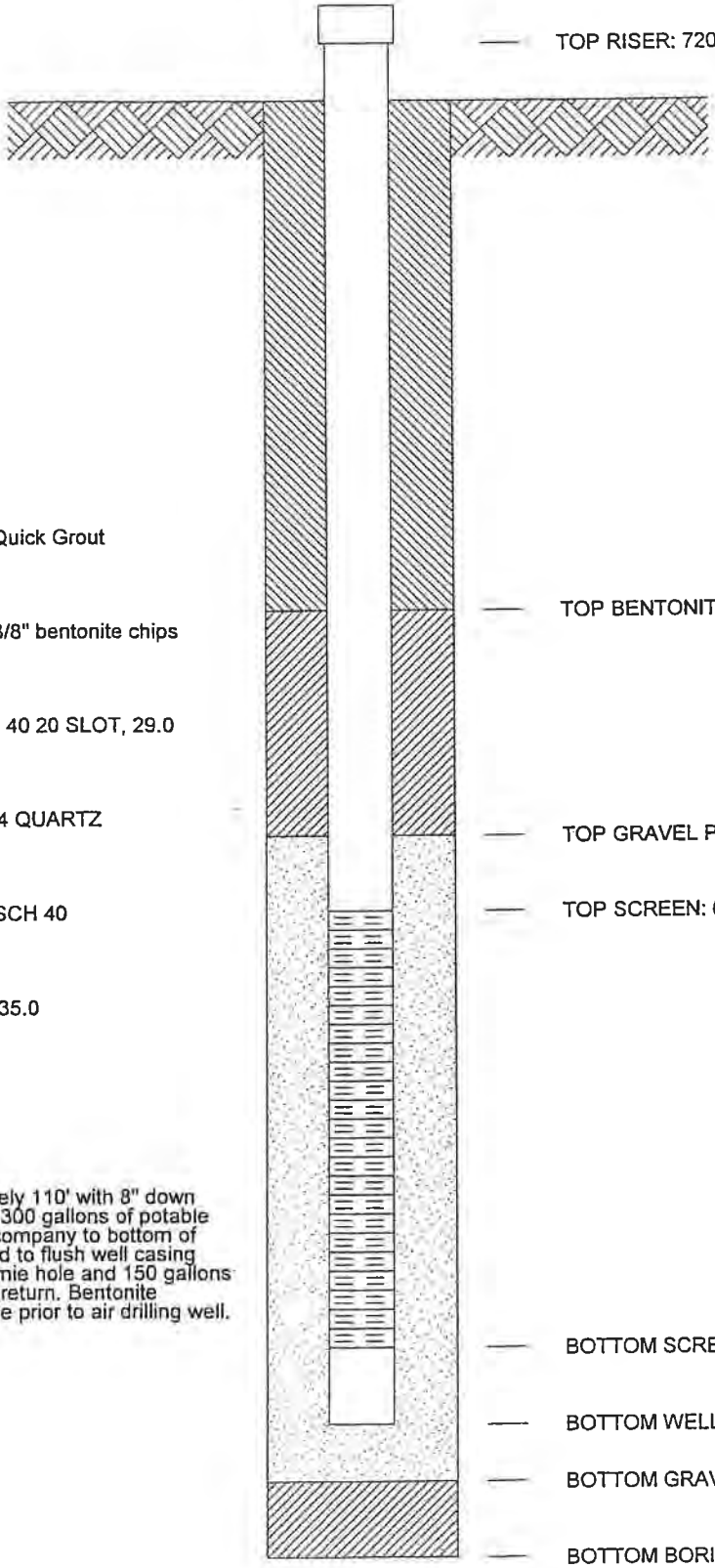
WELL No. R-9806 BORING No. R-9806 INSTALLED 12/29/98

PROJECT GAVIN FGD RETROFIT PROJECT

COORDINATES N 349,056.1 E 2,103,324.6

SYSTEM State Plane using NADA27

GROUND ELEVATION 718.29 FT.



GROUT SEAL: 300 Gallons Quick Grout

BENTONITE SEAL: 150 lbs 3/8" bentonite chips

SCREEN: 2.0 dia., PVC SCH 40 20 SLOT, 29.0

GRAVEL PACK: 1250 LBS #4 QUARTZ

RISER PIPE: 2.0, dia., PVC SCH 40

SPACERS, DEPTH: 116.0, 135.0

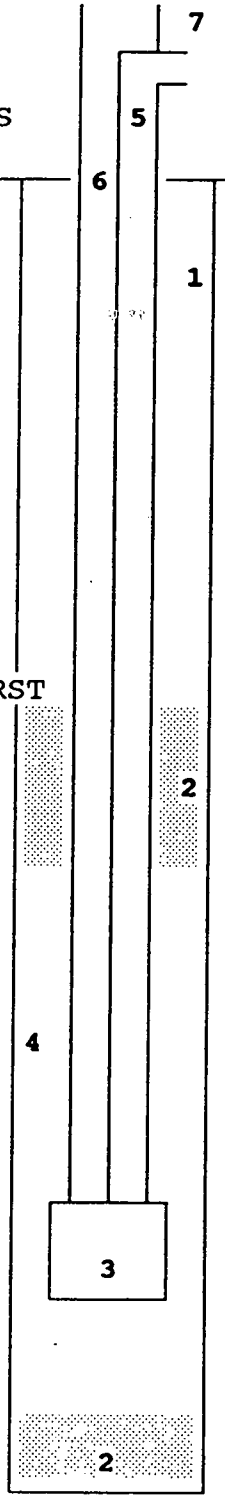
Well drilled dry to approximately 110' with 8" down hole hammer then used 300 gallons of potable water from local water company to bottom of hole. The crew attempted to flush well casing after installation with tremie hole and 150 gallons of potable water with no return. Bentonite backfilled 3' NQ core hole prior to air drilling well.

GEOMCNST R1R2.G_FULL.GDT 2/2/99

COMPANY OPCO GAVIN PLANT
PROJECT FGD LANDFILL
COORDINATES N.348462.47 E.2104474.65 ✓
DATE INSTALLED 2-8-93

WELL CONSTRUCTION SUMMARY ELEVATION (ft. NGVD)
WELL NO. R-9396
REF. DATUM PT. 616.22
GRADE 613.61

NOTE: CASING PROTECTOR DETAILS NOT SHOWN



1 GROUT SEAL
2 BENTONITE SEAL
3 GEOMON UNIT
4 GRAVEL PACK
5 CONTINUOUS UNKINKED NYLON TUBING EXTENDED TO TOP OF CHECK VALUE
6 CASING
7 BRASS 'Y'FITTING
2-9-93 8:40 SWL PRIOR TO FIRST PURGING 7.1.

RECOVERED TO 96.4 .
SWL 8:10 AM 2-10-93 91.6

VOLCLAY GROUT FROM 523.71 TO GRADE.

TOP OF BENTONITE SEAL 523.71

TOP OF GRAVEL PACK 518.62

CHECK VALUE 499.41
TOP OF SCREEN 498.81
BOTTOM OF SCREEN 496.81
GEOMON TIP 496.41

BOTTOM OF GRAVEL PACK 495.61

BOTTOM OF BORE HOLE 492.21

--OTECHNICAL ENGINEERING SECTION
VIL ENGINEERING DESIGN

AMERICAN ELECTRIC POWER SERVICE CORPORATION

GEOMON WELL
CDS-04C

This is log for 9396

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 348,462.4 E 2,104,474.6**

GROUND ELEVATION **613.6** SYSTEM

Water Level, ft	▽ 19.4	▼	▼
TIME	8:38		
DATE	1-4-93		

BORING NO. **R-93096** DATE **11/24/10** SHEET **1** OF **5**

BORING START **2/2/93** BORING FINISH **2/8/93**

PIEZOMETER TYPE WELL TYPE **GM**

HGT. RISER ABOVE GROUND **616.22** DIA **1"**

DEPTH TO TOP OF WELL SCREEN **498.81** BOTTOM **496.81**

WELL DEVELOPMENT BACKFILL **VOLCLAY**

FIELD PARTY **TJH-TLS** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	3.7	5.2	4-6-7	.8					**BROWN,TAN,GRAY SANDY SILT**		
2	SS	8.7	10.2	4-7-9-	.9		5					
3	SS	13.7	15.2	3-7-12	.8		10			**RED SILTY CLAY**		
4	SS	18.7	20.2	4-10-22	1.3		15			**RED,TAN,YELLOW CLAYSTONE** weathered.		

TYPE OF CASING USED

X	NQ-2 ROCK CORE	
X	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 R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93096** DATE **11/24/10** SHEET **2** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/2/93** BORING FINISH **2/8/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
5	SS	23.7	24.5	18-50/.3	.8					**RED CLAY SHALE**		
6	NQ	24.5	25.0		0	0	25					
7	NQ	25.0	35.0		10.0	74				**RED CLAYSTONE**		
										GRAY SANDY CLAYSTONE		
							30					
8	NQ	35.0	45.0		10.0	86	35			**RED CLAYSTONE**		
										GRAY SHALEY CLAYSTONE		
							40			**RED SHALEY CLAYSTONE**		
9	NQ	45.0	55.0		10.0	94	45			**RED,TAN,YELLOW CLAYSTONE** With limestone nodules.		

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93096** DATE **11/24/10** SHEET **3** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/2/93** BORING FINISH **2/8/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							50					
10	NQ	55.0	65.0		7.1	37	55					
							60					
11	NQ	65.0	75.0		10.0	87	65					
							70					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93096** DATE **11/24/10** SHEET **4** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/2/93** BORING FINISH **2/8/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
12	NQ	75.0	85.0		10.0	63	75			**RED CLAY SHALE**		
13	NQ	85.0	95.0		10.0	71	80					
14	NQ	95.0	100.0		4.8	90	85			**RED,TAN,YELLOW CLAYSTONE**		
							90			**GRAY SHALEY LIMESTONE**		89.9 Top of bentonite seal.
										GRAY LIMESTONE		
										RED SHALEY LIMESTONE		
										GRAY SHALEY LIMESTONE Badly broken.		
										GRAY SILTY SHALE		
							95			**GRAY SANDY SHALE**		95.0 Top of gravel pack.

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-93096** DATE **11/24/10** SHEET **5** OF **5**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **2/2/93** BORING FINISH **2/8/93**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										RED AND GRAY SANDY SHALE		
15	NQ	100.0	105.0		5.0	98	100			**GRAY SILTY SHALE** Well cemented		
16	NQ	105.0	115.0		9.9	99	105					
							110					
17	NQ	115.0	121.4		6.4	89	115					114.2 Check value. 114.8 Top of screen. 116.8 Bottom of screen. 117.2 Tip of geomon. 118.0 Bottom of gravel pack.
							120			**RED,TAN,YELLOW CLAYSTONE**		124.4 Bottom of boring.

AEP R1R2.GPJ AEP.GDT 11/24/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

PROJECT **GAVIN FGD CONVERSION PROJECT**

COORDINATES **N 345,817.3 E 2,104,954.5**

GROUND ELEVATION **706.7** SYSTEM **STATE PLANE**

Water Level, ft	▽ 0.0	▼ 130.2	▼
TIME	07:30	07:15	
DATE	10-16-96	10-17-96	

BORING NO. **R-9631** DATE **11/29/10** SHEET **1** OF **10**

BORING START **10/14/96** BORING FINISH **10/17/96**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND DIA **2.0**

DEPTH TO TOP OF WELL SCREEN **187.1** BOTTOM **225.9**

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

FIELD PARTY **TJH-RLY-JCM** RIG **CME-75**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	0.0	1.5	4-6-9	1.0				SC	**DARK BROWN SANDY CLAY** Moist, with trace of coal and gravel size sandstone fragments (fill).		
2	SS	1.5	3.0	7-6-6	1.5				CL	**GRAY CLAY** Moist, with clayshale gravel size shale fragments (fill).		
3	SS	3.0	4.5	4-4-7	1.5							
4	SS	4.5	6.0	7-4-6	1.4		5					
5	SS	6.0	7.4	3-3-50/.4	1.4					**GRAY CLAYSHALE** Dry.		Bailed hole dry water recovered 148.8 to 130.6 30 minutes. Bailed hole dry water recovered 149.6 to 132.6 17 minutes. 6:00 static water level ofter installation hole dry. 10-30-96 7:45 swl 233.0' 10' solid pipe sealed in bottom of hole with bentonite below monitoring zone as a reservoir.
6	SS	7.5	7.9	50/.4	.4							
7	NQ	9.0	10.5		1.2	75						
8	NQ	10.5	15.5		5.0	63	10			**DARK GRAY CLAYSHALE** Hard.		
9	NQ	15.5	20.5		2.7	50	15			**BLACK COAL** **DARK GRAY CLAYSHALE**		

TYPE OF CASING USED

X	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"

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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 **JCM**

AEP R1R2.GPJ AEP.GDT 11/29/10

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-9631** DATE **11/29/10** SHEET **2** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
10	NQ	20.5	25.5		5.0	94						
11	NQ	25.5	35.5		9.9	85	25			**BLACK CARBONACEOUS SHALE** **GRAY LIMESTONE** Hard. **GRAY CLAYSHALE** Hard. **GRAY SANDY SHALE** Hard, limestone nodules		
							30					
							35					
12	NQ	35.5	45.5		9.4	86				**MOTTLED RED, GRAY, GREEN CLAYSHALE** Hard.		
							40			**GRAY SANDY CLAYSHALE** Hard, limestone nodules, pyrite.		
							45					
13	NQ	45.5	55.5		10.0	100						

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY

BORING NO. **R-9631** DATE **11/29/10** SHEET **3** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										LIGHT GRAY SANDSTONE Fine grain, well cemented.		
										BLUE GRAY SANDY SHALE Limestone nodules, pyrite, some shaley sandstone.		
							50					
										Changing to light gray		
										BLUE GRAY SANDSTONE V-fine grain, well cemented.		
14	NQ	55.5	65.5		9.8	98	55					
										MOTTLED RED, PURPLE, GREEN, BLUE GREEN CLAYSHALE Hard, sandy in area, hard.		
							60					
										RED CLAYSHALE Hard, limestone.		
15	NQ	65.5	75.5		10.0	100	65					
										LIGHT BLUE GRAY SHALEY SANDSTONE Hard.		
							70			**BLUE GRAY SANDSTONE** Fine grain, well cemented, hard.		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-9631** DATE **11/29/10** SHEET **4** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							75			**GRAY CLAYSHALE** Hard. **RED CLAYSHALE** Hard.		
16	NQ	75.5	85.5		10.0	95	80			**MOTTLED BLACK, YELLOW, PURPLE, BROWN CLAYSHALE** Medium hard.		
										LIGHT GRAY SANDY CLAYSHALE Hard, more sand at bottom, soft layer 84.2, limestone nodules.		
17	NQ	85.5	95.5		10.0	100	85					
							90			**RED, YELLOW BROWN CLAYSHALE** Hard.		
										MOTTLED PURPLE RED, YELLOW, BROWN CLAYSTONE Soft		
18	NQ	95.5	105.5		10.0	83	95					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-9631** DATE **11/29/10** SHEET **5** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							100					
							105					
19	NQ	105.5	111.8		5.5	0						
							110			**RED, BLUE GRAY CLAYSHALE** Hard, limestone nodules.		
							115					
21	NQ	115.5	125.5		10.0	100						
20	NQ	118.8	122.5		3.7	100	120					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-9631** DATE **11/29/10** SHEET **6** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							125					
22	NQ	125.5	135.5		10.0	100						
							130					
23	NQ	135.5	145.5		10.0	100	135			**BLUE GRAY SANDSTONE** Fine grain, hard, well cemented, shale partings grading to sandstone at 136.5 **Vertical crack 136.8 to 138.3.**		
							140			**BLUE GRAY SANDY CLAYSHALE** Hard, pyrite. **RED CLAYSHALE** Hard, limestone nodules.		
							145			**BLUE GRAY SANDY SHALE** Limestone nodules, pyrite, hard.		
24	NQ	145.5	155.5		10.0	100				**RED CLAYSHALE** Hard, limestone nodules. **BLUE GRAY CLAYSHALE** Hard, limestone nodules. **RED CLAYSHALE** Hard, limestone nodules.		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-9631** DATE **11/29/10** SHEET **7** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										RED BLUE GREEN SANDY CLAYSTONE Medium hard, limestone nodules, changing to more red with depth.		
25	NQ	155.5	165.5		10.0	100	155					
							160					
26	NQ	165.5	175.5		10.0	100	165					
							170					
27	NQ	175.5	185.5		10.0	95	175					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-9631** DATE **11/29/10** SHEET **8** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							180					178.4 top of seal.
							185					185.1 top of sand.
												187.1 top of screen.
							190			**.4 LAYER GRAY SHALEY LIMESTONE**		
29		195.5	205.5		10.0	100	195					
28	NQ	198.5	208.5		10.0	100				**BLUE GRAY SHALEY SANDSTONE** Hard, limestone nodules.		
							200			**RED CLAYSHALE** Hard, limestone nodules.		
										BLUE GRAY CLAYSHALE Hard, limestone		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-9631** DATE **11/29/10** SHEET **9** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										nodules, changing to red 203.1 to 206.2.		
30	NQ	205.5	215.5		10.0	100	205			**BLUE GRAY SANDSTONE** Shale parting, v-fine grain, well cemented.		
										BLUE GRAY SANDY SHALE Sandstone partings, limestone.		
31	NQ	215.5	225.5		10.0	100	210					
							215					
							220					
32	NQ	225.5	235.3		9.8	100	225					225.9 bottom of screen. 227.0 bottom of sand.

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **R-9631** DATE **11/29/10** SHEET **10** OF **10**

PROJECT **GAVIN FGD CONVERSION PROJECT** BORING START **10/14/96** BORING FINISH **10/17/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										RED AND GRAY CLAYSHALE Hard.		
							230			**MOTTLED RED, GRAY, PURPLE SANDY CLAYSTONE** Medium hard, limestone nodules.		
							235			**Longitude 38 56 56.36749 N** **Latitude 82 07 51.01131 W**		

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

COORDINATES **N 355,372.6 E 2,065,722.5**

GROUND ELEVATION **777.3** SYSTEM **STATE PLANE**

WATER LEVEL	▽ 23.7	▼	▽
TIME			
DATE	6-26-96		

BORING NO. **96152** DATE SHEET **1** OF **5**

BORING START **06/25/96** BORING FINISH **06/27/96**

PIEZOMETER TYPE WELL TYPE **OW**

HGT. RISER ABOVE GROUND **2.16** DIA

DEPTH TO TOP OF WELL SCREEN **127.0** BOTTOM **166.0**

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

FIELD PARTY **MCR-REB-JCM** RIG **BK-81**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							0					
									SP	**BROWN SANDSTONE** Dry fine grain.		
							5					Latitude 38 58 30.76511 N. = Longitude 082 09 28.87729 W.
										BROWN AND GRAY SAND Fine grain, dry.		
							10					
									SC	**BROWN SANDY CLAY** Moist, fine grain with 3/4" gravel.		
							15					
									SP	**BROWN SAND** Moist, fine grain.		
							20					
							25					
							30					
										BROWN AND GRAY CLAYSHALE Dry.		
							35					
										N6 MEDIUM LIGHT GRAY LIMESTONE Vertical crack from 37.8-38.8.		
							40			**N6 MEDIUM GRAY CLAY SHALE**		
							45					

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TYPE OF CASING USED

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

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 **REB**

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

BORING NO. **96152** DATE SHEET **2** OF **5**

BORING START **06/25/96** BORING FINISH **06/27/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							55			10YR 4/6 MODERATE REDDISH BROWN CLAY SHALE		
										5YR 4\2 GRAYISH RED SANDY SHALE		
										5R 5/4 MODERATE RED CLAYSHALE		
										N5 MEDIUM GRAY CLAYSHALE		
										N7 LIGHT GRAY SANDY SHALE		
							60			MOTTLED GRAY, RED, GREEN CLAYSHALE		
							65			N7 LIGHT GRAY SANDY SHALE		
										LIGHT GRAY CLAYSHALE		
							70			5R 4/2 GRAY REDDISH CLAYSTONE		
										RETURN WATER		
										pH 7.22		
										COND 925		
							75			DRILL WATER		
										pH 6.86		
										COND 869		
										N5 MEDIUM GRAY SANDY SHALE		
							80			RED AND GRAY CLAYSTONE With calcite.		
										RED AND GRAY CLAYSHALE		
										5R 4/6 MODERATE RED CLAYSTONE		
							85			5R 4/6 MODERATE RED CLAYSHALE		
										MOTTLED RED, GREEN, GRAY CLAYSTONE		
							90			MOTTLED GRAY, GREEN, RED CLAYSHALE		
										5GY 6/1 REDDISH GRAY CLAYSTONE		
							95			10R 4\2 GRAYISH GREENISH RED CLAYSHALE		
							100			10R3\4 DARK REDDISH BROWN CLAYSTONE		Lost all return water 97.0
							105			MOTTLED RED, GRAY, BROWN CLAYSHALE		
										MOTTLED RED, BROWN, GRAY CLAYSTONE		
							110			10R 4\6 MODERATE REDDISH BROWN		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

BORING NO. **96152** DATE SHEET **3** OF **5**

BORING START **06/25/96** BORING FINISH **06/27/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							120			CLAYSHALE 5R 4\6 MODERATE RED CLAYSTONE 5R 4\6 MODERATE RED CLAYSHALE		118.0 Top of seal.
							125			N6 MEDIUM LIGHT GRAY SANDY SHALE		124.1 Top of sand.
							130					
							135			N6 MEDIUM LIGHT GRAY SANDSTONE With shale streaks.		
							140					
							145			N6 MEDIUM LIGHT GRAY CLAYSHALE With pyrite. 10R 3\4 DARK REDDISH BROWN CLAYSHALE		
							150			N5 MEDIUM GRAY SANDY SHALE N7 LIGHT GRAY SANDSTONE Well cemented.		Regained all drill water.
							155			N7 LIGHT GRAY SANDY SHALE N7 MEDIUM DARK GRAY CLAYSHALE With calcite and limestone nodules.		Used 3500 gallons of drill water.
							160					
							165			N5 MEDIUM GRAY SANDY SHALE N7 LIGHT GRAY SANDSTONE		166.0 Bottom of screen.
							170			N4 MEDIUM DARK GRAY CLAYSHALE 5R 4\6 MODERATE RED AND GRAY CLAYSHALE N5 MEDIUM GRAY CLAYSTONE With limestone nodules.		169.1 Bottom of sand.
							175			5R 4\6 MODERATE RED CLAYSTONE With limestone nodules. N6 MEDIUM LIGHT GRAY CLAYSTONE GRAY LIMESTONE 10R 4\6 MODERATE REDDISH BROWN		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY **OHIO POWER COMPANY** BORING NO. **96152** DATE _____ SHEET **4** OF **5**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE** BORING START **06/25/96** BORING FINISH **06/27/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										CLAYSTONE N5 MEDIUM GRAY CLAYSHALE RED AND GRAY CLAYSHALE		
							185			MOTTLED RED, GRAY, BROWN CLAYSTONE With limestone nodules.		
							190					
							195					
							200					
							205			MOTTLED RED GRAY, BROWN CLAYSTONE With limestone nodules.		
							210					
							215			N6 MEDIUM LIGHT GRAY SANDY SHALE N6 MEDIUM LIGHT GRAY CLAYSHALE With calcite and limestone nodules.		Used 5000 gallons of drill water.
							220					
							225			N7 LIGHT GRAY SANDSTONE		
							230			N7 LIGHT GRAY SANDY SHALE		
							235					
							240					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY **OHIO POWER COMPANY** BORING NO. **96152** DATE _____ SHEET **5** OF **5**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE** BORING START **06/25/96** BORING FINISH **06/27/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										N6 MEDIUM LIGHT GRAY CLAYSHALE		
							250					
										N1 BLACK CLAYSHALE		
							255					

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

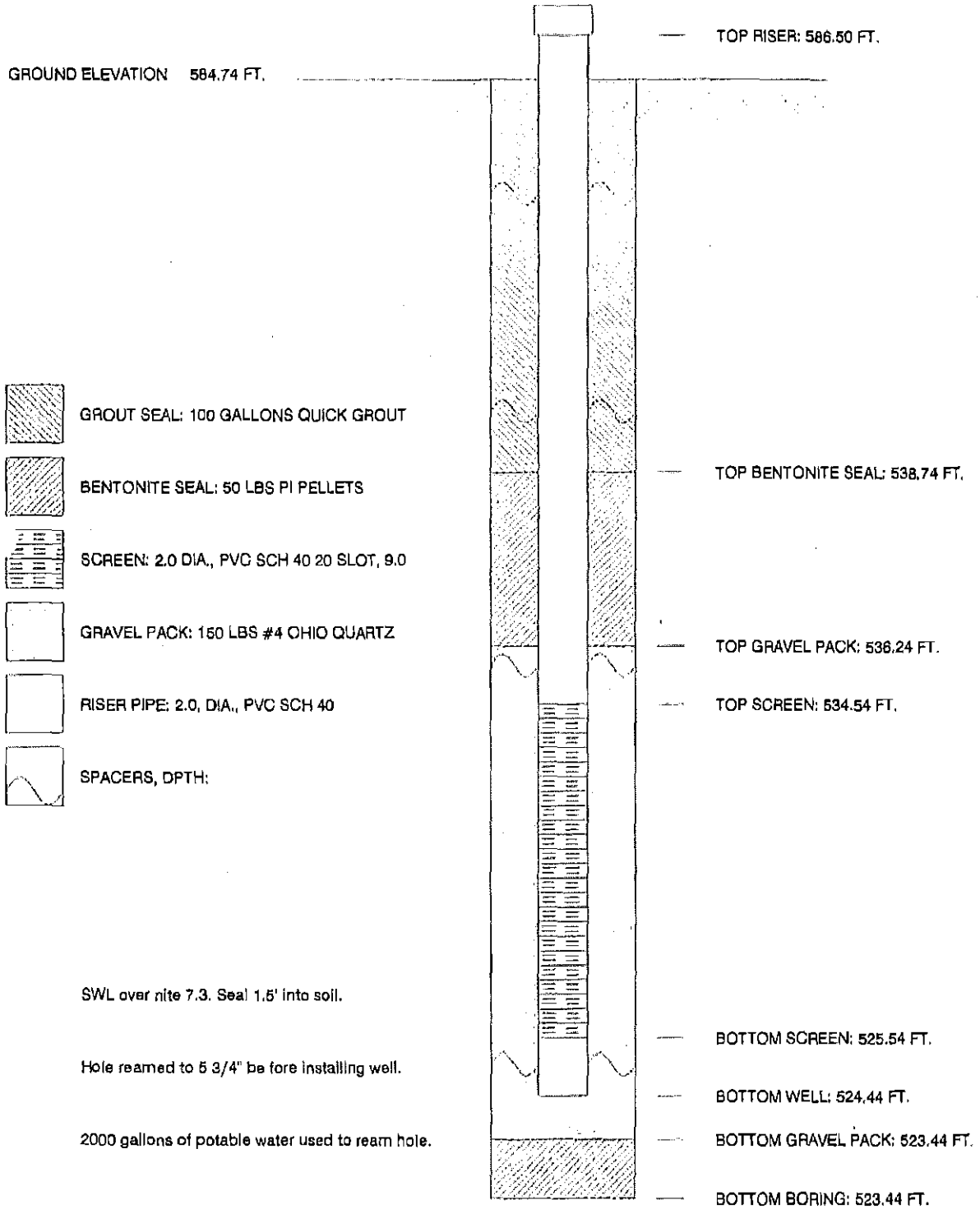
JOB NUMBER

COMPANY **OHIO POWER COMPANY** WELL No. **96158** BORING No. **96158** INSTALLED **11/29/95**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

COORDINATES **N 351,115.0 E 2,070,634.8**

SYSTEM **STATE PLANE**



SWL over nite 7.3. Seal 1.5' into soil.

Hole reamed to 5 3/4" be fore installing well.

2000 gallons of potable water used to ream hole.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

COMPANY OHIO POWER COMPANY

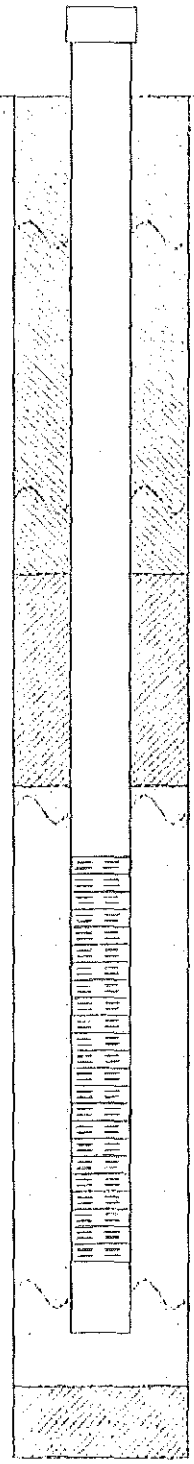
WELL No. 96157 BORING No. 96157 INSTALLED 11/21/95

PROJECT GAVIN PLANT FLY ASH POND CLOSURE

COORDINATES N 351,118.0 E 2,070,648.6

SYSTEM STATE PLANE

GROUND ELEVATION 584.59 FT.



TOP RISER: 586.52 FT.

TOP BENTONITE SEAL: 557.89 FT.

TOP GRAVEL PACK: 553.39 FT.

TOP SCREEN: 546.89 FT.

BOTTOM SCREEN: 537.89 FT.

BOTTOM WELL: 536.79 FT.

BOTTOM GRAVEL PACK: 536.79 FT.

BOTTOM BORING: 536.49 FT.

GROUT SEAL: 50 GALLONS QUICK GROUT

BENTONITE SEAL: 125 LBS PI PELLETS

SCREEN: 2.0 DIA., PVC SCH 40 20 SLOT, 9.0

GRAVEL PACK: 475 LBS #4 OHIO QUARTZ

RISER PIPE: 2.0, DIA., PVC SCH 40

SPACERS, DPTH:

Approximately 150 gallons of potable water to drill hole.

SWL 7.2 after 5 days.

SWL over nite 38.6, Hole drilled using 6.25 HSA.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

COORDINATES **N 352,338.7 E 2,061,912.6**

GROUND ELEVATION **851.8** SYSTEM **STATE PLANE**

WATER LEVEL	▽ 72.2	▼ 66.9	▽ 77.3
TIME			
DATE	1-9-96	1-10-96	1-11-96

BORING NO. **96156** DATE SHEET **1** OF **6**

BORING START **01/03/96** BORING FINISH **01/11/96**

PIEZOMETER TYPE WELL TYPE **GM**

HGT. RISER ABOVE GROUND DIA **1.0**

DEPTH TO TOP OF WELL SCREEN **220.1** BOTTOM **222.1**

WELL DEVELOPMENT **YSEE NOTES** BACKFILL **QUICK GROUT**

FIELD PARTY **MCR-RLY-PDK** RIG **BK-81**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	SS	1.7	3.2	1-1-2	.1				CL	DECON AT GAVIN FAD 1-2-96 USING LEADING CREEK RUAL WATER BROWN CLAY		
2	SS	6.7	7.4	38-50/.2	.6		5			BROWN CLAY SHALE Dry.		Latitude 38 58 00.91662 N. = Longitude 082 10 17.26120 W.
3	SS	11.7	11.7	50/0	0		10					
4	SS	13.6	13.6	50/0	0	0				N6 MEDIUM LIGHT GRAY CLAYSHALE		
5	NQ	13.7	15.0		1.3	51	15			10YR 6\6 DARK YELLOWISH ORANGE SANDY CLAYSTONE		
6	NQ	15.0	24.0		9.0					10YR 6\6 DARK YELLOWISH ORANGE SANDSTONE		
7	NQ	24.0	30.0		1.6	0	20					
8	NQ	30.0	35.0		5.0	46	25					
9	NQ	35.0	45.0		10.0	83	30					
10	NQ	45.0	55.0		10.0	86	35					
							40					
							45					

TYPE OF CASING USED

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

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 **MCR**

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY** BORING NO. **96156** DATE SHEET **2** OF **6**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE** BORING START **01/03/96** BORING FINISH **01/11/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
11	NQ	55.0	65.0		10.0	70	55			10YR 5\4 MODERATE YELLOWISH BROWN SANDSTONE		
										58.3 GRAY CLAY SEAM		
							60			5B 5\1 MEDIUM BLUISH GRAY SANDSTONE		
12	NQ	65.0	70.0		5.0	60	65			N5 MEDIUM GRAY SANDSTONE		
										N3 DARK GRAY CLAYSTONE		
13	NQ	70.0	75.0		5.0	60	70			N3 DARK GRAY CLAYSHALE		
14	NQ	75.0	79.0		4.0	50	75			N3 DARK GRAY CLAYSTONE Well cemented.		
										BLACK COAL		
15	NQ	79.0	79.2		.2	46				N4 MEDIUM DARK GRAY CLAYSHALE Soft.		
16	NQ	79.2	84.8		4.9		80			BLACK COAL		
										N4 MEDIUM DARK GRAY CLAYSHALE		
17	NQ	84.8	94.8		10.0	60	85					
							90					
18	NQ	94.8	97.3		2.5	0	95			N4 MEDIUM DARK GRAY CLAYSHALE With limestone.		
										DARK GRAY SANDY LIMESTONE Hard.		
19	NQ	97.3	104.8		7.0					Drill water pH 7.45, return water 7.20 Summer test		
										GRAY CLAYSHALE		
							100					
20	NQ	104.8	113.8		9.0	62	105			10R 4\6 MODERATE REDDISH BROWN CLAYSHALE Soft.		
							110					
21	NQ	113.8	119.8		6.0	83				5b 5\1 MEDIUM BLUISH GRAY CLAYSTONE		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY** BORING NO. **96156** DATE SHEET **3** OF **6**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE** BORING START **01/03/96** BORING FINISH **01/11/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										Well cemented.		
22	NQ	119.8	124.8		5.0	80	120			5rp 4\2 GRAYISH RED PURPLE CLAYSTONE With high angle fracture at 121.9. 5B 5\1 MEDIUM BLUISH SANDY CLAYSTONE Well cemented.		
23	NQ	124.8	134.8		10.0	90	125					Used approximately 3000 gallons of water to this point.
							130					
24	NQ	134.8	144.8		10.0	83	135			10R 4\6 MODERATE REDDISH BROWN CLAYSHALE		
										N5 MEDIUM GRAY SANDY CLAYSTONE CLARKSBURG LS HORIZON		
							140			10R 4\6 MODERATE REDDISH BROWN CLAYSHALE		
25	NQ	144.8	154.8		10.0	63	145			5YR 4\1 BROWNISH GRAY CLAYSHALE		
							150					
26	NQ	154.8	164.8		10.0	46	155			10YT 4\2 DARK YELLOWISH BROWN CLAYSHALE Soft.		
							160					
27	NQ	164.8	174.8		10.0	46	165			10R 3\4 DARK REDDISH BROWN CLAYSHALE Soft.		
							170					171.0 Top of bentonite seal.
28	NQ	174.8	178.8			58	175			10R 4\6 MODERATE REDDISH BROWN CLAYSHALE Soft.		175.5 Top of sand.
29	NQ	178.8	184.8			60				10R 4\6 MODERATE REDDISH BROWN		Used approximately

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY** BORING NO. **96156** DATE SHEET **4** OF **6**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE** BORING START **01/03/96** BORING FINISH **01/11/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										CLAYSTONE Hard.		5000 gallons of water to this point.
										GRAY SANDY CLAYSTONE Hard.		
30	NQ	184.8	192.8		8.0	98	185			**5B 5\1 MEDIUM BLUISH GRAY SANDY SILTSTONE** Fine grain, well cemented.		
31	NQ	192.8	198.8		6.0	100	190			**SILTY SANDSTONE** Medium to fine grain, well cemented, cross bedding throughout.		
32	NQ	198.8	208.8		9.9	99	195			**N7 SANDY SILTSTONE** Fine grain, well cemented.		
							200					
33	NQ	208.8	218.8		10.0	92	205			**N7 LIGHT GRAY SANDSTONE** Medium to fine grain, well cemented, cross bedding throughout.		
							210					
34	NQ	218.8	228.8		10.0	83	215			**GRAY LIMESTONE** Hard. ELK LICK		
										N6 MEDIUM LIGHT GRAY CLAYSTONE Well cemented.		
							220			**MEDIUM DARK GRAY CLAYSHALE** Well cemented, hard.		219.6 Check valve. 220.1 Top of screen. 222.1 Bottom of screen. 224.0 Top of bottom seal.
35	NQ	228.8	238.8		9.4	81	225			**10R 4\2 GRAYISH RED CLAYSHALE**		
							230			**10R 4\2 GRAYISH RED CLAYSHALE**		Used approximately 6500 gallons of water to this point.
36	NQ	238.8	243.8		5.0	80	235					
							240			**10 R 2\2 VERY DUSKY RED CLAYSHALE** Hard.		
37	NQ	243.8	251.8		7.8	50				**N6 MEDIUM LIGHT GRAY CLAYSHALE** limestone nodules throughout.		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER

COMPANY **OHIO POWER COMPANY** BORING NO. **96156** DATE SHEET **5** OF **6**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE** BORING START **01/03/96** BORING FINISH **01/11/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							250			N6 MEDIUM LIGHT GRAY SHALEY LIMESTONE N6 MEDIUM LIGHT GRAY CLAYSHALE 10R 2\2 VERY DUSKY RED CLAYSHALE		
38	NQ	251.8	258.8		7.0	97	255			5G 6\1 GREENISH GRAY CLAYSTONE Hard with limestone nodules throughout.		
39	NQ	258.8	268.8		10.0	93	260			N6 MEDIUM LIGHT GRAY SILTSTONE Fine grain, well cemented, hard.		
40	NQ	268.8	275.8		7.0	57	265			5YR 4\1 BROWNISH GRAY CLAYSHALE 10R 2\2 VERY DUSKY RED CLAYSHALE Hard, soft weathered area at 270.4- 274.5.		
41	NQ	275.8	283.8		7.6	38	270			N6 MEDIUM LIGHT GRAY SILTY CLAY SHALE Hard.		
42	NQ	283.6	293.6		10.0	76	275			N6 MEDIUM LIGHT GRAY LIMESTONE Fracture bottom .3. N5 MEDIUM GRAY SILTY CLAYSHALE Medium hard, high angle fractures throughout.		Used approximately 8500 gallons of water to this point.
43	NQ	293.8	303.8		10.0	93	280			N5 MEDIUM GRAY SHALEY SANDSTONE Hard, fine to medium grain, cross bedding throughout.		
44	NQ	303.8	313.8		9.7	88	285					
							290					
							295					
							300					
							305					

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY **OHIO POWER COMPANY** BORING NO. **96156** DATE _____ SHEET **6** OF **6**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE** BORING START **01/03/96** BORING FINISH **01/11/96**

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPH LOG	USCS	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
45	NQ	313.8	323.8		9.9	77	315			**N4 MEDIUM DARK GRAY SILTY CLAYSHALE** Fracture. **LIGHT GRAY SHALEY LIMESTONE** PORTERSVILLE LS **SILTY CLAY SHALE** **SANDY CLAYSTONE** Hard, fine grain, limestone nodules throughout, calcite deposits 319.0.		
46	NQ	323.8	333.8		10.0	96	320			**N5 MEDIUM GRAY SANDY CLAYSTONE** Hard, fine grain, calcite throughout.		
47	NQ	333.8	343.8		9.8	97	325			**N5 MEDIUM GRAY SILTY SANDSTONE** Hard, well cemented, fine grain, cross bedding throughout.		
48	NQ	343.8	353.8		10.0	99	330					
49	NQ	353.8	363.8		9.4	84	335			**N5 MEDIUM GRAY SANDSTONE** Hard, well cemented, medium grain, some cross bedding.		
							340					
							345					
							350					
							355					
							360			**N5 MEDIUM GRAY SANDY CLAYSTONE** Fine grain, soft area at 361.2-361.5		

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____

PROJECT **GAVIN FLY ASH POND CLOSURE**

COORDINATES _____

GROUND ELEVATION _____ SYSTEM _____

Water Level, ft	▽ 10.2	▼ 97.8	▽
TIME	7:00AM		
DATE	8/4/99	9/9/99	

BORING NO. **9910** DATE **3/7/12** SHEET **1** OF **7**

BORING START _____ BORING FINISH _____

PIEZOMETER TYPE _____ WELL TYPE _____

HGT. RISER ABOVE GROUND _____ DIA _____

DEPTH TO TOP OF WELL SCREEN _____ BOTTOM _____

WELL DEVELOPMENT _____ BACKFILL _____

FIELD PARTY _____ RIG _____

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
							5			**NO SPT SAMPLES TAKEN** Drilled 3.25" HSA to top of bedrock and started coring		Water for drilling and deconning came from G-5 belt station using Leading Creek Corp. water. Deconned all tools and drill before starting to drill on 8/2/99. Boring Geo-logged and grouted on 8/12/99
							10				▽	
							15					

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"

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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_GAVIN_FLY_ASH_POND.GPJ AEP.GDT 3/7/12

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **9910** DATE **3/7/12** SHEET **2** OF **7**

PROJECT **GAVIN FLY ASH POND CLOSURE** BORING START _____ BORING FINISH _____

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
1	NQ-2	23.9	29.8		5.6	45				**10R 3/4 DARK REDDISH BROWN CLAY SHALE**		
										N3 DARK GRAY CLAY SHALE		
2	NQ-2	29.8	39.8		8.6	88				**10R 3/4 DARK REDDISH BROWN CLAY SHALE** Slightly weathered		
										N4 MEDIUM DARK GRAY CLAY SHALE		
										10YR 5/4 MODERATE YELLOWISH BROWN & N5 MEDIUM GRAY CLAY SHALE		
										10R 3/4 DARK REDDISH BROWN CLAY SHALE		
3	NQ-2	39.8	49.8		7.1	99				**10R 3/4 DARK REDDISH BROWN CLAY SHALE** Slightly weathered		
										MULTI COLORED CLAY SHALE N5 MEDIUM GRAY, 10YR 6/6 DARK YELLOWISH ORANGE,& 5RP VERY DUSKY		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **9910** DATE **3/7/12** SHEET **3** OF **7**

PROJECT **GAVIN FLY ASH POND CLOSURE** BORING START _____ BORING FINISH _____

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										RED PURPLE		
4	NQ-2	49.8	56.8		4.7	83				**5YR 3/4 MODERATE BROWN CLAY SHALE** With 5Y 5/6 LIGHT OLIVE GREEN & N6 MEDIUM LIGHT GRAY MARBLING THROUGHOUT Slightly weathered, semisoft		
5	NQ-2	56.8	64.8		8.3	77				**10R 4/6 MODERATE REDDISH BROWN CLAY SHALE** With N6 MEDIUM LIGHT GRAY MARBLING THROUGHOUT 10R 4/2 GRAYISH RED LIMESTONE NODULES AT 62.0' & 63.3'		
6	NQ-2	64.8	74.8		9.9	94				**10R 3/4 DARK REDDISH BROWN CLAY SHALE**		
										N4 MEDIUM DARK GRAY FINE GRAIN SANDSTONE Well cemented, hard		
										N4 MEDIUM DARK GRAY & N6 MEDIUM LIGHT GRAY SILTSTONE With cross bedding, hard, well cemented		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **9910** DATE **3/7/12** SHEET **4** OF **7**

PROJECT **GAVIN FLY ASH POND CLOSURE** BORING START _____ BORING FINISH _____

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
7	NQ-2	74.8	84.8		9.9	76						Used 1800 gallons of drill water to this point - 74.8'
										N5 MEDIUM GRAY SILTY CLAY SHALE Well cemented & bonded, hard		
										10R 3/4 DARK REDDISH BROWN CLAY SHALE Slightly weathered from 80.8' - 84.2'		
8	NQ-2	84.8	94.8		9.9	95				**5B 5/1 MEDIUM BLUISH GRAY SILT STONE**		
										10R 3/4 DARK REDDISH BROWN CLAY SHALE With N5 MEDIUM GRAY LIMESTONE NODULES THROUGHOUT		
										N6 MEDIUM LIGHT GRAY & N2 GRAYISH BLACK FINE GRAIN SILT STONE With cross bedding		
9	NQ-2	94.8	104.8		10	93				**N4 MEDIUM DARK GRAY & N5 MEDIUM GRAY CLAY SHALE**		
										10R 3/4 DARK REDDISH BROWN & N3 DARK GRAY CLAY SHALE		
										5B 5/1 MEDIUM BLUISH GRAY FINE GRAIN		

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **9910** DATE **3/7/12** SHEET **5** OF **7**

PROJECT **GAVIN FLY ASH POND CLOSURE** BORING START _____ BORING FINISH _____

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
										SANDY SILT STONE Well cemented, hard		
										N4 MEDIUM DARK GRAY CLAY SHALE With pyrite throughout		
										10R 3/4 DARK REDDISH BROWN CLAY SHALE		
10	NQ-2	104.8	114.8		9.8	60				**MULTI COLORED WEATHERED CLAY SHALE** 10R 3/4 DARK REDDISH BROWN, 5Y 6/4 DUSKY YELLOW, 5RP 2/2 VERY DUSKY RED PURPLE, 5Y 5/6 LIGHT OLIVE BROWN, & N3 DARK GRAY		
11	NQ-2	114.8	123.8		8.8	80				**MULTI COLORED WEATHERED CLAY SHALE** 10R 3/4 DARK REDDISH BROWN, 5Y 6/4 DUSKY YELLOW, 5RP 2/2 VERY DUSKY RED PURPLE, 5Y 5/6 LIGHT OLIVE BROWN, & N3 DARK GRAY With a lot of slick & slides		SWL at 10.2' on 8/4/99; NQ hole to 114.8'

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AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **9910** DATE **3/7/12** SHEET **6** OF **7**

PROJECT **GAVIN FLY ASH POND CLOSURE** BORING START _____ BORING FINISH _____

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
12	NQ-2	123.8	133.8		9.5	65						
13	NQ-2	133.8	143.8		9.5	55						
14	NQ-2	143.8	152.8		9.0					**5RP 2/2 VERY DUSKY RED PURPLE CLAY SHALE** With limestone nodules		
										10R 3/4 DARK REDDISH BROWN & 10Y 4/2 GRAYISH OLIVE CLAY SHALE With cross bedding, slightly weathered		Used 3800 gallons of drill water to this

Continued Next Page

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

LOG OF BORING

JOB NUMBER _____

COMPANY _____ BORING NO. **9910** DATE **3/7/12** SHEET **7** OF **7**

PROJECT **GAVIN FLY ASH POND CLOSURE** BORING START _____ BORING FINISH _____

SAMPLE NUMBER	SAMPLE	SAMPLE DEPTH IN FEET FROM	SAMPLE DEPTH IN FEET TO	STANDARD PENETRATION RESISTANCE BLOWS / 6"	TOTAL LENGTH RECOVERY	RQD %	DEPTH IN FEET	GRAPHIC LOG	U S C S	SOIL / ROCK IDENTIFICATION	WELL	DRILLER'S NOTES
												point - 148.8'
										5BG 5/2 GRAYISH BLUE GREEN CLAY SHALE Well cemented		Stopped boring at 152.8' on 8/4/99 Flushed boring with approx. 700 gallons of water.

WELL NUMBER RB12-01/MW-20

Geosyntec consultants

CLIENT AEP
PROJECT NAME Gavin FAR Closure Site Investigation
PROJECT NUMBER CHE8273
PROJECT LOCATION Cheshire, OH
DATE STARTED 5/8/12 **COMPLETED** 5/10/12
GROUND ELEVATION 771.8 ft **HOLE SIZE** 5.5 inches
DRILLING CONTRACTOR Frontz Drilling
GROUND WATER LEVELS:
DRILLING METHOD Air Rotary/Rockcore
AT TIME OF DRILLING ---
LOGGED BY Jim Bannantine **CHECKED BY** J. Neil Couch
AT END OF DRILLING ---
NORTHING, EASTING 355665.7 N, 2063769.2 E
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0					Casing Top Elev: 774.3 (ft) Casing Type: Schd. 80 PVC
				0.5 (771.3) CLAY (CL) -gray (7.5YR 5/1); some SILT and SAND; low to medium plastic; very stiff; moist	
	SC 1	38" / 60"		SAND (SW-SC) -reddish yellow (7.5YR 6/6 to 7.5YR 5/8); some CLAY; trace COAL; fine grained; mostly quartz; loose	
5				5.0 (766.8)	
	SC 2	45" / 60"		SAND (SW-SM) -light yellowish brown (2.5Y 6/3) to olive yellow (2.5Y 6/6); little silt; fine grained; mottled; stiff	
				8.3 (763.6) 8.5 (763.3) COAL -dark gray (N3) to grayish black (N2); thinnly bedded, soft	
10				SHALE/CLAYSTONE - medium gray (N5); thinly to very thinly bedded; soft to very soft; damp 10.0 (761.8)	
	SC 3	48" / 48"		SHALE/CLAYSTONE - medium gray (N5); thinly to very thinly bedded; soft to very soft; damp	
				14.0 (757.8)	
15				SHALE - thinly bedded; some calcareous nodules; iron staining on fractured surfaces; breaks easily along bedding planes; trace pyrite near top	
	RC 1	39" / 84"			
20					

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
20					
				1 ft - SHALE - as above from 14.0 to 21.0 ft 1 ft - SHALE - medium gray; hard; massive; conformable with overlying unit 3 FT - MUDSTONE - greenish black (5 G 2/1); some carbonaceous clasts; massive; some wet mud on fracture planes	
25	RC 2	60" / 120"			
30				31.0 740.8	
				0.1 ft to 0.2 ft - CLAYSTONE - medium gray (N5) to medium dark gray (N4); very dark red (5 R 2/6) carbonaceous nodules 0.1 ft - Soft gray mud 1.25 ft - SHALE / CLAYSTONE - medium dark gray (N4); some olive brown (5 Y 4/4) carbonaceous nodules; massive; soft; many bedding planes have slickenslided surfaces 1.58 ft - SANDSTONE - greenish gray (5GY 6/1) to dark gray (5 GY 4/1) to medium dark gray (N4); moderately hard	
35	RC 3	39" / 120"			
40				41.0 730.8	

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
45	RC 4	80" / 120"		4.33 ft - SANDSTONE **TOP OF CONNELSVILLE SANDSTONE** - as above FROM 31.0 to 41.0 ft; some reddish carbonaceous nodules and thin silt layers; moderately hard 4-inch SHALE; thinly bedded 1.33 ft - CLAYSTONE/SILTSTONE - medium gray (N5); massive; soft 0.67 ft - CLAYSTONE - very dusky purple (5 RP 2/2); massive; moderately soft *(continued)*	
50				51.0 720.8	
55	RC 5	100" / 120"		CLAYSTONE/MUDSTONE - as above; medium bluish gray (5 B 5/1) to very dusky purple (5 RP 2/2); some cabonaceous nodules; breaks easily across some bedding planes; several slickensided surfaces	
60				61.0 710.8	
65				1.1 ft - SANDY SILTY SHALE - medium dark gray (N4), little pyrite 3.3 ft - CLAYSTONE/SILTSTONE **TOP OF CLARKSBURGH RED BEDS** - very dark red (5 R 2/6); thinly bedded in sections, thickly bedded in others; occassional very finely bedded gray shale; some slickensided surfaces 0.25 ft - **CLARKSBURGH LIMESTONE** - black (N7); massive; non-crystalline	

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
70	RC 6	56" / 120"		1.1 ft - SANDY SILTY SHALE - medium dark gray (N4), little pyrite 3.3 ft - CLAYSTONE/SILTSTONE **TOP OF CLARKSBURGH RED BEDS** - very dark red (5 R 2/6); thinly bedded in sections, thickly bedded in others; occassional very finely bedded gray shale; some slickensided surfaces 0.25 ft - **CLARKSBURGH LIMESTONE** - black (N7); massive; non-crystalline *(continued)*	
71.0				700.8	
75	RC 7	67" / 120"		SILTSTONE/MUDSTONE - light olive brown (5 Y 5/6) to dusky red (5 R 3/4); some calcareous nodules; massive; some slickensided surfaces	
80					
81.0				690.8	
85	RC 8	0" / 120"		No Recovery	

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
90				No Recovery *(continued)*	
				91.0 680.8	
				No Recovery	
95	RC 9	0" / 120"			
100					Grout Seal
				101.0 670.8	
				SANDSTONE **MORGANTOWN SANDSTONE** - dusky yellowish green (10 GY 3/2) and dusky red (5 R 3/4) at about 108 ft depth; some SILTSTONE/MUDSTONE; some CLAYSTONE; little pyrite; massive	
105	RC 10	113" / 120"			Schd. 80 Solid Riser Pipe
110					
				111.0 660.8	

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115	RC 11	102" / 120"		2.2 ft - SANDSTONE - grayish blue green (5 BG 5/2); some pyrite nodules; micaceous 6.3 ft - SILTSTONE to MUDSTONE - MUDSTONE is very thinly bedded to massive; breaks easily along some bedding planes; several slickensided surfaces *(continued)*	
120				121.0 650.8	
125	RC 12	115" / 120"		0.4 ft - MUDSTONE - as above from 111.0 to 121.0 ft; pyrite rich at base 1.6 ft - CLAYSTONE - dark reddish brown (10 R 3/4) to dusky red (5 R 3/4); some SILTSTONE; massive; some slickensided surfaces 6.8 ft - SANDY SHALE - grayish green (10 G 4/2); trace pyrite; micaceous; very thickly bedded; slickensided surfaces	
130				131.0 640.8	
				SANDY SHALE - as above from 121.0 to 131.0 ft	

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
135	RC 13	120" / 120"		134.8 637.1 135.3 SANDSTONE 636.6 - fine to medium grained quartz; micaceous; cross-bedded CLAYSTONE - dolomite nodules; calcareous; non-crystalline	
140				141.0 630.8 4.0 ft - CLAYSTONE - as above from 135.25 to 141.0 ft 2.0 ft - CLAYSTONE - calcareous; limestone nodules; trace pyrite; medium bluish gray (5 B 5/1) 2.0 ft - CLAYSTONE - grayish red purple (5 RP 4/2) to very dusky purple (5 RP 2/2); dark greenish yellow (10 Y 6/6) SILTSTONE lenses; conformable contact; slickensided surfaces	
145	RC 14	96" / 120"			
150				151.0 620.8 1.3 ft - CLAYSTONE - as above from 141.0 to 151.0 ft 0.4 ft - LIMESTONE - light gray (N7); fine grained; massive 0.7 ft - MUDSTONE - medium bluish gray (5 B 5/1) 0.9 ft - LIMESTONE - olive gray (5 Y 4/1); calcareous MUDSTONE 1.3 ft - SILTSTONE	
155	RC 15	56" / 120"			

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
160				1.3 ft - CLAYSTONE - as above from 141.0 to 151.0 ft 0.4 ft - LIMESTONE - light gray (N7); fine grained; massive 0.7 ft - MUDSTONE - medium bluish gray (5 B 5/1) 0.9 ft - LIMESTONE - olive gray (5 Y 4/1); calcareous MUDSTONE 1.3 ft - SILTSTONE *(continued)* 161.0 610.8	
165	RC 16	91" / 120"		4.5 ft - CLAYSTONE/SILTSTONE - very dark red (5 R 2/6) to dusky yellow (5 Y 6/4) 0.3 ft - CLAYSTONE - grayish green (10 GY 5/2) 2.75 ft - SILTSTONE - SANDY calcareous 171.0 600.8	
170					
175	RC 17	103" / 120"		4.75 ft - SANDSTONE to SANDY SHALE - dark greenish gray (5 G 4/1); carbonaceous 0.1 ft - LIMESTONE 0.9 ft - SANDSTONE/LIMESTONE - calcareous 2.9 FT - SANDSTONE - grayish green (10 GY 5/2); fine to medium grained quartz; hard; massive	
180					

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
180					
				181.0 590.8 0.7 ft - SANDSTONE - as above from 171.0 to 181.0 ft 0.7 ft - MUDSTONE - medium gray (N5) 0.7 ft - CLAYSTONE - grayish red purple (5 RP 4/2) to brownish gray (5 YR 4/1)	
185	RC 18	26" / 120"			
190				191.0 580.8 1.4 ft - SANDSTONE to SANDY SHALE - greenish black (5 GY 2/1) 0.9 ft - LIMESTONE - bluish white (5 B 9.1) to greenish gray (5 GY 6/1) 2.4 ft - MUDSTONE - medium bluish gray (5 B 5/1)	
195	RC 19	57" / 120"			
200				201.0 570.8	Bentonite Seal

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
205	RC 20	90" / 120"		0.3 ft - MUDSTONE - as above from 191.0 to 201.0 ft 3.0 ft - SANDSTONE **TOP OF COW RUN SANDSTONE** - grayish blue green (5 BG 5/2); some SHALE 4.2 ft - SHALE - grayish blue green (5 BG 5/2); some SAND *(continued)*	
210				211.0	
215	RC 21	111" / 120"		SHALE and SANDY SHALE - grayish blue green (5 BG 5/2); some SANDSTONE; thinly to moderately bedded; moderately hard to hard	Filter Pack 10-slot PVC Screen
220				221.0	
225				SHALE - medium dark gray (N4); SANDY in some areas; thinly bedded; breaks easily across some bedding planes; some slickensided surfaces	

(Continued Next Page)

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
230	RC 22	93" / 120"		SHALE - medium dark gray (N4); SANDY in some areas; thinly bedded; breaks easily across some bedding planes; some slickensided surfaces *(continued)*	
				231.0	540.8
235				2.5 ft - SHALE **PORTERSVILLE LIMESTONE** - grayish black (N2) 1.1 ft - MUDSTONE/SHALE **TOP OF ANDERSON CLAY** - medium bluish gray (5 B 5/1) 2.0 ft - SILTSTONE and CLAYSTONE - medium bluish gray (5 B 5/1); calcareous; 2-inch MUDSTONE seam	
240	RC 23	67" / 120"			
				241.0	530.8
245	RC 24	23" / 120"		0.3 ft - MUDSTONE/SHALE - as above from 231.0 to 241.0 ft 0.7 ft - LIMESTONE **BLOOMFIELD LIMESTONE** - light olive gray (5 Y 6/1) to medium bluish gray (5 B 5/1); massive 0.8 ft - CLAYSTONE/SHALE **TOP OF BLOOMFIELD CLAY** - medium bluish gray (5 B 5/1); calcareous	← Grout Seal

(Continued Next Page)

Geosyntec consultants

WELL NUMBER RB12-01/MW-20

CLIENT AEP **PROJECT NAME** Gavin FAR Closure Site Investigation

PROJECT NUMBER CHE8273 **PROJECT LOCATION** Cheshire, OH

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY/ ATTEMPTED (RQD%)	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
250				0.3 ft - MUDSTONE/SHALE - as above from 231.0 to 241.0 ft 0.7 ft - LIMESTONE **BLOOMFIELD LIMESTONE** - light olive gray (5 Y 6/1) to medium bluish gray (5 B 5/1); massive 0.8 ft - CLAYSTONE/SHALE **TOP OF BLOOMFIELD CLAY** - medium bluish gray (5 B 5/1); calcareous *(continued)* 251.0 520.8	
255	RC 25	18" / 120"		CLAYSTONE/SHALE - as above from 241.0 to 251.0 ft; very soft	
260				261.0 510.8	

Bottom of borehole at 261.0 feet.

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-03
Page: 1 of 4

Drilling Start Date:	03/18/2016 10:15	Boring Depth (ft):	75	Well Depth (ft):	52
Drilling End Date:	03/19/2016 10:45	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.11	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,727.9 E 2,101,388.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0									Overburden. No samples collected. See 2016-04 log.		0
5											5
10											10
15											15
20											20

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-03
Page: 2 of 4

Drilling Start Date:	03/18/2016 10:15	Boring Depth (ft):	75	Well Depth (ft):	52
Drilling End Date:	03/19/2016 10:45	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.11	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,727.9 E 2,101,388.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20									Overburden. No samples collected. See 2016-04 log.		20
25				Run 1			48/ 120	77			25
30									(31') CLAYSTONE: moderately strong to weak, dusky red (10R 3/4), thickly bedded, moderately decomposed, slightly disintegrated, slightly fractured. [CLARKSBURGH RED BEDS]		30
35				Run 2			78/ 120	63	(34.5') SANDSTONE: moderately strong to strong, olive (5Y 5/6), fine grained, slightly decomposed, slightly disintegrated, intensely fractured, micaceous, non-calcareous. [MORGANTOWN]		35
40											40

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-03

Drilling Start Date:	03/18/2016 10:15	Boring Depth (ft):	75	Well Depth (ft):	52
Drilling End Date:	03/19/2016 10:45	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.11	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,727.9 E 2,101,388.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40											40
45				Run 3			84/ 120	86	(46') Red Mud/CLAYSHALE: weak to moderately strong, dusky red (10R 3/4), thickly bedded, moderately decomposed, slightly disintegrated, slightly fractured.		45
50											50
55				Run 4			48/ 120	33	(55') SANDSTONE: strong, olive (5Y 5/6), fine grained, cross-bedded, slightly decomposed, slightly disintegrated, intensely fractured. [MORGANTOWN]		55
60									(59') Sandy CLAYSHALE: strong, bluish gray (5B 5/1), thickly bedded, slightly decomposed,		60

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-03
Page: 4 of 4

Drilling Start Date:	03/18/2016 10:15	Boring Depth (ft):	75	Well Depth (ft):	52
Drilling End Date:	03/19/2016 10:45	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.11	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,727.9 E 2,101,388.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60									slightly disintegrated, slightly fractured, micaceous.		60
65				Run 5			24/ 120	50	(65.5') Round Knob Red-SHALE: moderately strong, dusky red (10R 3/4), thickly bedded, moderately decomposed, slightly disintegrated, slightly fractured.		65
70											70
75									End of borehole at 75 ft bgs. Well installed on 03/23/2016		75
80											80

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-04
Page: 1 of 8

Drilling Start Date:	03/15/2016 08:30	Boring Depth (ft):	150	Well Depth (ft):	133
Drilling End Date:	03/17/2016 09:15	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.04	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,736.8 E 2,101,388.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	Date & Time	Blow Counts	Recovery (in)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0				SPT-1		2 2 4 5	16/24	0.75	(0') Silty CLAY, dusky red (7.5R 3/2), damp, soft.		0
				SPT-2		5 9 19 19	16/24	0.75	(2') CLAY with sand, stiff, low plasticity, gray.		
				SPT-3		8 9 10 12	24/24	1.0	(3') SAND, brownish yellow (10YR 6/8), fine to medium grained, damp, soft.		
5				SPT-4		13 10 10 15	22/24	1.0	(6') Some clay lenses <1".		5
				SPT-5		9 9 12 8	20/24	0.75			
10				SPT-6		3 6 7 9	16/24	4.5	(11') CLAY, dark brown (7.5YR 3/4), dry, stiff, low plasticity.		10
				SPT-7		6 10 13 15	20/24	NA	(12') SAND lense, damp, low plasticity. (12.5') CLAY, gray (GLEY 1 6/N), dry, stiff, no plasticity.		
15				SPT-8		10 11 18 16	18/24	1.5	(14') Fly ASH, gray (GLEY 1 3/N), fine to medium grained, dry.		15
				SPT-9		22 19 19 20	20/24	1.25			
				SPT-10		12 18 15 15	18/24	0.75			
20											20

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 2016-04
Page: 2 of 8

Drilling Start Date:	03/15/2016 08:30	Boring Depth (ft):	150	Well Depth (ft):	133
Drilling End Date:	03/17/2016 09:15	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.04	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,736.8 E 2,101,388.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	Date & Time	Blow Counts	Recovery (in)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20				SPT-11		9 20 20 20	20/24	0.5			20
				SPT-12		20 12 7 5	18/24	2.5			
				SPT-13		8 10 12 13	14/24	>5	(23.5') Red CLAY with secondary yellow (2.5YR 4/3 and 2.5Y 6/8), dry, stiff, non-cohesive. [CLARKSBURGH RED BEDS]		
25				SPT-14		14 16 21 17	12/24	>5			25
				SPT-15		9 13 24 28	16/24	>5			
30				SPT-16		20 40 50/3	16/24	>5			30
				Run 1			72/96	43	(32') CLAYSTONE/MUDSHALE: red (10R 3/4). [CLARKSBURGH RED BEDS]	Begin coring at 32'.	
35									(34') SANDSTONE: calcareous near top (~2'), micaceous throughout, fine grained, olive gray (5Y 5/2), thickly bedded/cross-bedding, slightly to moderately decomposed, moderately disintegrated, intensely fractured. [MORGANTOWN]	Casing (6" PVC) set to 34'.	35
40											40

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 2016-04

Drilling Start Date:	03/15/2016 08:30	Boring Depth (ft):	150	Well Depth (ft):	133
Drilling End Date:	03/17/2016 09:15	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.04	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,736.8 E 2,101,388.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40				Run 2			60/120	92	(40.5') Repeating bands of Red MUDSHALE (10R 3/4) and Sandy SHALE, dark greenish gray (5G 4/1), pyritic/micaceous, weak to moderately strong, medium bedded, highly to moderately decomposed, moderately disintegrated, slightly fractured.		40
45									(44') MUDSHALE/CLAYSHALE: red (10R 3/4), weak to moderately strong, thickly bedded, moderately to highly decomposed, slightly disintegrated, slightly fractured.		45
50				Run 3			60/120	68			50
55									(53.5') SANDSTONE: micaceous, pale olive (10Y 6/2), fine grained, cross-bedded, moderately strong to strong, slightly decomposed, slightly disintegrated, intensely fractured.		55
60											60

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-04
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Drilling Start Date:	03/15/2016 08:30	Boring Depth (ft):	150	Well Depth (ft):	133
Drilling End Date:	03/17/2016 09:15	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.04	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,736.8 E 2,101,388.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60				Run 4			60/120	58	(60') Sandy SHALE: very pyritic, bluish gray (5B 5/1), moderately strong to strong, fine grained, thickly bedded, some red mudshale lenses, slightly decomposed, slightly disintegrated, moderately to intensely fractured.		60
65											65
70				Run 5			48/120	46	(70') Round Knob Red SHALE: moderate red (5R 4/2), weak to moderately strong, fine grained, thickly bedded, highly decomposed, moderately to intensely disintegrated, intensely to very intensely fractured.		70
75											75
80											80

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 2016-04
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Drilling Start Date:	03/15/2016 08:30	Boring Depth (ft):	150	Well Depth (ft):	133
Drilling End Date:	03/17/2016 09:15	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.04	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,736.8 E 2,101,388.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80				Run 6			30/120	37	(80') As above.		80
85											85
90				Run 7			30/120	73	(90') Round Knob Red SHALE: moderate red (5R 4/2) with secondary (5Y 5/6), moderately strong to weak, thickly bedded, moderately to highly decomposed, moderately to intensely disintegrated, moderately fractured.		90
95											95
100											100

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-04
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Drilling Start Date:	03/15/2016 08:30	Boring Depth (ft):	150	Well Depth (ft):	133
Drilling End Date:	03/17/2016 09:15	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.04	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,736.8 E 2,101,388.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100				Run 8			78/120	59	(100') Round Knob Red SHALE: moderately strong, moderate red (5R 5/2), no secondary color, thickly bedded, moderately decomposed, moderately disintegrated, intensely fractured (100'-103').		100
105											105
110				Run 9			54/120	22	(110.5') SANDSTONE: calcareous, lightly micaceous. [COW RUN]		110
115									(112') SANDSTONE: lightly micaceous, moderately strong to strong, fine grained, cross-bedded, slightly decomposed, slightly disintegrated, intensely fractured at 113'. [COW RUN]		115
120											120

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-04
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Drilling Start Date:	03/15/2016 08:30	Boring Depth (ft):	150	Well Depth (ft):	133
Drilling End Date:	03/17/2016 09:15	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.04	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,736.8 E 2,101,388.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120				Run 10			114/ 120	91	(120') SANDSTONE: strong to very strong, bluish gray (5B 5/1), fine grained, fresh to slightly decomposed, slightly disintegrated, slightly fractured, micaceous, lightly calcareous. [COW RUN]		120
125											125
130				Run 11			108/ 120	61	(131') Sandy CLAYSHALE: moderately strong to strong, calcareous, bluish gray (5B 5/1), thickly bedded, slightly decomposed, slightly disintegrated, intensely fractured at ~132', moderate fractures throughout. [COW RUN]		130
135											135
140											140

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-04
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Drilling Start Date:	03/15/2016 08:30	Boring Depth (ft):	150	Well Depth (ft):	133
Drilling End Date:	03/17/2016 09:15	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	661.04	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 350,736.8 E 2,101,388.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
140				Run 12			120/ 120	91	(140') Sandy CLAYSHALE: micaceous, moderately strong to strong, bluish gray (5B 5/1), thickly bedded, slightly decomposed, slightly disintegrated, slightly fractured. [COW RUN]		140
									End of [COW RUN]		
145									(143') Layered CLAYSHALE/MUDSTONE: bluish gray (5B 5/1) and red (10R 3/4), moderately strong, medium bedded, slightly decomposed, slightly disintegrated, slightly fractured.		145
150									End of borehole at 150 ft bgs. Well installed on 03/28/2016		150
155											155

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-05
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Drilling Start Date:	03/08/2016 14:00	Boring Depth (ft):	60	Well Depth (ft):	54
Drilling End Date:	03/09/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	650.97	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,787.1 E 2,101,641.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0									Blind drilled 0-20'. See log 2016-06 for lithology.		0
5											5
10											10
15											15
20										Set 20' of 8" PVC casing.	20

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Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-05
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Drilling Start Date:	03/08/2016 14:00	Boring Depth (ft):	60	Well Depth (ft):	54
Drilling End Date:	03/09/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	650.97	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,787.1 E 2,101,641.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20				Run 1			104/ 120	47	(20') CLAYSTONE/CLAYSHALE: moderately strong, dark reddish brown (10R 3/4), moderately decomposed, moderately disintegrated. [CLARKSBURGH RED BEDS]	Begin coring @ 16:00	20
									(20.1') SANDSTONE/Sandy SHALE: fine grained, cross-bedded, micaceous, light olive gray (5Y 5/2), strong, slightly decomposed, slightly disintegrated, moderately fractured. [MORGANTOWN]		
25									(26') CLAYSTONE/CLAYSHALE: moderately strong, calcareous nodules, moderate red (5R 4/6) and very dark red (5R 2/6), massive, slightly to moderately decomposed, moderately disintegrated, moderately to intensely fractured. [INTER-MORGANTOWN]		25
30				Run 2			7/ 120	0	(30') Changes to intensely disintegrated, very intensely fractured.		30
35											35
40											40

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-05
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Drilling Start Date:	03/08/2016 14:00	Boring Depth (ft):	60	Well Depth (ft):	54
Drilling End Date:	03/09/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	650.97	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,787.1 E 2,101,641.7	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40				Run 3			55/ 120	22			40
									(42.5') Silty SANDSTONE: strong to very strong, pale olive (10Y 6/2) and olive gray (5Y 3/2), micaceous, strongly cross-bedded, fine grained, fresh to slightly decomposed, competent to slightly disintegrated, moderately fractured. [MORGANTOWN]		
45											45
50				Run 4			75/ 120	30	(50') SANDSTONE: very strong, light bluish gray (5B 7/1), fine grained, micaceous, calcareous, fresh, competent, moderately to intensely fractured. [MORGANTOWN] End of [MORGANTOWN]		50
									(52.5') Sandy, silty SHALE: moderately strong to strong, dark greenish gray (5G 4/1), pyritic, slightly decomposed, intensely disintegrated, slightly fractured.		
55									(54') CLAYSTONE/CLAYSHALE: weak to moderately strong, very dark red (5R 2/6), moderately decomposed, intensely disintegrated, intensely fractured.	17:15 Stop drilling for day @ 55'; out of water. Continue drilling on 03/09/2016	55
									Well installed on 03/29/2016		
60									End of borehole at 60 ft bgs.	Finish coring @ 08:50 03/09/2016	60

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-06
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Drilling Start Date:	03/06/2016 14:20	Boring Depth (ft):	140	Well Depth (ft):	122
Drilling End Date:	03/08/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	651.10	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,789.1 E 2,101,632.9	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	Date & Time	Blow Counts	Recovery (in)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0				SS-1		2 3 3 2	12/24	1.5	(0') Lean CLAY (CL); soft, moist to wet, reddish brown, medium plasticity, trace fine to coarse sand, trace fine gravel.		0
				SS-2		3 6 6 6	10/24	3.5	(3') Changes to dry to moist, low plasticity, stiff.		
5				SS-3		4 3 5 7	12/24	3			5
				SS-4		6 7 9 6	14/24	2	(6') Changes to gray (10YR 6/1) with yellow (10YR 7/6) mottled.		
				SS-5		2 5 8 18	11/24	3.5			
10				SS-6		3 8 11 15	10/24	4	(10') Changes to weak red (10R 4/3).		10
				SS-7		31 28 29 28	16/24	>4	(12') Changes to hard, dry, dusky red (10R 3/3), trace to few fine to coarse sand, fine gravel, few to little silt.	12-16' possibly in Clarksburgh Red Beds.	
				SS-8		15 13 25 29	18/24	>4	(14') Changes to light reddish brown.		
15				SS-9		25 50 55	5/24	>4	(16') Changes to weak red (7.5R 4/3).	50 over 6" Split Spoon refusl @ 18'; will auger and log from cuttings.	15
									(19') LIMESTONE: light gray (N7), ervescent, (logged from cuttings).		
20											20

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-06
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Drilling Start Date:	03/06/2016 14:20	Boring Depth (ft):	140	Well Depth (ft):	122
Drilling End Date:	03/08/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	651.10	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,789.1 E 2,101,632.9	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20									(21') Interbedded, limestone and shale, likely weak to moderate.		20
				Run 1					(23') Silty SANDSTONE: fine grained, strong, greenish gray (5GY 6/1), medium bedded, slightly decomposed, slightly disintegrated, moderately fractured, micaceous, cross-bedded. [MORGANTOWN]	Begin coring @ 23' on 03/7/2016 @ 10:45	
25									(25') SHALE and SILTSTONE: strong, dusky red (5R 3/4) and dusky yellow green (5GY 5/2), fine grained, thinly interbedded, moderately decomposed, moderately disintegrated, moderately fractured. [MORGANTOWN]		25
30				Run 2			49/120	20	(30') CLAYSTONE/CLAYSHALE: weak to moderately strong, pale reddish brown (10R 5/4), very dusky purple, massive, calcareous nodules throughout, moderately decomposed, slightly disintegrated, moderately fractured, occasional slickensides. [INTER-MORGANTOWN]		30
									(32') Changes to highly decomposed, intensely disintegrated, intensely fractured.		
35											35
40											40

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-06
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Drilling Start Date:	03/06/2016 14:20	Boring Depth (ft):	140	Well Depth (ft):	122
Drilling End Date:	03/08/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	651.10	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,789.1 E 2,101,632.9	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40				Run 3			101/120	79	(41') Changes to slightly to moderately fractured. (41.5') 3" 45° fracture. (43.5') 45° slickenside.		40
45											45
50				Run 4			70/120	14	(50') Silty SANDSTONE: fine grained, moderately strong, cross-bedded, micaceous, light olive gray (5Y 6/1), massive, fresh, slightly disintegrated, intensely fractured. [MORGANTOWN] (52.5') Sandy, silty SHALE and Silty SANDSTONE: thinly bedded, pyritic, light olive gray (5Y 6/1), moderately strong, slightly decomposed, moderately to intensely disintegrated (shale), intensely fractured. (53.5') Changes to calcareous sandy, silty SHALE, pyritic. (56') CLAYSTONE: moderately strong to strong, very dusky purple (5RP 2/2) and light olive green (5Y 5/6), calcareous limestone nodules throughout, many slickenside throughout, slightly to moderately fractured, moderately decomposed, moderately disintegrated.		50
55											55
60											60

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-06
Page: 4 of 7

Drilling Start Date:	03/06/2016 14:20	Boring Depth (ft):	140	Well Depth (ft):	122
Drilling End Date:	03/08/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	651.10	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,789.1 E 2,101,632.9	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60				Run 5			61/120	32			60
65											65
70				Run 6			40/120	12	(71') Changes to intensely disintegrated, intensely fractured.		70
75											75
80											80

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-06
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Drilling Start Date:	03/06/2016 14:20	Boring Depth (ft):	140	Well Depth (ft):	122
Drilling End Date:	03/08/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	651.10	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,789.1 E 2,101,632.9	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80				Run 7			66/120	37			80
									(83') CLAYSTONE/CLAYSHALE: strong, dusky red (5R 3/4), massive, slightly decomposed, slightly disintegrated, moderately fractured. [ROUND KNOB RED SHALE]		
85											85
90				Run 8			30/120	14			90
95									(98') Changes to moderately to highly decomposed, intensely disintegrated, intensely fractured.		95
100											100

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-06
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Drilling Start Date:	03/06/2016 14:20	Boring Depth (ft):	140	Well Depth (ft):	122
Drilling End Date:	03/08/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	651.10	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,789.1 E 2,101,632.9	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100				Run 9			100/120	49			100
									(103') Sandy SHALE: strong to very strong, dark greenish gray (5G 4/1), fine grained, massive, trace calcareous nodules, slightly decomposed, slightly to moderately disintegrated, slightly to moderately fractured. [COW RUN]		
105											105
110				Run 10			105/120	22			110
									(112') Silty SANDSTONE: fine grained, very strong, medium light gray (N6), cross-bedded, fresh, competent, intensely fractured. [COW RUN]		
115									(115') Sandy SHALE: strong to very strong, dark greenish gray (5G 4/1), fine grained, massive, trace calcareous nodules, slightly decomposed, slightly disintegrated, slightly to moderately fractured. [COW RUN]		115
120											120

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-06
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Drilling Start Date:	03/06/2016 14:20	Boring Depth (ft):	140	Well Depth (ft):	122
Drilling End Date:	03/08/2016 08:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:		Top of Casing Elev. (ft):	651.10	Seal Material(s):	Bentonite Chips
Logged By:	M. Muenich	Location (X,Y):	N 351,789.1 E 2,101,632.9	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120				Run 11			110/ 120	38			120
125										Stop drilling for day.	125
130				Run 12			49/ 120	14		Continue drilling on 03/08/2016 @ 08:50	130
135									(131') CLAYSTONE/SHALE: weak to moderately strong, dark reddish brown (10R 3/4) and light olive brown (5Y 5/6), massive, highly decomposed, intensely disintegrated, moderately to intensely fractured.		135
140									Well installed on 03/29/2016 End of borehole at 140 ft bgs.	Finish coring on 03/08/2016 @ 09:50	140

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-07
Page: 1 of 7

Drilling Start Date:	03/18/2016 11:00	Boring Depth (ft):	131	Well Depth (ft):	103
Drilling End Date:	03/18/2016 17:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.45	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 352,403.8 E 2,100,399.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0									Overburden. No samples. See 2016-08.		0
5											5
10											10
15											15
20											20

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-07
Page: 2 of 7

Drilling Start Date:	03/18/2016 11:00	Boring Depth (ft):	131	Well Depth (ft):	103
Drilling End Date:	03/18/2016 17:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.45	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 352,403.8 E 2,100,399.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20									Overburden. No samples. See 2016-08.		20
25											25
30											30
35											35
40											40

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-07
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Drilling Start Date:	03/18/2016 11:00	Boring Depth (ft):	131	Well Depth (ft):	103
Drilling End Date:	03/18/2016 17:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.45	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 352,403.8 E 2,100,399.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40									Overburden. No samples. See 2016-08.		40
45											45
50											50
55											55
60											60

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-07
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Drilling Start Date:	**03/18/2016 11:00**	Boring Depth (ft):	**131**	Well Depth (ft):	**103**
Drilling End Date:	**03/18/2016 17:40**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**731.45**	Seal Material(s):	**Bentonite Chips**
Logged By:	**C. Christensen**	Location (X,Y):	**N 352,403.8 E 2,100,399.0**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60									Overburden. No samples. See 2016-08.		60
65											65
70											70
75											75
80											80

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-07
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Drilling Start Date:	03/18/2016 11:00	Boring Depth (ft):	131	Well Depth (ft):	103
Drilling End Date:	03/18/2016 17:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.45	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 352,403.8 E 2,100,399.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80									Overburden. No samples. See 2016-08.		80
85				Run 1			42/60	21	(85') CLAYSTONE: red (10R 3/4), weak, thickly bedded, highly to moderately decomposed, moderately disintegrated, intensely fractured. [CLARKSBURGH RED BEDS]		85
90				Run 2			84/ 120	78	(91.5') Sandy SHALE: lightly micaceous, calcareous between 91.5-95, strong to moderately strong, fine grained, thickly bedded, slightly decomoposed, slightly disintegrated. [MORGANTOWN]		90
95									(96') MUDSTONE/CLAYSHALE: red (10R 3/4), weak.		95
100									(97') SANDSTONE: moderately strong to strong, fine grained, cross-bedded, moderately decomposed, slightly disintegrated, moderately fractured, very pyritic, calcareous. [MORGANTOWN]		100

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-07
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Drilling Start Date:	03/18/2016 11:00	Boring Depth (ft):	131	Well Depth (ft):	103
Drilling End Date:	03/18/2016 17:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.45	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 352,403.8 E 2,100,399.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100				Run 3			96/ 120	27	(101.5-102.5') Highly fractured.		100
									(104') Intensely fractured.		
105									(105') CLAYSHALE/MUDSTONE: very weak, red (10R 3/4), thickly bedded, highly decomposed, intensely disintegrated, very intensely fractured.		105
110				Run 4			90/ 120		(111') Red MUDSHALE with blue Sandy SHALE: red (10R 3/4) and blue (5B 5/1), calcareous, thickly bedded, moderately strong to strong, moderately decomposed, slightly disintegrated, slightly fractured.		110
115											115
120											120

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 2016-07
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Drilling Start Date:	**03/18/2016 11:00**	Boring Depth (ft):	**131**	Well Depth (ft):	**103**
Drilling End Date:	**03/18/2016 17:40**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**731.45**	Seal Material(s):	**Bentonite Chips**
Logged By:	**C. Christensen**	Location (X,Y):	**N 352,403.8 E 2,100,399.0**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120											120
				Run 5			120/ 120	69	(121') Layered red MUDSHALE with blue Sandy SHALE: red (10R 3/4) and blue (5B 5/1), moderately strong, thickly bedded, moderately decomposed, slightly disintegrated, slightly fractured.		
125											125
									(127') SANDSTONE: strong, very pyritic, blue (5B 5/1), cross-bedded, slightly decomposed, slightly disintegrated, moderately to intensely fractured, calcareous.		
130											130
									End of borehole at 131 ft bgs. Well installed on 03/29/2016		
135											135

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-08
Page: 1 of 12

Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0				SC			48/60		(0') Sandy CLAY (CL); medium plasticity, brown (5YR 4/4), some dark brown and yellowish mottling, dry, ppen 2.0.		0
5				SC			54/60		(8') Clayey SILT (ML); very dense, some very thin uneven bedding, dense clay inclusions.		5
10				SC			90/120		(10') As above: brown (5YR 4/2) to yellowish red (5YR 5/6).		10
15											15
20											20

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-08
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Drilling Start Date:	**03/14/2016 13:00**	Boring Depth (ft):	**221**	Well Depth (ft):	**192**
Drilling End Date:	**03/16/2016 16:00**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Sonic & Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**731.39**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Chad Gregory**	Location (X,Y):	**N 352,403.8 E 2,100,409.0**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20				SC			110/120		(20') Sandy CLAY (CL); brown (5YR 4/3), hard.	20-30' wet from drill fluids.	20
25									(26') SAND (SP); fine grained, dark brown (5YR 2.5/2), loose. [BOTTOM ASH]		25
									(26.5') SILT (ML); very dense, tan to gray to yellowish brown, some very thin bedding.		
30				SC			105/120		(30') Silty, sandy CLAY (CL); brown (7.5YR 4/2), very stiff to hard, medium to high plasticity.	30-40' wet from drill fluids.	30
35											35
40									(39.5') CLAYSTONE cobbles: moderately strong,		40

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40				Run 1			6/12	0	reddish brown.		40
				Run 2			103/ 120	88	(40') CLAYSTONE: very weak, light gray to moderate red (5R 4/6), intensely fractured, highly decomposed. (41') Changing to dusky red (5R 3/4) to medium gray (N5), weak, slightly fractured, moderately decomposed.		
45											45
50				Run 3			84/ 120	85			50
									(53') Changing to slightly sandy.		
55											55
60											60

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60									(60') Changing to grayish black (N2) with few thin beds, light gray to yellowish brown to red.		60
				Run 4			28/ 120	32	(61') LIMESTONE: dusky blue/green (5BG 3/2) to light olive brown (5Y 5/6), weak, highly decomposed, slickensides, clayey.		
65											65
70				Run 5			40/ 120	50	(71') CLAYSTONE: dusky blue/green (5BG 3/2) to dark greenish yellow (10Y 6/6), weak, moderately decomposed, moderately disintegrated, few moderately brown clay nodules.		70
75											75
80											80

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80				Run 6			58/120	52	(81.5') Slickensided fracture. (82.5') Changing to moderate red (5R 4/6), some dusky blue/green (5BG 3/2) to greenish yellow (10Y 6/6) veins, intensely fractured, few slickensides. [LOWER CLARKSBURGH RED BEDS]		80
85											85
90				Run 7			117/120	98	(89') Changing to slightly calcareous. (91') Silty SANDSTONE: fine grained, strong, slightly decomposed, slightly fractured, light to dark gray. [MORGANTOWN]		90
95									(95.5') CLAYSHALE: dark red (5R 2/6), strong. (96.5') SANDSTONE: light gray (N7), strong, slightly fractured, fine grained.		95
100									(98.5') CLAYSHALE: medium to dark gray (N5 to N3), moderately strong, sandy.		100

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100				Run 8			69/120	57	(100') SANDSTONE: fine grained, micaceous, thinly bedded, cross bedded, strong, light to medium gray, slightly fractured, slightly decomposed, very micaceous 102-104'.		100
									(104') Sandy CLAYSHALE: weak, medium gray to dark reddish brown, highly decomposed, highly disintegrated.		
105									(105') CLAYSTONE: weak, medium gray, limestone nodules, highly fractured, moderately decomposed, moderately disintegrated, changing to dark reddish brown (10R 3/4) at 106'.		105
110				Run 9			112/120	87	(111') Silty SANDSTONE: gray, strong, fine grained.		110
									(112') As above: less silty.		
									End of [MORGANTOWN]		
115									(113') CLAYSHALE: moderately strong, medium gray, limestone nodules, changing at 114.5' to dark reddish brown, strong, calcareous, slightly fractured.		115
									(118') Slickensided fracture.		
									(119-120') Medium dark gray.		
120											120

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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120				Run 10			120/ 120	78	(121') Changing to strong, very dark red (5R 2/6), moderately fractured.		120
									(123.5') LIMESTONE: dark greenish gray (5G 4/1) to dark reddish brown, moderately decomposed, moderately disintegrated, sandy.		
125									(124.5') Sandy CLAYSHALE: pyritic, dark greenish gray to light gray, calcareous, moderately fractured.		125
									(129') Changing to dark reddish brown (10R 3/4), not pyritic, less calcareous.		
130				Run 11			69/84	83			130
									(132') LIMESTONE: medium reddish brown, dark greenish yellow nodules (10Y 6/6), few white veins, many slickensides, clayey.		
135									(136') More frequent dusky blue green mottling (5BG 3/2).		135
				Run 12			0/36		(138') No Recovery.		
140											140

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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
140										Sonic crew cleared out borehole @ 141'	140
				Run 13			82/ 120	73	(141') CLAYSTONE: calcareous, dark greenish yellow/light blue green/dusky blue green mottled, moderately fractured, many slickensides, strong.		
145											145
									(149') No Recovery.		
150				Run 14			80/ 120	43	(151') LIMESTONE: greenish gray (5G 6/1), strong, massive, moderately decomposed, moderately disintegrated, intensely fractured.		150
									(151.5') CLAYSTONE: calcareous, dusky blue green to dark greenish yellow, weak, intensely fractured, slickensided (152-153'), moderately decomposed, moderately disintegrated.		
155											155
160											160

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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
160				Run 15			60/60	57	(161') Changing to moderately strong, dark reddish brown.		160
165				Run 16			60/60	50	(167') Changing to very weak, intensely fractured, dusky blue green to dark greenish yellow.		165
170				Run 17			75/ 120	92	(171') Changing to moderately strong, dusky blue green to dark reddish brown, slickensided, highly fractured, white calcareous nodules.		170
175									(174') CLAYSHALE: strong, dark reddish brown to dusky blue green, white calcareous veins. (176.5') Slickensided fracture. (177-178') Few thin sandstone beds.		175
180											180

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Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
180				Run 18			117/ 120	74	(181.5') SANDSTONE: medium dark gray (N4), thinly bedded, cross-bedded, strong, fine grained. [COW RUN]		180
									(182') Sandy SHALE: medium dark gray to grayish black, moderately fractured, weak to moderately strong, occasional interbedded sandstone.		
185											185
190				Run 19			116/ 120	78	(191') Changing to pyritic.		190
									(194-195') Intensely fractured (shale).		
195									(196-197') Very weak.		195
200											200

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Drilling Start Date:	03/14/2016 13:00	Boring Depth (ft):	221	Well Depth (ft):	192
Drilling End Date:	03/16/2016 16:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	731.39	Seal Material(s):	Bentonite Chips
Logged By:	Chad Gregory	Location (X,Y):	N 352,403.8 E 2,100,409.0	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
200				Run 20			102/ 120	75	(202') Changing to weak, intensely fractured, wet.		200
205									(204') Changing to medium reddish brown and medium gray layers, less sandy, more clayey.		205
									End of [COW RUN]		
									(208') CLAYSTONE: dark reddish brown to grayish purple (5P 4/2), calcareous, moderately strong, no pirite.		
210									(209') MUDSTONE: medium gray (N5), very weak, very soft.		210
				Run 21			80/ 120	66	(210') CLAYSTONE: moderately reddish brown, calcareous, moderately strong.		
215									(213') Changing to claystone with many small limestone nodules, very calcareous, weak.		215
220											220

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Project: CHE8259A
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Drilling Start Date:	**03/14/2016 13:00**	Boring Depth (ft):	**221**	Well Depth (ft):	**192**
Drilling End Date:	**03/16/2016 16:00**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Sonic & Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**731.39**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Chad Gregory**	Location (X,Y):	**N 352,403.8 E 2,100,409.0**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
220											220
									End of borehole at 221 ft bgs. Well installed on 03/23/2016		
225											225

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-09
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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	Date & Time	Blow Counts	Recovery (in)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0				SS		3 6 8 8	18/24		(0') TOPSOIL, light brown (10YR 4) with organic.		0
				SS		13 9 9 10	24/24		(1') Sandy SILT, medium firm, some sand lenses <1", dry, 7.5YR 6.		
				SS		4 6 7 9	21/24		(3') Silty/sandy CLAY, dry, stiff, yellowish brown (10YR 5/6).		
5				SS		12 12 13 12	24/24				5
				SS		3 7 8 10	24/24				
				SS		2 6 9 10	24/24		(10') Silty/sandy CLAY, grayish/yellow (10YR 6/3), dry, stiff.		
10											10
15											15
20									(19') CLAYSTONE: red/gray (10R 4/6), very decomposed, unable to core.		20

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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20											20
25									(25') Sandy SILTSTONE: light brown/yellow, very decomposed, unable to core.		25
									(27') CLAYSTONE with silt: red, less decomposed.		
30				Run 1			30/96	37	(32') SANDSTONE: fine grained, dry, light gray (N7), slightly decomposed, competent, moderately fractured.		30
35									(32.5') CLAYSTONE with silt: brown (5YR 4/4), moderately strong, limestone nodules near top, intensely fractured, competent.		35
40											40

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BORING LOG
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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40				Run 2			74/120	53	(40') CLAYSTONE with silt: greenish black (5GY 2/1), moderately strong, thickly bedded, slightly decomposed, intensely fractured.		40
									(43') LIMESTONE: gray (N5), strong, microcrystalline, thickly bedded, moderately decomposed, competent, moderately fractured.		
45											45
50				Run 3			5/120	100	Limestone grades into red beds at ~50.5'.		50
									(50.5') MUDSTONE/CLAYSTONE: reddish brown (5YR 3/2), highly decomposed, intensely fractured. [CLARKSBURGH RED BEDS]		
55											55
60											60

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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60				Run 4			19/ 120	37	(60') MUDSTONE: reddish brown (5YR 3/2), lightly decomposed, intensely fractured. [CLARKSBURGH RED BEDS]		60
65											65
70				Run 5			92/ 120	73			70
75									(72.5') SANDSTONE: micaceous/pyritic, fine grained, medium light gray, thickly bedded, fresh, slightly fractured. [MORGANTOWN]		75
80											80

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Project: CHE8259A
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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80				Run 6			103/ 120	67			80
									(81') Clayey MUDSTONE: reddish brown (5YR 3/2), weak, thickly bedded, highly decomposed, intensely fractured.		
85									(83.5') Silty SANDSTONE: micaceous, greenish gray (5G 6/1), cross-bedding at 85.5', thickly bedded, slightly decomposed, moderately disintegrated.		85
90				Run 7			76/ 120	58	(90') Silty/sandy SHALE: greenish gray (5G 6/1), moderately strong, fissile, moderately decomposed, intensely fractured.		90
									(92.5') MUDSTONE: dusky red (5R 2/2), weak to moderately strong, thickly bedded, highly decomposed, calcite veins, moderately disintegrated, moderately fractured.		
95											95
100											100

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-09
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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100				Run 8			58/ 120	16	(110') Repeating sequence of Silty MUDSTONE to SANDSTONE: micaceous, fine grained, 100-105' strong to moderately strong, slightly decomposed, slightly disintegrated, intensely fractured.		100
105											105
110				Run 9			100/ 120	89	(110') Shaly SILTSTONE: micaceous, moderately strong, thickly bedded, moderately decomposed, slightly disintegrated, slightly fractured.		110
115											115
120									(118.5') SILTSTONE: gray (N4), moderately strong, thickly bedded, moderately decomposed, slightly disintegrated, intensely fractured.		120

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Project: CHE8259A
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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120				Run 10			41/ 120	22			120
125											125
130				Run 11			70/ 120	61	(130') MUDSTONE: red (5RP 2/2), moderately strong, thickly bedded.		130
135									(133') Silty CLAYSTONE: greenish gray, thickly bedded, moderately decomposed, slightly disintegrated, moderately to intensely fractured.		135
140											140

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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
140				Run 12			96/ 120	63	(140') MUDSTONE/CLAYSTONE: red (5R 3/4) - matrix and olive (5Y 5/6) - secondary, moderately strong to strong.		140
145									(144') CLAYSHALE: greenish gray (5G 4/1), weak, moderately fissile, thickly bedded, moderately to highly decomposed, slightly disintegrated, slightly fractured.		145
150				Run 13			100/ 120	52	(151') Silty MUDSTONE: greenish gray (5G 4/1), with limestone nodules, thickly bedded, highly to moderately decomposed, moderately disintegrated, moderately fractured.		150
155									(158.5') Silty MUDSTONE: greenish gray (5G 4/1), thickly bedded, moderately decomposed, moderately disintegrated, moderately fractured,		155
160											160

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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
160				Run 14			54/ 120	28	limestone nodules.		160
165											165
170				Run 15			48/ 120	92	(170') SILTSTONE: greenish gray (5G 4/1), not calcareous, thickly bedded, fresh to slightly decomposed, slightly fractured.		170
175									(171.5') Silty SANDSTONE: greenish gray (5G 4/1), fresh to slightly decomposed, moderately fractured, lightly micaceous.		175
180											180

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Drilling Start Date:	02/09/2016 12:45	Boring Depth (ft):	200	Well Depth (ft):	187
Drilling End Date:	02/12/2016 14:00	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	739.22	Seal Material(s):	Bentonite Chips
Logged By:	CC & CG	Location (X,Y):	N 353,180.4 E 2,095,686.6	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
180				Run 16			102/ 120	29	(180') SANDSTONE: micaceous, fine grained, greenish gray (5G 4/1), thickly bedded, fresh to slightly decomposed, moderately disintegrated, moderately fractured, limestone nodules 180-183', cross-bedding 186-188.5'.		180
185											185
190				Run 17			114/ 120	62	(190') SANDSTONE: fine grained, micaceous, some beddings/bending, fresh to slightly decomposed, moderately disintegrated, moderately fractured.		190
195									(194.5') SANDSTONE: medium grained, light gray (N6), fresh to slightly decomposed, moderately disintegrated, moderately fractured.		195
200									(196.5') SILTSTONE: with limestone nodules, greenish gray (5G 4/1), slightly decomposed, moderately disintegrated, moderately fractured. Well installed on 03/03/2016 End of borehole at 200 ft bgs.		200

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,060.5 E 2,096,240.3	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0				RS-0-5			60/60		(0') Lean CLAY (CL); reddish brown (2.5YR 3/3), moist, low plasticity, trace fine gravel, little silt.		0
									(2.5') Clayey SILT (ML); reddish brown (10YR 7/4) with redox features, platy structure, friable, trace to few fine sand, dry, loose.		
5				RS-5-10			60/60		(5') Changes to yellowish brown (2.5Y 6/3).		5
									(6.5-7.5') Changes to reddish brown (2.5YR 4/4).		
									(7.5') Changes to light yellowish brown (2.5Y 6/4).		
10				RS-10-15			52/60		Trace cobbles from 5-10 ft.		10
									(10') Changes to yellowish brown (10YR 5/4), few fine to coarse gravel, trace cobbles, from 10-14' ft.		
15				RS-15-20			60/60		(14-14.5') SILT (ML); dense, trace to few red cobbles, light brownish gray (10YR 6/2) with some brownish yellow mottling (10YR 6/5), dry, platy, friable, trace fine sand.		15
20											20

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Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20				RS-20-30			120/120		(20') SILT (ML); reddish brown (2.5YR 4/4), dry, friable, medium stiff, trace fine sand, weak platy structure.		20
									(22.5') Changes to light yellowish brown (10YR 6/4).		
25									(24.5') Changes to light reddish brown (2.5YR 7/3).		25
									(27.5') Changes to reddish brown (2.5YR 5/4).		
									(28.5') Changes to light gray (2.5Y 7/2) with few to little brownish yellow (10YR 6/3) mottled, very hard, dry, trace dark reddish brown (10YR 3/3) clay film.		
30				RS-30-39			103/103		(30') Changes to light gray (5Y 7/2), hard, weak, platy structure.		30
35									(37') Silty SHALE: strong, light gray (N7), planar (massive), slightly to moderately decomposed, competent.	Sampled with sonic core barrel, not boxed.	35
40											40

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40				Run 1			10/30	22	(40') Sandy, silty SHALE: medium light gray (N6), strong, white (N9) laminations throughout, fresh to slightly decomposed, slightly disintegrated, moderately fractured, calcite veins at 41'.	02/11/2016 begin coring @ 09:45	40
				Run 2			118/ 120	62	(42.5') SANDSTONE: fine grained, strong, medium gray (N5) with medium dark gray (N4) laminations, micaceous, cross-bedded, slightly decomposed, slightly disintegrated, moderately fractured.		
45									(46-46.5') Moderately disintegrated.		45
									(47-48.5') Changes to moderate yellowish brown (10YR 5/4).		
									(48.5') Changes to medium gray (N5) with medium dark gray (N4) laminations, fresh, competent, unfractured.		
50									(51') Slightly decomposed, slightly disintegrated, moderately fractured.		50
				Run 3			119.5/ 120	73			
55									(58.4') Two converging fractures: 110° (extremely narrow) and 225° (narrow).		55
60									(58.5') Changes to dark yellowish orange (10YR		60

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60									6/6) with moderate brown (5YR 4/4) laminations. (59.6-60.6') Medium gray (N5) with moderate dark gray (N4) laminations. (60.6') Dark yellowish orange (10YR 6/6) with moderate brown (5YR 4/4) laminations. (62.5') Changes to intensely fractured.		60
				Run 4			114.5/ 120	70	(63.2') SANDSTONE: micaceous, medium grained, strong, very light gray (N8), massive, fresh, competent, slightly fractured.		
65											65
									(68.3-69') Moderately wide fracture 80°, changes to coarse grained, weak, highly decomposed, iron oxide staining. (69') Changes to medium grained, light gray (N7) with reddish orange staining, strong, slightly decomposed, competent.		
70											70
				Run 5			115.5/ 120	81			
75									(74.5') Silty SANDSTONE: micaceous, strong, very light gray (N8) with medium dark gray (N4) laminations, cross-bedding, fine grained, slightly decomposed, slightly disintegrated, slightly fractured. (75-77.5') Dark yellowish orange (10YR 6/6) with moderate brown (5YR 4/4) cross bedding. (77.5') Changes back to gray found at 74.3'. (78.8-79') Mud inclusions, otherwise same as above.		75
80											80

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80											80
				Run 6			115.5/ 120	83	(81.8-82.5') Moderately narrow fracture at 80°.		
85											85
									(86.4') SANDSTONE: fine grained, micaceous, very strong, medium gray (N5), massive, fresh, competent, unfractured.		
90											90
				Run 7			117/ 120	89			
95											95
									(97.5-98.3') Dark yellowish orange (10YR 6/6).		
100											100

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Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100											100
				Run 8			98/ 120	27	(101.4') CLAYSTONE: very weak, dark gray (N3), massive, highly decomposed, very intensely fractured.		
									(102.5') Silty SHALE: weak, grayish black (N2), fissile, moderately to highly decomposed, slightly disintegrated, intensely fractured, slightly micaceous.		
105									(105') SANDSTONE: with interbedded silty shale, medium light gray (N6) and grayish black (N2), micaceous, moderately strong, laminations of shale, slightly to moderately decomposed, slightly disintegrated, intensely fractured.		105
									(108.9') Sandy SHALE: micaceous, moderately strong, medium dark gray (N4), slightly to moderately decomposed, moderately disintegrated, moderately to intensely fractured, fissile.		
110				Run 9			50/ 120	19	(112') Shaly SANDSTONE: micaceous, moderately strong, medium light gray (N6) and grayish black (N2), moderately to highly decomposed, moderately disintegrated, intensely fractured.		110
									(114.2') Sandy SHALE: micaceous, moderately strong, medium dark gray (N4), slightly to moderately decomposed, moderately disintegrated, moderately to intensely fractured.		
115									(116') COAL: moderately strong, black (N1), orange reddish staining, highly decomposed, very intensely fractured.		115
120											120

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120				Run 10			120/ 120	35	(123') Silty SANDSTONE: micaceous, light gray (N7) with medium dark gray (N4) cross bedding and laminations, mud inclusions, strong, fine grained, slightly decomposed, slightly to moderately disintegrated, slightly to moderately fractured, mud infillings in fractures.		120
125									(128') Sandy CLAYSHALE: micaceous, strong, medium dark gray (N4), fine grained, fissile, slightly decomposed, moderately to intensely disintegrated, intensely fractured, coal inclusions.		125
130				Run 11			91/ 120	42	(130.9') Grades to claystone, highly decomposed, intensely disintegrated, very intensely fractured. (132-132.5') Grades to slightly decomposed, slightly disintegrated. (133') CLAYSHALE: moderately strong, grayish black (N2), fissile, slightly pyritic, slightly decomposed, intensely disintegrated, very intensely fractured.		130
135									(136') Clayey LIMESTONE: strong, medium gray (N5), massive, slightly decomposed, slightly disintegrated, unfractured.		135
140											140

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-10
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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
140									(140') No Recovery.		140
				Run 12			47/ 120	10	(142.5') CLAYSTONE: strong, slightly calcareous, dark greenish gray (5G 4/1), micaceous, massive, moderately decomposed, moderately disintegrated, very intensely fractured.		
145									(145') Changes to moderately strong to weak, grayish red (10R 4/2) and dark reddish brown (10R 3/4), not calcareous, highly decomposed, highly disintegrated, intensely to very intensely fractured.		145
150				Run 13			80/ 120	51	(152.5') Grades to sandy silty claystone, grayish olive (10Y 4/2), not micaceous, chert nodules, moderately decomposed, moderately disintegrated, intensely fractured, clay infillings in fractures, slickensides.		150
155									(157.5') SILTSTONE to silty SANDSTONE: moderately strong, micaceous, medium dark gray (N4) with reddish orange staining, massive, slightly decomposed, slightly to moderately disintegrated, moderately fractured, fine grained, slickensides.		155
160											160

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
160											160
				Run 14			92/ 120	32	(162') Silty SANDSTONE: moderately strong to strong, micaceous, medium gray (N3), cross-bedded laminations, slightly decomposed, slightly disintegrated to competent, moderately fractured, fine grained.		
165									(163.7-166.5') Changes to medium dark gray (N4), laminations, no cross beddings, moderately decomposed, intensely disintegrated, intensely fractured.		165
									(166.5') CLAYSTONE: weak, dark reddish brown (10R 3/4) and grayish red (10R 4/2), massive to slightly fissile, moderately to highly decomposed, moderately disintegrated, intensely fractured.		
170									(170.6') SANDSTONE: moderately strong to weak, medium dark gray (N4), fine grained, micaceous, mostly massive, minor cross bedding, fresh to slightly decomposed, slightly disintegrated, slightly fractured.		170
				Run 15			90/90	51			
175									(174.3') Grades to Shaly SANDSTONE, moderately decomposed, moderately disintegrated, intensely fractured.		175
									(175.7') CLAYSHALE: strong, moderate brown (5YR 3/4), fissile, slightly decomposed, intensely disintegrated, intensely fractured.		
									(176.8') Shaly SANDSTONE: strong, medium dark gray (N4) and grayish black (N2), fissile, fine grained, slightly decomposed, slightly disintegrated, intensely fractured, slightly micaceous.		
180									(178.5') Changes to SANDSTONE: not fissile,		180

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
180									fresh and competent, slightly fractured.		180
				Run 16			49/60	53			
									(183') CLAYSHALE: strong, dusky brown (5YR 2/2), fissile, slightly decomposed, intensely disintegrated, intensely fractured.		
185											185
				Run 17			60/60	27	(187.5') CLAYSTONE: moderately strong to weak, dark reddish brown (10R 3/4), light olive brown (5Y 5/6), dusky yellow (5Y 6/4) and very dusky purple (5RP 2/2), highly decomposed, highly disintegrated, intensely to very intensely fractured, fractures at 45° and 135° angles, slickensides present. [CLARKSBURGH RED BEDS]		
190											190
				Run 18			32/60	7			
195											195
200											200

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
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Drilling Start Date:	**02/09/2016 15:50**	Boring Depth (ft):	**330**	Well Depth (ft):	**304.6**
Drilling End Date:	**02/17/2016 15:25**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Sonic & Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.98**	Seal Material(s):	**Bentonite Chips**
Logged By:	**D. Mateas & M. Muenich**	Location (X,Y):	**N 351,068.1 E 2,096,227.1**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
200											200
				Run 19			35/ 120	0			
205											205
210											210
				Run 20			77/ 120	10	(212') Very dusky purple (5RP 2/2) and dusky yellow (5Y 6/4) grade out, grades to moderately decomposed, intensely fractured.		
215											215
220											220

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	**02/09/2016 15:50**	Boring Depth (ft):	**330**	Well Depth (ft):	**304.6**
Drilling End Date:	**02/17/2016 15:25**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Sonic & Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.98**	Seal Material(s):	**Bentonite Chips**
Logged By:	**D. Mateas & M. Muenich**	Location (X,Y):	**N 351,068.1 E 2,096,227.1**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS
220										
				Run 21			32.5/ 60	50	(221.5') Silty SANDSTONE: strong, medium bluish gray (5B 5/1), fine grained, massive, micaceous, fresh, competent, slightly fractured, calcareous nodules. [MORGANTOWN FRM]	
225									(225.5') CLAYSHALE: moderately strong, medium gray (N5), fissile, fresh to slightly decomposed, moderately disintegrated, intensely fractured, very micaceous, clay infillings in fractures, calcareous nodules. [MORGANTOWN FRM]	
				Run 22			22/24	0		Reamed hole with 6" sonic casing and set 6" PVC casing to 228 ft.
230				Run 23			88/ 120	38	(230') Shaly SANDSTONE: moderately strong, medium gray (N5), fissile, cross bedding, fresh, slightly disintegrated, moderately to intensely fractured, very micaceous. [MORGANTOWN FRM]	
235									(234.2') CLAYSHALE: weak, medium gray (N5) and dark greenish gray (5G 4/1), fissile, slightly decomposed, highly disintegrated, moderately to intensely fractured, pyritic, micaceous, 2" lenses of limestone at 234.1 and 235 ft. [MORGANTOWN FRM]	
									(236.5') CLAYSTONE: moderately strong to strong, dark reddish brown (10R 3/4), light olive brown (5Y 5/6) and very dusky purple (5RP 2/2), massive, moderately decomposed, slightly disintegrated, slightly to moderately fractured, calcareous nodules, slickensides. [MORGANTOWN FRM]	
240										

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	**02/09/2016 15:50**	Boring Depth (ft):	**330**	Well Depth (ft):	**304.6**
Drilling End Date:	**02/17/2016 15:25**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Sonic & Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.98**	Seal Material(s):	**Bentonite Chips**
Logged By:	**D. Mateas & M. Muenich**	Location (X,Y):	**N 351,068.1 E 2,096,227.1**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
240				Run 24			80/ 120	53			240
									(241.2') Sandy SILTSTONE: strong, dark greenish gray (5G 4/1) [silt] and light gray (N7) [sand], massive, mainly fissile, slightly decomposed, slightly disintegrated, slightly fractured, clay infillings in fractures, fine grained (sandy parts). [MORGANTOWN FRM]		
245											245
250				Run 25			115/ 120	79			250
									(252') SANDSTONE: strong, light gray (N7), fine grained, slightly micaceous, massive, fresh, competent, unfractured to slightly fractured. [MORGANTOWN FRM]		
255											255
									(256.3') Sandy silty SHALE: moderately strong, greenish gray (5G 6/1) and medium dark gray (N4), fissile, sand content grades out at 258 ft, slightly to highly decomposed, moderately disintegrated, pyritic, moderately fractured, clay infillings in fractures.		
260											260

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-10

Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
260				Run 26			120/ 120	70	(262') Slickensides appear through rest of unit.		260
									(264') Grades to CLAYSTONE, slightly decomposed, slightly disintegrated, slightly fractured, with limestone nodules and lenses.		
265									(264.7') Pyrite grades out.		265
									(266.2') Changes to very dusky purple (5RP 2/2) with some light olive brown (5Y 5/6).		
									(267.2') Changes to dark greenish gray (5G 4/1).		
									(268') Changes to light olive brown (5Y 5/6) with some very dusky purple (5RP 2/2).		
									(269') Changes to highly decomposed, intensely fractured.		
270				Run 27			101.5/ 120	63	(271') Changes to slightly decomposed, slightly fractured.		270
									(272.6') Changes to dark greenish gray (5G 4/1) with light olive brown (5Y 5/6) secondary staining.		
275									(275.5-277.9') Changes to very dusky purple (5RP 2/2) and light olive brown (5Y 5/6).		275
									(277.9') Grades to limestone nodules and lenses, strong to very strong.		
280											280

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-10

Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
280				Run 28			64/ 120	17	(282') Changes to very dusky purple (5RP 2/2) and light olive brown (5Y 5/6).		280
285									(285') Clayey LIMESTONE: strong to very strong, olive gray (5Y 4/1), microcrystalline, massive, with dark greenish gray (5G 4/1) secondary staining, slightly decomposed, slightly to moderately disintegrated, intensely to moderately fractured.		285
									(287.7') Shaly CLAYSTONE: moderately strong, medium dark gray (N4), slightly fissile, intensely fractured, chert lenses.		
290				Run 29			120/ 120	85	(291.2') SANDSTONE: strong, dark greenish gray (5G 4/1), calcareous with calcite nodules, fine grained, massive, fresh, competent, slightly fractured to unfractured, slightly micaceous. [COW RUN FRM]		290
295									(297-297.9') Changes to sandy shale with significant white limestone nodules.		295
300											300

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Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
300				Run 30			117/ 120	42	(300.2-302') Changes to Shaly SANDSTONE: fissile, intensely fractured.		300
305									(304.1') Sandy SHALE: moderately strong, dark greenish gray (5G 4/1), fine grained, fissile, large limestone nodules, slightly decomposed, slightly disintegrated, intensely to moderately fractured, clay infillings in fractures. [COW RUN FRM]		305
									(307.1') SANDSTONE: strong, dark greenish gray (5G 4/1), fine grained, massive, significant clay lenses, slightly decomposed, slightly disintegrated, moderately fractured.		
310				Run 31			120/ 120	74	(310.8') Clay lenses grade out, changes to fresh, competent and unfractured to slightly fractured, cross bedding. [COW RUN FRM]		310
315									(318.3') Changes to Shaly SANDSTONE: fissile, moderately disintegrated, intensely fractured.		315
320											320

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	02/09/2016 15:50	Boring Depth (ft):	330	Well Depth (ft):	304.6
Drilling End Date:	02/17/2016 15:25	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Sonic & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.98	Seal Material(s):	Bentonite Chips
Logged By:	D. Mateas & M. Muenich	Location (X,Y):	N 351,068.1 E 2,096,227.1	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
320				Run 32			120/ 120	81	(319.7') CLAYSTONE: moderately strong, dark greenish gray (5G 4/1), massive, yellowish gray (5Y 8/1), limestone nodules, slightly decomposed, slightly disintegrated, slightly fractured.		320
325									(328.5') Grades to Sandy CLAYSTONE.		325
330									End of borehole at 330 ft bgs. Well installed on 03/04/2016		330
335											335

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-11
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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0									See log 2016-10 for 0-215 ft bgs.	4" rods dropped from 110-114 ft. See log for 2016-10. Blind drilled from 0-215 ft bgs. 6" PVC casing set from 0-219 ft bgs before geophysical analysis.	0
5											5
10											10
15											15
20											20

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 2016-11
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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20									See log 2016-10 for 0-215 ft bgs.		20
25											25
30											30
35											35
40											40

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
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Drilling Start Date:	02/17/2016 17:15	Boring Depth (ft):	261	Well Depth (ft):	255
Drilling End Date:	02/20/2016 14:45	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.88	Seal Material(s):	Bentonite Chips
Logged By:	Doug Mateas	Location (X,Y):	N 351,060.5 E 2,096,240.3	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40									See log 2016-10 for 0-215 ft bgs.		40
45											45
50											50
55											55
60											60

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60									See log 2016-10 for 0-215 ft bgs.		60
65											65
70											70
75											75
80											80

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80									See log 2016-10 for 0-215 ft bgs.		80
85											85
90											90
95											95
100											100

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100									See log 2016-10 for 0-215 ft bgs.		100
105											105
110											110
115											115
120											120

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Client: AEP-Gavin
Project: CHE8259A
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Drilling Start Date:	02/17/2016 17:15	Boring Depth (ft):	261	Well Depth (ft):	255
Drilling End Date:	02/20/2016 14:45	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.88	Seal Material(s):	Bentonite Chips
Logged By:	Doug Mateas	Location (X,Y):	N 351,060.5 E 2,096,240.3	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120									See log 2016-10 for 0-215 ft bgs.		120
125											125
130											130
135											135
140											140

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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
140									See log 2016-10 for 0-215 ft bgs.		140
145											145
150											150
155											155
160											160

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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
160									See log 2016-10 for 0-215 ft bgs.		160
165											165
170											170
175											175
180											180

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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
180									See log 2016-10 for 0-215 ft bgs.		180
185											185
190											190
195											195
200											200

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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
200									See log 2016-10 for 0-215 ft bgs.		200
205											205
210											210
215				Run 1			58/72	22.2	(215') CLAYSTONE: very weak to weak, dark reddish brown (10R 3/4) [primary color] with dusky yellow (5Y 6/4) and very dusky purple (5RP 2/2) [secondary colors], highly decomposed, intensely disintegrated, intensely to very intensely fractured, slickensides. [CLARKSBURGH RED BEDS]		215
220									(219') Silty SANDSTONE: strong, medium bluish gray (5G 5/1), fine grained, massive, micaceous,	6" of Split Spoon lost down hole.	220

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Drilling Start Date:	02/17/2016 17:15	Boring Depth (ft):	261	Well Depth (ft):	255
Drilling End Date:	02/20/2016 14:45	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.88	Seal Material(s):	Bentonite Chips
Logged By:	Doug Mateas	Location (X,Y):	N 351,060.5 E 2,096,240.3	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
220									calcareous nodules, fresh, competent, slightly fractured. [MORGANTOWN FRM]		220
				Run 2			109/ 120	63.3	(221') Cross-bedding appears.		
225									(223.3') CLAYSHALE: dark reddish brown (10R 3/4) to greenish gray (5GY 6/1), moderately strong, fissile, slightly decomposed, moderately disintegrated, intensely fractured, micaceous and sandy to 223.8 ft, calcareous nodules, clay infillings in fractures. [MORGANTOWN FRM]		225
									(225.2') SANDSTONE to Shaly SANDSTONE: moderately strong to strong, medium bluish gray (5B 5/1), massive, fresh, competent to slightly disintegrated, unfractured to moderately fractured, very micaceous. [MORGANTOWN FRM]		
230									(228.8') Changes to Shaly SANDSTONE: cross-bedding, pyritic, clay infillings in fractures.		230
				Run 3			108/ 120	9.58	(231') Grades to very intensely fractured.		
235									(232.9') Sandy CLAYSHALE: weak to strong, medium bluish gray (5B 5/1) and medium dark gray (N4), fissile, fine grained, pyritic, micaceous, slightly decomposed, intensely disintegrated, intensely fractured, calcareous nodules. [MORGANTOWN FRM]		235
									(237.3') CLAYSTONE: moderately strong to strong, dark reddish brown (10R 3/4), light olive brown (5Y 5/6) and dusky purple (5RP 2/2), massive, slightly fissile at top, moderately decomposed, slightly disintegrated, moderately fractured, calcareous nodules, slickensides.		
240											240

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Drilling Start Date:	02/17/2016 17:15	Boring Depth (ft):	261	Well Depth (ft):	255
Drilling End Date:	02/20/2016 14:45	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Sonic	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:	Versa-Sonic	DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Rob Hamilton	Top of Casing Elev. (ft):	866.88	Seal Material(s):	Bentonite Chips
Logged By:	Doug Mateas	Location (X,Y):	N 351,060.5 E 2,096,240.3	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
240				Run 4			61/ 120	49.2	[MORGANTOWN FRM]		240
									(242.2') Sandy SILTSTONE: strong, dark greenish gray (5G 4/1) [silt] and light gray (N7) [sand], massive, locally fissile, slightly decomposed, slightly disintegrated, slightly fractured, slickensides, pyritic. [MORGANTOWN FRM]		
245											245
250				Run 5			108/ 120	69.6			250
255									(253.6') SANDSTONE: strong, light gray (N7), fine grained, slightly silty, micaceous, massive, fresh, competent to slightly disintegrated, slightly fractured. [MORGANTOWN FRM]		255
									(258.1') Sandy silty SHALE: moderately strong, greenish gray (5G 6/1) and medium dark gray (N4), fissile, slightly decomposed, moderately disintegrated, moderately fractured, clay infillings		
260											260

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Client: AEP-Gavin
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Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
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Drilling Start Date:	**02/17/2016 17:15**	Boring Depth (ft):	**261**	Well Depth (ft):	**255**
Drilling End Date:	**02/20/2016 14:45**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**Frontz Drilling**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Sonic**	DTW During Drilling (ft):		Riser Material:	**Sch 80 PVC**
Drilling Equipment:	**Versa-Sonic**	DTW After Drilling (ft):		Screen Material:	**Sch 80 PVC 4" Pre-packed**
Driller:	**Rob Hamilton**	Top of Casing Elev. (ft):	**866.88**	Seal Material(s):	**Bentonite Chips**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 351,060.5 E 2,096,240.3**	Filter Pack:	**Sidley #5 & #7 (Choker Sand)**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
260									in fractures, pyritic.		260
									End of borehole at 261 ft bgs. Well installed on 03/04/2016		
265											265

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 96153-R
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Drilling Start Date:	02/18/2016 09:35	Boring Depth (ft):	150	Well Depth (ft):	112
Drilling End Date:	02/20/2016 12:30	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 355,633.4 E 2,095,228.4	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0									(0') Overburden. Sandy Clay, wet.		0
5											5
10											10
15									(15') Clayey SHALE: dark gray, dry. (cuttings)		15
20											20

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

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Drilling Start Date:	02/18/2016 09:35	Boring Depth (ft):	150	Well Depth (ft):	112
Drilling End Date:	02/20/2016 12:30	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 355,633.4 E 2,095,228.4	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20											20
25											25
30											30
35											35
40											40

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Client: AEP-Gavin
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BORING LOG
Boring/Well No. 96153-R
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Drilling Start Date:	02/18/2016 09:35	Boring Depth (ft):	150	Well Depth (ft):	112
Drilling End Date:	02/20/2016 12:30	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 355,633.4 E 2,095,228.4	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40									(40') Sandy SHALE: dark gray with some red bed.		40
45											45
50									(50') CLAYSTONE: red. (cuttings)		50
55											55
60											60

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 96153-R
Page: 4 of 8

Drilling Start Date:	02/18/2016 09:35	Boring Depth (ft):	150	Well Depth (ft):	112
Drilling End Date:	02/20/2016 12:30	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 355,633.4 E 2,095,228.4	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60											60
65											65
70											70
75											75
80											80

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 96153-R
Page: 5 of 8

Drilling Start Date:	02/18/2016 09:35	Boring Depth (ft):	150	Well Depth (ft):	112
Drilling End Date:	02/20/2016 12:30	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 355,633.4 E 2,095,228.4	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80											80
85											85
90				Run 1			72/120	46	(90') CLAYSTONE: dark reddish brown (10R 3/4) [primary] and light olive brown (5Y 5/6) [secondary], moderately strong to weak, thickly/massive bedding, slightly decomposed, moderately disintegrated, moderately to intensely fractured. [LOWER CLARKSBURGH RED BEDS]		90
95											95
100											100

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 96153-R
Page: 6 of 8

Drilling Start Date:	02/18/2016 09:35	Boring Depth (ft):	150	Well Depth (ft):	112
Drilling End Date:	02/20/2016 12:30	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 355,633.4 E 2,095,228.4	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100				Run 2			66/120	36	(100') SANDSTONE: pyritic, with calcite nodules, fine grained, dark greenish gray (5G 4/1). [MORGANTOWN]		100
									(103') Interbedded Silt/mud, dark reddish brown (10R 3/4) and dark greenish gray (5G 4/1).		
105									(104-105.5') Silty SANDSTONE: very pyritic, micaceous.		105
110				Run 3			90/120	81	(110') SANDSTONE: medium bluish gray (5B 5/1), calcareous, micaceous, fine to medium grained, strong, thickly bedded, fresh to slightly decomposed, competent, moderately fractured. [MORGANTOWN]		110
115									(115') Sandy SILTSTONE: pyritic, dark greenish gray (5G 4/1), strong to moderately strong, thickly bedded, slightly decomposed, slightly disintegrated, moderately to intensely fractured. [MORGANTOWN]		115
120											120

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 96153-R
Page: 7 of 8

Drilling Start Date:	02/18/2016 09:35	Boring Depth (ft):	150	Well Depth (ft):	112
Drilling End Date:	02/20/2016 12:30	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 355,633.4 E 2,095,228.4	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120				Run 4			96/ 120	60	(120') Sandy MUDSHALE: dark reddish brown (10R 3/4), moderately strong, medium bedded, moderately to slightly decomposed, slightly disintegrated, intensely fractured, non calcareous. [MORGANTOWN]		120
									(122.5') Silty SANDSTONE: dark greenish gray (5G 4/1), micaceous, slightly calcareous, strong, thickly bedded, fresh to slightly decomposed, slightly disintegrated, moderately fractured. [MORGANTOWN]		
125											125
130				Run 5			108/ 120	78	(130') Silty SANDSTONE: some calcite nodules, strong, dark greenish gray (5G 4/1), thickly bedded, fresh to slightly decomposed, slightly disintegrated, moderately fractured, pyritic, micaceous. [MORGANTOWN]		130
									(133-134') Bands of sandy mudstone.		
135									(136-137.5') Intensely fractured.		135
									(137.5') SANDSTONE: medium grained, micaceous, gray (N5), strong. [MORGANTOWN]		
140											140

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 96153-R
Page: 8 of 8

Drilling Start Date:	02/18/2016 09:35	Boring Depth (ft):	150	Well Depth (ft):	112
Drilling End Date:	02/20/2016 12:30	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	773.89	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 355,633.4 E 2,095,228.4	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
140				Run 6			93/ 120	54	(140') SANDSTONE: fine to medium grained, gray (N6), calcareous, strong, thickly bedded, fresh, competent to slightly disintegrated, moderately fractured.		140
									(142') LIMESTONE: dark greenish gray (5G 4/1), shaly, strong to moderately strong, thickly bedded, slightly to moderately disintegrated, moderately decomposed, intensely fractured.		
145											145
									(146') MUDSTONE/CLAYSHALE: dark reddish brown (10R 3/4) [primary] and light olive brown (5Y 5/6) [secondary], thickly bedded, moderately strong, moderately decomposed, moderately disintegrated, intensely to moderately fractured.		
150									End of borehole at 150 ft bgs. Well installed on 02/29/2016		150
155											155

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 96154-R
Page: 1 of 7

Drilling Start Date:	02/15/2016 12:30	Boring Depth (ft):	125	Well Depth (ft):	96
Drilling End Date:	02/17/2016 14:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	738.22	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 353,185.4 E 2,095,695.2	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0									Overburden.	Auger no SPT or logging.	0
5											5
10											10
15											15
20											20

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 96154-R
Page: 2 of 7

Drilling Start Date:	02/15/2016 12:30	Boring Depth (ft):	125	Well Depth (ft):	96
Drilling End Date:	02/17/2016 14:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	738.22	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 353,185.4 E 2,095,695.2	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20											20
									(22.5') Mudstone/decomposed sandstone.		
25											25
30											30
35											35
40											40

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 96154-R
Page: 3 of 7

Drilling Start Date:	02/15/2016 12:30	Boring Depth (ft):	125	Well Depth (ft):	96
Drilling End Date:	02/17/2016 14:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	738.22	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 353,185.4 E 2,095,695.2	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40											40
45											45
50											50
55											55
60											60

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 96154-R
Page: 4 of 7

Drilling Start Date:	02/15/2016 12:30	Boring Depth (ft):	125	Well Depth (ft):	96
Drilling End Date:	02/17/2016 14:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	738.22	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 353,185.4 E 2,095,695.2	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60											60
65				Run 1			48/ 120	50	(65') MUDSTONE [CLARKSBURGH RED BEDS]		65
									(67.5') Silty MUDSTONE [CLARKSBURGH RED BEDS]		
70											70
75				Run 2			112/ 120	70	(75') SANDSTONE: medium bluish gray (5B 5/1), calcareous, micaceous, pyritic, calcite nodules near 80', strong, thickly bedded, fresh to slightly decomposed, slightly disintegrated, slightly fractured. [MORGANTOWN]		75
80											80

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 96154-R
Page: 5 of 7

Drilling Start Date:	02/15/2016 12:30	Boring Depth (ft):	125	Well Depth (ft):	96
Drilling End Date:	02/17/2016 14:50	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
Drilling Equipment:		DTW After Drilling (ft):		Screen Material:	Sch 80 PVC 4" Pre-packed
Driller:	Aaron Mackey	Top of Casing Elev. (ft):	738.22	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 353,185.4 E 2,095,695.2	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80									(80') Shaly MUDSTONE: dusky red (5R 4/2), slightly calcareous with sand lenses, moderately strong to weak, thickly bedded, moderately decomposed, moderately disintegrated, moderately fractured.		80
85				Run 3			80/120	7	(84') SANDSTONE: pyritic, fine grained, medium bluish gray (5B 5/1), strong, medium thick bedded, slightly decomposed, not calcareous, slightly disintegrated, moderately to intensely fractured. [MORGANTOWN]		85
90									(85') SANDSTONE: pyritic, micaceous, fine to medium grained, medium bluish gray (5B 5/1), strong, medium/thick bedded, slightly decomposed, slightly disintegrated, intensely fractured. Medium grained Sandstone for 85-97' (very fractured). Then alternating bands of sandy siltstone and sandstone, cross bedding near top.		90
95				Run 4			96/120	84	(95') MUDSTONE: dusky red (5R 4/2), with sandy inclusions, moderately strong, thickly bedded, slightly decomposed, moderately disintegrated, moderately fractured.		95
100									(97.5') Sandy SILTSTONE: dark greenish gray (5G 4/1), some sandstone lenses, moderately strong, medium bedded, fresh to slightly decomposed, slightly to moderately disintegrated, slightly fractured.		100

NOTES:

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Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG
Boring/Well No. 96154-R
Page: 6 of 7

Drilling Start Date:	02/15/2016 12:30	Boring Depth (ft):	125	Well Depth (ft):	96
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Drilling Company:	Frontz Drilling	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Air Rotary	DTW During Drilling (ft):		Riser Material:	Sch 80 PVC
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Driller:	Aaron Mackey	Top of Casing Elev. (ft):	738.22	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 353,185.4 E 2,095,695.2	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100											100
									(101.5') SANDSTONE: micaceous, fine grained, gray (N8/N4) bedding, thinly bedded, strong, fresh, slightly fractured.		
105				Run 5			84/ 120	64	(105') Alternating SANDSTONE and SILTSTONE: micaceous, bedded, calcareous, fine grained, fresh, slightly disintegrated, moderately fractured.		105
110											110
115				Run 6			102/ 120	52	(115') Sandy SILTSTONE: pyritic, micaceous (light), dark greenish gray (5G 4/1), some calcite nodules, moderately strong, thickly bedded, slightly decomposed, moderately disintegrated, intensely fractured.		115
									(118') Shaly SILTSTONE: with calcite nodules, dark greenish gray (5G 4/1), moderately strong, thickly bedded, moderately decomposed, moderately fractured, moderately disintegrated.		
120											120

NOTES:

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Client: AEP-Gavin
Project: CHE8259A
Address: 7397 North State Route 7, Cheshire, OH

BORING LOG

Boring/Well No. 96154-R
Page: 7 of 7

Drilling Start Date:	02/15/2016 12:30	Boring Depth (ft):	125	Well Depth (ft):	96
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Driller:	Aaron Mackey	Top of Casing Elev. (ft):	738.22	Seal Material(s):	Bentonite Chips
Logged By:	C. Christensen	Location (X,Y):	N 353,185.4 E 2,095,695.2	Filter Pack:	Sidley #5 & #7 (Choker Sand)

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120											120
									(122') LIMESTONE: gray (N4), with calcareous nodules, strong, thickly bedded, slightly decomposed, moderately disintegrated, moderately fractured.		
125									End of borehole at 125 ft bgs. Well installed on 03/03/2016		125
130											130

NOTES:

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

COMPANY **OHIO POWER COMPANY**

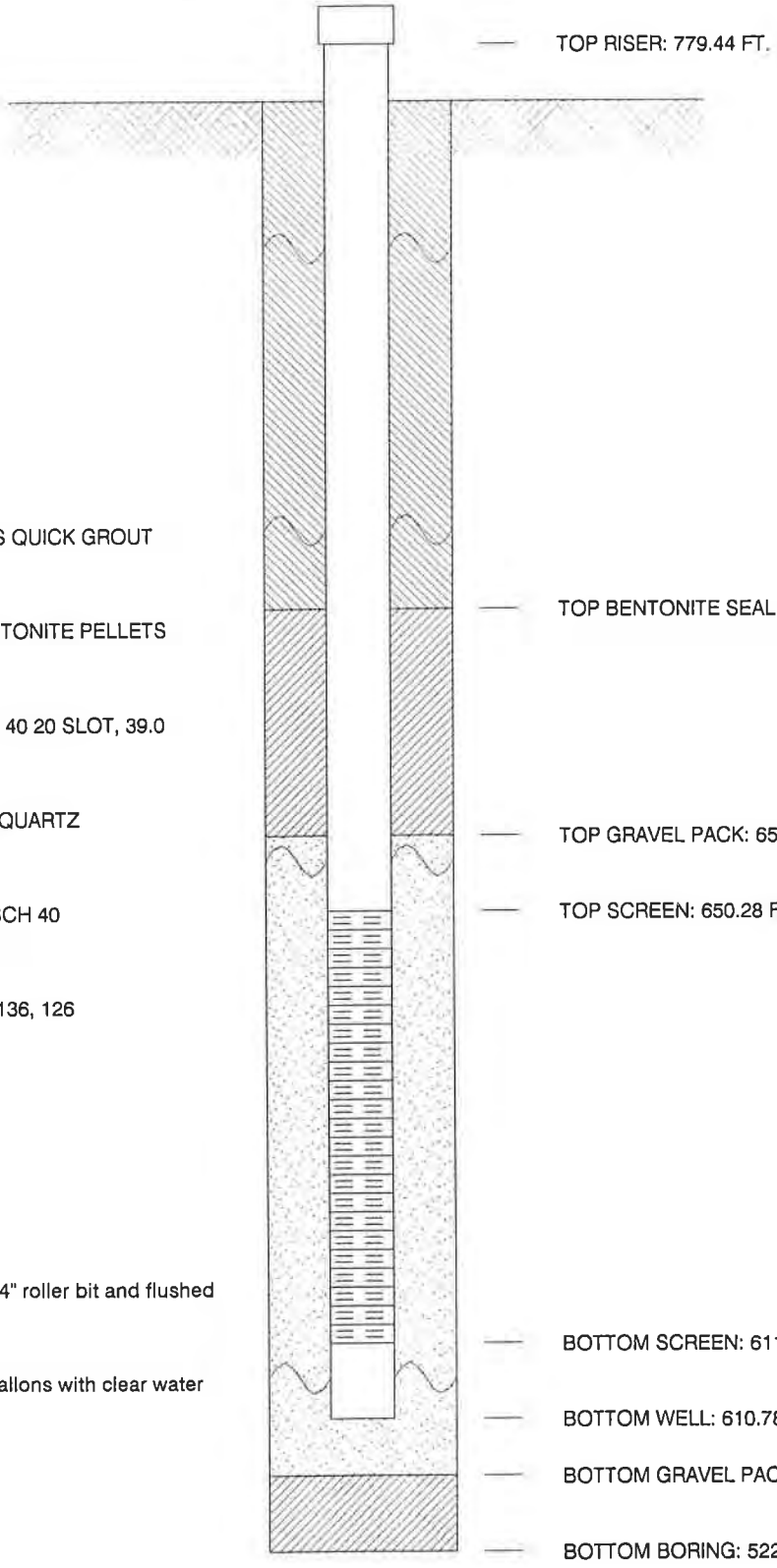
WELL No. **96152** BORING No. **96152** INSTALLED **06/27/96**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

OORDINATES **N 355,372.6 E 2,065,722.5**

SYSTEM **STATE PLANE**

GROUND ELEVATION 777.28 FT.



GROUT SEAL: 300 GALLONS QUICK GROUT

BENTONITE SEAL: 75# BENTONITE PELLETS

SCREEN: 2.0 DIA., PVC SCH 40 20 SLOT, 39.0

GRAVEL PACK: 700# NO. 4 QUARTZ

RISER PIPE: 2.0, DIA., PVC SCH 40

SPACERS, DPTH: 166, 146, 136, 126

Boring was drilled using 53/4" roller bit and flushed with mud.

Hole was flushed with 500 gallons with clear water prior to

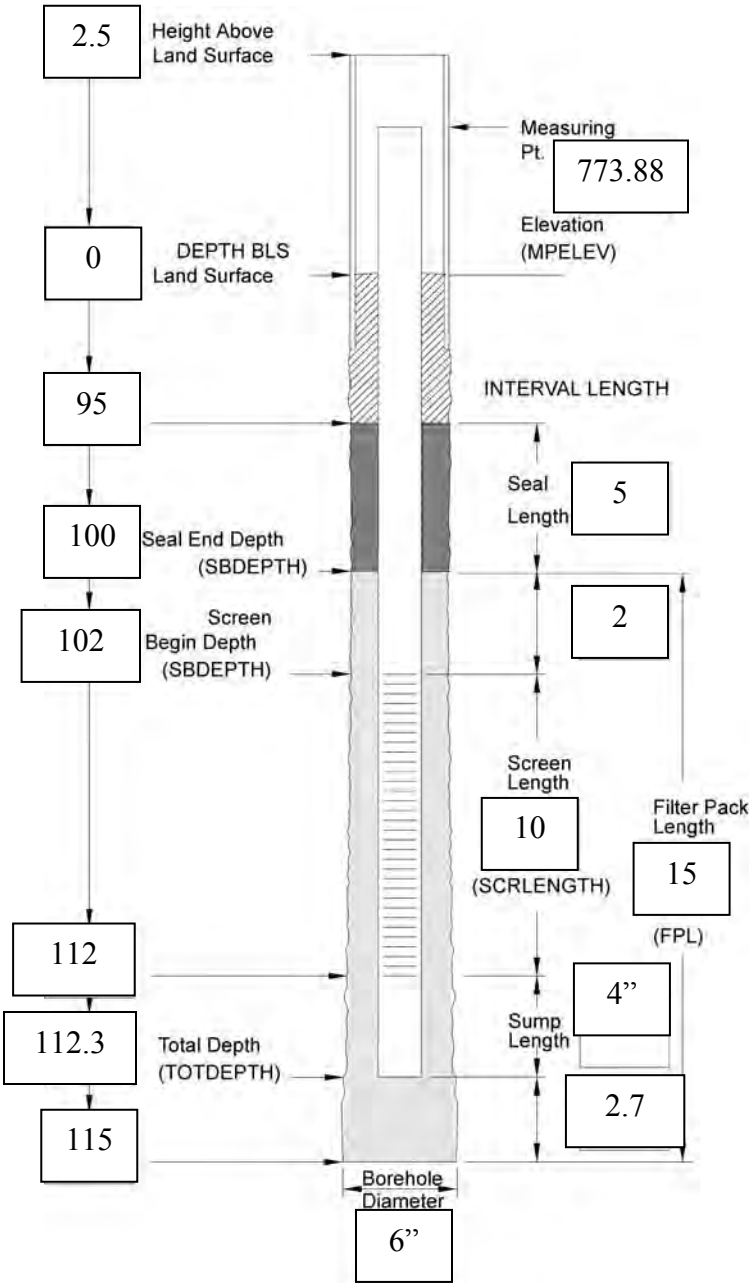
installing well.

Geosyntec consultants

WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 96153R
Drilling Company: Frontz Drilling
Drillers: Aaron Mackey
Geologist/Engineer: Chad Gregory
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Air Rotary
Casing Installation Date (INSDATE): 2/29/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Comments
Original borehole 150'. Backfilled w/ Bentonite chips to 115'.

Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)
Grout
Composition/Proportions: 150 gal
7 gal water: 94 lbs portland cement: 4 lbs bentonite grout
Placement Method: Pressure Tremie

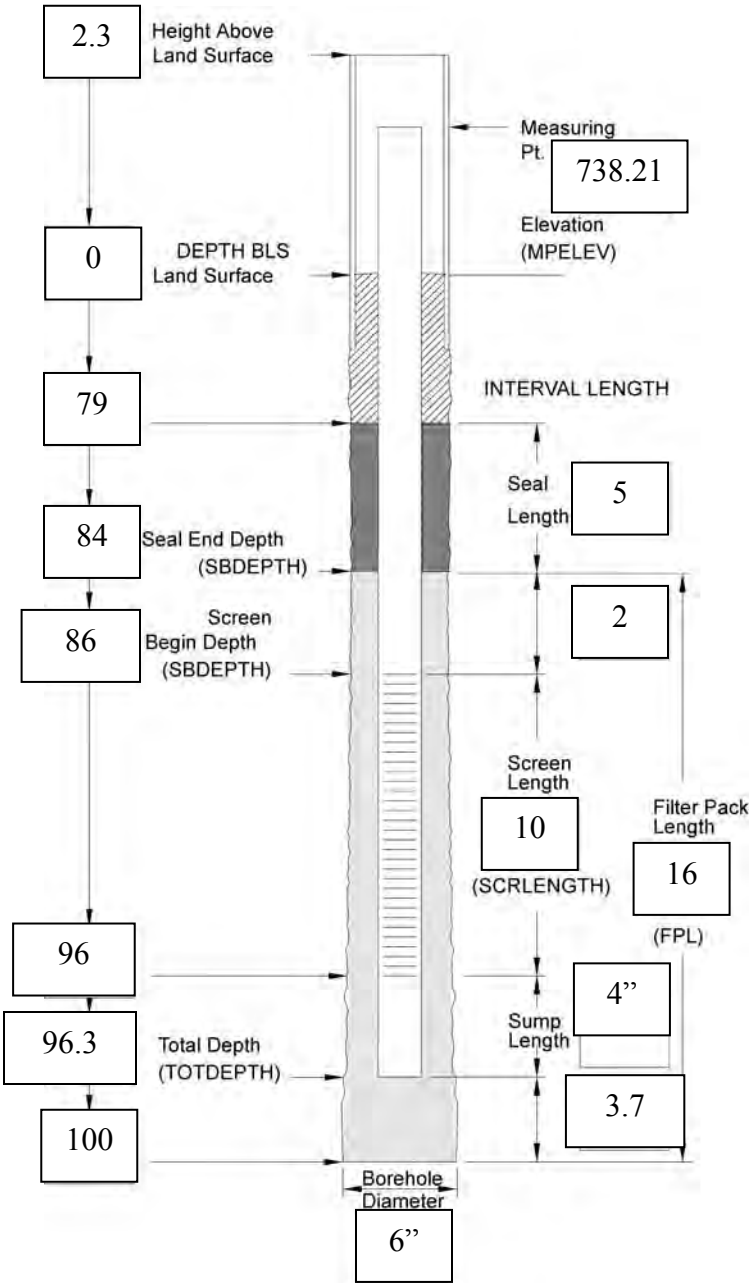
Seal Date: 2/29/16
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Sodium Bentonite (2 bags)
Set-up/Hydration Time: 2 hours
Placement Method: Poured, Gravity
Vol. Fluid Added: N/A, submerged
Filter Pack
Type: Sidley #5 & #7 above screen (Choker Sand)
Source: Sidley
Amount Used: 3 – 50 lb bags #5, 0.5 – 50 lb bag #7
Placement Method: Poured Gravity
Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y) N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y) N)
Material: Bentonite chips (8 - 50 lb bags)
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): - Recovered _____ (Gal): -
Reviewed By: J. Couch Date: 4/13/016

Geosyntec consultants

WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 96154R
Drilling Company: Frontz Drilling
Drillers: Aaron Mackey
Geologist/Engineer: Chad Gregory
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Air Rotary
Casing Installation Date (INSDATE): 3/3/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Comments
Original borehole 125'. Backfilled w/ Bentonite chips to 100'. 70' of 6" PVC surface casing left in hole, (10' to 80' bgs)

Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)
Grout
Composition/Proportions: 150 gal
7 gal water: 94 lbs portland cement: 4 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/2/16
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Sodium Bentonite (1 bag)
Set-up/Hydration Time: >12 hours
Placement Method: Poured, Gravity
Vol. Fluid Added: 5 Gallons
Filter Pack
Type: Sidley #5 & #7 above screen (Choker Sand)
Source: Sidley
Amount Used: 4.5 – 50 lb bags #5, 0.5 – 50 lb bag #7
Placement Method: Poured Gravity
Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y) N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y) N)
Material: Bentonite chips (5 - 50 lb bags)
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): - Recovered (Gal): -
Reviewed By: J. Couch Date: 4/13/2016

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

GEOMON CONSTRUCTION

JOB NUMBER

COMPANY **OHIO POWER COMPANY**

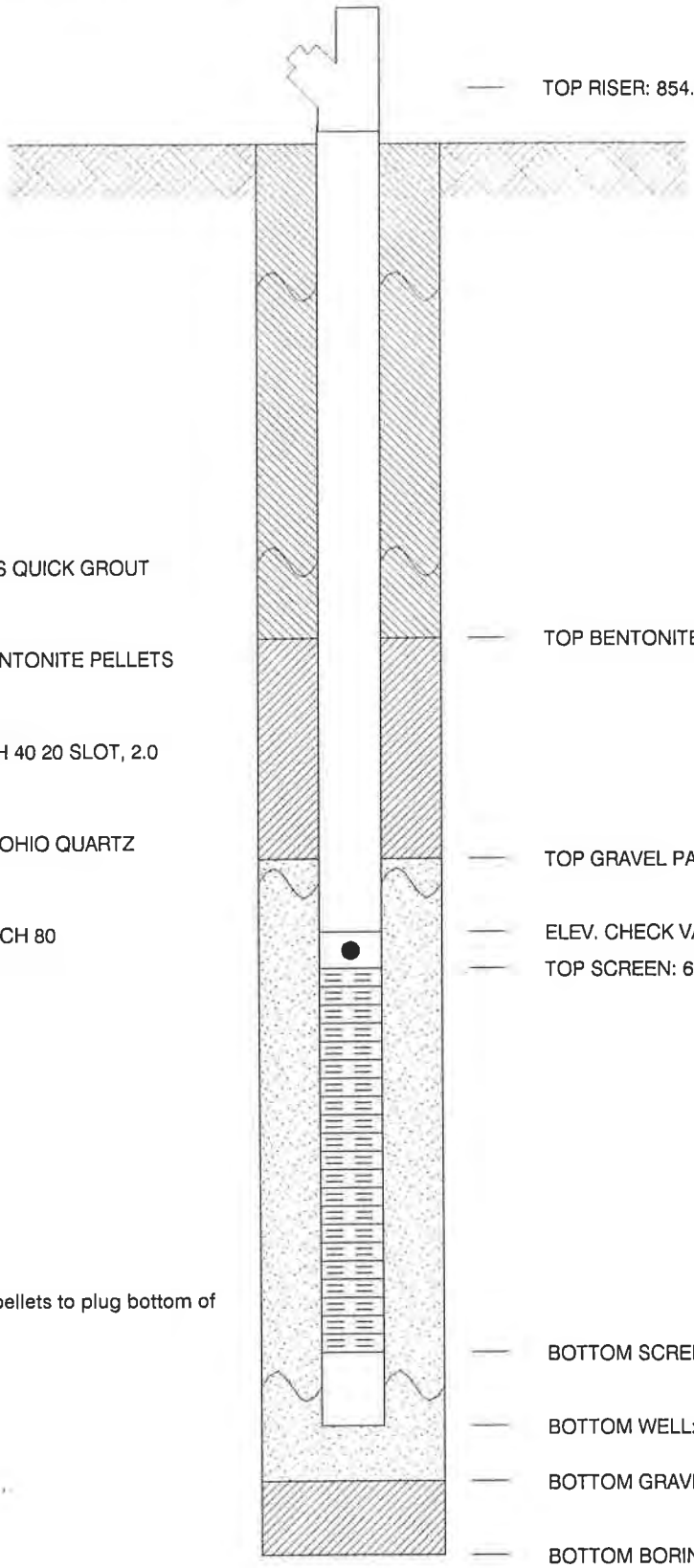
WELL No. **96156** BORING No. **96156** INSTALLED **01/11/96**

PROJECT **GAVIN PLANT FLY ASH POND CLOSURE**

COORDINATES **N 352,338.7 E 2,061,912.6**

SYSTEM **STATE PLANE**

GROUND ELEVATION 851.81 FT.



TOP RISER: 854.20 FT.

TOP BENTONITE SEAL: 680.81 FT.

TOP GRAVEL PACK: 676.31 FT.

ELEV. CHECK VALVE: 632.21 FT.

TOP SCREEN: 631.71 FT.

BOTTOM SCREEN: 629.71 FT.

BOTTOM WELL: 629.31 FT.

BOTTOM GRAVEL PACK: 627.81 FT.

BOTTOM BORING: 488.01 FT.

GROUT SEAL: 100 GALLONS QUICK GROUT

BENTONITE SEAL: 450# BENTONITE PELLETS

SCREEN: 1.25 dia., PVC SCH 40 20 SLOT, 2.0

GRAVEL PACK: 100# NO. 4 OHIO QUARTZ

RISER PIPE: 1.0, dia., PVC SCH 80

SPACERS, dpth: n\a

Tremied 450# of bentonite pellets to plug bottom of hole.

SWL at installation 76.3.

Brass weight on 3/16 tubing.

AMERICAN ELECTRIC POWER SERVICE CORPORATION

AEP CIVIL ENGINEERING LABORATORY

MONITORING WELL CONSTRUCTION

JOB NUMBER _____

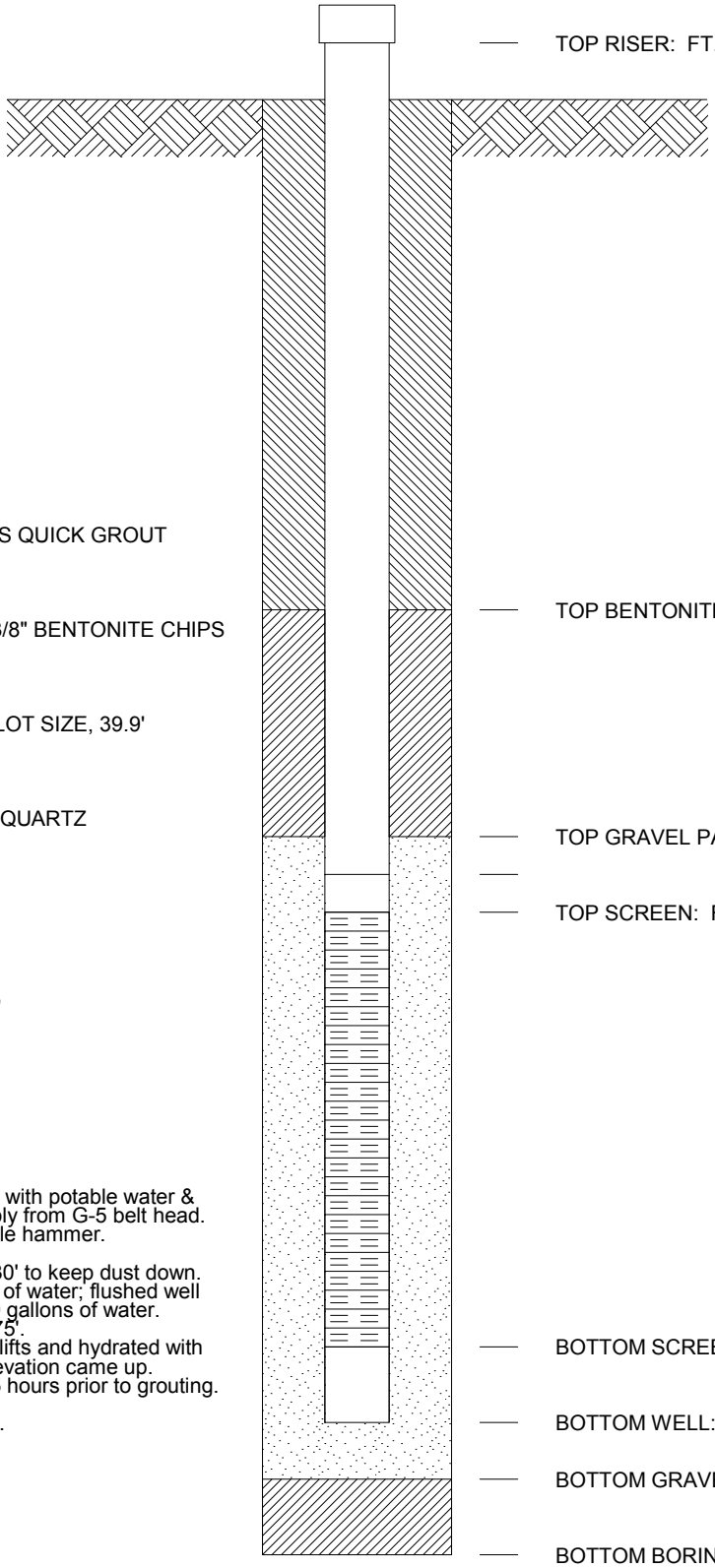
COMPANY _____ WELL No. **9910** BORING No. **9910** INSTALLED _____

PROJECT **GAVIN FLY ASH POND CLOSURE**

COORDINATES _____

SYSTEM _____

GROUND ELEVATION FT.



TOP RISER: FT.

TOP BENTONITE SEAL: FT.

TOP GRAVEL PACK: FT.

TOP SCREEN: FT.

BOTTOM SCREEN: FT.

BOTTOM WELL: FT.

BOTTOM GRAVEL PACK: FT.

BOTTOM BORING: FT.

GROUT SEAL: 120 GALLONS QUICK GROUT

BENTONITE SEAL: 150 lbs 3/8" BENTONITE CHIPS

SCREEN: 2" dia., PVC; 20 SLOT SIZE, 39.9'

GRAVEL PACK: 1700 lbs #4 QUARTZ

RISER PIPE: 2", dia., PVC

SPACERS, DEPTH: 85' & 75'

Notes: Decon all tools and rig with potable water & alconox mix. Water supply from G-5 belt head.
Boring drilled with 8" down hole hammer.

1. Used water injection after 30' to keep dust down.
2. Used approx. 2000 gallons of water; flushed well with approx. 750 to 1000 gallons of water.
3. Spider spacers at 85' and 75'.
4. Bentonite seal placed in 1' lifts and hydrated with potable water as seal elevation came up.
5. Seal allowed to hydrate 1.5 hours prior to grouting.

SWL at 97.8' after installation.

GEOMCNST GAVIN_FLY_ASH_POND.GPJ AEP.GDT 3/7/12

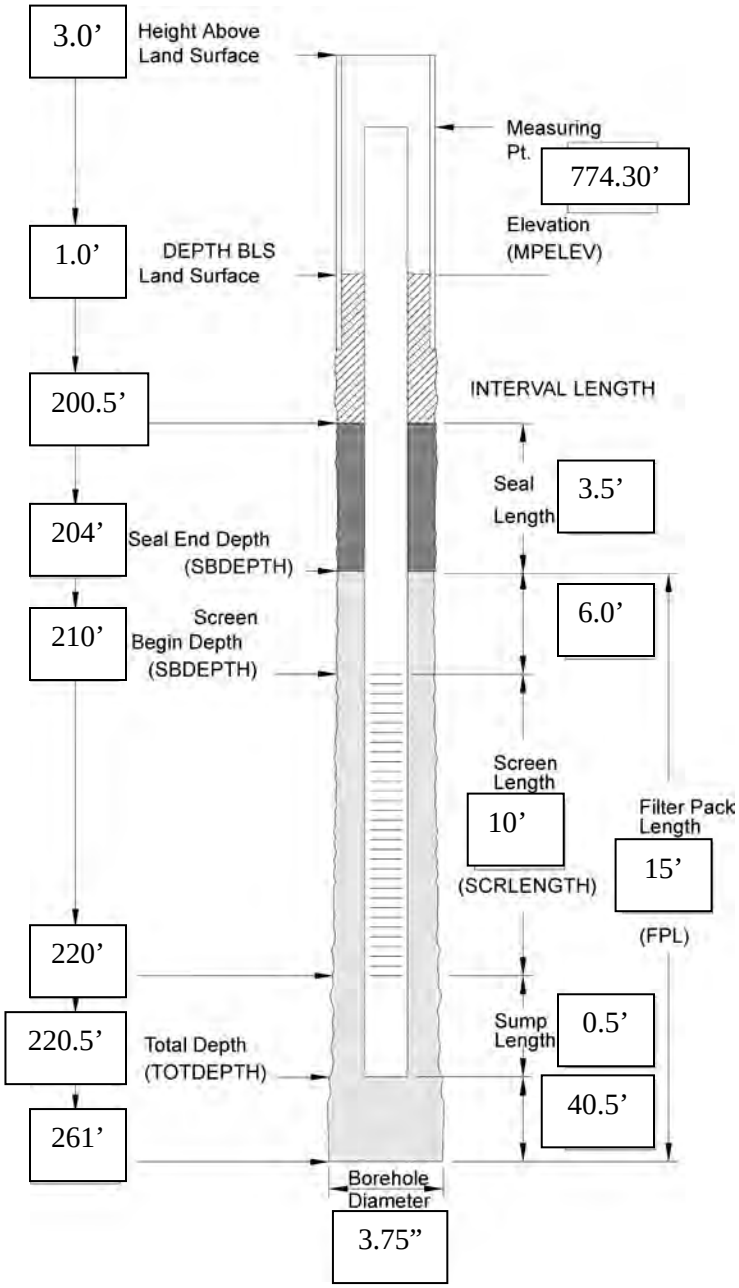
Geosyntec consultants
engineers | scientists | innovators

PROJECT # CHE8273

WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): MW-20
Drilling Company: Frontz Drilling Company
Drillers: D. Schrecengost/R. VanDyne
Geologist/Engineer: J. Bannantine
Signature: _____

Site: AEP Gavin FAR Closure
Installation Method: Sonic – Rock Coring
Casing Installation Date (INSDATE): 05/08/2012
Well Type (WTCCODE): Monitoring
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): ___



Comments
Pre-packed, 20-slot screen.
Borehole cored and logged from 0-261 ft. bgs prior to well construction.

Well Completion
Guard Posts (Y / N) Date: 5/17/2012
Surface Pad Size: 2.0 ft x 2.0 ft
Protective Casing or Cover
Diameter/Type: 5.5-inch steel Procasing.
Depth BGS: _____ Weep Hole ([Y] / N)
Grout
Composition/Proportions: 3.5 bags per 100 gallons water
Quik-Grout
Placement Method: _____
Tremie
Seal Date: 5/16/12
Type: 3/8-inch bentonite chips.
Source: Haliburton
Set-up/Hydration Time: 16 hours
Placement Method: Gravity
Vol. Fluid Added: None
Filter Pack
Type: Filter sand #5
Source: RW Sidley, Inc
Amount Used: 5 bags (50 lb bags)
Placement Method: Gravity
Well Riser Pipe
Casing Material (CMACODE): Schedule 40 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Pre-pack schedule 40 PVC
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.020 in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap ([Y] / N)
Type/Length: Schedule 40 PVC/0.4 feet
Backfill Plug ([Y] / N)
Material: Bentonite chips
Placement Method: Gravity
Set-up/Hydration Time: 16 hours
Total Water Volume During Construction
Introduced (Gal): 0 Recovered (Gal): 30
Reviewed
By: _____ Date: _____

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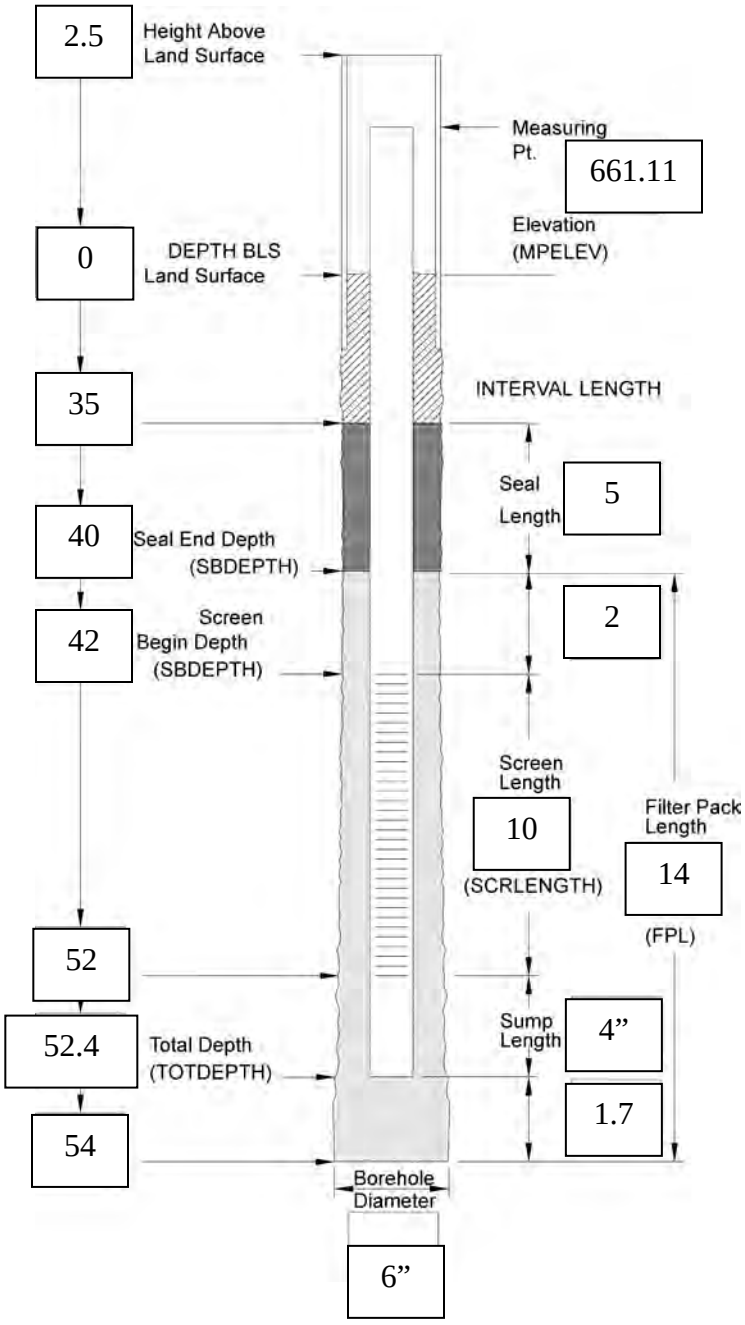
WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-03
Drilling Company: Frontz Drilling
Drillers: Aaron Mackey
Geologist/Engineer: Chase Christenson
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: HSA
Casing Installation Date (INSDATE): 3/23/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)
Grout
Composition/Proportions: 120 gal
7 gal water: 94 lbs portland cement: 4 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/22/16
Type: 3/8" Med, crushed bentonite chips
Source: Baroid – Wyoming Sodium Bentonite (1 bag)
Set-up/Hydration Time: 2 Hours
Placement Method: Poured, Gravity
Vol. Fluid Added: 5 gal
Filter Pack
Type: Sidley #5 & #7 (Choker Sand)
Source: Sidley
Amount Used: 2 – 50 lb bags #5, 0.5 – 50 lb bag #7
Placement Method: Poured Gravity

Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" Pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y / N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y / N)
Material: Bentonite Chips, 2 – 50 lb bags
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): - Recovered _____ (Gal): -
Reviewed By: J. Couch Date: 4/13/2016

Comments
Feet unless otherwise indicated. Original borehole 75'
Backfilled w/ bentonite chips to 54', 2' of sand below Well.

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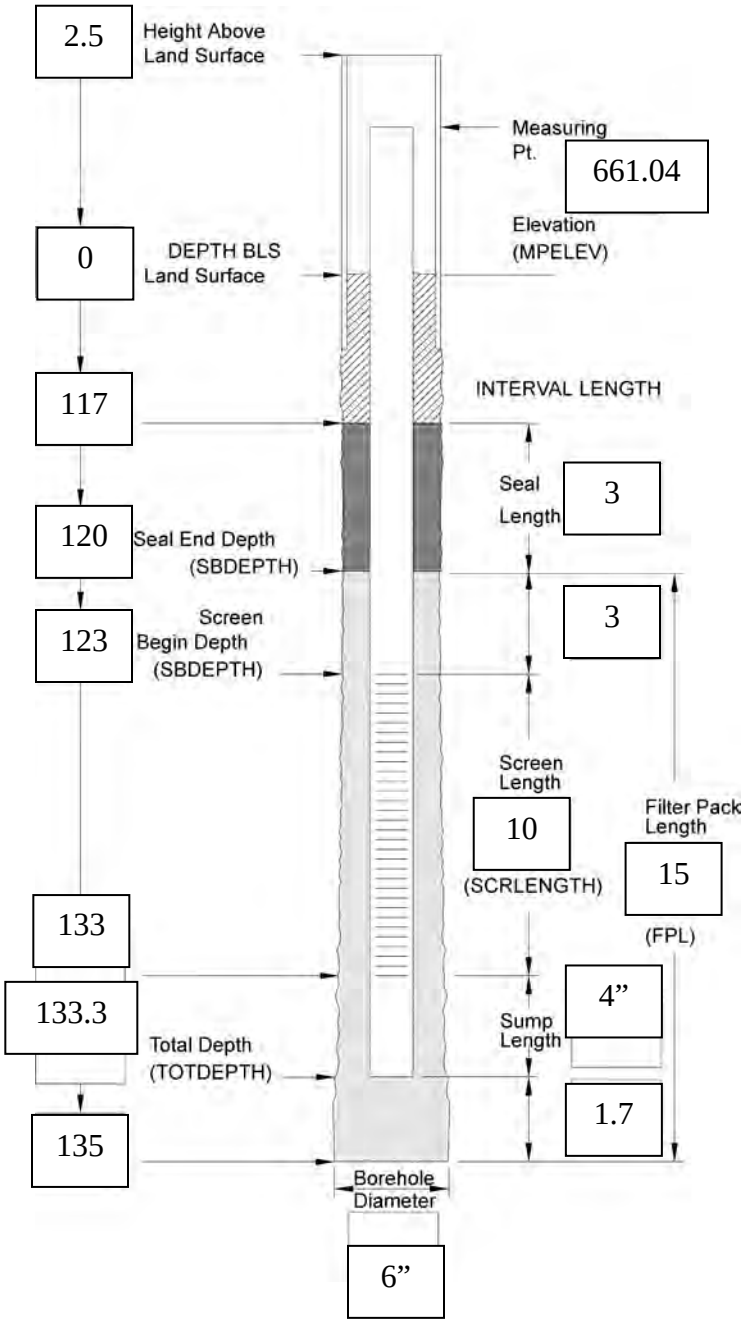
WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-04
Drilling Company: Frontz Drilling
Drillers: Aaron Mackey
Geologist/Engineer: C. Christenson / M. Muenich
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Air Rotary
Casing Installation Date (INSDATE): 3/28/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)
Grout
Composition/Proportions: _____
7 gal water: 94 lbs portland cement: 4 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/28/16 @ 1230
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Sodium Bentonite (1 bag)
Set-up/Hydration Time: 2 Hours
Placement Method: Poured, Gravity
Vol. Fluid Added: N/A, submerged
Filter Pack
Type: Sidley #5 & #7 (Choker Sand)
Source: Sidley
Amount Used: 1 – 50 lb bags #5, 3 – 50 lb bag #7
Placement Method: Poured Gravity
Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" Pre-packed

Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y / N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y / N)
Material: Bentonite Chips (2 – 50 lb bags)
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): - Recovered _____
(Gal): -
Reviewed By: J. Couch Date: 4/13/2016

Comments
Feet unless otherwise indicated; Original borehole 150'. Backfilled w/ Bentonite chips to 135'; used 1 centralizer For riser; removed 10' of 6" surface casing, 24' still in ground.

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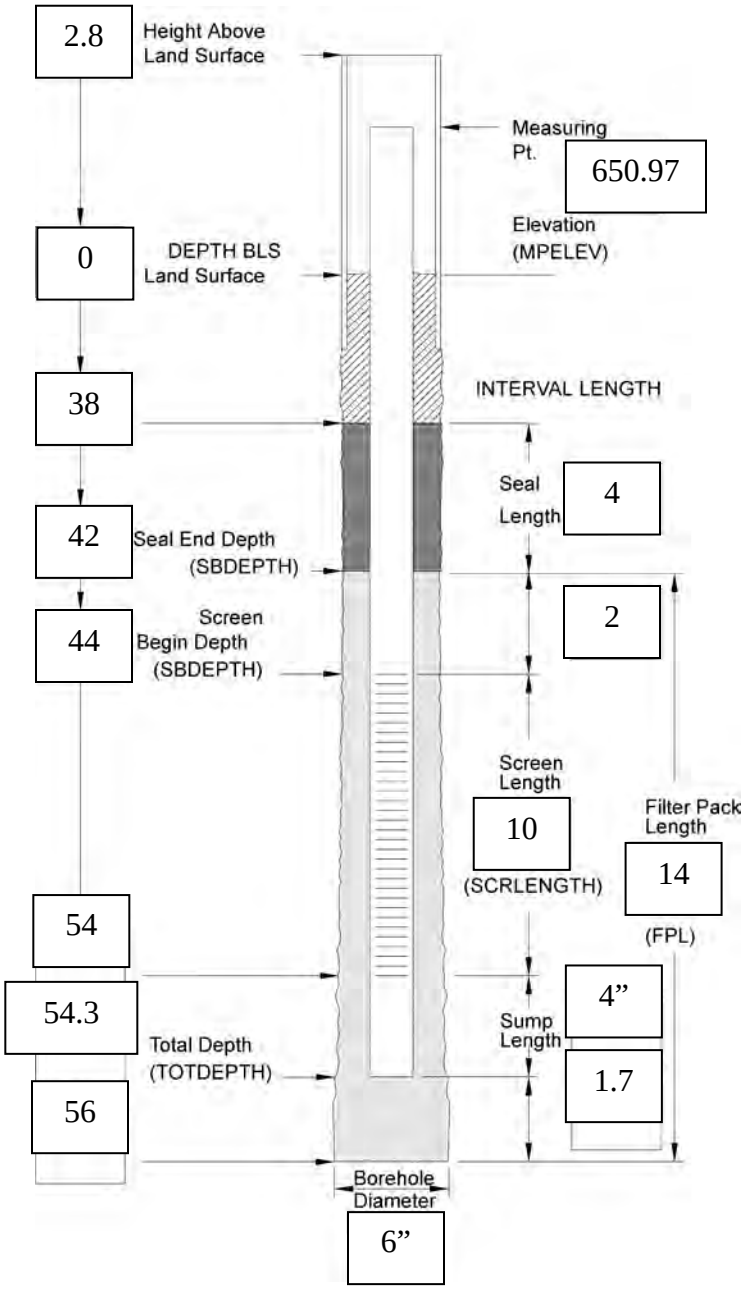
WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-05
Drilling Company: Frontz Drilling
Drillers: Aaron Mackey
Geologist/Engineer: Mike Muenich
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Air Rotary
Casing Installation Date (INSDATE): 3/29/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Comments
Feet unless otherwise indicated; total boring depth was 60'. Backfilled to 56' w/ bentonite chips.

Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)
Grout
Composition/Proportions: _____
7 gal water: 94 lbs portland cement: 4 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/29/16 @ 1115
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Sodium Bentonite (1 bag)
Set-up/Hydration Time: Overnight
Placement Method: Poured, Gravity
Vol. Fluid Added: 1 – 50 lb bag + 5 gal.
Filter Pack
Type: Sidley #5 & #7 (Choker Sand)
Source: Sidley
Amount Used: 3 – 50 lb bags #5, 1 – 50 lb bag #7
Placement Method: Poured Gravity
Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" Pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y) N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y / N)
Material: Bentonite Chips (2 – 50 lb bags)
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): - Recovered (Gal): -
Reviewed By: J. Couch Date: 4/13/2016

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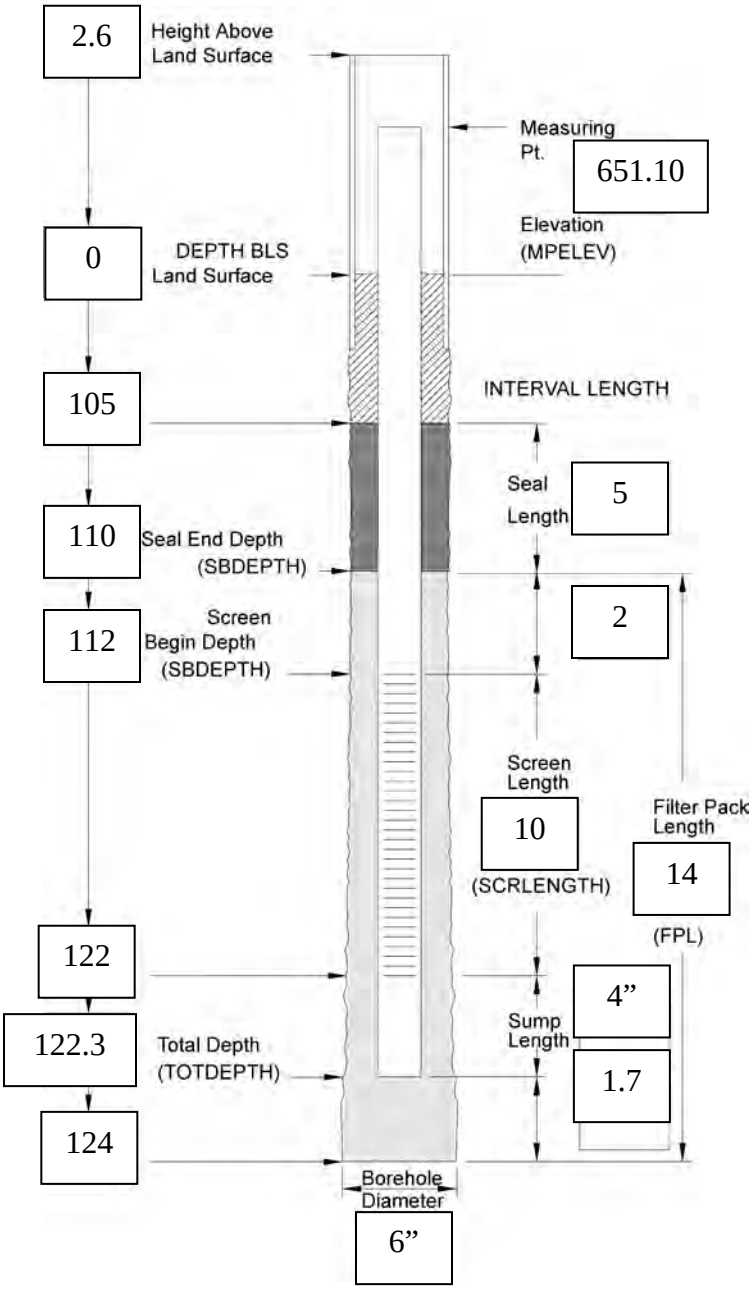
WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-06
Drilling Company: Frontz Drilling
Drillers: Aaron Mackey
Geologist/Engineer: Mike Muenich
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Air Rotary
Casing Installation Date (INSDATE): 3/29/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft

Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)

Grout
Composition/Proportions: _____
6 gal water: 94 lbs portland cement: 5 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/29/16 @ 1615
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Bentonite (1 bag)
Set-up/Hydration Time: Overnight
Placement Method: Poured, Gravity
Vol. Fluid Added: 1 – 50 lb bag + 5 gal.

Filter Pack
Type: Sidley #5 & #7 (Choker Sand)
Source: Sidley
Amount Used: 3 – 50 lb bags #5, 1 – 50 lb bag #7
Placement Method: Poured Gravity

Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.

Screen
Material: Sch. 80 PVC 4" pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y) N)
Type/Length: Sch. 80 PVC 2"

Backfill Plug (Y / N)
Material: Bentonite Chips (1 – 50 lb bag)
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A

Total Water Volume During Construction
Introduced (Gal): - Recovered _____ (Gal): -

Comments
Feet unless otherwise indicated. Original borehole 140'.
Collapse to ~105', reamed out to 125'.
Backfilled w/ Bentonite chips to 124'.

Reviewed By: J. Couch Date: 4/13/2016

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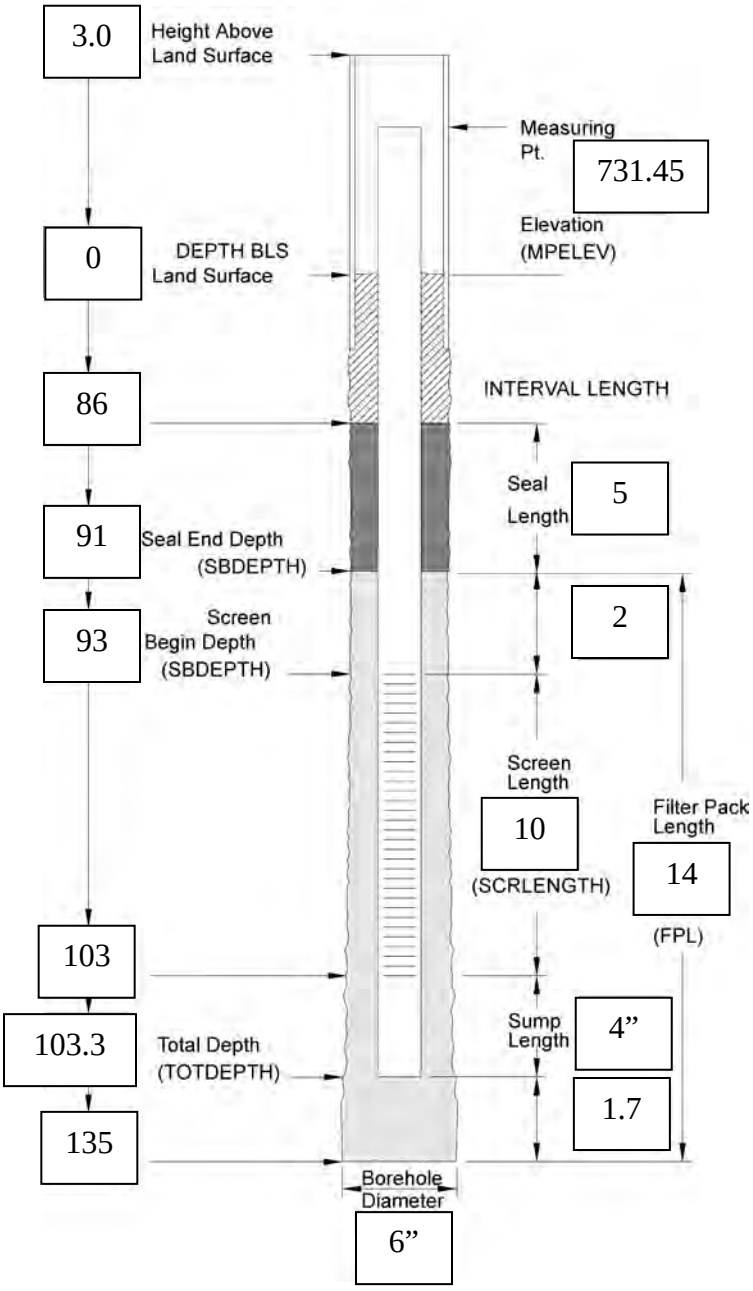
WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-07
Drilling Company: Frontz Drilling
Drillers: Rob Hamilton
Geologist/Engineer: Chase Christenson
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Air Rotary
Casing Installation Date (INSDATE): 3/29/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: 2' x 2' ft x 0.5 ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)
Grout
Composition/Proportions: 245 gal
7 gal water: 94 lbs portland cement: 4 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/22/16
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Sodium Bentonite (1 bag)
Set-up/Hydration Time: Overnight
Placement Method: Poured, Gravity
Vol. Fluid Added: 1 – 50 lb bag + 5 gal.
Filter Pack
Type: Sidley #5 & #7 above screen (Choker Sand)
Source: Sidley
Amount Used: 8 – 50 lb bags
Placement Method: Poured Gravity
Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" Pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y / N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y / N)
Material: Bentonite Chips
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): - Recovered _____ (Gal): -
Reviewed By: J. Couch Date: 4/13/2016

Comments
Feet unless otherwise indicated. Original borehole 135' Backfilled w/ bentonite chips to 105'. #5 Sidley Sand 105' – 103.3'.

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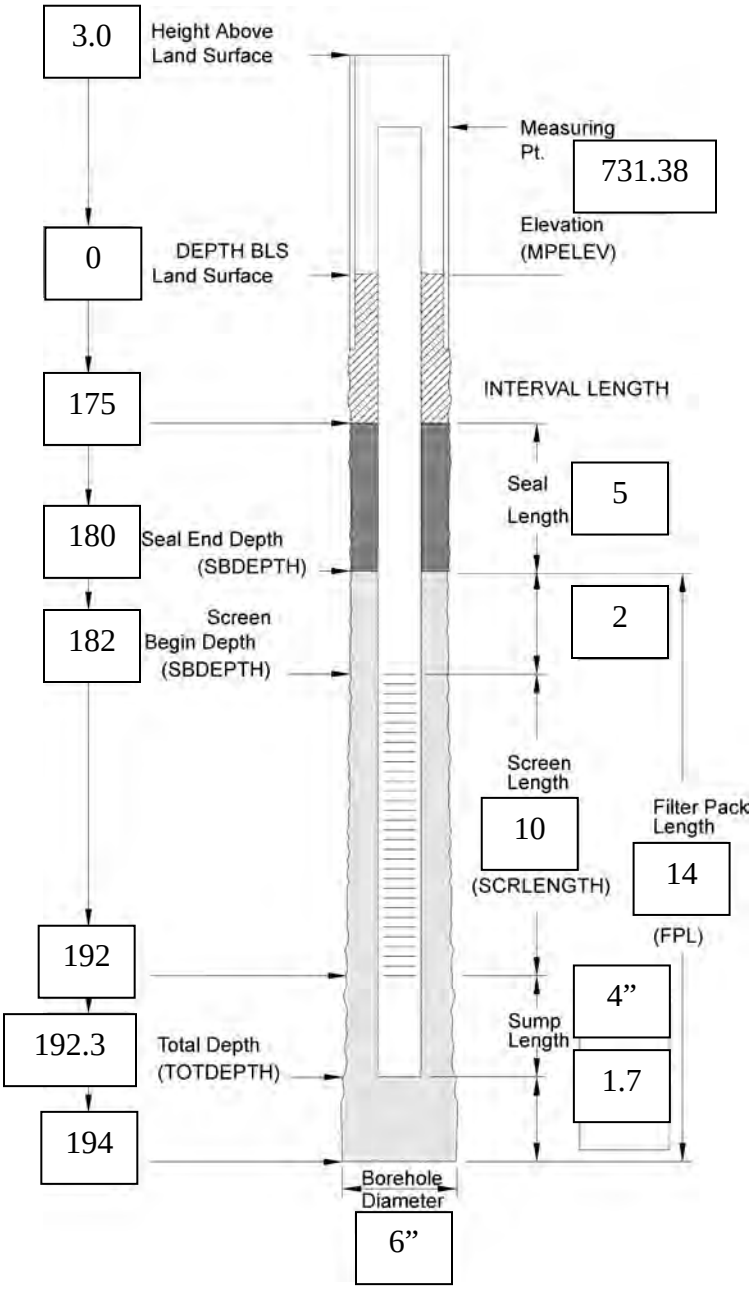
WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-08
Drilling Company: Frontz Drilling
Drillers: Rob Hamilton
Geologist/Engineer: Chase Christenson
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Sonic
Casing Installation Date (INSDATE): 3/23/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Comments
Feet unless otherwise indicated. Original borehole 221'. Backfilled w/ bentonite chips to 194'.

Well Completion
Guard Posts (Y / N) Date: 3/30/16
Surface Pad Size: 2' x 2' ft x 0.5 ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: 2 Weep Hole (Y / N)
Grout
Composition/Proportions: 460 gal
6 gal water: 94 lbs portland cement: 5 lbs bentonite grout
Placement Method: Pressure Tremie

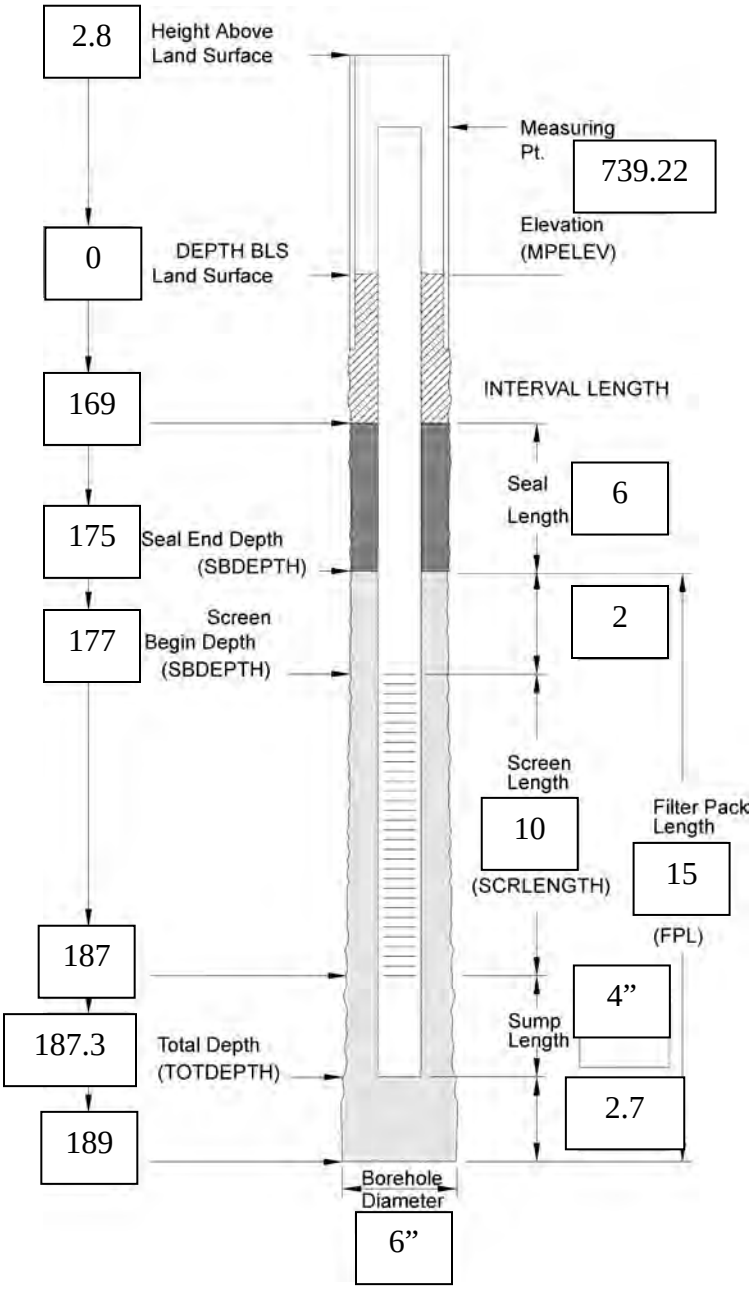
Seal Date: 3/23/16
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Bentonite
Set-up/Hydration Time: 2 days
Placement Method: Poured, Gravity
Vol. Fluid Added: N/A, submerged
Filter Pack
Type: Sidley #5 & #7 (Choker Sand)
Source: Sidley
Amount Used: 4 – 50 lb bags #5, 1 – 50 lb bag #7
Placement Method: Poured Gravity
Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" Pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y / N)
Material: Bentonite, Holeplug
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): - Recovered (Gal): -
Reviewed By: J. Couch Date: 4/13/2016

Geosyntec consultants

WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-09
Drilling Company: Frontz Drilling
Drillers: Aaron Mackey
Geologist/Engineer: Chad Gregory
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Air Rotary
Casing Installation Date (INSDATE): 3/3/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)
Grout
Composition/Proportions: 150 gal
7 gal water: 94 lbs portland cement: 4 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/3/16
Type: 3/8" med, crushed bentonite chips – 2 bags
Source: Baroid – Wyoming Sodium Bentonite
Set-up/Hydration Time: 2 hours
Placement Method: Poured, Gravity
Vol. Fluid Added: N/A, submerged
Filter Pack
Type: Sidley #5 & #7 (Choker Sand)
Source: Sidley
Amount Used: 4 – 50 lb bags #5
Placement Method: Poured Gravity
Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y) N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y / N)
Material: Bentonite chips (2 – 50 lb bags)
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): _____ Recovered (Gal): _____
Reviewed By: J. Couch Date: 4/13/2016

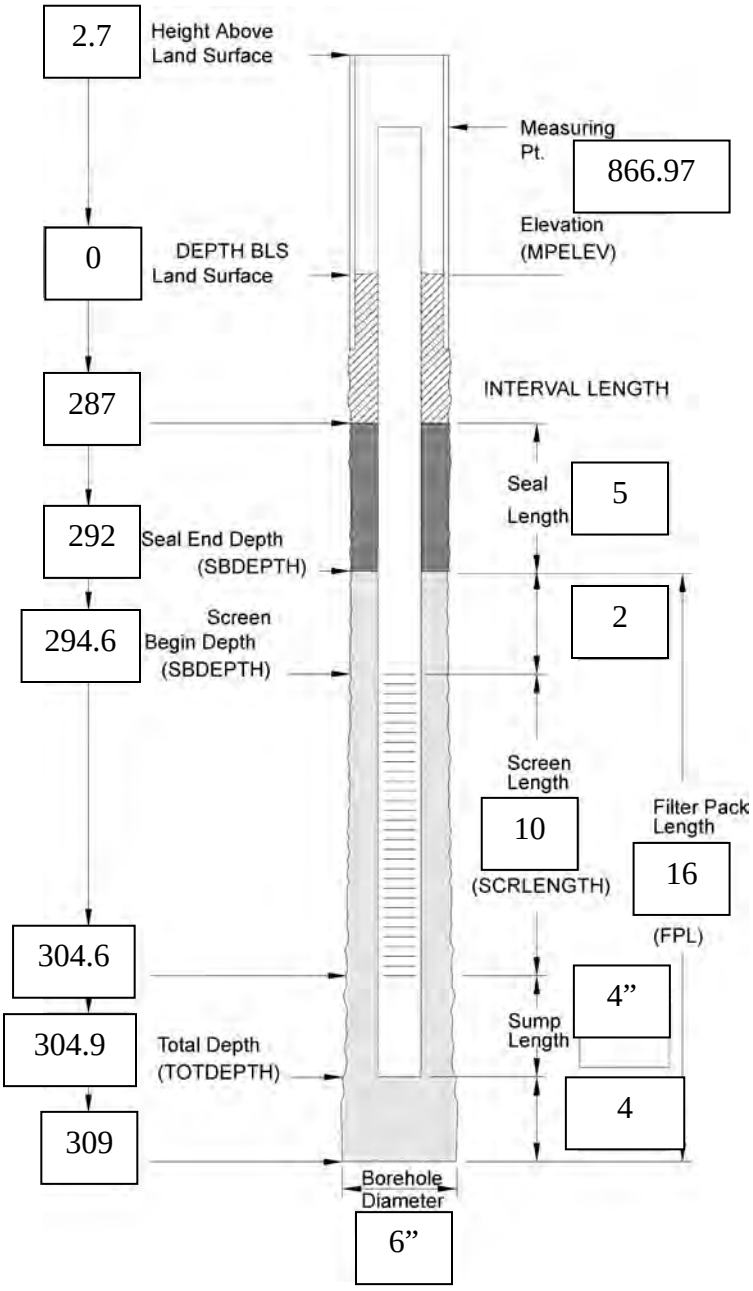
Comments
Feet unless otherwise indicated. Original borehole 200'. Backfilled w/ Bentonite chips to 189'. 70' of 6" PVC surface casing left in hole 10 – 80' bgs.

Geosyntec consultants

WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-10
Drilling Company: Frontz Drilling
Drillers: Rob Hamilton
Geologist/Engineer: Chad Gregory
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Sonic
Casing Installation Date (INSDATE): 3/4/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Comments
Feet unless otherwise indicated. Original borehole 330'. Backfilled w/ Bentonite Chips to 309'. Water introduced during construction to clear out unsettled` Sand. 6" PVC surface casing left in place 20'-230' bgs.

Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft

Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)

Grout
Composition/Proportions: 625 gal
6 gal water: 94 lbs portland cement: 7 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/4/16
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Sodium Bentonite (4 bags)
Set-up/Hydration Time: >2 hours
Placement Method: Poured, Gravity
Vol. Fluid Added: N/A, submerged

Filter Pack
Type: Sidley #5 & #7 (Choker Sand)
Source: Sidley
Amount Used: 9 – 50 lb bags
Placement Method: Poured Gravity

Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.

Screen
Material: Sch. 80 PVC 4" pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y) N)
Type/Length: Sch. 80 PVC 2"

Backfill Plug (Y / N)
Material: Bentonite, Holeplug (10 bags)
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A

Total Water Volume During Construction
Introduced (Gal): 250 Recovered (Gal): 200

Reviewed By: J. Couch Date: 4/13/2016

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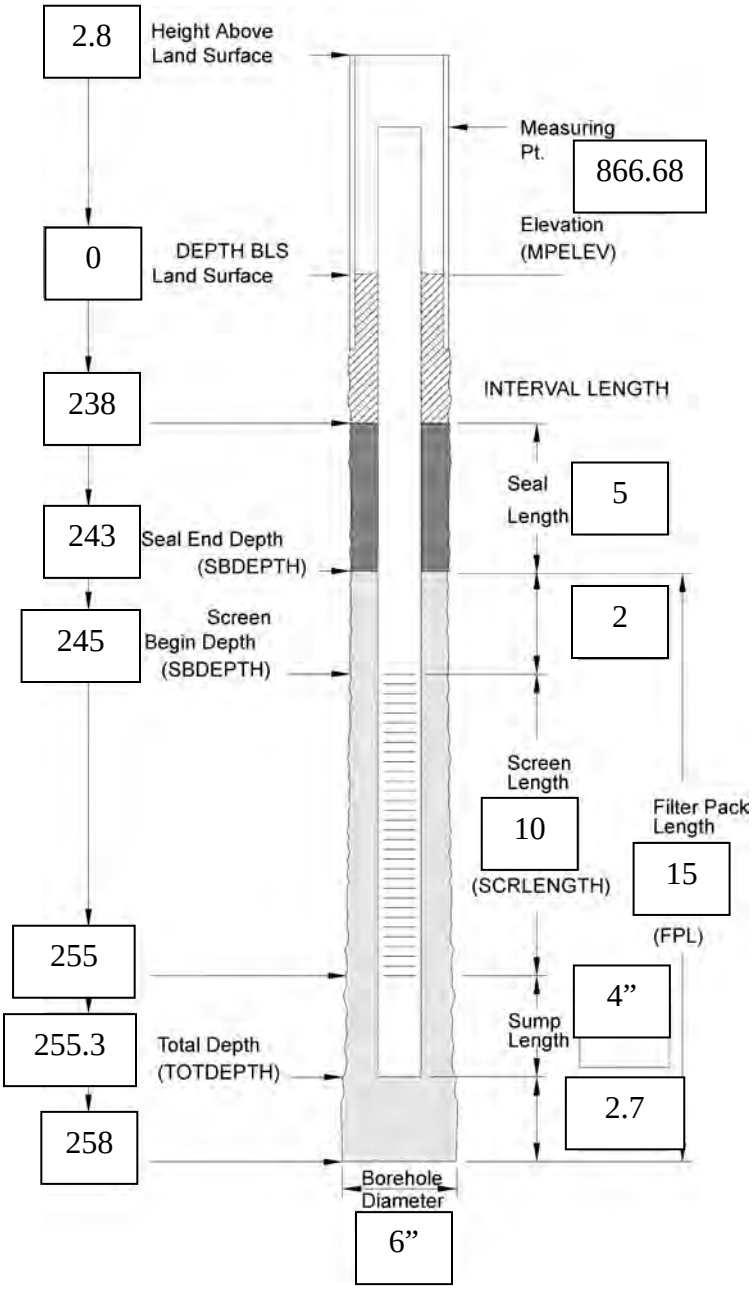
WELL CONSTRUCTION LOG
ABOVE GROUND COMPLETION

Well I.D. (LOCID): 2016-11
Drilling Company: Frontz Drilling
Drillers: Rob Hamilton
Geologist/Engineer: Chad Gregory
Signature: _____

Site: AEP – Gavin Project Number: CHE8259A
Installation Method: Sonic
Casing Installation Date (INSDATE): 3/4/16
Well Type (WTCCODE): Monitoring Well
Well Completion Method (WCMCODE): _____
Geologic Completion Zone (GZCODE): _____



Well Completion
Guard Posts (Y / N) Date: _____
Surface Pad Size: _____ ft x _____ ft
Protective Casing or Cover
Diameter/Type: 6" Steel, 5' length
Depth BGS: _____ Weep Hole (Y / N)
Grout
Composition/Proportions: 575 gal
6 gal water: 94 lbs portland cement: 7 lbs bentonite grout
Placement Method: Pressure Tremie

Seal Date: 3/3/16
Type: 3/8" med, crushed bentonite chips
Source: Baroid – Wyoming Sodium Bentonite (4 bags)
Set-up/Hydration Time: 24 hours
Placement Method: Poured, Gravity
Vol. Fluid Added: N/A, submerged
Filter Pack
Type: Sidley #5 & #7 (Choker Sand)
Source: Sidley
Amount Used: 9 – 50 lb bags
Placement Method: Poured Gravity
Well Riser Pipe
Casing Material (CMACODE): Sch. 80 PVC
Casing Inside Diameters (CASDIAM): 2.0 in.
Screen
Material: Sch. 80 PVC 4" pre-packed
Inside Diameter (SCRDIAM): 2.0 in.
Screen Slot Size: (SOUA): 0.01 (10-Slot) in.
Percent Open Area (PCTOPEN): _____
Sump or Bottom Cap (Y) N)
Type/Length: Sch. 80 PVC 2"
Backfill Plug (Y / N)
Material: Bentonite, Holeplug (1 bag)
Placement Method: Poured, Gravity
Set-up/Hydration Time: N/A
Total Water Volume During Construction
Introduced (Gal): - Recovered _____ (Gal): -
Reviewed By: J. Couch Date: 4/13/2016

Comments
Feet unless otherwise indicated. Original borehole 261'. Backfilled w/ Bentonite holeplug to 258'. 6" PVC surface casing left in place 10'-230' bgs.

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
Well No. MW-16
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Drilling Start Date:	**10/03/2016 16:20**	Boring Depth (ft):	**134.1**	Well Depth (ft):	**119.4**
Drilling End Date:	**10/05/2016/ 09:40**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**AEP Service Corp.**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Rotary**	DTW After Drilling (ft):	**107.8**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Diedrich D-120**	Ground Surface Elev. (ft):	**727.961**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**Zach Racer**	Top of Casing Elev. (ft):	**730.757**	Seal Material(s):	**Bentonite Pellets and Grout**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 349,987.86 E 2,102,252.07**	Filter Pack:	**Global #5 Sand**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
0									Overburden.	0-2 ft: #2 Gravel. 2-3 ft: #57 Gravel Advanced through overburden and incompetent rock with 8" hollow-stem auger to 87 ft bgs. Before well installation, AEP Service Corp. reamed 6" diameter borehole to 121 ft bgs.	0
5											5
10											10
15											15
20											20

NOTES:
1) Coordinates are in Gavin Plant Coordinate System, which varies ±3 ft. from State Plane Ohio South NAD27. Elevation in NGVD1929.
2) "DTW after Drilling" refers to steady-state water level in open borehole (prior to well installation).
3) Geophysical logging used to interpret best depth interval to set the well screen.
4) Monitoring well screened in Morgantown Sandstone.

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
Well No. MW-16
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Drilling Start Date:	**10/03/2016 16:20**	Boring Depth (ft):	**134.1**	Well Depth (ft):	**119.4**
Drilling End Date:	**10/05/2016/ 09:40**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**AEP Service Corp.**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Rotary**	DTW After Drilling (ft):	**107.8**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Diedrich D-120**	Ground Surface Elev. (ft):	**727.961**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**Zach Racer**	Top of Casing Elev. (ft):	**730.757**	Seal Material(s):	**Bentonite Pellets and Grout**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 349,987.86 E 2,102,252.07**	Filter Pack:	**Global #5 Sand**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20									Overburden.		20
25											25
30											30
35											35
40											40

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
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Drilling Start Date:	**10/03/2016 16:20**	Boring Depth (ft):	**134.1**	Well Depth (ft):	**119.4**
Drilling End Date:	**10/05/2016/ 09:40**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**AEP Service Corp.**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Rotary**	DTW After Drilling (ft):	**107.8**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Diedrich D-120**	Ground Surface Elev. (ft):	**727.961**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**Zach Racer**	Top of Casing Elev. (ft):	**730.757**	Seal Material(s):	**Bentonite Pellets and Grout**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 349,987.86 E 2,102,252.07**	Filter Pack:	**Global #5 Sand**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40									Overburden.		40
45											45
50										Centralizer set at 50' bgs.	50
55											55
60											60

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
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Drilling Start Date:	**10/03/2016 16:20**	Boring Depth (ft):	**134.1**	Well Depth (ft):	**119.4**
Drilling End Date:	**10/05/2016/ 09:40**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**AEP Service Corp.**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Rotary**	DTW After Drilling (ft):	**107.8**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Diedrich D-120**	Ground Surface Elev. (ft):	**727.961**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**Zach Racer**	Top of Casing Elev. (ft):	**730.757**	Seal Material(s):	**Bentonite Pellets and Grout**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 349,987.86 E 2,102,252.07**	Filter Pack:	**Global #5 Sand**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
60									Overburden.		60
65											65
70											70
75											75
80											80

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
Well No. MW-16
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Drilling Start Date:	**10/03/2016 16:20**	Boring Depth (ft):	**134.1**	Well Depth (ft):	**119.4**
Drilling End Date:	**10/05/2016/ 09:40**	Boring Diameter (in):	**6**	Well Diameter (in):	**2**
Drilling Company:	**AEP Service Corp.**	Sampling Method(s):	**Rock Core**	Screen Slot (in):	**0.010**
Drilling Method:	**Rotary**	DTW After Drilling (ft):	**107.8**	Riser Material:	**Sch 40 PVC**
Drilling Equipment:	**Diedrich D-120**	Ground Surface Elev. (ft):	**727.961**	Screen Material:	**Sch 40 PVC Slotted**
Driller:	**Zach Racer**	Top of Casing Elev. (ft):	**730.757**	Seal Material(s):	**Bentonite Pellets and Grout**
Logged By:	**Doug Mateas**	Location (X,Y):	**N 349,987.86 E 2,102,252.07**	Filter Pack:	**Global #5 Sand**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
80									Overburden.		80
85										Advanced with 4" advancer (4" casing cutting edge and roller bit) from 87 to 99.3 ft bgs.	85
90											90
95										Set 4" steel casing through overburden and incompetent rock to 99.3 ft bgs. Cored with NQ-size core barrel with wireline system from 99.3 to 134.1 ft bgs.	95
100				Run 1			43/58	42.7	(99.3') CLAYSTONE: weak, dark reddish brown		100

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
Well No. MW-16
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Drilling Start Date:	10/03/2016 16:20	Boring Depth (ft):	134.1	Well Depth (ft):	119.4
Drilling End Date:	10/05/2016/ 09:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.961	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.757	Seal Material(s):	Bentonite Pellets and Grout
Logged By:	Doug Mateas	Location (X,Y):	N 349,987.86 E 2,102,252.07	Filter Pack:	Global #5 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
100									(10R 3/4) with minor secondary colors of light olive brown (5Y 5/6) and very dusky purple (5RP 2/2), highly decomposed, moderately disintegrated, intensely fractured, massive.		100
				Run 2			120/ 120	67.9	(103.6') CLAYSHALE: strong, dark greenish gray (5G 4/1) with secondary grayish red (10R 4/2), massive, slightly decomposed, competent, unfractured.		
105									(104.7') Sandy silty SHALE: strong to very strong, light greenish gray (5G 4/1) with secondary grayish red (10R 4/2), massive, micaceous, fresh, competent, unfractured. [MORGANTOWN FRM.]		105
									(106.1') Changes to intensely fractured.		
									(107.9') Silty shaley SANDSTONE: strong to very strong, dark greenish gray (5G 4/1), massive, micaceous to very micaceous, fine to medium grained, fresh, competent, unfractured. [MORGANTOWN FRM.]		
110									(108.4') Sandy CLAYSTONE: very weak, dark greenish gray (5G 4/1), massive, micaceous, highly decomposed, moderately disintegrated, intensely fractured. [MORGANTOWN FRM.]		110
									(109.3') Silty shaley SANDSTONE: strong to very strong, dark greenish gray (5G 4/1), cross bedded, micaceous to very micaceous, fine to medium grained, fresh, competent, moderately to intensely fractured. [MORGANTOWN FRM.]		
				Run 3			110.5/ 120	47.5	(113.5') Silty SHALE: moderately strong, grayish red (10R 4/2), massive, slightly micaceous, fresh to slightly decomposed, competent, slightly fractured, slightly calcareous. [MORGANTOWN FRM.]		
115									(114.4') Changes to dark greenish gray (5G 4/1), clay content increases until 115.8 ft.		115
									(118.4') CLAYSTONE: very weak to weak, grayish red (10R 4/2), massive, slickensides, highly decomposed, intensely disintegrated,		
120											120

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4) Monitoring well screened in Morgantown Sandstone.

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
Well No. MW-16
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Drilling Start Date:	10/03/2016 16:20	Boring Depth (ft):	134.1	Well Depth (ft):	119.4
Drilling End Date:	10/05/2016/ 09:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.961	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.757	Seal Material(s):	Bentonite Pellets and Grout
Logged By:	Doug Mateas	Location (X,Y):	N 349,987.86 E 2,102,252.07	Filter Pack:	Global #5 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120									intensely fractured. [MORGANTOWN FRM.]		120
									(121.4') Silty SHALE: strong, grayish red (10R 4/2) with minor secondary variegated colors of grayish red purple (5RP 4/2) and light olive brown (5Y 5/6), slickensides, slightly decomposed, slightly disintegrated, moderately to intensely fractured, calcareous nodules. [MORGANTOWN FRM.]		
125				Run 4			120/ 120	67.8	(124.1') Changes to moderately fractured.		125
									(127.8') Silty sandy SHALE: strong, medium bluish gray (5B 5/1) and dark greenish gray (5G 4/1), massive, very micaceous, fresh, competent, slightly fractured, cross bedded. [MORGANTOWN FRM.]		
130									(129.1') Changes to very sandy.		130
									(130.1') CLAYSHALE: moderately strong to strong, dark greenish gray (5G 4/1), massive, slightly decomposed, slightly disintegrated, intensely fractured, clay infillings in fractures.		
									(130.7') Changes to grayish red (10R 4/2).		
									(132.1') Sandy silty SHALE: strong, dark greenish gray (5G 4/1), massive, micaceous, fresh, competent, unfractured.		
135									(133.1') CLAYSHALE: moderately strong to strong, dark greenish gray (5G 4/1), massive, slightly decomposed, slightly disintegrated, intensely fractured, clay infillings in fractures.		135
									End of boring at 134.1 ft bgs.		
									Well installed on 10/25/2016		
140											140

NOTES:
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3) Geophysical logging used to interpret best depth interval to set the well screen.
4) Monitoring well screened in Morgantown Sandstone.

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
Well No. MW-17
Page: 1 of 12

Drilling Start Date:	09/28/2016 12:50	Boring Depth (ft):	229.3	Well Depth (ft):	213.4
Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
Logged By:	Doug Mateas	Location (X,Y):	N 349,980.08 E 2,102,247.86	Filter Pack:	Global #5 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS
0										0-2 ft: #2 Gravel. 2-3 ft: #57 Gravel. Advanced through overburden with 4" hollow stem auger to 58 ft bgs. Sampled every 5 ft with 1.5' split spoon. Before well installation, AEP Service Corp. reamed 6" diameter borehole to 217 ft bgs.
5				SPT-1		8 8 7	10.5/18	15	(6.5') Shaley GRAVEL (GW); medium gray (N5), fine to coarse grained, well-graded, some clay, trace sand, moist, medium dense, subrounded to angular micaceous shaley gravel. [FILL]	
10				SPT-2		5 9 11	9/18	20	(11.5') Gravelly CLAY (CL); medium gray (N5), low plasticity, some subangular to angular micaceous shaley gravel, medium stiff, moist. [FILL] (12.5') Shaley GRAVEL (GW); medium light gray (N6), fine to coarse grained, well-graded, angular shaley gravel, micaceous, some sand, medium dense, dry. [FILL]	
15				SPT-3		7 17 23	10.5/18	40	(16.5') SAND (SW); moderately yellow (5Y 7/6) with secondary colors of medium light gray (N6) and very light gray (N8), fine to medium grained, well-graded, little subrounded sandstone gravel, dense, dry. [FILL]	
20										

NOTES:
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3) Geophysical logging used to interpret best depth interval to set the well screen.
4) Monitoring well screened in Morgantown Sandstone.

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Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
Well No. MW-17
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Drilling Start Date:	09/28/2016 12:50	Boring Depth (ft):	229.3	Well Depth (ft):	213.4
Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
Logged By:	Doug Mateas	Location (X,Y):	N 349,980.08 E 2,102,247.86	Filter Pack:	Global #5 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	Date & Time	Blow Counts	Recovery (in)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
20										Centralizer at 20' bgs.	20
				SPT-4		7 12 17	8/18	29	(21.5') Silty SAND (SM); very light gray sand (N7) and medium gray (N5), fine grained, poorly graded, some silt with platy/shaley structure, medium dense, dry to moist, sand content decreases and silt content increases down section. [FILL]		
25				SPT-5		10 14 18	11/18	32	(26.5') SAND (SW); dark yellowish orange (10YR 6/6) and grayish orange (10YR 7/4), fine to medium grained, well-graded, dense, moist. [FILL]		25
30				SPT-6		14 12 41	8.5/18	53	(31.5') Shaley GRAVEL (GW); medium light gray (N6) with some dusky yellow (5Y 6/4), fine to coarse grained angular shaley gravel, well-graded, trace sand, micaceous, very dense, moist. [FILL]		30
35				SPT-7		18 7 9	9/18	16	(36.5') Shaley GRAVEL (GW); medium gray (N5), fine to coarse grained subangular to angular shaley gravel, well-graded, few clay, trace sand, medium dense, dry. [FILL]		35
40											40

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WELL LOG
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Drilling Start Date:	09/28/2016 12:50	Boring Depth (ft):	229.3	Well Depth (ft):	213.4
Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
Logged By:	Doug Mateas	Location (X,Y):	N 349,980.08 E 2,102,247.86	Filter Pack:	Global #5 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	Date & Time	Blow Counts	Recovery (in)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
40											40
				SPT-8		12 14 14	5/18	28	(41.5') SAND (SP); dark yellowish orange (10YR 6/6) and very light gray (N8), medium grained, poorly graded, few poorly cemented sandstone gravel, medium dense, moist. [FILL]		
45				SPT-9		11 27 33	15/18	60	(46.5') CLAYSHALE: moderately brown (5YR 3/4), slickensides, hard, dry to moist, fissile.		45
50				SPT-10		50/4	1/4	50/4	(51.5') CLAYSHALE: moderately brown (5YR 4/4), fissile, hard, moist.		50
55				SPT-11		50/5	5/5	50/5	(56.5') Sandy CLAYSHALE: medium light gray (N6) and pale reddish brown (10R 5/4), fissile, hard, moist.		55
				Run 1			78.5/76	65.8	(58') SANDSTONE: light gray (N7) with medium gray (N5), cross bedded, strong, fine grained, fresh and competent, intensely fractured, very micaceous.	Auger refusal at 57.9 ft bgs. Cored with NQ-size core barrel with wireline system from 58 to 229.3 ft bgs.	
60											60

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Drilling Start Date:	09/28/2016 12:50	Boring Depth (ft):	229.3	Well Depth (ft):	213.4
Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
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DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS
60									(58.8') Shaley silty SANDSTONE: strong, medium bluish gray (5B 5/1), fine grained, slightly fissile, fresh, competent, unfractured.	
									(60.4') CLAYSTONE/CLAYSHALE: very weak, medium gray (N5), fissile, highly decomposed, moderately disintegrated, intensely fractured.	
									(61.4') Changes to grayish red (5R 4/2).	
65				Run 2			110.5/ 120	61.7	(64.3') MUDSTONE: very weak to weak, dark yellowish brown (10YR 4/2), fissile, very highly decomposed (residual soil), intensely disintegrated, intensely fractured.	
									(66.1') Sandy silty SHALE: strong, dark yellowish brown (10YR 4/2), massive, locally fissile, fresh, competent, slightly fractured, micaceous, slickensides.	
70									(70.4') MUDSTONE: very highly decomposed, grayish olive (10Y 4/2).	
									(71.7') Carbonaceous SHALE: strong, grayish olive (10Y 4/2), massive, slickensides, calcareous, moderately decomposed, slightly disintegrated, moderately to intensely fractured.	
75				Run 3			74/ 120	27.9	(76.3') Transitions to variegated colors of grayish red (5R 4/2) with some grayish olive (10Y 4/2) and light olive brown (5Y 5/6).	
									(77.2') MUDSTONE: grayish red (10R 4/2), very highly decomposed.	
80										

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Drilling Start Date:	09/28/2016 12:50	Boring Depth (ft):	229.3	Well Depth (ft):	213.4
Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
Logged By:	Doug Mateas	Location (X,Y):	N 349,980.08 E 2,102,247.86	Filter Pack:	Global #5 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS
80									(80.7') CLAYSTONE: very weak, pale reddish brown (10R 5/4), massive, highly decomposed, slightly disintegrated, intensely fractured, slightly calcareous. (82.2') Changes to not calcareous.	
85				Run 4			70/ 120	42.5	(84.3') CLAYSTONE: weak, grayish red (5R 4/2) with some variegated colors of very dusky purple (5RP 2/2), light olive brown (5Y 5/6) and dark greenish gray (5G 4/1), highly decomposed, moderately disintegrated, slightly to moderately fractured, clay infillings in fractures, slickensides. (88.6') Changes to moderately strong, moderately decomposed.	
90										Centralizer at 90' bgs.
95				Run 5			70/ 120	20.4	(94.3') Changes to primary color of pale reddish brown (10R 5/4), highly decomposed, intensely fractured, weak. (96.3') Changes to medium brown (5YR 4/4), moderately decomposed, moderately fractured.	
100										

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Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
Logged By:	Doug Mateas	Location (X,Y):	N 349,980.08 E 2,102,247.86	Filter Pack:	Global #5 Sand

DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS
100										
105				Run 6			120/120	68.7	(104.3') CLAYSHALE: weak, medium bluish gray (5B 5/1), massive to locally fissile, highly decomposed, intensely disintegrated, intensely fractured. (105.1') Changes to strong, fresh, competent, slightly fractured. (106.7') Sandy silty SHALE: strong, medium bluish gray (5B 5/1), massive, micaceous, fresh, competent, slightly fractured. [MORGANTOWN FRM.] (108.1') SANDSTONE: strong, medium bluish gray (5B 5/1), cross bedded, very micaceous, fine grained, fresh, competent, moderately fractured with vertical fracture from 108.5-109.4'. [MORGANTOWN FRM.]	After coring, advanced with 4" advancer (4" casing cutting edge and roller bit) to 110 ft bgs to set 4" steel casing through overburden and incompetent rock.
110										
115				Run 7			108/120	21.7	(111.7') CLAYSHALE: moderately strong, medium bluish gray (5B 5/1), fissile, moderately decomposed, slightly disintegrated, intensely fractured. [MORGANTOWN FRM.] (112.2') Changes to grayish red (5R 4/2). (114.1') Changes to medium bluish gray (5B 5/1). (114.8') Changes to grayish red (5R 4/2).	
120									(118.1') Changes to grayish red (10R 4/2) with some variegated colors of grayish red purple (5RP 4/2) and light olive brown (5Y 5/6), slickensides appear, intensely disintegrated,	

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Drilling Start Date:	09/28/2016 12:50	Boring Depth (ft):	229.3	Well Depth (ft):	213.4
Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
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DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
120									minor calcareous nodules, massive. (119.8') Changes to strong, slightly disintegrated.		120
				Run 8			120/ 120	57.5			
125									(127.2') Silty sandy SHALE: strong, medium bluish gray (5B 5/1), massive to slightly fissile, very micaceous, fresh, competent, slightly fractured, some clay infillings in fracture at top. [MORGANTOWN FRM.]		125
130									(130.5') CLAYSHALE: moderately strong, grayish red (10R 4/2), fissile, moderately decomposed, slightly disintegrated, intensely fractured, clay infillings in fractures.		130
				Run 9			119.5/ 120	57.1			
135									(134.3') Silty SHALE: strong to very strong, medium bluish gray (5B 5/1), massive, locally sandy from 135.0-136.5', slightly decomposed, competent, slightly fractured, pyritic, micaceous, minor calcareous nodules.		135
									(137.6') CLAYSHALE/CLAYSTONE: strong, medium bluish gray (5B 5/1), massive, slightly decomposed, competent, moderately fractured. (138.6') Changes to weak, fissile, moderately to highly decomposed, moderately disintegrated,		
140											140

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Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
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DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
140									intensely fractured, clay infillings in fractures.		140
									(140.2') CLAYSHALE: moderately strong, grayish red (5R 4/2), fissile, highly decomposed, slightly disintegrated, intensely fractured, clay infillings in fractures.		
									(142.6') Carbonaceous SHALE: strong, grayish red (10R 4/2) with variegated colors of light olive brown (5Y 5/6) and grayish red purple (5RP 4/2), massive, slickensides, calcareous, slightly decomposed, moderately disintegrated, moderately to intensely fractured.		
145				Run 10			96.5/ 120	40.8	(144.3') Changes to slightly calcareous.		145
									(146.2') MUDSTONE: moderately strong, grayish red (5R 4/2) and medium bluish gray (5B 5/1), massive, slickensides, large amount of mud inclusions, moderately decomposed, moderately disintegrated, moderately fractured.		
150									(149.2') CLAYSHALE: strong, variegated colors of very dusky purple (5P 2/2), light olive brown (5Y 5/6), dark reddish brown (10R 3/4) and moderately red (5R 5/4), massive, slickensides, moderately decomposed, moderately disintegrated, moderately fractured.	Centralizer at 150' bgs.	150
155				Run 11			58/ 120	19.2	(155.1') CLAYSTONE: moderately strong to weak, grayish red (10R 4/2) with secondary medium bluish gray (5B 5/1), massive, slickensides, highly decomposed, moderately disintegrated, intensely fractured with clay infillings in fractures, slightly calcareous.		155
160											160

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Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
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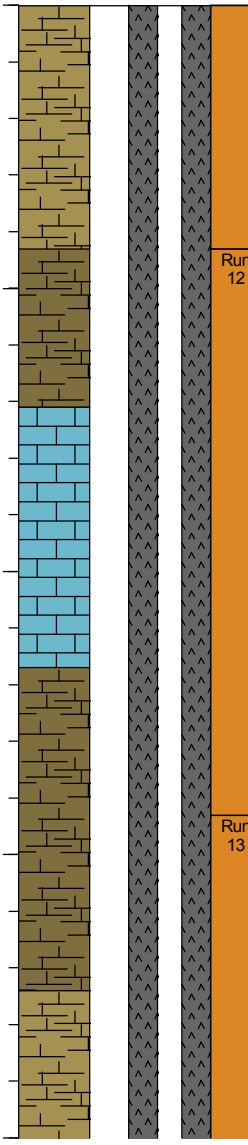

DEPTH (ft)	Sample Type	Date & Time	Blow Counts	Recovery (in)	N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS
160							
165	Run 12			119.5/ 120	51.3	(164.3') CLAYSHALE/CLAYSTONE: moderately strong, variegated colors of very dusky purple (5P 2/2), light olive brown (5Y 5/6) and dark reddish brown (10R 3/4), massive, slickensides, moderately decomposed, moderately disintegrated, intensely fractured.	
						(167.1') Clayey LIMESTONE: weak to moderately strong, dark reddish brown (10R 3/4) with secondary light olive brown (5Y 5/6) and very dusky purple (5RP 2/2), microcrystalline, slickensides, moderately to intensely decomposed, moderately disintegrated, moderately to intensely fractured.	
170						(171.7') CLAYSHALE: very strong, dark reddish brown (10R 3/4), massive, slickensides, fresh, competent, slightly fractured.	
175	Run 13			119/ 120	47.5	(174.3') Large amount of competently healed fractures with mud infillings.	
						(176.8') Changes to intensely fractured.	
						(177.4') CLAYSTONE: weak to moderately strong, grayish red (5R 4/2) with minor secondary colors of light olive brown (5Y 5/6) and grayish red purple (5RP 4/2), massive, slickensides, moderately to highly decomposed, moderately disintegrated, intensely fractured.	
180							

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Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
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DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
180									(178.6') Changes to strong, slightly decomposed, slightly disintegrated. (178.8') Calcareous nodules appear.		180
				Run 14			105/ 120	38.8			
185									(186.9') Large calcareous nodule. (187.2') Calcareous nodules disappear, changes to strong, fissile, moderately decomposed, competent.		185
									(188.3') Changes to medium bluish gray (5B 5/1), weak, highly decomposed, moderately disintegrated.		
190									(188.8') Carbonaceous SHALE: very strong, greenish gray (5G 6/1), massive, slickensides, pyritic at unit top, micaceous, fresh to slightly decomposed, competent, unfractured, calcareous.		190
									(189.9') CLAYSHALE: moderately strong, grayish brown (5YR 3/2) with thin laminations of light olive brown (5Y 5/6), fissile, moderately decomposed, competent to slightly disintegrated, intensely fractured.		
				Run 15			112/ 112	95.1			
195									(194.3') Sandy silty SHALE: strong, dark greenish gray (5G 4/1), massive, very fine grained sand, micaceous, fresh, competent, unfractured. [COW RUN FRM.]		195
200											200

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Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
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DEPTH (ft)	LITHOLOGY	WATER LEVEL	WELL COMPLETION	COLLECT: Sample Type	COLLECT: Date & Time	COLLECT: Blow Counts	COLLECT: Recovery (in)	COLLECT: N Value RQD (%)	SOIL/ROCK VISUAL DESCRIPTION	REMARKS	DEPTH (ft)
200									(200.3') Changes to intensely fractured, some clay infillings in fractures until 200.7 ft.		200
				Run 16			120/ 120	70.0			
205									(205.3') Changes to moderately to intensely fractured. (206.1') Some clay infillings in fractures. (207.4') Changes to moderately fractured.		205
210									(210.7') Changes to intensely fractured. (212.3-213.6') Vertical fracture.		210
									(213.6-214.3') No recovery.		
				Run 17			115/ 120	48.8	(214.3') Changes to slightly fractured, no clay infillings in fractures [COW RUN FRM.] (215.5') 0.8 ft section with thin laminations of grayish red (10R 4/2) clayshale. (216.1') Changes to unfractured. (216.4-217') Changes to dark yellowish orange (10YR 6/6), slightly decomposed. (218.2') Thin grayish red (10R 4/2) laminations of clayshale.		
215											215
									(219') CLAYSHALE: moderately strong, grayish		
220											220

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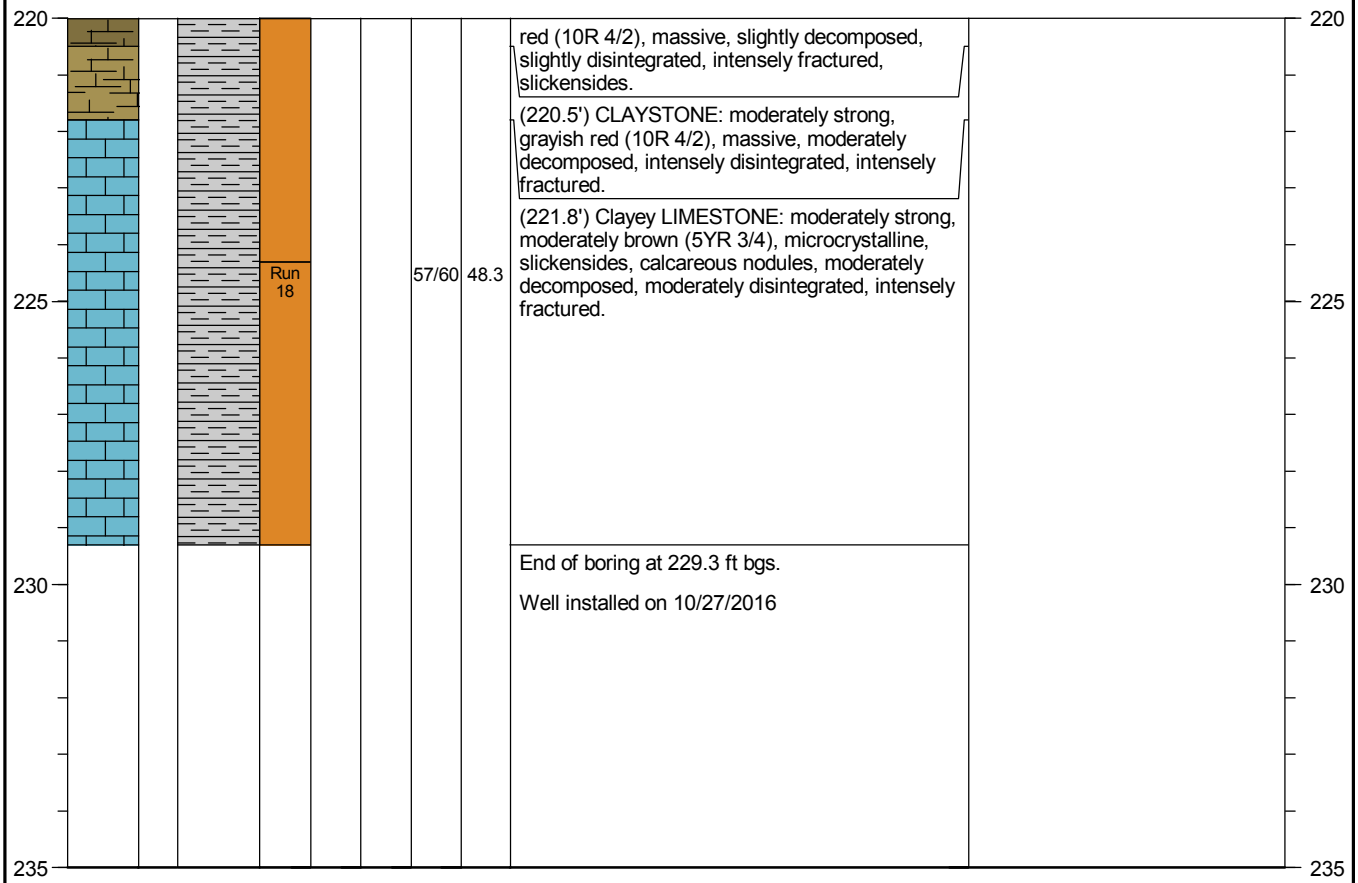
Client: American Electric Power
Project: CHE8259
Address: General James M. Gavin Power Plant

WELL LOG
Well No. MW-17
Page: 12 of 12

Drilling Start Date:	09/28/2016 12:50	Boring Depth (ft):	229.3	Well Depth (ft):	213.4
Drilling End Date:	10/03/2016 14:40	Boring Diameter (in):	6	Well Diameter (in):	2
Drilling Company:	AEP Service Corp.	Sampling Method(s):	SPT & Rock Core	Screen Slot (in):	0.010
Drilling Method:	Rotary	DTW After Drilling (ft):	107.8	Riser Material:	Sch 40 PVC
Drilling Equipment:	Diedrich D-120	Ground Surface Elev. (ft):	727.725	Screen Material:	Sch 40 PVC Slotted
Driller:	Zach Racer	Top of Casing Elev. (ft):	730.638	Seal Material(s):	Bentonite Pellets and Grout
Logged By:	Doug Mateas	Location (X,Y):	N 349,980.08 E 2,102,247.86	Filter Pack:	Global #5 Sand



NOTES:
1) Coordinates are in Gavin Plant Coordinate System, which varies ±3 ft. from State Plane Ohio South NAD27. Elevation in NGVD1929.
2) "DTW after Drilling" refers to steady-state water level in open borehole (prior to well installation).
3) Geophysical logging used to interpret best depth interval to set the well screen.
4) Monitoring well screened in Morgantown Sandstone.

ERM
1 Beacon Street: 5th Floor
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Telephone: + 1 (617) 646-7800

2022-02

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

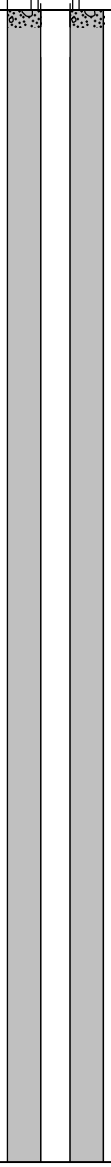
DATE STARTED: 9/11/2022
DATE COMPLETED: 9/12/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: J. Maag
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

TOTAL DEPTH: 165 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 745.60
PVC ELEVATION: 748.23
NORTHING: 350043.6197
EASTING: 2067462.41

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Bailer
DATE STARTED: 11/3/2022
DATE ENDED: 11/7/2022
DTW AT START: 51.37 feet bgs
DTW AT END: 140.47 feet bgs
VOLUME PURGED: 22.5 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Red, CLAYEY GRAVEL, angular coarse gravel.
						1.0
						Gray Brown, SILT, with fine sand, some orange and red mottling, organic matter present, medium stiff, low plasticity, wet.
						2.0
		SC	78			Yellow Brown, FINE SAND, orange and gray mottling, poorly graded, loose, moist.
5	741					
						7.0
						Blue Gray, FINE SAND, with rounded coarse gravel.
10	736	SC	120			
						13.5
						Gray Brown, SILT, with subrounded coarse gravel, orange and red mottling, black organic matter (twigs, fibers), trace cobbles, medium stiff, low plasticity, wet.
15	731					
						18.0
						Light Brown, SHALE, orange and gray mottling, very thinly laminated, very weathered, grading into dominantly orange mottling, very weak, moist.
20	726					

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clayey Gravel
- Sandy Silt
- Poorly-Graded Sand
- Poorly-Graded Gravelly Sand
- Gravelly Silt
- Shale

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: RWL/FAR 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
		HQ	120			Light Brown, SHALE, orange and gray mottling, very thinly laminated, very weathered, grading into dominantly orange mottling, very weak, moist. *(continued)*	
25	721						
						27.0	
						Red, CLAY-SHALE, orange and gray mottling, intensely disintegrated, dry.	
						29.0	
30	716					Light Brown, SHALE, orange and gray mottling, intensely disintegrated, dry.	
						30.5	
		HQ	108	0		Gray Brown, SHALE, orange mottling, very disintegrated, dry.	
35	711						
						37.0	
40	706					Yellow, CLAYSTONE, greenish gray, massive, moderately weathered, weak, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clayey Gravel
- Sandy Silt
- Poorly-Graded Sand
- Poorly-Graded Gravelly Sand
- Gravelly Silt
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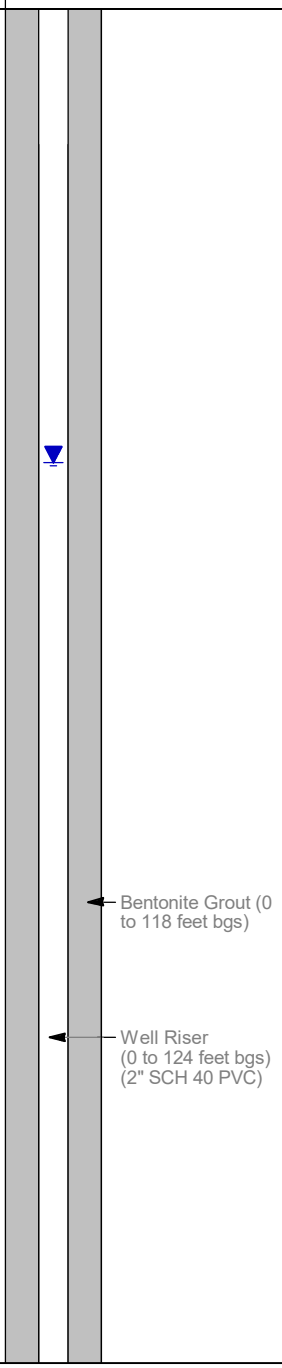
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						44.0 Yellow, CLAYSTONE, greenish gray, massive, moderately weathered, weak, wet. *(continued)*
45	701	HQ	108			
						Blue Gray, CLAYSTONE, brown, massive, moderately weathered, weak, wet.
50	696					
55	691					55.5
						56.0 Blue Gray, FINE GRAINED SANDSTONE, some mica, massive, strong, wet.
						Blue Gray, CLAYSTONE, trace mica, massive, slightly weathered, weak, wet.
60	686					
						62.0
						Light Bluish Gray, FINE GRAINED SANDSTONE, some mica, massive, slightly weathered, iron staining from 62-62.5 feet bgs, vertical fracture from 61-62.5 feet bgs, strong, wet.
						64.5
65	681					Red, CLAYSTONE, purple, blue gray, yellow staining, massive, moderately weathered, weak, wet.

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clayey Gravel
- Sandy Silt
- Poorly-Graded Sand
- Poorly-Graded Gravelly Sand
- Gravelly Silt
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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
		HQ	216	68			
70	676						
75	671						
						Red, CLAYSTONE, purple, blue gray, yellow staining, massive, moderately weathered, weak, wet. *(continued)*	
80	666						
85	661						
		HQ	162	77.2			
90	656						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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- Gravelly Silt
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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
95	651						
						Red, CLAYSTONE, purple, blue gray, yellow staining, massive, moderately weathered, weak, wet. *(continued)*	
100	646						
105	641	HQ	114	29.8			
						108.0	
110	636					Blue Gray, SILTSTONE, interbedded purple sandstone, trace mica, massive, moderately weathered, strong.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clayey Gravel
- Sandy Silt
- Poorly-Graded Sand
- Poorly-Graded Gravelly Sand
- Gravelly Silt
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Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
115	631					Blue Gray, SILTSTONE, interbedded purple sandstone, trace mica, massive, moderately weathered, strong. *(continued)*
						115.0
						Light Bluish Gray, FINE SANDSTONE, some mica, massive, dissolutions at 119 feet bgs, strong, wet.
120	626					
						121.0
125	621	HQ	132			
						Light Bluish Gray, SILTSTONE, interbedded purple sandstone, some mica, massive, slightly weathered, dissolutions at 121-122', 136', and 138-142 feet bgs, moderate to strong.
130	616					
135	611					

WELL DIAGRAM

- Bentonite Seal (118 to 122 feet bgs)
- Filter Sand (122 to 150 feet bgs) (Global #5)
- Well Screen (124 to 139 feet bgs) (2" SCH 40 PVC/ 0.01" slot)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clayey Gravel
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- Poorly-Graded Gravelly Sand
- Gravelly Silt
- Shale

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Project Name: RWL/FAR 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
140	606					Light Bluish Gray, SILTSTONE, interbedded purple sandstone, some mica, massive, slightly weathered, dissolutions at 121-122', 136', and 138-142 feet bgs, moderate to strong. *(continued)*	Sump (2" SCH 40 PVC/2' long) (139 to 141 feet bgs)
						142.0	
						Light Bluish Gray, FINE GRAINED SANDSTONE, Morgantown, few mica, trace pyrite, massive, strong, wet.	
145	601					145.0	
		HQ	210			Light Bluish Gray, CLAYSTONE, purple red, trace pyrite, massive, slightly weathered, moderate to strong, wet.	
150	596					150.5	
155	591					Red, CLAYSTONE, purple, massive, slightly weathered, moderately disintegrated from 157-165 feet bgs, moderate to strong, wet.	Borehole Collapse
160	586						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clayey Gravel
- Sandy Silt
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- Poorly-Graded Gravelly Sand
- Gravelly Silt
- Shale

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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
165	581	HQ	72	0		Red, CLAYSTONE, purple, massive, slightly weathered, moderately disintegrated from 157-165 feet bgs, moderate to strong, wet. *(continued)*	
						165.0	
						Bottom of Boring @ 165.00 feet bgs	
170	576						
175	571						
180	566						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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2022-03

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 9/10/2022
DATE COMPLETED: 9/11/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: J. Maag
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

TOTAL DEPTH: 227 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 745.43
PVC ELEVATION: 748.00
NORTHING: 350054.0373
EASTING: 2067458.572

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Wattera
DATE STARTED: 11/4/2022
DATE ENDED: 11/9/2022
DTW AT START: 67.13 feet bgs
DTW AT END: 185.03 feet bgs
VOLUME PURGED: 36 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Red, CLAY, stiff, medium plasticity, moist.
						1.0 Brown, loam, organic material, moist.
						2.0
		SC	84			Yellowish Brown, FINE SAND, red and gray mottling, poorly sorted, very loose, moist.
5	740					
						6.5
						7.0 Yellowish Brown, SILT, with fine sand, stiff, low plasticity, wet.
10	735	SC	120			Yellowish Brown, FINE SAND, red and gray mottling, poorly sorted, loose, wet.
15	730					
						16.0
						Gray Brown, FINE SAND, red and gray mottling, yellow brown secondary color, poorly sorted, loose, wet.
						17.0
20	725					Gray, CONGLOMERATE with grayish brown fine sand, weathered, medium strong, poorly sorted, medium dense, wet.

WELL DIAGRAM
Concrete Pad and 6" Steel Stickup Protective Casing

SAMPLE TYPE
- Sonic Drilling (SC)
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Clay
- Poorly-Graded Sand
- Sandy Silt
- Breccia
- Shale
- Claystone Interbedded Shale

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						20.5	
						Gray, SHALE, very thinly laminated, very weathered, orange mottling, very weak, wet.	
25	720	HQ	108	0		25.0	
						Yellowish Brown, SHALE, very thinly laminated, very weathered, red and purple mottling, very weak, wet.	
						28.5	
						Red, CLAY-SHALE, yellowish brown to orange mottling, trace mica, very thinly laminated, very weathered, very weak, wet.	
30	715					30.5	
						Dark Gray, SHALE, red to yellowish brown mottling, very thinly laminated, moderately weathered, weak, wet.	
35	710	HQ	48	41.7		37.0	
						Green Gray, CLAY-SHALE, purple and range mottling, very thinly laminated, moderately weathered, horizontal fracture (180 degrees) at 38 feet bgs, very weak, wet.	
40	705					41.0	
						Yellow, CLAYSTONE, green-gray, massive, moderately weathered, weak, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
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- Sandy Silt
- Breccia
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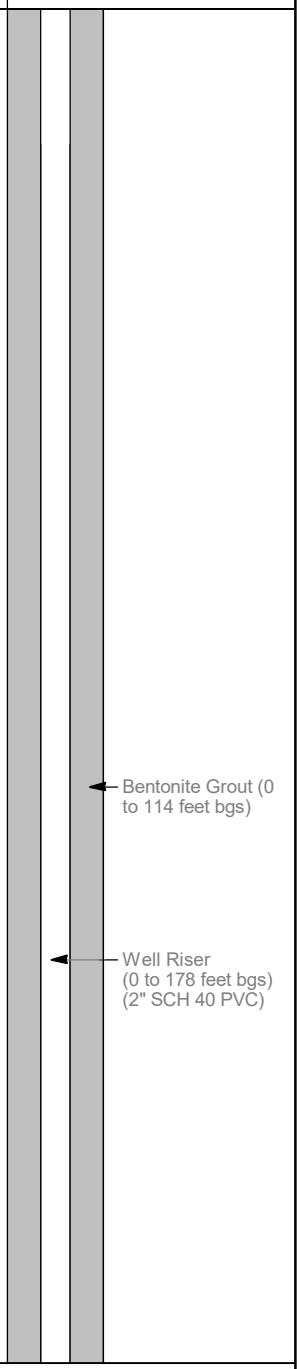
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	700	HQ	120	63.3		Yellow, CLAYSTONE, green-gray, massive, moderately weathered, weak, wet. *(continued)*
						47.0
50	695					Blue Gray, CLAYSTONE, massive, moderately weathered, weak, wet.
						52.0
						Greenish Gray, SILTSTONE, few mica, orange, purple, massive, very weathered, strong, wet.
						54.0
55	690					
60	685	HQ	24	0		Greenish Gray, SHALE, few mica, purple, very thinly laminated, moderately weathered, very weak, wet.
65	680					65.0
						Blueish Gray, SANDSTONE, some mica, massive, moderately weathered, grades into yellowish brown iron staining, fracture (70 degrees) at 65.6-66.5 feet bgs, strong, wet.
						67.0

WELL DIAGRAM



SAMPLE TYPE

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- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

- Clay
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
70	675	HQ	180	75.6		Blueish Gray, CLAYSTONE, purple red orange, massive, moderately weathered, very weak, wet. *(continued)*	
75	670					75.0	
80	665					Red, CLAYSTONE, purple red, massive, slightly weathered, very weak, wet.	
85	660	HQ	240	17.5			
90	655						

Well Riser
(0 to 178 feet bgs)
(2" SCH 40 PVC)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
95	650					Red, CLAYSTONE, purple red, massive, slightly weathered, very weak, wet. *(continued)*	
100	645						
						103.0	
105	640	HQ	216	59.7		Blueish Gray, SANDSTONE, interbedded siltstone, purple, fine grained, some mica, thinly laminated, strong, wet.	
110	635						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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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
115	630					Blueish Gray, SANDSTONE, interbedded siltstone, purple, fine grained, some mica, thinly laminated, strong, wet. *(continued)*	
						116.0	
						Light Blueish Gray, SANDSTONE, some mica, fine grained, thinly laminated, 80 degree fracture, strong, wet.	
120	625					121.0	
						Red, CLAYSTONE, purple-blue gray, massive, slightly weathered, weak, wet.	
125	620	HQ	150	36.7		128.0	
130	615					Bluish Gray, SILTSTONE, interbedded shale, and fine Sandstone, trace pyrite, trace mica, massive, slightly weathered, moderately strength, wet.	Bentonite Chip Couplet (114 to 149 feet bgs)
135	610						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
140	605					Bluish Gray, SILTSTONE, interbedded shale, and fine Sandstone, trace pyrite, trace mica, massive, slightly weathered, moderately strength, wet. *(continued)*	
						140.0	
						Light Blueish Gray, SANDSTONE, fine grained, mostly mica, trace pyrite, massive, strong, wet.	
						143.0	
145	600					Blueish Gray, SHALE, trace mica, with pyrite, very thinly laminated, slightly weathered, weak, wet.	
		HQ	228	46.9			
						148.0	
150	595						
155	590					CLAYSTONE, purple, bluish green, and orange coloration, massive, moderately weathered, moderately strength, wet.	← Bentonite Grout (149 to 172 feet bgs)
160	585						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
- Poorly-Graded Sand
- Sandy Silt
- Breccia
- Shale
- Claystone Interbedded Shale

ACRONYM LEGEND

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

ERM
1 Beacon Street: 5th Floor
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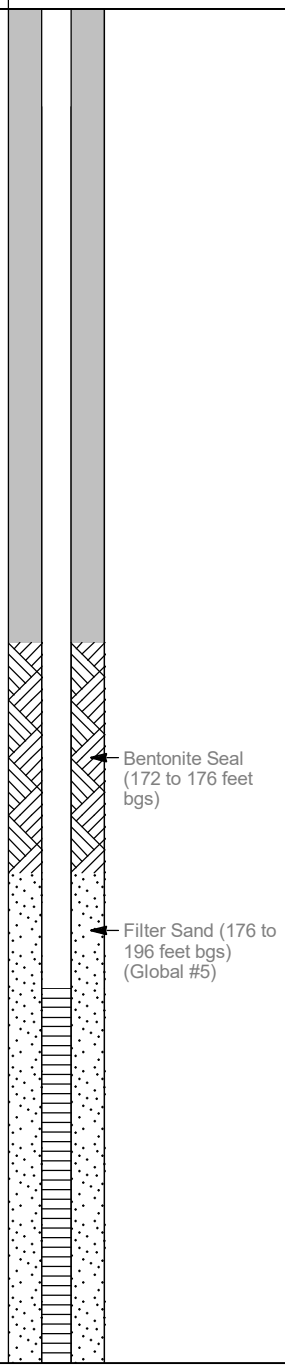
Telephone: + 1 (617) 646-7800

Client: Gavin Power, LLC
Project Name: RWL/FAR 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
165	580	HQ	108	31.5		CLAYSTONE, purple, bluish green, and orange coloration, massive, moderately weathered, moderately strength, wet. *(continued)*
170	575					
						173.0
175	570					Blue Gray, CLAYSTONE, massive, moderately weathered, moderately strength, wet.
						179.0
180	565					Blueish Gray, SILTSTONE, interbedded sandstone, trace mica, slightly weathered, fine grained, in-filled veins throughout, massive, strong, wet.

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
- Poorly-Graded Sand
- Sandy Silt
- Breccia
- Shale
- Claystone Interbedded Shale

ACRONYM LEGEND

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
185	560	HQ	216	70.8		Blueish Gray, SILTSTONE, interbedded sandstone, trace mica, slightly weathered, fine grained, in-filled veins throughout, massive, strong, wet. *(continued)*	Well Screen (178 to 193 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
190	555					192.0	
195	550						Sump (2" SCH 40 PVC/2' long) (193 to 195 feet bgs)
200	545					Light Blueish Gray, SANDSTONE, interbedded shale, fine grain, trace mica, massive, dissolutions from 197-199' and 209-211', 20 degree fractures at 217', 219', 219.5', and 220 feet bgs, strong, wet.	
205	540	HQ	234	73.5			

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
- Poorly-Graded Sand
- Sandy Silt
- Breccia
- Shale
- Claystone Interbedded Shale

ACRONYM LEGEND

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
210	535						Borehole Collapse
215	530					Light Blueish Gray, SANDSTONE, interbedded shale, fine grain, trace mica, massive, dissolutions from 197-199' and 209-211', 20 degree fractures at 217', 219', 219.5', and 220 feet bgs, strong, wet. *(continued)*	
220	525	HQ	120	80.8			
225	520					225.5	
						Dark Gray, SILTSTONE, interbedded shale, very thinly laminated, strong, wet.	
						227.0	
						Bottom of Boring @ 227.00 feet bgs	
230	515						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
- Poorly-Graded Sand
- Sandy Silt
- Breccia
- Shale
- Claystone Interbedded Shale

ACRONYM LEGEND

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2022-04

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 9/8/2022
DATE COMPLETED: 10/4/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

TOTAL DEPTH: 142 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 732.43
PVC ELEVATION: 734.84
NORTHING: 350607.317
EASTING: 2069387.817

WELL DEVELOPMENT
METHOD(S): Bailer
DATE STARTED: 10/21/2022
DATE ENDED: 11/6/2022
DTW AT START: 121.89 feet bgs
DTW AT END: 122.29 feet bgs
VOLUME PURGED: 18.1 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
5	727	SC	84			Yellow Brown, FINE SAND, some mica, orange-brown, lens of gray fine grained sand and silt, poorly sorted, very loose, moist.
						7.0
						Orange Brown, CLAY, red mottling, low plasticity, stiff, moist.
						8.0
10	722					Dark Gray, SILT, few mica, non-plastic, stiff, wet.
		HQ	120			11.5
						Gray, SILT, weathered shale, non-plastic, very stiff, moist.
						14.0
						14.5 Black to Brown, SHALE, coal, very stiff, moist.
15	717					Blackish Gray, SILT, little mica, orange mottling, weathered shale, non-plastic, very stiff, wet.
						15.5
						Dark Gray, SILT, little mica, orange mottling, non-plastic, stiff, wet.
						17.0
						Dark Gray, SILT, little mica, non-plastic, stiff, wet.
						19.5
20	712					Gray, SILT, trace mica, non-plastic, stiff, moist.

WELL DIAGRAM
Concrete Pad and 6" Steel Stickup Protective Casing

SAMPLE TYPE
- Sonic Drilling (SC)
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Poorly-Graded Sand
- Clay
- Silt
- Shale
- Siltstone
- Sandstone

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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, SILT, trace mica, non-plastic, stiff, moist. *(continued)*	
						21.5	
		HQ	156				
25	707					Gray, SILT, trace mica, little pyrite, orange mottling, highly disintegrated, non-plastic, stiff, dry.	
30	702					30.0	
		HQ	84	32.1		Greenish Gray, SILTSTONE, purplish red, orange coloration, little pyrite, massive, slightly weathered, very weak, wet.	
35	697					37.0	
						Greenish Gray, FINE SANDSTONE, little pyrite, some mica, iron staining, strong, wet.	
40	692					39.5	
						No Recovery.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Poorly-Graded Sand
- Clay
- Silt
- Shale
- Siltstone
- Sandstone

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	687	HQ	102	23.5		No Recovery. *(continued)*
50	682					
55	677	HQ	0			
60	672	RC	90	58.9		59.0 Gray Blue, SILTSTONE, some clay, highly laminated/fissile, mechanically fractured along bedding planes, externally weathered, moderately sorted, low strength. 59.5 Red Brown, CLAYSTONE, some silt, moderately laminated, little yellow mottling, moderately sorted, medium strength. 60.5 Gray Blue, SANDSTONE, some silt, fine grained and micaceous, highly laminated, mechanically fractured along bedding planes, red brown claystone inclusions starting at 62 ft bgs, moderately sorted, medium strength. 63.0
65	667					Red Brown, CLAYSTONE, some silt, highly laminated, few medium gray blue siltstone inclusions, little yellow mottling, rubble zone 65 to 67 feet bgs, moderately sorted, medium strength. 67.0

WELL DIAGRAM: Bentonite Grout (0 to 116 feet bgs); Well Riser (0 to 122 feet bgs) (2" SCH 40 PVC)

SAMPLE TYPE
- Sonic Drilling (SC)
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Poorly-Graded Sand
- Clay
- Silt
- Shale
- Siltstone
- Sandstone

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
						Red Brown, SILTSTONE, some very fine to fine sand, micaceous, moderately laminated/fissile, interbedded with medium gray blue silty shale (micaceous, fissile, transitional contacts), moderately sorted, low strength. *(continued)*	
70	662					71.0	
		HQ	120	49.2		Black, SHALE, little silt, alternating layers of black and medium to light gray shale beds, rubble zone, poorly sorted, low strength.	
						72.0	
75	657					Light Greenish Gray, CLAYSTONE, some silt, crumbly, yellow-orange mottling, some fine sand, poorly sorted, low strength.	
						77.0	
80	652	HQ	108	15.3		CLAYSTONE, some silt, red-purple, yellow-orange mottling, blue-green siltstone inclusions, highly weathered, mechanically fractures, poorly sorted, low strength.	
85	647					87.0	
						CLAYSTONE, some silt, red-purple, yellow-orange mottling, blue green siltstone inclusions, moderately weathered, mechanically fractures, three natural fractures (150 degrees) from 87-89 ft bgs, rubble zone, poorly sorted, medium strength.	
90	642						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Poorly-Graded Sand
- Clay
- Silt
- Shale
- Siltstone
- Sandstone

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Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		HQ	120	28.3		CLAYSTONE, some silt, red-purple, yellow-orange mottling, blue green siltstone inclusions, moderately weathered, mechanically fractures, three natural fractures (150 degrees) from 87-89 ft bgs, rubble zone, poorly sorted, medium strength. *(continued)*	
95	637						
						97.0	
		HQ	120	42.1		Red brown, CLAYSTONE, little silt, some yellow orange mottling, some red-purple veins, moderate blue green claystone lenses, moderate natural fractures (150-160 degrees), moderately sorted, moderate strength.	
100	632						
						104.0	
105	627					Medium Gray, CLAYSTONE, some silt, blueish green, rubble zone, fissile, faintly micaceous, interbedded with red-brown claystone, poorly sorted, low strength.	
						107.0	
						Blue Gray, SANDSTONE, little silt, fine grained, micaceous, dark gray fine grained cross bedding, moderately laminated, mechanically fractured along bedding planes, moderately sorted, high strength.	
110	622						
						110.5	
		HQ	114	72.4		Blue Gray, SANDSTONE, medium to coarse grained, micaceous, moderate dark gray fine grained cross bedding, mechanically fractured along bedding planes, 112.5 to 114 feet color change to yellow-blue (potential oxidation), well sorted, high strength.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Poorly-Graded Sand
- Clay
- Silt
- Shale
- Siltstone
- Sandstone

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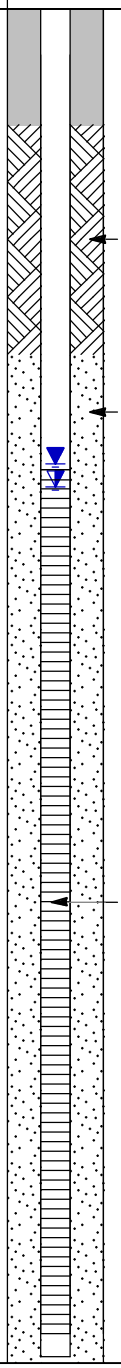
Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
115	617					Blue Gray, SANDSTONE, medium to coarse grained, micaceous, moderate dark gray fine grained cross bedding, mechanically fractured along bedding planes, 112.5 to 114 feet color change to yellow-blue (potential oxidation), well sorted, high strength. *(continued)*
						117.0 — Blue Gray, SANDSTONE, medium to coarse grained, micaceous, moderate dark gray fine grained cross bedding, mechanically fractured along bedding planes, well sorted, high strength.
						118.0 — Blue Gray, SILTSTONE, some clay, interbedded siltstone and claystone, poorly sorted, moderate strength.
						118.5 — Red Brown, CLAYSTONE, some silt, faintly micaceous, laminated, transitional contact to upper blue gray siltstone, moderately sorted, moderate strength.
120	612					120.0
		HQ	120	72.1		Red, CLAYSTONE, some silt, red-purple, dark gray, yellow orange and blue green mottling, few natural fractures (160-170 degrees), external highly weathered, poorly sorted, moderate strength.
125	607					
						127.0 — Red Brown, CLAYSTONE, some silt, faintly micaceous, laminated, transitional contact to lower blue gray sandstone, moderately sorted, moderate strength.
						128.5
130	602					
		HQ	120	70.4		Blue Gray, SANDSTONE, fine to medium grained, highly micaceous, few fine grained cross beds, massive, natural fracture (160-170 degrees) with significant water loss at 136 feet, red brown silty claystone bed from 134-135 feet bgs, moderately sorted, high strength. [Morgantown Sandstone]
135	597					
						137.0

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Poorly-Graded Sand
- Clay
- Silt
- Shale
- Siltstone
- Sandstone

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Client: Gavin Power, LLC
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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
140	592	HQ	60	55.8		Blue Gray, SANDSTONE, fine to medium grained, highly micaceous, pyritic lenses, moderately laminated, fine grained cross bedding, red brown silty claystone bed from 134-135 feet, moderately sorted, high strength. *(continued)*	Sump (2" SCH 40 PVC/2' long) (137 to 139 feet bgs)
						142.0	Borehole Collapse
						Bottom of Boring @ 142.00 feet bgs	
145	587						
150	582						
155	577						
160	572						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Poorly-Graded Sand
- Clay
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- Shale
- Siltstone
- Sandstone

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2022-05

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 10/5/2022
DATE COMPLETED: 10/6/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

TOTAL DEPTH: 207 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 732.36
PVC ELEVATION: 734.87
NORTHING: 350622.4817
EASTING: 2069391.444

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Bailer
DATE STARTED: 10/21/2022
DATE ENDED: 11/6/2022
DTW AT START: 118.59 feet bgs
DTW AT END: 182.39 feet bgs
VOLUME PURGED: 18 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
5	727	SC	84			Yellowish Orange, FINE TO COARSE SAND, with silt, lenses of gray silty clay, poorly sorted, loose, moist.
						7.0
10	722					Yellowish Orange, FINE TO COARSE SAND, with silt, some dark gray silty clay, poorly sorted, loose, moist.
						10.0
						Red Brown, CLAY, with silt, yellow-orange mottling, moderately sorted, low plasticity, dry to moist.
						11.0
15	717	SC	120			Dark Gray, SILT, with sand, crumbly, dark gray broken silty shale with loose yellow fine to coarse sand and subangular coal fragments (0.3" diameter), poorly sorted, moist.
						15.0
						Yellow, FINE TO COARSE SAND, with subangular gravel, (0-3" diameter), with silt, poorly sorted, loose, moist.
						17.0
20	712					Yellow, FINE TO COARSE SAND, with subangular gravel, (0-3" diameter), with silt, poorly sorted, loose, moist.

WELL DIAGRAM
Concrete Pad and 6" Steel Stickup Protective Casing

SAMPLE TYPE
- Sonic Drilling (SC)
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Silty Sand
- Silty Clay
- Sandy Silt
- Claystone Interbedded Shale
- Sandstone
- Shale

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
		HQ	120			Yellow, FINE TO COARSE SAND, with subangular gravel, (0-3" diameter), with silt, poorly sorted, loose, moist. *(continued)*	
						23.0	
						Dark Brown, CLAYSTONE, some silt, some rock flour, thin layer (1-2" thick) of black fine-coarse sand as upper contact, hard.	
						24.0	
25	707					Yellow, FINE TO COARSE SAND, with subangular gravel, (0-3" diameter), with silt, poorly sorted, loose, moist.	
						27.0	
		HQ	120	77.9		Light Gray, SANDSTONE, yellow, coarse grained, slightly micaceous, hard.	
30	702					30.0	
						Dark Brown, CLAY, with subangular silt, (0-3" diameter), red purple mottling, dark gray shale fragments, poorly sorted, low plasticity, dry to moist.	
						34.0	
35	697					Dark Gray, SHALE, with silt, fragmented rubble zone, light and dark gray varving, weak, dry to moist.	
						37.0	
						Light Gray, SANDSTONE, fine to medium grained, micaceous, pyritic, massive, natural fracture (150 degrees) at 38 feet bgs, strong, hard.	
40	692					40.0	
		HQ	118	83.9		Gray Brown, SILTSTONE, some sand, micaceous, highly laminated, orange-yellow mottling, externally weathered, strong.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Sand
- Silty Clay
- Sandy Silt
- Claystone Interbedded Shale
- Sandstone
- Shale

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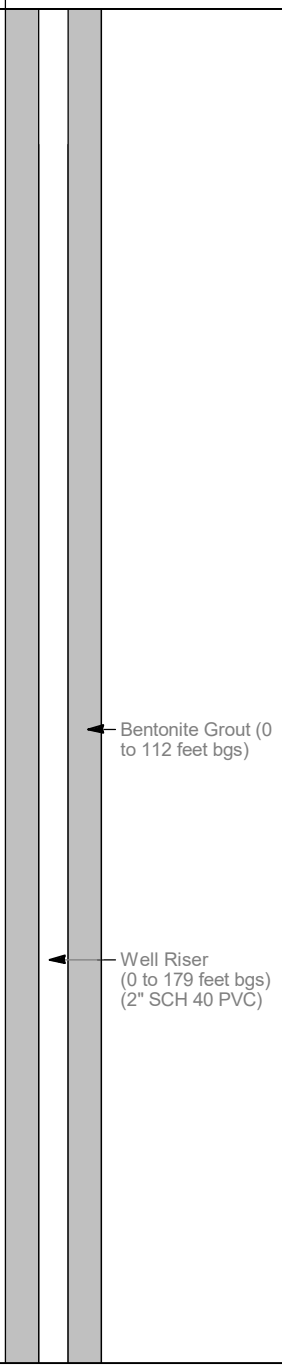
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	687					Gray Brown, SILTSTONE, some sand, micaceous, highly laminated, orange-yellow mottling, externally weathered, strong. *(continued)*
						47.0
50	682	HQ	120	80.4		Red Brown, SILTSTONE, some sand, micaceous, highly laminated, inclusions of upper gray siltstone, orange-yellow and purple mottling, externally weathered, strong, hard.
55	677					
						57.0
60	672	HQ	96	60.4		Red Brown, SILTSTONE, some sand, micaceous, highly laminated, faint orange-yellow and purple mottling, externally weathered, strong, hard.
						61.0
						Greenish Gray, SANDSTONE, fine grained, micaceous, highly laminated, dark gray fine grained cross bedding, mechanically and naturally fractured (yellow-orange oxidations on breaks), medium strength.
						64.0
65	667					Medium Gray, SANDSTONE, medium grained, micaceous, highly laminated, mechanically and naturally fractured (yellow-orange oxidation on breaks), medium strength.
						65.0
						no recovery.
						67.0

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Sand
- Silty Clay
- Sandy Silt
- Claystone Interbedded Shale
- Sandstone
- Shale

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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
70	662	HQ	120	56.3		Red Brown, SILTSTONE, some sand, highly laminated, faintly micaceous, medium gray fine grained sandstone inclusions, faint orange mottling, moderate strength. *(continued)*	
						71.0	
						Dark Gray, SHALE, some silt, alternating layers (1-2" thick) of dark gray and light gray shale, faint yellow mottling, weak.	
						73.0	
75	657					Gray Green, CLAYSTONE, some silt, faint yellow mottling, mechanical and natural fractures, moderate strength.	
						77.0	
80	652	HQ	134	44.8		Red, CLAYSTONE, some silt, purple-brown, yellow orange mottling, rubble zone from 85-90 feet bgs, moderately weak.	
85	647						
90	642					90.0	
						Red Brown, CLAYSTONE, some silt, yellow orange mottling, red-purple veins, gray blue siltstone inclusions, externally weathered, rubble zone 98 to 101 feet bgs, weak.	

Well Riser
(0 to 179 feet bgs)
(2" SCH 40 PVC)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Sand
- Silty Clay
- Sandy Silt
- Claystone Interbedded Shale
- Sandstone
- Shale

ACRONYM LEGEND

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

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

Client: Gavin Power, LLC
Project Name: RWL/FAR 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	637					Red Brown, CLAYSTONE, some silt, yellow orange mottling, red-purple veins, gray blue siltstone inclusions, externally weathered, rubble zone 98 to 101 feet bgs, weak. *(continued)*	
		HQ	124	69.4			
100	632					101.0	
						Blue Gray, SANDSTONE, rubble zone of rock flour and fine grained sandstone fragments, weak.	
						102.0	
105	627					No Recovery.	
						107.0	
						Blueish Gray, SANDSTONE, fine grained, micaceous, massive, mechanically and naturally fractured (orange oxidation along breaks), moderate strength.	
						109.0	
110	622					Green Gray, SANDSTONE, medium to coarse grained, micaceous, dark gray medium grained cross bedding, (highly fractured with orange oxidation on breaks from 109ft to 112ft), moderate strength.	
		HQ	102	52.9			

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Sand
- Silty Clay
- Sandy Silt
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- Sandstone
- Shale

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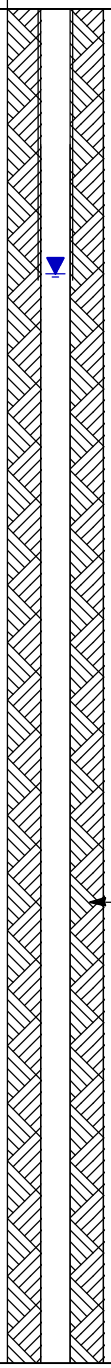
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
115	617					Green Gray, SANDSTONE, medium to coarse grained, micaceous, dark gray medium grained cross bedding, (highly fractured with orange oxidation on breaks from 109ft to 112ft), moderate strength. *(continued)*
						117.0
						Green Gray, SANDSTONE, medium to coarse grained, micaceous, dark gray medium grained cross bedding, rubble zone, moderate strength.
						118.0
120	612	HQ	120	12.1		Red Brown, CLAYSTONE, rubble zone of claystone fragments, low strength, wet.
125	607					127.0
						Blue Gray, SANDSTONE, fine to medium grained, micaceous, dark gray fine grained cross-bedding, mechanically and naturally fractured (orange oxidation along breaks), moderate strength.
130	602					131.0
		HQ	120	42.9		Red Brown, SILTSTONE, faintly micaceous, laminated, layer of blue gray siltstone from 132 to 132.5 feet bgs, moderate strength.
						134.0
135	597					Blue Gray, SILTSTONE, some sand, micaceous, rubble zone, low strength, wet.
						137.0
						Blue Gray, SILTSTONE, some sand, micaceous, pyritic lenses, laminated, low

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Sand
- Silty Clay
- Sandy Silt
- Claystone Interbedded Shale
- Sandstone
- Shale

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						strength.	
						Blue Gray, SILTSTONE, some sand, micaceous, pyritic lenses, laminated, low strength. *(continued)*	
140	592					140.0	
		HQ	108	53.2		Red Brown, CLAYSTONE, some silt, laminated, faintly micaceous, few very thin pyrite lenses, inclusions on blue gray siltstone, layer of blue gray siltstone 143 to 144 feet bgs, low strength.	
145	587					147.0	
150	582	HQ	120	51.3		Red Brown, CLAYSTONE, some silt, red-purple, yellow-orange mottling, natural fractures at 149' and 150 feet bgs (150-160 degrees), decreasing strength with depth, increasing blue gray claystone inclusions with depth, low strength.	
155	577					157.0	
						Red Brown, CLAYSTONE, some silt, blue, yellow-orange mottling, purple veins, light gray carbonate nodules, natural fracture at 159 feet bs (150-160 degrees), moderate strength.	
						159.0	
160	572					Red, CLAYSTONE, some silt, purple-brown, yellow-orange mottling, rubble zone from 164-167 feet bgs, moderate strength.	← Bentonite Grout (147 to 173 feet bgs)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Sand
- Silty Clay
- Sandy Silt
- Claystone Interbedded Shale
- Sandstone
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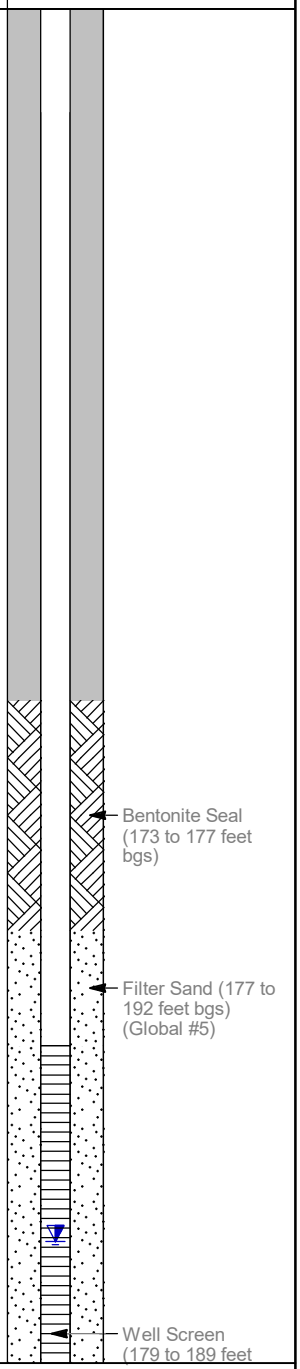
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		HQ	120	49.6		Red, CLAYSTONE, some silt, purple-brown, yellow-orange mottling, rubble zone from 164-167 feet bgs, moderate strength. *(continued)*
165	567					
						167.0
		HQ	120	30.8		Red Brown, CLAYSTONE, some silt, blue, yellow orange mottling, purple veins, light gray carbonate nodules, natural fractures from 169' to 171 feet bgs (150 to 160 degrees), rubble zone from 172' to 177 feet bgs, moderate strength.
170	562					
175	557					
						177.0
						Red, CLAYSTONE, some silt, purple-brown, yellow-orange mottling, purple veins, light gray carbonate nodules, natural fracture at 178 feet bgs (140 to 150 degrees), moderate strength.
						178.0
						Red Brown, CLAYSTONE, some silt, faint yellow-orange mottling, alternating light and dark gray calcareous layer from 179.5' to 180 feet bgs, moderate strength.
180	552					
						180.0
		HQ	108	57.9		Red, CLAYSTONE, some silt, purple-brown, yellow-orange mottling, light gray carbonate nodules, rubble zone from 185' to 187 feet bgs, weak. [Cow Run]



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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- Silty Clay
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- Claystone Interbedded Shale
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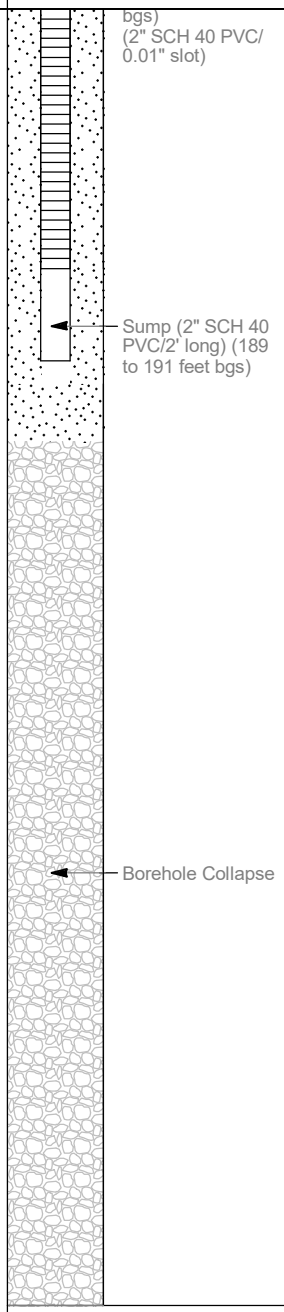
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
185	547					Red, CLAYSTONE, some silt, purple-brown, yellow-orange mottling, light gray carbonate nodules, rubble zone from 185' to 187 feet bgs, weak. *(continued)*
						187.0 — Red, CLAYSTONE, some silt, purple-brown, yellow-orange mottling, light gray carbonate nodules, weak.
						188.0 — Blue Gray, SHALE, some silt, fissile, interbedded thin (<0.5" thick) layers of red-brown claystone, weak.
						189.0
190	542					Red Brown, SHALE, some silt, some yellow-orange mottling, interbedded thin layers (0.5" thick) of blue gray shale, moderate strength.
		HQ	108	60.2		
						193.0
195	537					Blue Gray, SHALE, some silt, fissile, faintly micaceous, weak.
						197.0
200	532	HQ	108	87.5		Blue Gray, SANDSTONE, some silt, interbedded fine to coarse sandstone beds, micaceous, massive, few thin pyrite beds at 205 feet bgs, strong, hard.
205	527					207.0
						Bottom of Boring @ 207.00 feet bgs

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Sand
- Silty Clay
- Sandy Silt
- Claystone Interbedded Shale
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2022-06

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

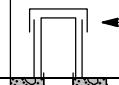
DATE STARTED: 8/4/2022
DATE COMPLETED: 8/4/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

TOTAL DEPTH: 90 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 613.86
PVC ELEVATION: 616.04
NORTHING: 351151.8389
EASTING: 2070153.902

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Hurricane Pump
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 36.26 feet bgs
DTW AT END: 76.97 feet bgs
VOLUME PURGED: 38 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		SC	36			Red Brown, SILTY CLAY, with fine medium sand, yellow, gray-blue clay inclusions, moderately sorted, medium plasticity, moist.
						4.0
5	609	SC	34			Red Brown, SILTY CLAY, with fine medium sand, yellow, gray-blue clay inclusions, moderately sorted, medium plasticity, moist.
						5.5 Dark Gray, CLAY, with silt, shale fragments, moderately sorted, medium plasticity, dry.
		SC	24			7.0 Black, GRAVEL, and sand, ground up coal fragments, loose, saturated.
						9.0
10	604	SC	48			Black, GRAVEL, and sand, ground up coal fragments, orange tan clay, thin clay lenses throughout, loose, moist.
						13.0
		SC	48			Black, GRAVEL, and sand, ground up coal fragments, orange tan clay, thin clay lenses throughout, loose, moist.
15	599					14.5 Light Brown, COARSE SAND, loose, moist.
						16.5
						17.0 Red Brown, CLAY, little silt, gray-blue clay lenses, well sorted, high plasticity, dry.
		SC	48			Red Brown, CLAY, some silt and fine medium sand, blue gray silt/ fine sand lenses, yellow orange mottling, lenses of organic material, moderately sorted, high plasticity, wet.
20	594					22.0
		SC	48			Red Brown, CLAY, some silt and fine medium sand, blue gray silt/fine sand lenses, yellow orange mottling, lenses of organic material, moderately sorted, high plasticity, moist.
25	589					

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Clay
- Clay
- Gravel & Sand
- Poorly-Graded Sand
- High Plasticity Clay
- Sandstone

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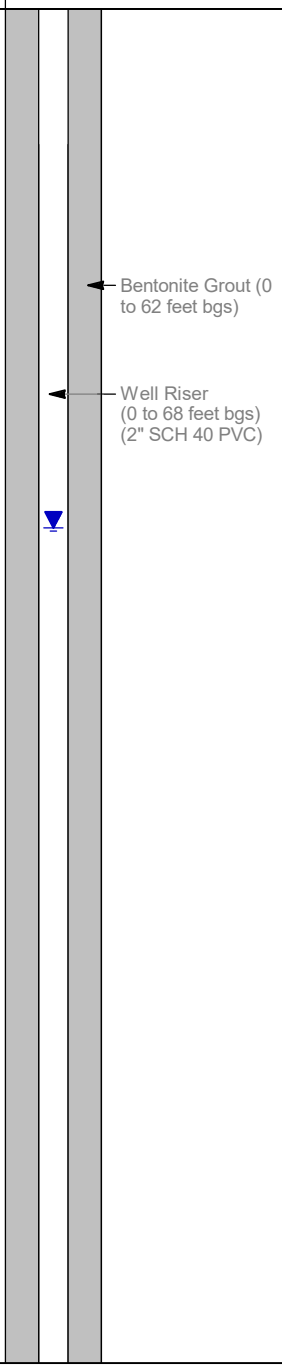
Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Red Brown, CLAY, some silt and fine medium sand, blue gray silt/fine sand lenses, yellow orange mottling, lenses of organic material, moderately sorted, high plasticity, moist. *(continued)*
						27.0
30	584	SC	42			Red Brown, CLAY, some silt and fine-coarse sand, blue gray silt/fine sand lenses, yellow-green mottling, lenses of organic material, poorly sorted, medium plasticity, moist.
						32.0
35	579	SC	53			Red Brown, CLAY, some subangular silt and fine-coarse sand, little gravel, (0.5-2" diameter), blue gray fragmented siltstone bed from 34.8' to 35.5 feet bgs, yellow-green, orange and purple mottling, lenses of organic material, poorly sorted, medium plasticity, moist.
						37.0
40	574	SC	36			Red Brown, CLAY, some silt and fine -medium sand, blue gray silt/sand lenses with mica, yellow-orange mottling, poorly sorted, high plasticity, moist.
						40.0
		SC	36			Red Brown To Gray Brown, CLAY, some silt and fine-medium sand, blue gray silt/sand lenses with mica, yellow-orange mottling, poorly sorted, high plasticity, moist.
						43.0
45	569	SC	48			Gray Brown, CLAY, some silt and fine-medium sand, blue gray silt/sand lenses with mica, yellow-orange mottling, poorly sorted, high plasticity, moist.
						47.0
		SC	24			Gray Brown, CLAY, some silt and fine-medium sand, blue gray silt/sand lenses with mica, yellow-orange mottling, poorly sorted, high plasticity, moist.
						49.0
50	564	SC	53			Red Brown, CLAY, some silt and fine-medium sand, blue gray silt/sand lenses with mica, yellow-orange mottling, trace black organic fragments, poorly sorted, high plasticity, moist.
						54.0



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Clay
- Clay
- Gravel & Sand
- Poorly-Graded Sand
- High Plasticity Clay
- Sandstone

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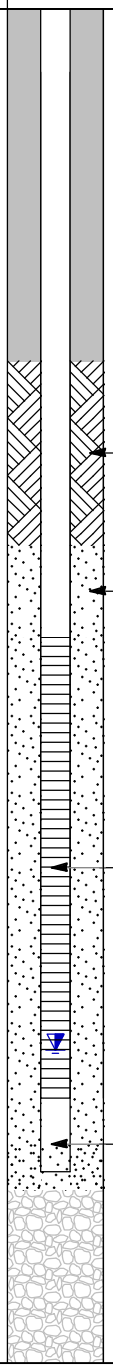
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
55	559	SC	36			Red Brown, CLAY, some sub-angular silt and fine-coarse sand, coarse gravel (1-2" diameter), blue gray layered micaceous sandstone, yellow-orange mottling, trace black organic fragments, poorly sorted, high plasticity, moist. *(continued)*
						57.0
		SC	36			Red Brown, CLAY, some sub-angular silt and fine-coarse sand, coarse gravel (2-3" diameter), blue gray layered micaceous sandstone, yellow-orange mottling, trace black organic fragments, poorly sorted, high plasticity, moist.
60	554					60.0
		SC	36			Red Brown, CLAY, some subangular silt and fine-coarse sand, coarse gravel (2-3" diameter), blue gray layered micaceous sandstone, yellow-orange mottling, trace black organic fragments, poorly sorted, high plasticity, moist.
						63.0
65	549	SC	48			Red Brown, CLAY, some sub-rounded silt and fine-coarse sand, coarse gravel (2-3" diameter), red-brown claystone and blue-gray micaceous sandstone fragments from 65'-67 feet bgs, yellow-orange mottling, trace black organic fragments, poorly sorted, high plasticity, moist.
						67.0
		HQ	36	58.3		Gray, SANDSTONE, 67-67.5 feet bgs gray clay bed with sandstone fragments, thin, brittle layered zone 68.5'- 67-77 feet bgs, high cementation. [Cow Run Sandstone]
70	544					70.0
		HQ	36	93		Gray, SANDSTONE, thin (<0.2" thick) brown fine grained crossbeds, high cementation. [Cow Run Sandstone]
						73.0
75	539	HQ	48	59.4		Gray, SANDSTONE, thin (<0.5" thick) alternating fine grained light gray-light brown bedding, thin (<0.2" thick) clay lenses at 74.8 feet bgs. Natural fracture at 74 feet bgs (160 degrees), natural fracture at 74.5 feet bgs (155 degrees) with healing, vein 3" long (130 degrees), high cementation. [Cow Run Sandstone]
						77.0
80	534	HQ	48	88.5		Gray, SANDSTONE, thin (<0.2" thick) brown fine grained crossbeds, high cementation. [Cow Run Sandstone]
						82.0
		HQ	23	100		Gray, SANDSTONE, thin (<0.2" thick) brown fine grained crossbeds, high cementation. [Cow Run Sandstone]



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Silty Clay
- Clay
- Gravel & Sand
- Poorly-Graded Sand
- High Plasticity Clay
- Sandstone

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
85	529					Gray, SANDSTONE, thin (<0.2" thick) brown fine grained crossbeds, high cementation. [Cow Run Sandstone] *(continued)*	Borehole Collapse
		HQ	33	95.5		Gray, SANDSTONE, thin (<0.2" thick) brown fine grained crossbeds, highly weathered layers, medium cementation. [Cow Run Sandstone]	
90	524					90.0	
						Bottom of Boring @ 90.00 feet bgs	
95	519						
100	514						
105	509						
110	504						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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2022-10

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 8/22/2022
DATE COMPLETED:
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford

TOTAL DEPTH: 147 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 740.13
PVC ELEVATION: 742.50
NORTHING: 350611.9774
EASTING: 2071598.263

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Bailer
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 131.12 feet bgs
DTW AT END: 142.0 feet bgs
VOLUME PURGED: 11.09 gallons

NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Light Brown, FINE TO COARSE SANDY SILT, some subangular fine to coarse gravel, (0.5-2" diameter), roots, poorly sorted, nonplastic, saturated.
						1.0
						Light Brown, SANDSTONE, high oxidation, rubble zone, low cementation.
						3.0
		HQ	84			
5	735					Light Gray, SANDSTONE, micaceous, rubble zone, low cementation.
						7.0
10	730	HQ	90	0		Medium Gray, SANDSTONE, and silt and clay, highly layered/fissile, micaceous, pyritic, 12-16.5 feet bgs silt and clay content increases, low cementation.
15	725					16.5
						17.0 Black, COAL, rubble zone.
		HQ	0			No Recovery.
20	720					

WELL DIAGRAM
Concrete Pad and 6" Steel Stickup Protective Casing

SAMPLE TYPE
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Sandy Silt
- Sandstone
- Coal
- Shale
- Limestone
- Claystone Interbedded Shale

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Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						no recovery. *(continued)*
						21.0
						Black, COAL, cubic breakage, rubble zone.
						23.0
						Medium Gray, SHALE, some silt and fine sand, fissile, slightly pyritic along fracture beds, coal clasts, low cementation.
		HQ	72	12.5		24.0
25	715					Medium Gray, SANDSTONE, highly layered/fissile, micaceous, low cementation.
						27.0
30	710	HQ	78	16		Medium Gray, SHALE, interbedded coal, fissile, pyritic, coal clasts, moderately natural fractured with slicken lines, coal beds (0.5-1" thick) at 29 feet and 33 feet bgs, low cementation.
35	705					36.0
						Light Gray, LIMESTONE, moderate clay content, rubble zone, weak.
						37.0
40	700					Light Gray, LIMESTONE, interbedded shale, moderate clay content, medium gray sandy shale (pyritic/micaceous), rubble zone, weak.
		HQ	78	0		42.0
						Medium Gray, SANDSTONE, highly layered/fissile, micaceous, pyritic, low cementation.

WELL DIAGRAM

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal | Shale | Limestone | Claystone Interbedded Shale

ACRONYM LEGEND

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

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

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	695					Medium Gray, SANDSTONE, highly layered/fissile, micaceous, pyritic, low cementation. *(continued)*
						47.0
50	690	HQ	0			No Recovery.
						52.0
						Light Gray, LIMESTONE, interbedded shale, moderate clay content, medium Gray Sandy Shale (pyritic/micaceous), rubble zone, weak.
						53.0
						Blue Gray, CLAYSTONE, inclusions claystone, tan-gray, red-brown mottling, rubble zone, weak.
						54.0
55	685	HQ	54			Dark Bluish Gray, LIMESTONE, inclusions claystone, (0.5-4" diameter), tan, gray, red-brown to dark gray veining, rubble zone, weak.
						55.0
						Medium Gray, CLAYSTONE, laminated, yellow orange mottling, rubble zone, low cementation.
						57.0
						57.5 Red Brown, CLAYSTONE, inclusions sandstone, purple, blue gray fine grained, yellow orange mottling, rubble zone, low cementation.
						Light Bluish Gray, SANDSTONE, silt-clay laminations, micaceous, oxidation, low cementation.
						59.5
60	680					Medium Gray, SANDSTONE, micaceous, massive, moderate cementation.
						61.0
		HQ	120	28.3		Bluish Gray to Gray, SANDSTONE, moderate silt, laminated/fissile, micaceous, pyritic, few red brown claystone inclusions (<0.5" diameter), oxidized, moderate cementation.
65	675					65.0
						Red Brown, SHALE, purple, gray laminations, yellow mottling, low cementation.
						67.0

WELL DIAGRAM
- Bentonite Grout (0 to 124 feet bgs)
- Well Riser (0 to 130 feet bgs) (2" SCH 40 PVC)

SAMPLE TYPE
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Sandy Silt
- Sandstone
- Coal
- Shale
- Limestone
- Claystone Interbedded Shale

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Project Name: RWL/FAR 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
						Red Brown, SHALE, purple, gray laminations, yellow mottling, low cementation. *(continued)*	
						68.0	
70	670					Bluish Gray to Gray, SANDSTONE, laminated/fissile, micaceous, slightly pyritic, moderately decomposed, moderate silt-clay content, zones of oxidation, moderate cementation.	
						71.5	
		HQ	96	60.4		Red Brown, SHALE, interbedded sandstone, blue gray fine grained, both micaceous, fissile, moderately decomposed, moderate cementation.	
						73.0	
75	665					Red Brown, CLAYSTONE, slightly micaceous, small blue gray sandstone clasts, yellow orange purple mottling, low cementation.	
						77.0	
80	660						
		HQ	120	81.7		Red Brown, SHALE, slightly micaceous, small blue gray sandstone clasts, slightly decomposed, with blue gray micaceous laminated fine grained sandstone bed (1" thick) at 80 feet bgs, yellow orange mottling, moderate cementation, dense.	
85	655						
						87.0	
						Red Brown, SHALE, slightly micaceous, moderately decomposed, fissile, with blue gray micaceous laminated fine grained sandstone bed (3" thick) at 88 feet bgs, yellow orange mottling, moderate cementation, dense.	
90	650						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal
Shale | Limestone | Claystone Interbedded Shale

ACRONYM LEGEND

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
		HQ	114	26.3		Red Brown, SHALE, slightly micaceous, moderately decomposed, fissile, with blue gray micaceous laminated fine grained sandstone bed (3" thick) at 88 feet bgs, yellow orange mottling, moderate cementation, dense. *(continued)*	
						94.0	
95	645					Dark Gray, SHALE, and silty clay, alternating light gray, moderately decomposed, slight yellow orange mottling, rubble zone, low cementation.	
						97.0	
100	640	HQ	120	56.3		Green, CLAYSTONE, green-medium gray, few fine grained medium gray sandstone clasts (<0.5" diameter), moderately fractured, yellow orange to red brown mottling, moderate cementation.	
						103.0	
105	635					Red Brown, CLAYSTONE, moderately decomposed, moderately fractured, yellow orange mottling, moderate cementation.	
						107.0	
110	630	HQ	120	61.3		Red Brown, CLAYSTONE, moderately decomposed, moderately fractured (natural/mechanical), yellow orange mottling, moderate cementation.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal | Shale | Limestone | Claystone Interbedded Shale

ACRONYM LEGEND

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
115	625					Red Brown, CLAYSTONE, moderately decomposed, moderately fractured (natural/mechanical), yellow orange mottling, moderate cementation. *(continued)*
						117.0
120	620	HQ	66	34.8		Red Brown, CLAYSTONE, blue gray siltstone, moderately decomposed, moderately fractured (natural/mechanical), yellow orange mottling, moderate cementation.
125	615					127.0
						Red Brown, CLAYSTONE, moderately decomposed, moderately fractured (natural/mechanical), yellow orange mottling, moderate cementation.
						129.0
130	610	HQ	120	47.5		Light Bluish Gray, SANDSTONE, micaceous, few cross-beds, laminated, few carbonate nodules, fractured along bedding planes (165-170 degrees), Red Brown Claystone from 130-131 feet bgs, moderate cementation. [Morgantown Sandstone]
						132.5
						Red Brown, SHALE, moderate silt and fine sand, slight micaceous, fissile, fracture along bedding planes (165-170 degrees) 134.5 feet bgs (2-3" thick) blue gray fine sandstone bed, moderate cementation. [Morgantown Sandstone]
						134.5
135	605					Light Bluish Gray, SANDSTONE, micaceous, few cross beds, laminated, natural fractures along bedding planes (165-170 degrees), few carbonate nodules, red-brown claystone clasts 136.5-137 feet bgs, Light Green-Gray Sandstone (1 ft thick) 135.5-136.5 feet bgs, moderate cementation. [Morgantown Sandstone]
						137.0

WELL DIAGRAM

- Bentonite Seal (124 to 128 feet bgs)
- Filter Sand (128 to 142 feet bgs) (Global #5)
- Well Screen (130 to 140 feet bgs) (2" SCH 40 PVC/ 0.01" slot)

SAMPLE TYPE

- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

- Sandy Silt
- Sandstone
- Coal
- Shale
- Limestone
- Claystone Interbedded Shale

ACRONYM LEGEND

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
140	600	HQ	84	35.1		Red Brown, SHALE, moderate silt, faintly micaceous, fissile, natural fractures along bedding planes (165-170 degrees) blue gray fine sandstone beds (1-2" thick) at 137.8', 138', and 140 feet bgs, moderate cementation. *(continued)*	Sump (2" SCH 40 PVC/2' long) (140 to 142 feet bgs)
						142.0	
145	595					Red Brown, CLAYSTONE, purple, moderately decomposed, yellow orange to light blue mottling, rubble zone, moderate cementation.	Borehole Collapse
						147.0	
						Bottom of Boring @ 147.00 feet bgs	
150	590						
155	585						
160	580						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal | Shale | Limestone | Claystone Interbedded Shale

ACRONYM LEGEND

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ERM
1 Beacon Street: 5th Floor
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Telephone: + 1 (617) 646-7800

2022-12

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/28/2022
DATE COMPLETED: 7/28/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Wireline Rock Coring
LOGGED BY: J. Maag
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

TOTAL DEPTH: 40 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 612.52
PVC ELEVATION: 614.86
NORTHING: 349256.8742
EASTING: 2072676.67

WELL DEVELOPMENT
METHOD(S): Proactive Pump & Hurricane Pump
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 28.09 feet bgs
DTW AT END: 37.47 feet bgs
VOLUME PURGED: 59.25 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Brown, CLAY, with sand and gravel, angular. 25% coarse grain gravel, 10% fine grain sand, red, orange, greenish-gray mottling, soft, wet.
						1.0
						Reddish Brown, CLAY, orange, greenish-gray mottling, stiff, low to high plasticity, moist.
		HQ	96.0			
5	608					5.0
						Greenish Gray, SHALE, very thinly laminated, intensely weathered, grading into purple and yellow with increasing depth, very weak, wet.
						8.0
						Olive Gray, SHALE, mostly mica, thinly laminated, moderately weathered, very weak, wet.
10	603					10.0
						Light Gray, SANDSTONE, with mica schist, fine grain, massive bedding, slightly weathered, well sorted, moderate to strong, wet.
						12.0
		HQ	120.0	26.7		
15	598					Bluish Gray, CLAYSTONE, interbedded shale, purplish-red, few mica, slightly weathered, very weak, wet.
20	593					

WELL DIAGRAM

- Concrete Pad and 6" Steel Stickup Protective Casing
- Bentonite Grout (0 to 22 feet bgs)
- Well Riser (0 to 28 feet bgs) (2" SCH 40 PVC)

SAMPLE TYPE

- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

- Clay
- Shale
- Sandstone
- Claystone Interbedded Shale
- Limestone

ACRONYM LEGEND

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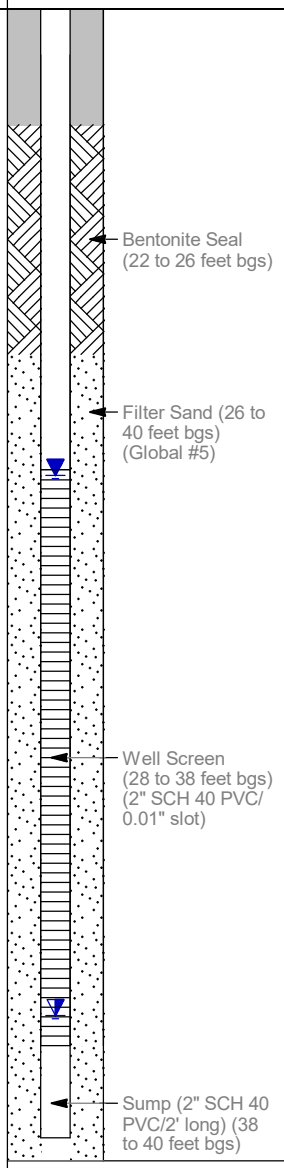
Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		HQ	96.0	8.3		Red, CLAYSTONE, interbedded shale, purplish-red, blueish-gray, few mica, slightly weathered, very weak, wet. *(continued)*
						21.0
						Blue Gray, LIMESTONE, purple, blueish gray, some mica, massive bedding, highly weathered, moderate to strong, wet.
						21.5
25	588					Olive Gray, SHALE, purple, blueish gray clay shale, very thinly laminated, few mica, moderately weathered, very weak, wet.
						28.0
						Greenish Gray, SHALE, with mica schist, sandy shale, very thinly laminated, moderately weathered, moderate to strong, wet.
						29.0
30	583	HQ	84	0		Red, SHALE, purplish-red, blueish-gray clay shale, very thinly laminated, highly weathered, very weak, wet.
35	578					
40	573					40.0
						Bottom of Boring @ 40.00 feet bgs

WELL DIAGRAM



SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Clay
Shale
Sandstone
Claystone Interbedded Shale
Limestone

ACRONYM LEGEND

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PVC = polyvinyl chloride

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

2022-13

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 8/3/2022
DATE COMPLETED: 8/3/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford

TOTAL DEPTH: 118 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 609.73
PVC ELEVATION: 612.40
NORTHING: 349262.6609
EASTING: 2072727.054

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Bailer
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 21.53 feet bgs
DTW AT END: 84.43 feet bgs
VOLUME PURGED: 34.40 gallons

NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	MATERIAL DESCRIPTION
		HQ	60.0	0	Yellowish Brown, SANDSTONE, few mica, very thinly laminated, moderately weathered, moderately weak, highly disintegrated, dry.
					3.0
					Brown, CLAY, with sand, few roots, few coarse gravel, red, orange, soft, greenish gray mottling, moderate plasticity, wet.
5	605				5.0
		HQ	24		Gray Brown, SANDSTONE, fine grained, some mica, very thinly laminated, slightly weathered, strong, wet.
					7.0
					CLAYSTONE, purple, red, gray, massive, very weathered, very weak.
10	600				
		HQ	102	42.2	11.5
15	595				Red, CLAYSTONE, massive, slightly weathered, weak, wet.
20	590				

WELL DIAGRAM
Concrete Pad and 6" Steel Stickup Protective Casing
Bentonite Grout (0 to 18 feet bgs)

SAMPLE TYPE
HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
Sandstone
Clay
Claystone Interbedded Shale
Shale

ACRONYM LEGEND
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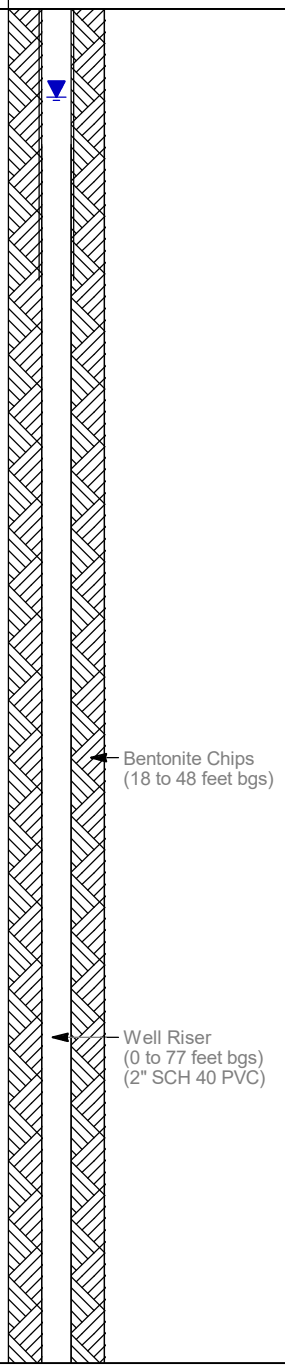
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		HQ	120.0	24.2		20.5 Red, CLAYSTONE, massive, slightly weathered, weak, wet. *(continued)*
						Gray Brown, SHALE, few mica, very thinly laminated, very weak, wet.
25	585					
						26.5
						Gray Brown, SANDSTONE, fine grained.
						27.5 Blue Gray, SHALE, trace pyrite, very thinly laminated, moderately weathered, weak, wet.
						28.0
30	580	HQ	120.0	18.3		SHALE, purple, red, bluish-gray, yellow, very thinly laminated, moderately weathered, very weak, wet.
35	575					
						39.0
40	570	HQ	114.0	53.5		SHALE, Shale, purple, yellow, red, greenish gray, massive, slightly weathered, weak, wet.

WELL DIAGRAM



SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandstone
Clay
Claystone Interbedded Shale
Shale

ACRONYM LEGEND

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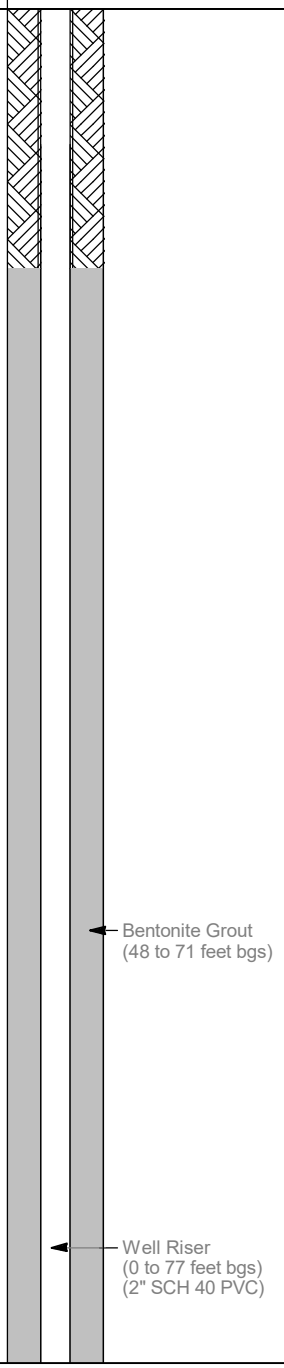
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	565					
50	560	HQ	114	3.5		SHALE, purple, yellow, red, greenish gray, massive, slightly weathered, weak, wet. *(continued)*
55	555					
60	550	HQ	84	14.3		
65	545					



SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandstone
Clay
Claystone Interbedded Shale
Shale

ACRONYM LEGEND

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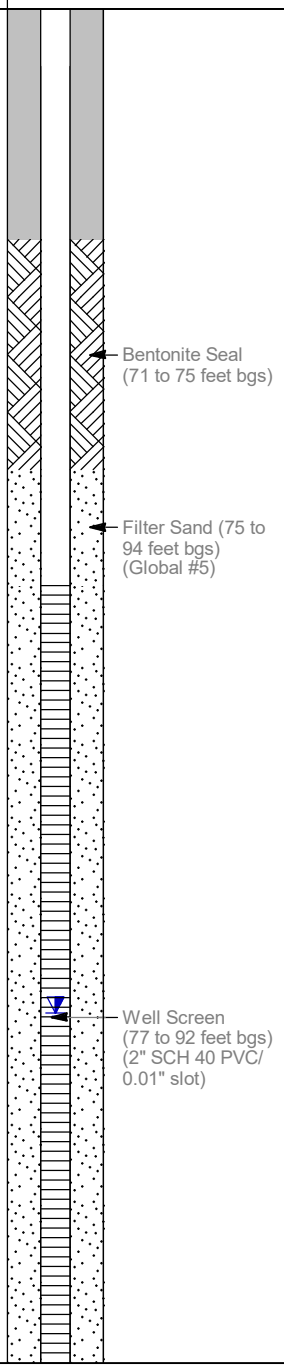
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
70	540	HQ	96	27.1		SHALE, purple, yellow, red, greenish gray, massive, slightly weathered, weak, wet. *(continued)*
75	535					
80	530	HQ	90	42.2		
85	525					
						87.0
90	520	HQ	30	30		Olive Gray, SANDSTONE, fine grained (some mica), high cementation, thin crossbedding/brittle layers at 88.2' to 89.2'. [Cow Run Sandstone]

WELL DIAGRAM



SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandstone
Clay
Claystone Interbedded Shale
Shale

ACRONYM LEGEND

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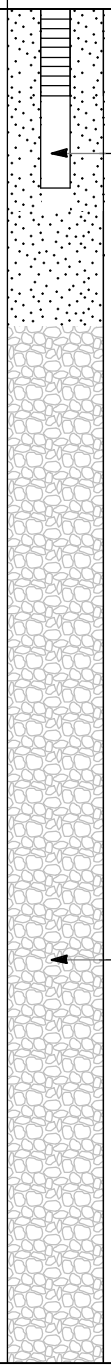
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Olive Gray, SANDSTONE, fine grained (some mica), high cementation, thin crossbedding/brittle layers at 88.2' to 89.2'. *(continued)*
						92.0
						Olive Gray, SANDSTONE, fine grained (some mica), high cementation.
						92.8
95	515	HQ	42	23.8		Olive Gray, SHALE, brittle.
						97.0
100	510	HQ	32	100		Olive Gray, SANDSTONE, fine grained (some mica), natural fracture at 103.8 (evidence of weathering angle), high compaction.
						102.0
105	505	HQ	49	59.2		Olive Gray, SANDSTONE, fine grained (some mica), dark gray-brown alternating banding throughout run (0.5"-1" thick bands), high compaction.
						108.0
110	500	HQ	48	72.9		Olive Gray, SANDSTONE, fine grained (some mica), dark gray-brown banding from 108' to 110.5', presence of mineral healing at 109', (0.5"-1" thick bands), thin layering throughout run, high compaction.
						112.0
						Olive Gray, SANDSTONE, fine grained (some mica), dark gray-red brown-yellow alternating banding 114.5' to 116' (0.5"-1" thick bands), thin brittle layering, fracture evidence by weathering at 115.8', high compaction.

WELL DIAGRAM



SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandstone
Clay
Claystone Interbedded Shale
Shale

ACRONYM LEGEND

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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	495	HQ	72	48.6		Olive Gray, SANDSTONE, fine grained (some mica), dark gray-red brown-yellow alternating banding 114.5' to 116' (0.5"-1" thick bands), thin brittle layering, fracture evidence by weathering at 115.8', high compaction. *(continued)*	
						116.0	
						Red Brown, CLAYSTONE, yellow-blue-gray "staining" chemical weathering, high compaction.	
						117.0	
						Red Brown, CLAY, with angular to subangular fine to medium gravel, "mud like" with shale fragments, parts are "rock flour" from mechanical breakage, low plasticity, moist.	
						118.0	
						Bottom of Boring @ 118.00 feet bgs	
120	490						
125	485						
130	480						
135	475						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandstone
Clay
Claystone Interbedded Shale
Shale

ACRONYM LEGEND

amsl = above mean sea level
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NR = no recovery
PVC = polyvinyl chloride

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

2022-14

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/23/2022
DATE COMPLETED: 7/24/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: J. Maag
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. Screen location based on results of downhole geophysical survey.

TOTAL DEPTH: 184 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 740.42
PVC ELEVATION: 743.04
NORTHING: 345975.5035
EASTING: 2070349.795

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Bailer
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 163.63 feet bgs
DTW AT END: 179.38 feet bgs
VOLUME PURGED: 15.1 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Yellowish Brown, SANDY SILT, fine grained sand, non-plastic, soft, wet.
						1.0
5	735	SC	84			Yellowish Brown, FINE SAND, subrounded few sand cobbles, some mica, well sorted, very loose, dry.
						7.0
10	730	SC	12			Gray, FINE SANDY SILT, mostly mica, non-plastic, dense, wet.
15	725					17.0
						Gray, CLAYSTONE, some mica, massive, slightly weathered, very weak.
						19.0
20	720	HQ	120	13.3		Gray, CLAY SHALE, very thinly laminated, intensely weathered, very weak, wet.
25	715					

WELL DIAGRAM

- Concrete Pad and 6" Steel Stickup Protective Casing
- Bentonite Grout (0 to 152 feet bgs)
- Well Riser (0 to 158 feet bgs) (2" SCH 40 PVC)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Sandy Silt
- Well-graded Sand
- Claystone Interbedded Shale
- Shale
- Limestone
- Sandstone

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Gray, CLAY SHALE, very thinly laminated, intensely weathered, very weak, wet. *(continued)*	
						28.5	
30	710	HQ	120	0		Gray, CLAY SHALE, very thinly laminated, intensely weathered-disintegrated, very weak, dry.	
35	705					37.0	
40	700	HQ	78	5.1		Gray, CLAY SHALE, very thinly laminated, moderately weathered, weak, wet.	← Bentonite Grout (0 to 152 feet bgs)
45	695					47.0	
						Gray, LIMESTONE, very fine grained, massive, intensely weathered, moderate strength, wet.	
						48.0	
50	690					Gray, CLAY SHALE, little mica and pyrite, very thinly laminated, very weathered, weak, wet.	
						51.0	
		HQ	48			Red, CLAY SHALE, orange, greenish-gray, purple, very thinly laminated, very weathered, weak, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Sandy Silt
- Well-graded Sand
- Claystone Interbedded Shale
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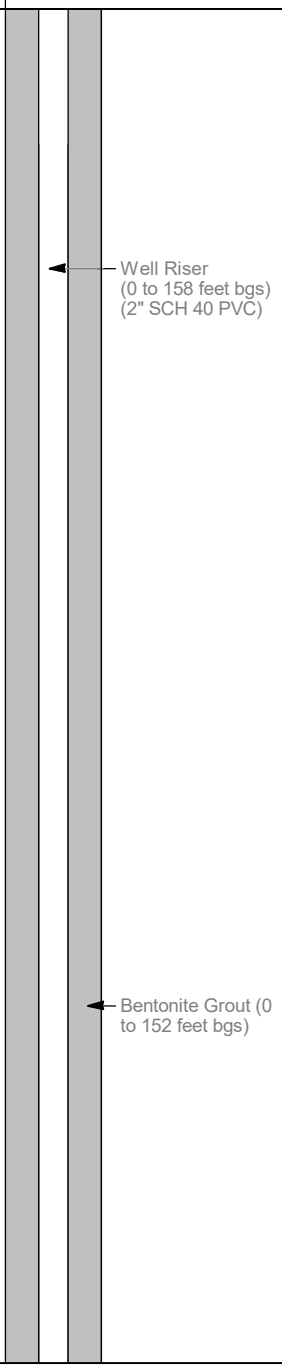
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
55	685					Red, CLAY SHALE, orange, greenish-gray, purple, very thinly laminated, very weathered, weak, wet. *(continued)*
60	680	HQ	60	6.7		60.0 Blue Gray, SANDSTONE, Fine grained, massive, little pyrite, slightly weathered, fracture from 60.5-62' (60 degrees), strong, wet. 62.5
65	675					
70	670	HQ	96	20.8		Blue Gray, CLAYSTONE, very thinly laminated, little mica, slightly weathered, weak, wet. 73.0
75	665					Blue Gray, SANDSTONE, fine grained, little mica, massive, fresh, 85 degree fracture (73.5' - 74.5'), strong, wet. 77.0
80	660	HQ	114	44.7		Red, CLAYSTONE, greenish gray, massive, trace mica, slightly weathered, moderate strength, wet.

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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- Well-graded Sand
- Claystone Interbedded Shale
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
85	655						
90	650						
95	645	HQ	240	47.1		Red, CLAYSTONE, greenish gray, massive, trace mica, slightly weathered, moderate strength, wet. *(continued)*	
100	640						← Bentonite Grout (0 to 152 feet bgs)
105	635						
110	630						

SAMPLE TYPE

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- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

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Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115	625	HQ	156	57.7		Red, CLAYSTONE, greenish gray, massive, trace mica, slightly weathered, moderate strength, wet. *(continued)*	
120	620						
125	615						
130	610						Bentonite Grout (0 to 152 feet bgs)
135	605	HQ	234	48.3			
140	600						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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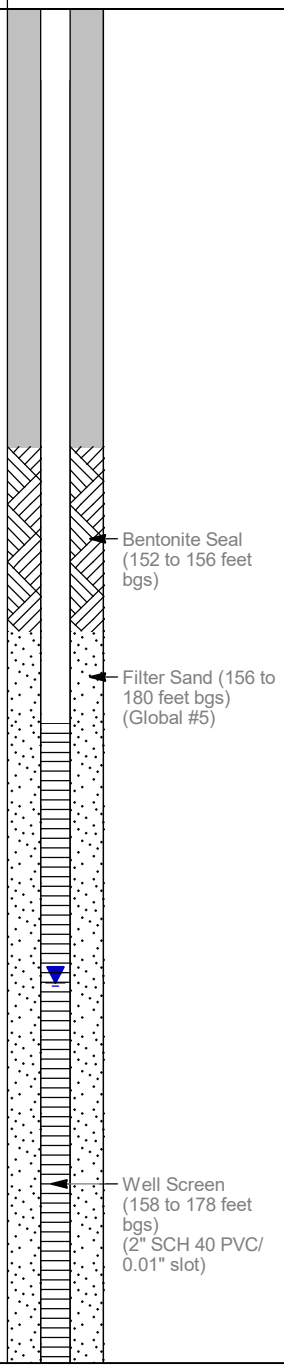
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
145	595					
						Red, CLAYSTONE, greenish gray, massive, trace mica, slightly weathered, moderate strength, wet. *(continued)*
150	590					
155	585					155.0
		HQ	240	48.3		Blue Gray, SANDSTONE, fine grained, some mica, massive, fresh, strong, wet.
160	580					
						164.5
165	575					
						Red, CLAYSTONE, purple, bluish gray, massive, fresh, 60 degree fracture at 173', 90 degree (4") fracture at 175', strong, wet.
170	570					



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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- Well-graded Sand
- Claystone Interbedded Shale
- Shale
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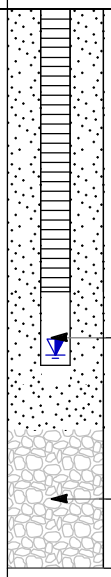
Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		HQ	96	61.5		Red, CLAYSTONE, purple, bluish gray, massive, fresh, 60 degree fracture at 173', 90 degree (4") fracture at 175', strong, wet. *(continued)*
175	565					
						176.0 — Red, CLAYSTONE, purple, bluish gray, massive, intensely weathered, strong, wet.
						177.0 — CLAYSTONE, purple, bluish-gray, orange, massive, slightly weathered, moderate strength, wet.
180	560	HQ	84	15.5		180.5 — Blue Gray, CLAYSTONE, purple, orange, massive, intensely weathered, very weak, wet.
						183.5
						184.0 — Light Gray, CLAYSTONE, intensely disintegrated, dry.
185	555					*Bottom of Boring @ 184.00 feet bgs*
190	550					
195	545					
200	540					

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Sandy Silt
- Well-graded Sand
- Claystone Interbedded Shale
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2022-15

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 8/5/2022
DATE COMPLETED: 8/5/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. 2016-08 replacement well.

TOTAL DEPTH: 195 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 729.55
PVC ELEVATION: 732.09
NORTHING: 352451.0853
EASTING: 2068926.25

WELL DEVELOPMENT
METHOD(S): Mega Monsoon, Wattera, Bailer
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 22.16 feet bgs
DTW AT END: 190.66 feet bgs
VOLUME PURGED: 25.4 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		SC	23			Light Brown, CLAY, some silt and fine sand, roots, orange yellow mottling, poorly sorted, medium plasticity, dry to moist.
						3.0
5	725	SC	36			Light Brown, CLAY, some silt and fine to medium sand, red to orange yellow mottling, poorly sorted, medium plasticity, dry to moist.
						7.0
10	720	SC	48			Red Brown, CLAY, some silt and fine to medium sand, blue gray clay inclusions, yellow orange mottling, poorly sorted, medium plasticity, moist.
						11.5
						12.0 Gray Brown, CLAY, some silt and fine to medium sand, trace gravel, 0.5"-1" claystone fragments, thin medium to coarse dark gray sandy lenses, orange yellow mottling, poorly sorted, medium plasticity, dry to moist.
15	715	SC	40			Gray Brown, CLAY, some silt and fine to medium sand, trace gravel, 0.5"-1" claystone fragments, thin medium to coarse dark gray sandy lenses, orange yellow mottling, poorly sorted, medium plasticity, dry to moist.
						17.0
		SC	36			Red Brown, CLAY, some silt and fine to medium sand, blue gray clay inclusions, yellow orange mottling, poorly sorted, medium plasticity, moist.
						19.5
20	710					20.0 Dark Gray To Black, FINE TO MEDIUM SAND, some silt.

WELL DIAGRAM
Concrete Pad and 6" Steel Stickup Protective Casing

SAMPLE TYPE
- Sonic Drilling (SC)
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Clay
- Poorly-Graded Sand
- Claystone Interbedded Shale
- Siltstone
- Sandstone

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Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						moderately sorted, loose, dry to moist.	
		SC	48			Brown To Red Brown, CLAY, some silt and fine sand, red bed layer at 21.5' to 22', varving, poorly sorted, low plasticity, dry. *(continued)*	
						24.0	
25	705	SC	36			Brown To Light Brown, CLAY, some silt and fine sand, mechanically crushed, varving, poorly sorted, low plasticity, dry.	
						27.0	
		SC	36			Red, CLAY, some subangular silt and fine sand, (1-3" diameter), gray-brown, gray shale rock fragments throughout, moderate gravel, yellow orange mottling, poorly sorted, medium plasticity, dense, moist.	
30	700					30.0	
		SC	55			Red Brown, CLAY, some subangular silt and fine sand, (1-3" diameter), gray shale rock fragments throughout, moderate gravel, yellow orange mottling, poorly sorted, medium plasticity, dense, moist.	
35	695					35.0	
		SC	24			Red Brown, CLAY, some subangular silt and fine sand, (1-3" diameter), gray shale and tan claystone rock fragments throughout, moderate gravel, yellow orange mottling, poorly sorted, medium plasticity, moist.	
						37.0	
40	690	HQ	28	92.9		Red Brown, CLAYSTONE, with clasts, gray-blue, few blue-gray fine grained sandstone clasts within claystone, thin layering in claystone, exterior moderately decomposed, moderate natural fractures, moderate cementation.	
						42.0	
						Red Brown, CLAYSTONE, with clasts, gray-blue, few blue-gray fine grained sandstone clasts within claystone, thin layering in claystone, exterior moderately decomposed, moderate natural fractures, moderate cementation.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
- Poorly-Graded Sand
- Claystone Interbedded Shale
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	685	HQ	38	90.8		Red Brown, CLAYSTONE, with clasts, gray-blue, few blue-gray fine grained sandstone clasts within claystone, thin layering in claystone, exterior moderately decomposed, moderate natural fractures, moderate cementation. *(continued)*
						47.0
50	680	HQ	38	78.9		Red Brown, CLAYSTONE, with clasts, gray-blue, few blue gray fine grained sandstone clasts within claystone, thin layering in claystone, exterior moderately decomposed, moderate natural fractures, moderate cementation.
						52.0
55	675	HQ	36	63.9		Red Brown, CLAYSTONE, with clasts, gray-blue, few blue-gray fine grained sandstone clasts within claystone, thin layering in claystone, exterior moderately decomposed, moderate natural fractures, moderate cementation.
						57.0
						Dark Gray, CLAYSTONE, interbedded light gray to dark gray beds, flame structures, transitional zone, high cementation, hard.
						57.8
60	670	HQ	44	93.2		SILTSTONE, little rounded clasts, (<0.5" diameter), fine gravel, blue-olive-gray, graywacke, moderate natural fractures, yellow orange mottling, oxidized veins, moderate cementation.
						62.0
65	665	HQ	20	55		SILTSTONE, little rounded clasts, (<0.5" diameter), fine gravel, blue-olive-gray, graywacke, moderate natural fractures, yellow -orange to red-purple mottling, low cementation.

WELL DIAGRAM

- Bentonite Grout (0 to 80 feet bgs)
- Well Riser (0 to 182 feet bgs) (2" SCH 40 PVC)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
- Poorly-Graded Sand
- Claystone Interbedded Shale
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						SILTSTONE, little rounded clasts, (<0.5" diameter), fine gravel, blue-olive-gray, graywacke, moderate natural fractures, yellow -orange to red-purple mottling, low cementation. *(continued)*	
						69.0	
70	660	HQ	0			No recovery, washed out and fall out.	
						72.0	
75	655	HQ	40	76.3		Red Brown, CLAY, some silt and fine to medium sand, blue gray clay inclusions , tan-red bed from 76'-77', yellow orange mottling, poorly sorted, medium plasticity, moist.	
						77.0	
80	650	HQ	0			No Recovery.	
85	645	HQ	27	51.9		85.0	
						Red Brown, CLAY, some silt and fine to medium sand, 82'-85' washout/no recovery, blue gray clay inclusions, yellow orange mottling, poorly sorted, medium plasticity, moist.	
						85.5	
						Olive, SANDSTONE, blue-gray, calcareous, fine-medium grain sandstone, dispersed calcite crystallization, fine grained thin crossbedding throughout, high cementation, hard.	
						87.0	
90	640	HQ	11	100		No Recovery.	Well Riser

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Client: Gavin Power, LLC **Project Name:** RWL/FAR Monitoring Well Installation
Project Number: 0643653 **Project Location:** Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						91.0 No Recovery. *(continued)*	(0 to 182 feet bgs) (2" SCH 40 PVC)
						Olive, SANDSTONE, blue-gray, calcareous, fine-medium grain sandstone, dispersed calcite crystallization, fine grained thin crossbedding throughout, high cementation, hard. 92.0	
		HQ	48	48.96		Olive, SANDSTONE, blue-gray, calcareous, fine-medium grain sandstone, dispersed calcite crystallization, fine grained thin crossbedding throughout, high cementation, hard. 94.0	
95	635					Red Brown, CLAY, some silt and fine to medium sand, blue gray clay inclusions, yellow orange mottling, poorly sorted, medium plasticity, moist. 95.5	
						Olive, SANDSTONE, blue-gray, calcareous, fine-medium grain sandstone, dispersed calcite crystallization, fine grained thin crossbedding throughout, high cementation, hard. 97.0	
100	630	HQ	40	73.5		Olive, SANDSTONE, blue-gray, calcareous, fine-medium grain sandstone, decrease in carbonate/increase in sand, fine to medium grained thin crossbedding throughout, high cementation, hard. 102.0	
105	625	HQ	50	56		Olive, SANDSTONE, with claystone, blue-gray, calcareous, fine-medium, decrease in carbonate/increase in sand, fine to medium grained thin crossbedding throughout, red brown claystone, high cementation, hard. 107.0	
110	620	HQ	0			No recovery. 112.0	
						Red Brown, CLAY, some silt and fine to medium sand, blue gray clay inclusions, yellow orange mottling, poorly sorted, medium plasticity, moist. 114.0	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
115	615	HQ	41	60.98		Olive, SANDSTONE, with claystone, blue-gray, calcareous, fine-medium grain, decrease in carbonate/increase in sand, fine to medium grained thin crossbedding throughout, red brown claystone, high cementation, hard. *(continued)*
						117.0
120	610	HQ	51	68.6		Olive, SANDSTONE, with claystone, blue-gray, calcareous, fine-medium grain, Thick interbedding (Red claystone from 118.5' to 120.5'), carbonate veins, fine to medium grained thin crossbedding throughout, red brown claystone, high cementation, hard.
						122.0
125	605	HQ	34	79.4		Olive, SANDSTONE, with claystone, blue-gray, calcareous, fine-medium grain sandstone, thick interbedding (Red claystone from 122 to 122.5'), carbonate veins, fine to medium grained thin crossbedding throughout, red brown claystone, high cementation, hard.
						125.0
		HQ	43	47.7		Red Brown, CLAYSTONE, interbedded with fine sand, dark brown, highly decomposed/ weathered, medium cementation.
						126.5
						Olive, SANDSTONE, blue-gray, calcareous, thin layering, increasing sand content with depth, fine-medium grained crossbedding, pyrite nodules, moderate fracturing, medium cementation.
						129.0
130	600	HQ	45	48.9		Olive, SANDSTONE, with claystone, blue-gray, calcareous, thin layering, increasing carbonate content with depth, fine-medium grained crossbedding, pyrite nodules, (Red claystone from 133' to 134'), moderate fracturing, medium cementation.
						134.0
135	595	HQ	32	32.8		Red Brown, CLAYSTONE, rubble zone from 136' to 137' with increased sand content, yellow orange to purple mottling, low cementation.
						137.0
						No Recovery.

WELL DIAGRAM: Bentonite Chips (80 to 176 feet bgs)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
- Poorly-Graded Sand
- Claystone Interbedded Shale
- Siltstone
- Sandstone

ACRONYM LEGEND

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

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

Client: Gavin Power, LLC
Project Name: RWL/FAR 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
140	590	HQ	0			No Recovery. *(continued)*
						142.0
145	585	HQ	35	84.3		Red Brown, CLAYSTONE, gray-brown, moderate natural fracturing, yellow-tan-orange mottling, moderate cementation, hard.
						147.0
150	580	HQ	60	90		Red Brown, CLAYSTONE, gray-brown, moderate natural fracturing, thin fine-medium grained sandstone crossbeds, yellow-tan-orange mottling, moderate cementation, hard.
						152.0
155	575	HQ	40	62.5		Red Brown, CLAYSTONE, gray-brown, moderate natural fracturing, thin fine-medium grained sandstone crossbeds, blue-gray sandstone clasts, yellow tan orange mottling, moderate cementation, hard.
						157.0
160	570					No Recovery.

WELL DIAGRAM

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clay
- Poorly-Graded Sand
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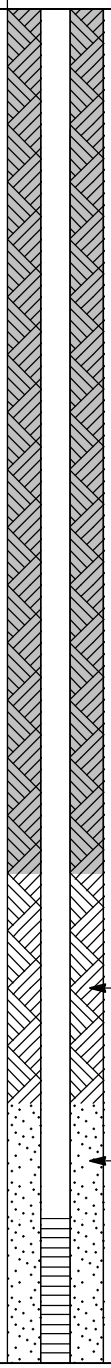
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
165	565	HQ	0			No Recovery. *(continued)*
						167.0
170	560	HQ	46	91.3		Red Brown, CLAYSTONE, moderate natural fracturing, thin fine-medium grained sand and silt lenses, yellow orange to purple mottling, moderate cementation, moderately decomposed/weathered.
						172.0
175	555	HQ	28	91.1		Red Brown, CLAYSTONE, moderate natural fracturing, thin fine-medium grained sand and silt lenses, yellow orange to purple mottling, moderate cementation, moderately decomposed/weathered.
						177.0
180	550	HQ	60	60		Red Brown, CLAYSTONE, moderate natural fracturing, thin fine-medium grained sand and silt lenses, yellow orange to purple mottling, moderate cementation, moderately decomposed/weathered.
						182.0
						Olive, SANDSTONE, blue-gray, calcareous, thin layering (brittle), increasing clay content with depth, very fine-fine grained crossbedding, moderate fracturing, medium cementation. [Cow Run Sandstone]

WELL DIAGRAM



SAMPLE TYPE

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

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
185	545	HQ	43	74.4		Olive, SANDSTONE, blue-gray, calcareous, thin layering (brittle), increasing clay content with depth, very fine-fine grained crossbedding, moderate fracturing, medium cementation. [Cow Run Sandstone] *(continued)*	Well Screen (182 to 192 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
						189.0	
190	540	HQ	42	55.95		Olive, SANDSTONE, blue-gray, calcareous, thin layering (brittle), increasing clay content with depth, very fine-fine grained crossbedding, moderate fracturing, medium cementation. [Cow Run Sandstone]	Sump (2" SCH 40 PVC/2' long) (192 to 194 feet bgs)
195	535					195.0	
						Bottom of Boring @ 195.00 feet bgs	
200	530						
205	525						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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2022-16

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 8/7/2022
DATE COMPLETED: 8/9/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. 2019-09 replacement well.

TOTAL DEPTH: 189 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 736.19
PVC ELEVATION: 738.37
NORTHING: 353206.6888
EASTING: 2064228.927

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Bailer
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 124.95 feet bgs
DTW AT END: 187.0 feet bgs
VOLUME PURGED: 12.25 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
5	731	SC	84			Brown, CLAYEY SILT, with fine to medium sand, tan, trace organic lenses, gray mottling, overburden, poorly sorted, low plasticity, damp.
7.0						
10	726	SC	120			Brown, CLAY, with fine sand and silt, tan, little organic lenses, gray mottling, overburden, medium, moderate plasticity, denser with depth, damp.
15	721					
17.0						
		SC	12			Brown, CLAY, with fine sand and silt, tan, little organic lenses, gray mottling, overburden, medium, moderate plasticity, dense, damp.
18.0						
20	716					Red Brown, CLAYSTONE, with clasts of fine grained sandstone, highly decomposed to appear as more clay than claystone, yellow orange mottling, medium cementation.

WELL DIAGRAM
Concrete Pad and 6" Steel Stickup Protective Casing

SAMPLE TYPE
- Sonic Drilling (SC)
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		HQ	48	41.7		Red Brown, CLAYSTONE, with clasts of fine grained sandstone, highly decomposed to appear as more clay than claystone, yellow orange mottling, medium cementation. *(continued)*	
						22.0	
		HQ	24	0		Brown, SANDSTONE, tan, thin crossbedding throughout, lithics and micas, very fine to fine grained, orange-dark brown oxidation along natural fractures, rubble zone, medium cementation.	
						24.0	
25	711	HQ	36	50		Brown, SANDSTONE, tan, thin crossbedding throughout, lithics and micas, very fine to fine grained, orange-dark brown oxidation along natural fractures, rubble zone, medium cementation.	
						25.5	
						Red Brown, CLAYSTONE, fine grain tan sandstone clasts, highly decomposed to appear as more clay than claystone, yellow orange mottling, medium cementation.	
						27.0	
		HQ	36	51.4		Red Brown, CLAYSTONE, with fine grained olive-blue-gray sandstone clasts, Moderately decomposed, yellow orange mottling, medium cementation.	
						29.0	
30	706					Olive, SILTSTONE, with clay, blue-gray, Moderately decomposed, fissile, medium cementation.	
						30.0	
						Red Brown, CLAYSTONE, with fine grained olive-blue-gray sandstone clasts, moderately decomposed, yellow orange mottling, medium cementation.	
						31.0	
		HQ	34	89.7		Olive, SHALE, some silt, blue-gray, moderately decomposed, fissile, red claystone clasts, medium cementation.	
						32.0	
						Red Brown, CLAYSTONE, fine grained olive-blue-gray sandstone clasts, moderately decomposed, yellow orange mottling, medium cementation.	
						33.0	
35	701	HQ	48	76		Red Brown, CLAYSTONE, with fine grained olive-blue-gray sandstone clasts, moderately decomposed (increased weathering with depth), (olive/blue-gray sandstone bed from 34.5' to 35'), yellow orange mottling, medium cementation.	
						38.0	
40	696					No Recovery.	

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- HQ Wireline Rock Coring (HQ)

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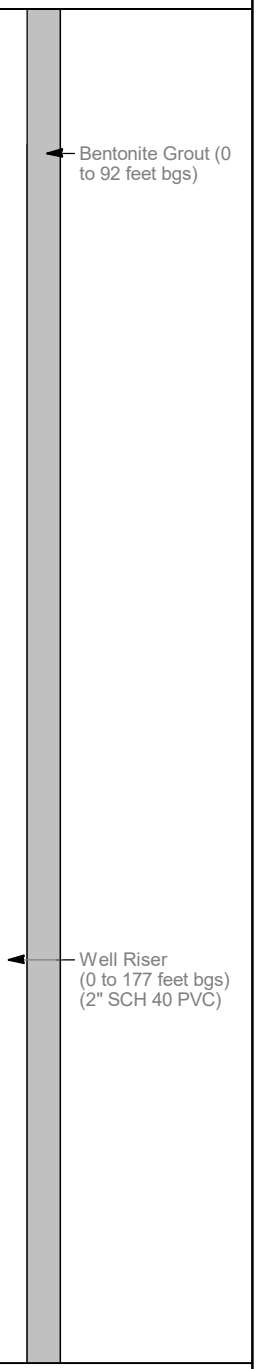
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	691	HQ	0			No Recovery. *(continued)*
50	686					53.0
		HQ	48	33.3		Olive, SHALE, some silt, blue-gray, highly decomposed, fissile, medium cementation.
55	681					54.0 Light Gray, CLAYSTONE, with red brown claystone clasts, highly decomposed, yellow orange to purple mottling, low cementation. 55.0
						Red Brown, CLAYSTONE, with fine grained olive-blue-gray sandstone clasts, highly decomposed to appear as more clay than claystone, yellow orange mottling, medium cementation.
60	676					57.0
		HQ	0			No recovery.
65	671					

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						No recovery. *(continued)*	
70	666					70.0	
		HQ	44	77.3		Red Brown, CLAYSTONE, fine grained olive-blue-gray sandstone clasts, highly decomposed, highly fractured, yellow orange to purple mottling, low cementation.	
						74.0	
75	661					Red Brown, CLAYSTONE, fine grained olive-blue-gray sandstone clasts, highly decomposed, highly fractured, yellow orange to purple mottling, low cementation.	
		HQ	36	52.8		75.5	
						Olive, SANDSTONE, blue-gray, fine-medium grained, micaceous, thin carbonate vein, moderately fractured, high cementation, hard.	
						77.0	
80	656	HQ	60	81.7		Olive, SANDSTONE, with silty clay, blue-gray, increasing silt-clay with depth, fine-medium grained, micaceous, (pyritic at 80-82ft), thin carbonate nodules, fine grained cross-beds, (fissile with depth), moderately fractured, high cementation, hard.	
						82.0	
						Red Brown, CLAYSTONE, with fine grained olive-blue-gray sandstone clasts, highly decomposed, highly fractured, low cementation.	
		HQ	46	70.7		84.0	
85	651					Olive, SANDSTONE, blue-gray, fine-medium grained, micaceous, pyritic, thin carbonate nodules, fine grained cross-beds, (fissile with depth), moderately fractured, high cementation, hard.	
						86.0	
		HQ	46	22.8		Olive, SANDSTONE, blue-gray, fine-medium grained, micaceous, pyritic, thin carbonate nodules, fin-medium grained cross-beds, highly fractured, high cementation, hard.	Well Riser (0 to 177 feet bgs) (2" SCH 40 PVC)
90	646					90.0	

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- HQ Wireline Rock Coring (HQ)

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						91.0 Olive, SANDSTONE, blue-gray, fine grained, micaceous, pyritic, fine grained cross-beds, fissile layering, moderately fractured, moderate silt-clay content, high cementation, hard. *(continued)*
		HQ	30	48.3		Red Brown, CLAYSTONE, with fine grained olive-blue-gray sandstone clasts, highly decomposed, highly fractured, low cementation.
						93.0
95	641	HQ	24	41.7		Red Brown, CLAYSTONE, highly decomposed to appear as more clay than claystone, yellow orange mottling, low cementation.
						96.0
						Red Brown, CLAYSTONE, highly decomposed to appear as more clay than claystone, yellow orange mottling, low cementation.
						97.0
		HQ	45	54.4		Olive, SANDSTONE, blue-gray, fine grained, micaceous, fissile layering, moderately fractured, moderate silt-clay content, high cementation, hard.
100	636					
						101.0
		HQ	42	57.1		Olive, SANDSTONE, blue-gray, fine grained, micaceous, interbedded fine grained cross-beds and fissile silty clay beds, moderately fractured, moderate silt-clay content, high cementation, hard.
105	631					
						105.0
		HQ	24	37.5		Olive, SANDSTONE, blue-gray, fine to medium grained, micaceous, pyritic, fine to medium grained cross beds, moderately fractured, high cementation, hard.
						107.0
		HQ	45	84.4		Olive, SANDSTONE, blue-gray, fine to medium grained, micaceous, pyritic, fine to medium grained cross-beds transition to fissile silt-clay layers with depth, moderately fractured, moderate silt-clay content, high cementation, hard.
110	626					
						112.0
						Olive, SANDSTONE, blue-gray, fine grained, micaceous, fissile layering, moderately fractured, moderate silt-clay content, high cementation, hard.

WELL DIAGRAM

Bentonite Chips (92 to 122 feet bgs)

SAMPLE TYPE

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- HQ Wireline Rock Coring (HQ)

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
115	621	HQ	34	89.7		Olive, SANDSTONE, blue-gray, fine grained, micaceous, fissile layering, moderately fractured, moderate silt-clay content, high cementation, hard. *(continued)*
						117.0
		HQ	36	37.5		Olive, SHALE, some silt to fine sand, blue-gray, highly decomposed, fissile, pyritic, thin carbonate nodules (interbedded red claystone from 119.5-120' Bgs), medium cementation.
120	616					120.0
						Olive, SHALE, some silt to fine sand, medium cementation, highly decomposed, fissile, pyritic, thin carbonate nodules (interbedded red claystone from 119.5' to 120').
						121.0
		HQ	48	75		Gray, SILTSTONE, transitional zone, carbonate nodules (0.2-0.5" diameter), medium cementation.
						123.5
125	611					Red Brown, CLAYSTONE, highly decomposed, yellow orange to purple mottling, medium cementation.
						125.0
		HQ	38	56.6		Red Brown, CLAYSTONE, highly decomposed, moderately fractured, yellow orange to purple mottling, medium cementation.
130	606					130.0
		HQ	60	57.5		Red Brown, CLAYSTONE, with beds of olive-blue-gray silty claystone, highly decomposed, moderate fracturing, rubble zones present at 130-131' bgs and 136-138' bgs, yellow orange to purple mottling, low cementation.
135	601					

WELL DIAGRAM

SAMPLE TYPE

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						138.0
140	596	HQ	23	95.7		Red Brown, CLAYSTONE, with clasts, tan claystone, highly decomposed, yellow orange to purple mottling, low cementation.
						143.0
						Red Brown, CLAYSTONE, with clasts, tan claystone, moderately decomposed, yellow orange to purple mottling, low cementation.
						144.5
145	591	HQ	47	90.4		Olive, SHALE, some some silt to fine sand, blue-gray, thin carbonate veins, alternating light brown fine grained sand and dark gray silt beds, medium cementation.
						148.0
						148.5 Red Brown, CLAYSTONE, with clasts, tan claystone, moderately decomposed, yellow orange to purple mottling, low cementation.
						Olive, SHALE, some some silt to fine sand, blue-gray, thin carbonate veins, alternating light brown fine grained sand and dark gray silt beds, medium
						149.5 cementation.
150	586	HQ	45	57.8		Gray, SILTSTONE, moderate carbonate nodules (0.2-0.5" diameter), moderately decomposed, moderately fractured, medium cementation.
						153.0
155	581	HQ	40	16.3		Gray, SILTSTONE, moderate carbonate nodules (0.2-0.5" diameter), moderately decomposed, moderately fractured, medium cementation.
						158.0
160	576	HQ	40	67.5		Gray, SILTSTONE, moderate carbonate nodules (0.2-0.5" diameter), moderately decomposed, moderately fractured, yellow orange-red purple mottling, medium cementation.

WELL DIAGRAM: ← Bentonite Grout (122 to 171 feet bgs)

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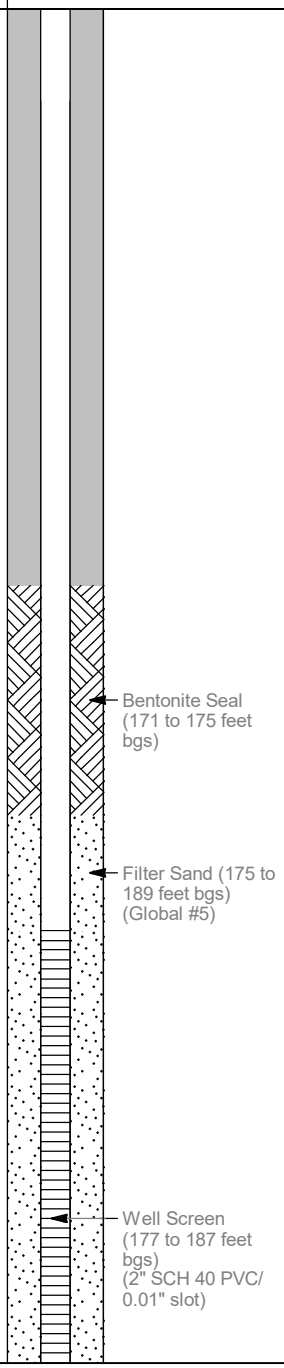
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Gray, SILTSTONE, moderate carbonate nodules (0.2-0.5" diameter), moderately decomposed, moderately fractured, yellow orange-red purple mottling, medium cementation. *(continued)*
						163.0
165	571	HQ	36	79.2		Gray, SILTSTONE, moderate carbonate nodules (0.2-0.5" diameter), moderately decomposed, moderately fractured, yellow orange-red purple mottling, medium cementation.
						168.0
						Gray, SILTSTONE, moderate carbonate nodules (0.2-0.5" diameter), moderately decomposed, moderately fractured, medium cementation.
170	566	HQ	51	54.9		170.0
						Olive, SILTSTONE, some fine sand, blue-gray, little carbonate nodules (0.2-0.5" diameter), moderately decomposed, moderately fractured, medium cementation.
						173.0
175	561	HQ	24	100		Olive, SANDSTONE, some silt, blue-gray, fine grained, micaceous, little carbonate nodules (0.2-0.5" diameter), increasing sand content with depth, natural fracture (165-170 degrees), high cementation, hard. [Cow Run Sandstone]
						177.0
180	556	HQ	46	95.7		Olive, SANDSTONE, blue-gray, fine to medium grained, micaceous, little fine grained cross-beds, thin carbonate veins (<0.5" diameter) carbonate nodules, moderately fractured (165-170 degrees), high cementation, hard. [Cow Run Sandstone]
						182.0
						Olive, SANDSTONE, blue-gray, fine to medium grained, micaceous, fine to medium grained cross-beds, moderately fractured (155-165 degrees), high cementation, hard. [Cow Run Sandstone]



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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
185	551	HQ	52	78.8		Olive, SANDSTONE, blue-gray, fine to medium grained, micaceous, fine to medium grained cross-beds, moderately fractured (155-165 degrees), high cementation, hard. [Cow Run Sandstone] *(continued)*	Sump (2" SCH 40 PVC/2' long) (187 to 189 feet bgs)
						189.0	
190	546					*Bottom of Boring @ 189.00 feet bgs*	
195	541						
200	536						
205	531						

SAMPLE TYPE

- Sonic Drilling (SC)
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GRAPHIC LOG LEGEND

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2022-17

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 9/13/2022
DATE COMPLETED:
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Wireline Rock Coring
LOGGED BY: J. Maag
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. 2018-01 replacement well.

TOTAL DEPTH: 258 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 733.39
PVC ELEVATION: 735.83
NORTHING: 345353.3472
EASTING: 2072913.835

WELL DEVELOPMENT
METHOD(S): Wattera
DATE STARTED: 10/5/2022
DATE ENDED: 10/5/2022
DTW AT START: 78.96 feet bgs
DTW AT END: 248.26 feet bgs
VOLUME PURGED: 36 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Gray Brown, SILT, soft, orange mottling, with coarse black shale pieces, low plasticity, wet.
						1.0
						Gray Brown, SILTSTONE, little mica, dark gray, orange, massive, slightly disintegrated, very weathered, with fine black shale pieces, very weak, dry.
						3.0
		HQ	84			
5	728					Dark Gray, SILTSTONE, interbedded shale, some mica, massive, weak, very weathered, wet.
						6.0
10	723					Gray Brown, CLAYSTONE, trace mica, orange, yellow. black, gray, massive, slightly weathered, very weak, wet.
		HQ	120	62.5		
15	718					15.0
						Yellow Brown, FINE SILTY SAND, with coarse gravel, orange mottling, some mica, trace organic matter (roots).
						17.0
						Yellow Brown, SILTSTONE, sandy, orange-red-gray mottling, trace organic matter (roots), little mica, massive, very weathered, very weak, wet.
20	713					

WELL DIAGRAM
Concrete Pad and 6" Steel Stickup Protective Casing

SAMPLE TYPE
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Silt
- Siltstone
- Claystone Interbedded Shale
- Silty Sand
- Shale
- Limestone

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

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

Client: Gavin Power, LLC
Project Name: RWL/FAR 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	708	HQ	204	0		Yellow Brown, SILTSTONE, sandy, orange-red-gray mottling, trace organic matter (roots), little mica, massive, very weathered, very weak, wet. *(continued)*	
						26.0	
						Dark Gray, SILTSTONE, little mica, orange-red-gray mottling, roots, massive, very weathered, very weak, wet.	
						29.0	
30	703					Gray, SHALE, very thinly laminated, moderately weathered, moderately disintegrated, moderately strong, dry.	
35	698						Bentonite Grout (0 to 72 feet bgs)
						37.0	
40	693					Gray, SHALE, very thinly laminated, moderately weathered, moderately strong, wet.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Silt
Siltstone
Claystone Interbedded Shale
Silty Sand
Shale
Limestone

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
45	688	HQ	168	44.6		Gray, SHALE, very thinly laminated, moderately weathered, moderately strong, wet. *(continued)*	
50	683						
55	678					55.5	
60	673					Gray, SILTSTONE, massive, slightly weathered, moderately strong, wet.	
65	668						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

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Siltstone
Claystone Interbedded Shale
Silty Sand
Shale
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		HQ	54	59.3		Gray, SILTSTONE, massive, slightly weathered, moderately strong, wet. *(continued)*
70	663					
						72.5 — Gray, LIMESTONE, fine grained veins of quartz and mica, very weathered, strong, wet. — 73.5
75	658					Bluish Gray, SANDSTONE, few mica, trace pyrite, massive, fine grained, strong, wet. — 76.5
						Bluish Gray, SHALE, few mica, purple-yellow, very thinly laminated, weak, moderately weathered, wet. — 79.5
80	653					Light Bluish Gray, SANDSTONE, few mica, fine grained, massive, strong, wet. — 83.0
85	648	HQ	228	55.3		Bluish Gray, CLAYSTONE, interbedded siltstone, purple-yellow, little mica, massive, weak, moderately weathered, wet. — 88.0
90	643					Red, CLAYSTONE, interbedded siltstone, purple-yellow blue-gray, little mica, massive, weak, moderately weathered, wet.

WELL DIAGRAM

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

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Silty Sand | Shale | Limestone

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
95	638					Red, CLAYSTONE, interbedded siltstone, purple-yellow blue-gray, little mica, massive, weak, moderately weathered, wet. *(continued)*	Bentonite Chips (72 to 114 feet bgs)
						97.0	
100	633					Bluish Gray, SILTSTONE, interbedded shale, purple-red, some mica, very thinly laminated, slightly weathered, moderately strong, wet.	
						101.5	
105	628	HQ	228	67.1		Red, CLAYSTONE, purple-red, blue gray, yellow, massive, weak, slightly weathered, wet.	
110	623						
						112.5	
						Red, CLAYSTONE, purple-red, blue gray, yellow, massive, weak, slightly weathered, wet.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

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Claystone Interbedded Shale
Silty Sand
Shale
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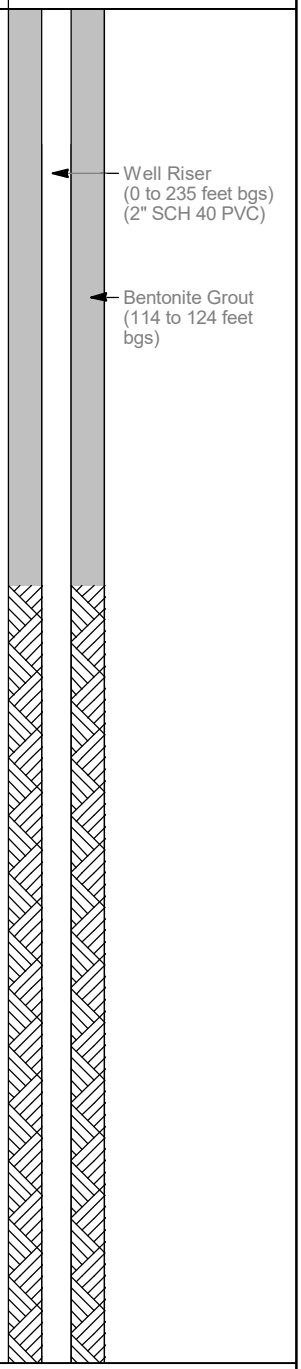
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
115	618					
120	613					
125	608	HQ	162	66		Red, CLAYSTONE, purple-red, blue gray, yellow, massive, weak, slightly weathered, wet. *(continued)*
130	603					
135	598					

WELL DIAGRAM



SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

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Siltstone
Claystone
Interbedded Shale
Silty Sand
Shale
Limestone

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
140	593					Red, CLAYSTONE, purple-red, blue gray, yellow, massive, weak, slightly weathered, wet. *(continued)*	
145	588	HQ	120	72.5			
						148.5	
150	583					Bluish Gray, SANDSTONE, few mica, purple-red, fine grained, massive, strong, wet.	
						150.5	Bentonite Chips (124 to 178 feet bgs)
155	578					Red, CLAYSTONE, trace mica, purple-red, massive, slightly weathered, moderately strong, wet.	
160	573						

SAMPLE TYPE

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Shale
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Project Number: 0643653
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						161.5	
						Bluish Gray, SILTSTONE, interbedded shale, purplish-red staining, trace pyrite, few mica, very thinly laminated, moderately weathered, moderately strong, wet.	
165	568						
						166.5	
		HQ	216	58.3		Red, CLAYSTONE, purple-red, bluish-gray, massive, slightly weathered, moderately strong, wet.	
						169.5	
170	563						
						Bluish Gray, SILTSTONE, interbedded sandstone, fine grained, little pyrite, trace mica, massive, slightly weathered, moderately strong, wet.	
175	558						
						177.0	
180	553					Red, CLAYSTONE, purple-red, blue -gray, yellow, massive, slightly weathered, moderately strong, wet.	

SAMPLE TYPE

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Claystone Interbedded Shale
Silty Sand
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Project Number: 0643653
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
185	548	HQ	186	63.98		Red, CLAYSTONE, purple-red, blue -gray, yellow, massive, slightly weathered, moderately strong, wet. *(continued)*	
190	543						
195	538						
200	533						
205	528	HQ	72	37.5			

Bentonite Grout (178 to 229)

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

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Siltstone
Claystone Interbedded Shale
Silty Sand
Shale
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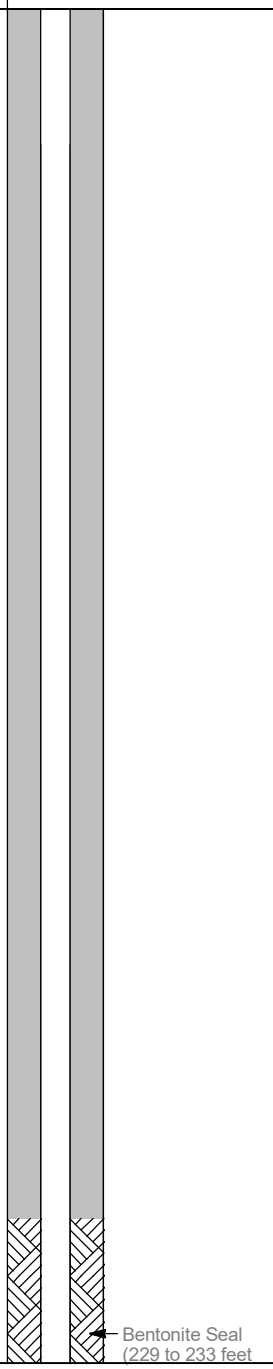
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
210	523					
215	518					
220	513					Red, CLAYSTONE, purple-red, blue -gray, yellow, massive, slightly weathered, moderately strong, wet. *(continued)*
225	508	HQ	222	32.4		
230	503					

WELL DIAGRAM



SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

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Siltstone
Claystone
Interbedded Shale
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Client: Gavin Power, LLC
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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
						Red, CLAYSTONE, purple-red, blue -gray, yellow, massive, slightly weathered, moderately strong, wet. *(continued)*	bgs)
235	498					234.5	Filter Sand (233 to 257 feet bgs) (Global #5)
240	493						
245	488	HQ	204	62.3		Bluish Gray, SANDSTONE, interbedded siltstone, fine grained, little mica, trace pyrite, massive, grades into dark gray, (45 degree) fracture at 237 ft, (10 degree) fracture at 240.5 ft, (180 degree) fracture at 243 ft, and (180 degree) fracture at 245.5 ft, wet. [Cow Run Sandstone]	Well Screen (235 to 255 feet bgs) (2" SCH 40 PVC/ 0.01" slot)
250	483						
255	478						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

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Siltstone
Claystone Interbedded Shale
Silty Sand
Shale
Limestone

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Client: Gavin Power, LLC
Project Name: RWL/FAR 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
						Bluish Gray, SANDSTONE, interbedded siltstone, fine grained, little mica, trace pyrite, massive, grades into dark gray, (45 degree) fracture at 237 ft, (10 degree) fracture at 240.5 ft, (180 degree) fracture at 243 ft, and (180 degree) fracture at 245.5 ft, wet. [Cow Run Sandstone] *(continued)*	Sump (2" SCH 40 PVC/2' long) (255 to 257 feet bgs)
						257.0 Dark Gray, SHALE, bluish-gray, very thinly laminated, slightly weathered, moderately strong, wet.	
						258.0 *Bottom of Boring @ 258.00 feet bgs*	
260	473						
265	468						
270	463						
275	458						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

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Silty Sand | Shale | Limestone

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2022-18

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

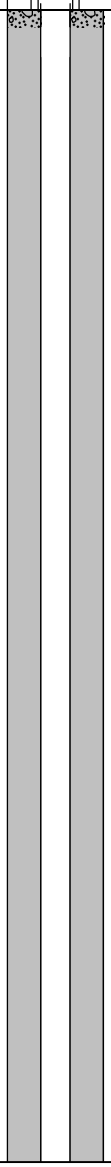
DATE STARTED: 8/11/2022
DATE COMPLETED: 8/18/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. 96156 replacement well.

TOTAL DEPTH: 223 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 852.04
PVC ELEVATION: 854.41
NORTHING: 352327.0836
EASTING: 2061913.471

WELL DEVELOPMENT
METHOD(S): Mega Monsoon & Bailer
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 128.19 feet bgs
DTW AT END: 211.0 feet bgs
VOLUME PURGED: 21.25 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
		SC	36			Brown, CLAYSTONE, little silt, tan, orange mottling, thin organic lenses, moderate, moderate plasticity.
						3.0
5	847	HQ	48	0		Brown, SANDSTONE, some silt, tan, orange-red mottling, fine grained rubble zone, low cementation.
						7.0
10	842	HQ	120	6.7		Brown, SANDSTONE, some silt, tan, fine grained rubble zone, highly layered, moderate cementation.
						12.0
						Light Gray, SANDSTONE, some silt, very fine to fine grained rubble zone, highly layered, moderate cementation.
						13.0
15	837					Light Brown, SANDSTONE, fine to coarse grained, highly cross bedded (alternating lithic beds), highly micaceous, moderate cementation.
						17.0
						Light Brown, SANDSTONE, interbedded sandstone, fine to coarse grained, highly cross bedded (alternating lithic beds), alternating light gray, highly micaceous, moderately natural fractured (along bedding planes 165-170 degrees), moderate cementation.
						18.0
20	832	HQ	36	27.8		Light Gray, SANDSTONE, fine to coarse grained, highly cross bedded (alternating lithic beds), highly micaceous, moderately natural fractured (along bedding planes 165-170 degrees), high cementation.

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Claystone Interbedded Shale
- Sandstone
- Coal
- Shale
- Siltstone
- Limestone

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Light Gray, SANDSTONE, fine to coarse grained, highly cross bedded (alternating lithic beds), highly micaceous, moderately natural fractured (along bedding planes 165-170 degrees), high cementation. *(continued)*	
						21.0	
		HQ	43	55.8		Light Gray, SANDSTONE, fine to coarse grained, highly cross bedded (alternating lithic beds), highly micaceous, moderately natural fractured (along bedding planes 165-170 degrees), high cementation.	
25	827					25.0	
		HQ	55	43.6		Light Gray, SANDSTONE, thin sandstone beds (0.5-1"), fine to coarse grained, highly cross bedded (alternating lithic beds), interbedded tan-brown coarse grained sandstone, highly micaceous, moderately natural fractured (along bedding planes 165-170 degrees), high cementation.	
30	822					30.0	
		HQ	48	46.9		Light Gray, SANDSTONE, thick sandstone beds (10-12"), fine to coarse grained, highly cross bedded (alternating lithic beds), interbedded tan-brown coarse grained sandstone, highly micaceous, moderately natural fractured, (along bedding planes 150-160 degrees), high cementation.	← Bentonite Grout (0 to 62 feet bgs)
						34.0	
35	817	HQ	34	0		Brown, SANDSTONE, tan, medium to coarse grained, highly cross bedded (alternating lithic beds), highly micaceous, moderately natural fractured/weathered (along bedding planes 150-160 degrees), moderate cementation.	
						37.0	
40	812					No Recovery/Washout.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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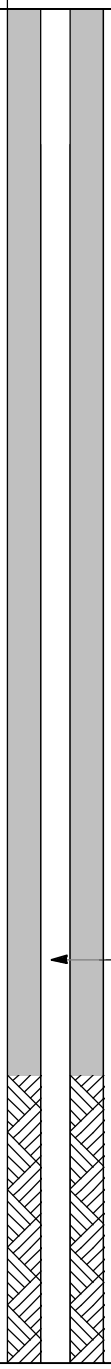
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
45	807	HQ	0			
50	802					No Recovery/Washout. *(continued)*
55	797					56.0
		HQ	15	0		Brown, SANDSTONE, tan, medium to coarse grained, highly cross bedded (alternating lithic beds), interbedded light gray fine to medium grained sandstone, highly micaceous, highly decomposed, low cementation. 57.0
60	792					No Recovery/Washout.
65	787	HQ	0			

WELL DIAGRAM



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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
70	782					No Recovery/Washout. *(continued)*	
75	777						
		HQ	12	37.5		76.0 Brown, SANDSTONE, tan, medium to coarse grained, highly cross bedded (alternating lithic beds), interbedded light gray fine to medium grained sandstone, highly micaceous, highly decomposed, low cementation. 77.0	Bentonite Chips (62 to 91 feet bgs)
						Black, COAL, rubble zone, low density, possibly bituminous. 79.0	
80	772						
		HQ	72	24.3		Gray, SHALE, sandstone (1' thick), alternating light to dark gray beds, interbedded light gray fine grained cross bedded sandstone, few thin pyritic lenses occur with depth, moderate cementation.	
85	767						
						87.0 Gray, SHALE, few alternating light to dark gray beds with depth, moderate cementation.	
90	762						

SAMPLE TYPE

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

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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
		HQ	73	35.6		Gray, SHALE, few alternating light to dark gray beds with depth, moderate cementation. *(continued)*
95	757					
						97.0 — Dark Gray, CLAYSTONE, rubble zone, moderate cementation.
						98.5
100	752	HQ	72	34		Light Bluish Gray, CLAYSTONE, some medium to coarse sand and gravel, carbonate inclusions (<0.5"), few thin pyrite lenses, fine grained gravel, moderately fractured, moderate cementation.
105	747					107.0 — Light Bluish Gray, CLAYSTONE, some medium to coarse sand and gravel, carbonate inclusions (<0.5"), few thin pyrite lenses, fine grained gravel, moderately fractured, moderate cementation.
						108.0
110	742	HQ	86	60.5		Red to Black, CLAYSTONE, dark gray and purple, yellow orange mottling, red and black alternating beds from 108 to 110 and transitions to dark gray/ purple with yellow mottling 110 to 115, low cementation.

WELL DIAGRAM

Well Riser
(0 to 199 feet bgs)
(2" SCH 40 PVC)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Claystone Interbedded Shale
- Sandstone
- Coal
- Shale
- Siltstone
- Limestone

ACRONYM LEGEND

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

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

Client: Gavin Power, LLC
Project Name: RWL/FAR 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	737					Red to Black, CLAYSTONE, dark gray and purple, yellow orange mottling, red and black alternating beds from 108 to 110 and transitions to dark gray/ purple with yellow mottling 110 to 115, low cementation. *(continued)*	
						115.0	
						Blue to Green Gray, SANDSTONE, little silt to clay, slight yellow to purple mottling that decreases with depth, fine grained, micaceous, few thin pyrite lenses, faint thin dark to light gray bedding, high cementation, hard.	
						117.0	
						Blue to Green Gray, SANDSTONE, little silt to clay, fine grained, micaceous, few thin pyrite lenses, faint thin dark to light gray bedding, high cementation, hard.	
						118.0	
120	732	HQ	94	76.1		Blue Gray, CLAYSTONE, some fine sand and silt, yellow - orange to red - purple mottling, layered, moderately fractured, slightly decomposed, moderate cementation.	
						123.0	
125	727					Blue to Green Gray, SANDSTONE, fine to medium grained, alternating carbonate beds and fine grained cross beds, micaceous, calcareous, high cementation, hard.	
						127.0	
130	722	HQ	120	57.9		Blue to Green Gray, SANDSTONE, fine to medium grained, alternating carbonate beds and fine grained cross beds, micaceous, calcareous, high cementation, hard.	
135	717					136.0	
						Red Brown, CLAYSTONE, some fine sand and silt, slight yellow mottling, sharp contact at 136', partial rubble zone at base, low cementation.	
						137.0	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Claystone Interbedded Shale
- Sandstone
- Coal
- Shale
- Siltstone
- Limestone

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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
140	712	HQ	120	58.3		Red Brown, CLAYSTONE, yellow-orange mottling, interbedded olive-blue-gray micaceous sandstone, sandstone bed 1ft foot, sandstone clasts throughout claystone, high cementation. *(continued)*	Bentonite Grout (91 to 193 feet bgs)
						141.0	
						Red Brown, CLAYSTONE, yellow-orange to red-purple mottling, layered, moderately fractured, slightly decomposed, moderate cementation.	
145	707					145.0	
						Brown, CLAYSTONE, rubble zone, fragmented claystone rock within a clay/mud matrix, broken down to mud from drill, high plasticity.	
						146.0	
						Dark Gray, CLAYSTONE, rubble zone, fragmented claystone rock within a clay/mud matrix, broken down to mud from drill, low cementation.	
						147.0	
150	702	HQ	100	46		Green Gray, SILTSTONE, some coarse sand and fine gravel, yellow mottling, moderately fractured, moderate decomposition, moderate cementation, hard.	
						153.0	
155	697					Red Brown, CLAYSTONE, yellow and purple mottling, 155' to 157' highly weathered into a clay with rock fragments, low cementation.	
						157.0	
						Red Brown, CLAYSTONE, yellow and purple mottling, high mechanical weathering, low cementation.	
160	692						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Claystone Interbedded Shale
- Sandstone
- Coal
- Shale
- Siltstone
- Limestone

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Project Number: 0643653
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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		HQ	90	45		Red Brown, CLAYSTONE, yellow and purple mottling, high mechanical weathering, low cementation. *(continued)*	
165	687						
						167.0	
		HQ	108	44.9		Red Brown, CLAYSTONE, yellow and purple mottling, high mechanical weathering, low cementation.	
170	682						
175	677						
						177.0	
		HQ	102	59.3		Red Brown, CLAYSTONE, yellow and purple mottling, high mechanical weathering, low cementation.	
180	672						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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- Sandstone
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Project Number: 0643653
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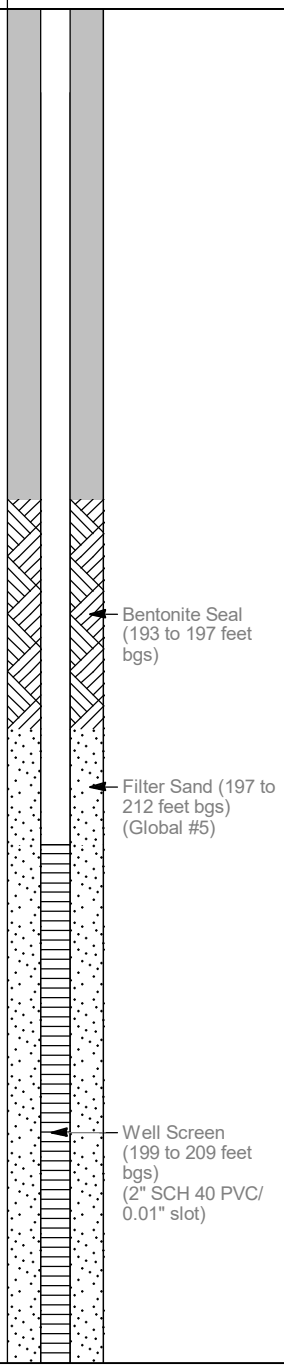
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
185	667					185.0
						Light Gray to Dark Gray, SANDSTONE, some silt and clay, very fine to fine grained, micaceous and pyritic, moderate cementation. [Morgantown Sandstone]
						187.0
190	662	HQ	120	77.5		Light Gray to Dark Gray, SANDSTONE, moderate natural fractures (160-170 degrees),fine to coarse grained, micaceous & pyritic, scouring/cross bedding/clasts (light gray, coarse grained) throughout, high cementation, hard. [Morgantown Sandstone]
195	657					197.0
200	652	HQ	120	73.3		Light Gray, SANDSTONE, moderate natural fractures (160-170 degrees), fine to coarse grained, micaceous & pyritic, interbedded dark gray siltstone beds, scouring/cross bedding/clasts (light gray, coarse grained) throughout, high cementation, hard. [Morgantown Sandstone]
205	647					207.0
						Light Gray, SANDSTONE, moderate natural fractures (160-170 degrees), fine to coarse grained, micaceous & pyritic, cross bedding (light gray, coarse grained) throughout, high cementation, hard. [Morgantown Sandstone]



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Claystone Interbedded Shale
- Sandstone
- Coal
- Shale
- Siltstone
- Limestone

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Project Number: 0643653
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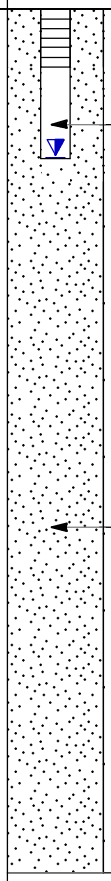
DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
210	642	HQ	132	43.6		Light Gray, SANDSTONE, moderate natural fractures (160-170 degrees), fine to coarse grained, micaceous & pyritic, cross bedding (light gray, coarse grained) throughout, high cementation, hard. [Morgantown Sandstone] *(continued)*
						213.0
215	637					Dark Gray, LIMESTONE, moderate clay, highly weathered, moderate layers, carbonate, nodules(<0.5"), claystone and sandstone clasts (<0.5"), low cementation.
						217.0
						Light Gray, SANDSTONE, moderate natural fractures (160-170 degrees), fine to coarse grained, micaceous & pyritic, cross bedding (light gray, coarse grained) throughout, high cementation, hard.
220	632	HQ	36			220.0
						Dark Gray, SHALE, rubble zone, shale fragment mixed into rock flour mud, low cementation.
						223.0
						Bottom of Boring @ 223.00 feet bgs
225	627					
230	622					

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Claystone Interbedded Shale
- Sandstone
- Coal
- Shale
- Siltstone
- Limestone

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2022-19

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

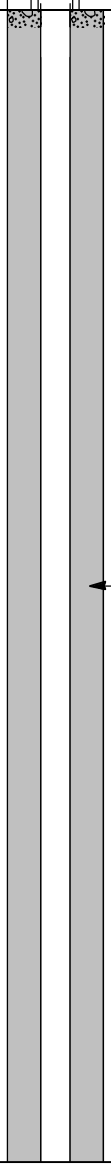
DATE STARTED: 7/25/2022
DATE COMPLETED: 7/26/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: J. Maag
CHECKED BY: A. Harford
NOTES: 6" Steel Stickup Protective Casing. 9396 replacement well.

TOTAL DEPTH: 119 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 613.58
PVC ELEVATION: 616.04
NORTHING: 348497.3409
EASTING: 2072997.258

WELL DEVELOPMENT
METHOD(S): Mega Monsoon, Hurricane Pump & Bailer
DATE STARTED: 9/7/2022
DATE ENDED: 11/6/2022
DTW AT START: 112.65 feet bgs
DTW AT END: 119.0 feet bgs
VOLUME PURGED: 3.8 gallons

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Brown, GRAVELLY SILT, some angular coarse gravel, very soft, non-plastic.
						1.0
		SC	36			Yellowish Brown, SANDY SILT, fine sand, non-plastic, very stiff, dry.
5	609					
						7.0
						Red, CLAY, coarse sand, greenish-gray, orange, purple, black sand particles, low plasticity, stiff, wet.
10	604					
						10.5
		SC	96			Red, CLAY, purple-red, green gray and yellow mottling, medium plasticity, very stiff, moist.
15	599					
20	594					

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Sandy Silt
- Clay
- Claystone Interbedded Shale
- Siltstone
- Shale

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Project Name: RWL/FAR 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
		HQ	120	0		Red, CLAY, purple-red, green gray and yellow mottling, medium plasticity, very stiff, moist. *(continued)*
						24.0
25	589					Red, CLAYSTONE, purple-red, intensely weathered, moist.
						27.0
						Green Gray, SILTSTONE, slightly weathered, very thinly laminated, weak.
30	584	HQ	96	29.2		
						32.0
						Red, SILTSTONE, purple-red, slightly weathered, very thinly laminated, weak.
35	579					
						37.0
						Green Gray, CLAYSTONE, little pyrite, very thinly laminated, slightly weathered, weak.
40	574					
						41.5
		HQ	120	35		Red, CLAYSTONE, little pyrite, purple-red, very thinly laminated, slightly weathered, weak.

WELL DIAGRAM: Bentonite Grout (0 to 36)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Sandy Silt
- Clay
- Claystone Interbedded Shale
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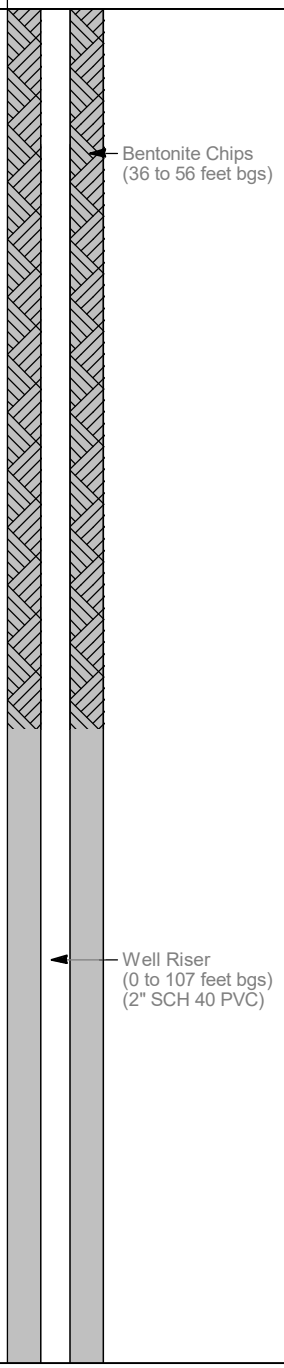
Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION
						Red, CLAYSTONE, little pyrite, purple-red, very thinly laminated, slightly weathered, weak. *(continued)*
45	569					45.0
						Red, CLAYSTONE, little pyrite, purple-red, very thinly laminated, intensely weathered, weak.
						47.0
						CLAYSTONE, purple, orange, green gray, moderately weathered, moderately weak, wet.
50	564					50.0
		HQ	96			CLAYSTONE, purple, greenish-gray, orange, intensely weathered, moderately disintegrated, very weak, wet.
55	559					
						57.0
						Red, CLAYSTONE, trace pyrite, purple-red, green gray, yellow, intensely weathered, moderately weak, wet.
60	554					
						61.0
		HQ	84	0		Red, CLAY SHALE, purple-red, orange, greenish gray, very thinly laminated, intensely weathered, very weak, wet.
65	549					

WELL DIAGRAM



SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Sandy Silt
- Clay
- Claystone Interbedded Shale
- Siltstone
- Shale

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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
						Red, CLAY SHALE, purple-red, orange, greenish gray, very thinly laminated, intensely weathered, very weak, wet. *(continued)*	
						68.0	
70	544	HQ	72	27.8		Red, CLAYSTONE, purple-red, greenish gray, yellow, massive, moderately weathered, weak, wet.	
75	539						
						78.0	
						Red, SHALE, purple-red, greenish gray, sandy, very thinly laminated, intensely weathered, weak, wet.	← Bentonite Grout (56 to 101 feet bgs)
80	534						
						81.0	
		HQ	48	18.8			
85	529					Red, CLAYSTONE, purple-red, greenish gray, orange, massive, very weathered, weak, wet.	
90	524						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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- Sandy Silt
- Clay
- Claystone Interbedded Shale
- Siltstone
- Shale

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Client: Gavin Power, LLC
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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
						91.0
		HQ				Green Gray, SANDSTONE, trace mica, fine grained, very thinly laminated, moderately weathered, moderately strong, wet.
95	519					
						97.0
						Red, CLAY SHALE, purple-red, greenish gray, very thinly laminated, moderately weathered, very weak, wet.
						98.0
100	514					
		HQ	102			Green Gray, SANDSTONE, trace mica and pyrite, massive, slightly weathered, moderately strong, wet.
105	509					
						105.0
						Green Gray, CLAY SHALE, very thinly laminated, very weathered, weak, wet.
						107.0
110	504					
		HQ	120	26.7		Green Gray, SANDSTONE, dark gray, fine grained, massive, fresh, moderately strong, wet. [Cow Run Sandstone]

WELL DIAGRAM

- Bentonite Seal (101 to 105 feet bgs)
- Filter Sand (105 to 119 feet bgs) (Global #5)
- Well Screen (107 to 117 feet bgs) (2" SCH 40 PVC/ 0.01" slot)

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Sandy Silt
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- Claystone Interbedded Shale
- Siltstone
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Project Location: Cheshire, OH

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
115	499					Green Gray, SANDSTONE, dark gray, fine grained, massive, fresh, moderately strong, wet. [Cow Run Sandstone] *(continued)*	
						115.0	
						Green Gray, CLAYSTONE, dark gray, intensely weathered, intensely disintegrated, wet.	
						117.0	
						Not Recovered.	Sump (2" SCH 40 PVC/2' long) (117 to 119 feet bgs)
						119.0	
120	494					*Bottom of Boring @ 119.00 feet bgs*	
125	489						
130	484						
135	479						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

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2022-01

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/19/2022
DATE COMPLETED:
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: J. Maag
CHECKED BY: A. Harford
NOTES: Coordinates and elevation are approximate

TOTAL DEPTH: 327 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 832
PVC ELEVATION: not available
NORTHING: 349371.0715
EASTING: 2066433.301

WELL DEVELOPMENT
METHOD(S): NA
DATE STARTED: NA
DATE ENDED: NA
DTW AT START: NA
DTW AT END: NA
VOLUME PURGED: NA

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
5	827	SC	84			Yellow Brown, SILT, with angular gravel, (2.5-3" diameter), increasing gravel size and percent with depth, loose, dry.	
						5.0	
						Light Brown, SILTSTONE, some mica, intensely disintegrated, very weak, dry.	
						7.0	
10	822	HQ	96	4.2			
15	817					Light Gray, SANDSTONE, subrounded mostly mica, friable, poorly sorted, massive, very firm, wet.	
20	812	HQ	120	20.8			
25	807						

SAMPLE TYPE
- Sonic Drilling (SC)
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
30	802	HQ	120	12.5		Light Gray, SANDSTONE, subrounded mostly mica, friable, poorly sorted, massive, very firm, wet. *(continued)*	
35	797						
40	792	HQ	108	22.2			
45	787						
50	782	HQ	84	0			

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
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- Claystone Interbedded Shale

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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	777						
60	772	HQ	10	0		Light Gray, SANDSTONE, subrounded mostly mica, friable, poorly sorted, massive, very firm, wet. *(continued)*	
65	767						
						67.0	
						Dark Gray, SHALE, some mica, thinly laminated, very weak, wet.	
70	762					70.0	
		HQ	90.0	4.44		Light Gray, SANDSTONE, few silt, mostly mica, thinly laminated, well sorted, moderate to strong, wet.	
75	757						
80	752					80.0	
						Grayish Brown, SILTSTONE, grading into black coloration with depth, coal seam at 85 feet bgs (1" thick), stiff, low plasticity, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

ACRONYM LEGEND

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

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

Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
85	747	HQ	84	0		85.0 Grayish Brown, SILTSTONE, grading into black coloration with depth, coal seam at 85 feet bgs (1" thick), stiff, low plasticity, wet. *(continued)*	
						No Recovery.	
90	742					90.0	
						Light Gray, CLAYSTONE, massive, highly weathered, very weak, wet.	
						92.0	
						Grayish Brown, SILTY CLAY, soft, low plasticity, wet.	
						93.5	
95	737	HQ	60	0		Light Gray, CLAYSTONE, some mica, massive, highly disintegrated, very weak, dry.	
						97.0	
						Light Gray, SHALE, sandy shale, mostly mica, very thinly laminated, moderate to strong, wet.	
100	732					100.5	
		HQ	72	5.6			
105	727					Dark Gray To Gray, SHALE, very thinly laminated, some mica, slightly weathered, very weak, wet.	
						109.0	
110	722					Gray, LIMESTONE, few fossils and mica, massive, highly weathered, moderate to strong, wet.	
		HQ	60	25		112.0	
						Blue Gray, CLAYSTONE, few pyrite, trace iron nodules, massive, slightly weathered, very weak, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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	717					Blue Gray, CLAYSTONE, few pyrite, trace iron nodules, massive, slightly weathered, very weak, wet. *(continued)*	
						120.0	
120	712	HQ	120	40.8		Red, CLAYSTONE, red, orange, purple, teal, massive, slightly weathered, very weak, wet.	
125	707					127.0	
						Light Gray, SANDSTONE, some mica, massive, moderate to strong, wet.	
130	702					130.0	
		HQ	72	38.9		Light Gray, SILTSTONE, mostly mica, very thinly laminated, moderately weathered, moderate to strong, wet.	
135	697						
140	692					141.0	
		HQ	60	51.6		Red, CLAYSTONE, purple greenish-gray, orange, some mica, massive, slightly weathered, very weak, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
145	687						
150	682	HQ	90	40		Red, CLAYSTONE, purple greenish-gray, orange, some mica, massive, slightly weathered, very weak, wet. *(continued)*	
155	677						
						156.0	
						Blue Gray, LIMESTONE, some mica, massive, slightly weathered, moderate to strong, wet.	
						158.0	
160	672					Red, SHALE, purple, greenish gray, orange, very few mica, very thinly laminated, moderately weathered, very weak, wet.	
						161.0	
		HQ	108.0	12.9		Black, CLAYSTONE, greenish gray, massive, slightly weathered, very weak, wet.	
						163.0	
165	667					Yellowish Brown, CLAY, stiff, low plasticity, wet.	
						166.0	
170	662					Red, CLAYSTONE, with silt, orange, greenish-gray, purple, massive, intensely weathered, very weak, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

ACRONYM LEGEND

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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
175	657	HQ	204.0	0		Red, CLAYSTONE, with silt, orange, greenish-gray, purple, massive, intensely weathered, very weak, wet. *(continued)*	
180	652						
185	647						
190	642	HQ	0	0			
195	637						
						198.0	
200	632					Greenish Gray, SANDSTONE, interbedded claystone, some mica, massive, greenish gray- purple claystone, weak, slightly weathered, well sorted, moderate to strong, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

ACRONYM LEGEND

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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
		HQ	120	16.7		Greenish Gray, SANDSTONE, interbedded claystone, some mica, massive, greenish gray- purple claystone, weak, slightly weathered, well sorted, moderate to strong, wet. *(continued)*	
205	627					205.0	
210	622					Greenish Gray, SHALE, some mica, thinly laminated, intensely weathered, very weak, wet.	
215	617					216.0	
		HQ	132	54.5		Greenish Gray, SANDSTONE, mostly mica, massive, well sorted, moderate to strong, wet.	
						218.0	
220	612					Greenish Gray, CLAYSTONE, little mica, purple, orange, slightly weathered, moderate to strong, wet.	
						223.0	
225	607					Greenish Gray, CLAYSTONE, little mica, red, slightly weathered, moderate to strong, wet.	
						227.0	
						Greenish Gray, CLAYSTONE, little pyrite, massive, moderate to strong, wet.	
						229.5	
230	602					230.0 Greenish Gray, SHALE, sandy shale, little mica, very thinly laminated, intensely weathered, moderate to strong, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

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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
235	597	HQ	240	69.2		Greenish Gray, CLAYSTONE, trace pyrite, massive, slightly weathered, moderate to strong, wet. *(continued)*	
						238.5	
240	592						
245	587						
250	582					Greenish Gray, CLAYSTONE, purple, red, orange, trace pyrite, massive, slightly weathered, moderate to strong, wet.	
255	577	HQ	180	37.2			
260	572						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
265	567					Greenish Gray, CLAYSTONE, purple, red, orange, trace pyrite, massive, slightly weathered, moderate to strong, wet. *(continued)*	
270	562	HQ	234	56.4			
275	557						
280	552						
285	547						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
290	542	HQ	102	61.8		Greenish Gray, CLAYSTONE, purple, red, orange, trace pyrite, massive, slightly weathered, moderate to strong, wet. *(continued)*	
295	537						
300	532	HQ	120	40.8			
304.5							
305	527					Greenish Gray, CLAYSTONE, purple, red, orange, massive, intensely weathered, very weak, wet.	
307.0							
						Greenish Gray, CLAYSTONE, purple, red, orange, massive, moderately weathered, very weak, wet.	
308.5							
310	522	HQ	102	82.4		Greenish Gray, SANDSTONE, fine grained, massive, moderate to strong, wet.	
315	517						
317.0							
						Greenish Gray, CLAYSTONE, few silt, black, massive, moderate to strong, wet.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
320	512	HQ	120	66.7		Greenish Gray, CLAYSTONE, few silt, black, massive, moderate to strong, wet. *(continued)*	
						322.5	
						Black, SHALE, interbedded claystone, laminated, moderately weathered, black claystone, massive, very weak, wet.	
						324.3	
325	507					Black, CLAYSTONE, gray, massive, intensely weathered, very weak, wet.	
						327.0	
						Bottom of Boring @ 327.00 feet bgs	
330	502						
335	497						
340	492						
345	487						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Gravelly Silt
- Siltstone
- Sandstone
- Shale
- Silt
- Claystone Interbedded Shale

ACRONYM LEGEND

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2022-07

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 7/25/2022
DATE COMPLETED: 7/25/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Sonic Drilling & Wireline Rock Coring
LOGGED BY: J. Maag
CHECKED BY: A. Harford
NOTES: Coordinates and elevation are approximate

TOTAL DEPTH: 36 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 595
PVC ELEVATION: not available
NORTHING: 351218.1429
EASTING: 2069612.396

WELL DEVELOPMENT
METHOD(S): NA
DATE STARTED: NA
DATE ENDED: NA
DTW AT START: NA
DTW AT END: NA
VOLUME PURGED: NA

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						Yellowish Brown, CLAYEY GRAVEL, with fine sand, medium plasticity, wet.	
						1.5	
		SC	72			Gray Brown, CLAY, stiff, medium plasticity, moist.	
5	590						
						6.0	
						Yellowish Brown, CLAY, stiff, medium plasticity, wet.	
10	585	SC	120				
						11.0	
15	580					Yellowish Brown, CLAY, red, greenish gray coloration, very stiff, wet.	
20	575	SC	120				
						21.0	
25	570					Red, CLAY, with sand, trace mica, greenish gray coloration, orange mottling, very stiff, moist.	

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clayey Gravel
- Clay
- High Plasticity Clay
- Claystone Interbedded Shale

ACRONYM LEGEND

amsl = above mean sea level
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DTW = depth to water
NA = not applicable
NM = not measured
NR = no recovery
PID = photoionization detector
ppm = parts per million
PVC = polyvinyl chloride

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

Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
30	565	HQ	120	0		Red, CLAY, with sand, trace mica, greenish gray coloration, orange mottling, very stiff, moist. *(continued)*	
						30.5	
35	560					Red, CLAYSTONE, purple, orange, greenish gray coloration, massive, intensely weathered, very weak, dry.	
						36.0	
40	555					*Bottom of Boring @ 36.00 feet bgs*	
45	550						
50	545						

SAMPLE TYPE

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

GRAPHIC LOG LEGEND

- Clayey Gravel
- Clay
- High Plasticity Clay
- Claystone Interbedded Shale

ACRONYM LEGEND

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DTW = depth to water
NA = not applicable
NM = not measured
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PVC = polyvinyl chloride

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2022-11

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 8/19/2022
DATE COMPLETED:
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Wireline Rock Coring
LOGGED BY: L. Stodden
CHECKED BY: A. Harford
NOTES: Coordinates and elevation are approximate

TOTAL DEPTH: 235 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 733
PVC ELEVATION: not available
NORTHING: 350561.0117
EASTING: 2071264.104

WELL DEVELOPMENT
METHOD(S): NA
DATE STARTED: NA
DATE ENDED: NA
DTW AT START: NA
DTW AT END: NA
VOLUME PURGED: NA

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						1.0 Brown, SANDY SILT, some subangular fine to coarse gravel, (0.5-2" diameter), roots, poorly sorted, non-plastic, saturated.	
5	728	HQ	84			Orange, SANDSTONE, oxidized, micaceous, with thin cross-bedding, fissile, alternating orange and light gray, low cementation, rubble zone.	
						7.0	
10	723	HQ	84	0		Light Gray, SANDSTONE, alternating siltstone, 1-2 ft thick alternating beds, gray sandstone is micaceous, lithic cross bedding, fissile, oxidized orange siltstone (rubble zones), low cementation.	
15	718					16.0 Black, COAL, low cementation, rubble zone.	
						17.0	
						18.0 Black, COAL, low cementation, rubble zone.	
20	713					Gray, SHALE, thin pyrite lenses, thin organic lenses, faint sporadic varying, moderate cementation. 20.0	
25	708	HQ	60	0		no recovery.	

SAMPLE TYPE
- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND
- Sandy Silt
- Sandstone
- Coal
- Shale
- Claystone Interbedded Shale
- Siltstone

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
						no recovery. *(continued)*	
						26.0	
						Orange, SANDSTONE, oxidized, micaceous, thin lithic cross bedding, fissile, low cementation, rubble zone.	
						27.0	
30	703	HQ	120			Gray, CLAYSTONE, rubble zone.	
35	698						
						37.0	
40	693	HQ	54			Olive Gray, CLAYSTONE, pyritic, few carbonate nodules, low cementation, faint orange mottling, rubble zone.	
						42.0	
45	688					Light Gray, SANDSTONE, micaceous, thin cross-bedding, fissile, low cementation, rubble zone.	
						47.0	
50	683	HQ	64	26.6		no recovery.	
						51.0	
						Gray, SILTSTONE, calcareous, thin pyrite lenses, thin organic lenses, thin carbonate lenses, fissile, low cementation, rubble zone.	
						52.5	
						Red, CLAYSTONE, red-purple, olive blue gray, thin carbonate veins, pyritic, moderately decomposed, moderately fractured, moderate cementation.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal | Shale | Claystone Interbedded Shale | Siltstone

ACRONYM LEGEND

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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	678					54.5 Olive, LIMESTONE, blue gray, abundant veining, claystone nodules (0.5-1" diameter), moderately fractured, high cementation, hard. 57.0	
						Olive, LIMESTONE, blue gray, abundant veining, claystone nodules (0.5-1" diameter), moderately fractured, high cementation, hard. 58.0	
60	673	HQ	78	28.2		Dark Gray, SANDSTONE, calcareous, zones of oxidation, micaceous, thin carbonate lenses (<0.2" thick), moderate cementation. 63.0	
65	668					Blue Gray, SHALE, increasing silt to fine sand content with depth, yellow-orange mottling, fissile, moderately decomposed, low cementation. 67.0	
70	663	HQ	90	31.1		Blue Gray, SHALE, interbedded sandstone, micaceous, yellow-orange mottling, fissile, moderately decomposed, low cementation. 72.0	
75	658					Red Brown, CLAYSTONE, blue gray claystone inclusions, moderately decomposed, low cementation, dense. 77.0	
80	653	HQ	120	75		Red Brown, CLAYSTONE, blue gray claystone beds, moderatenatural fractures, low cementation, dense.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt; Sandstone; Coal; Shale; Claystone Interbedded Shale; Siltstone

ACRONYM LEGEND

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
85	648					Red Brown, CLAYSTONE, blue gray claystone beds, moderatenatural fractures, low cementation, dense. *(continued)*	
						87.0	
90	643	HQ	115	26.96		Red Brown, CLAYSTONE, sporadic blue gray claystone beds, moderate natural fractures, low cementation, dense.	
						92.0	
95	638					Green, SHALE, dark gray, yellow-orange to blue mottling, rubble zone, fissile, moderately decomposed, low cementation.	
						97.0	
						Olive, SANDSTONE, blue gray, micaceous, moderate cross bedding, layered, moderate cementation.	
						98.0	
100	633	HQ	108	36.1		Green, CLAYSTONE, dark gray, yellow-orange mottling, moderate natural fractures, moderately decomposed, low cementation.	
						102.0	
105	628					Red, CLAYSTONE, red-purple, yellow-orange to blue mottling, rubble zone, moderately decomposed, moderate natural fractures, low cementation.	
						107.0	
110	623	HQ	108	62.96		Red, CLAYSTONE, red-purple, yellow-orange to blue mottling, moderately decomposed, moderate natural fractures with slicken lines, moderate cementation, dense.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt
Sandstone
Coal
Shale
Claystone Interbedded Shale
Siltstone

ACRONYM LEGEND

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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
115	618					Red, CLAYSTONE, red-purple, yellow-orange to blue mottling, moderately decomposed, moderate natural fractures with slicken lines, moderate cementation, dense. *(continued)*	
						117.0	
120	613	HQ	72	51.4		Red Brown, CLAYSTONE, purple, with blue carbonate nodules, yellow-orange to blue mottling, rubble zone, moderately decomposed, moderate natural fractures with slicken lines, moderate cementation, dense.	
125	608					127.0	
						Red Brown, CLAYSTONE, purple, yellow-orange to blue mottling, rubble zone, moderately decomposed, moderate natural fractures with slicken lines, moderate cementation, dense.	
						129.0	
130	603	HQ	120	67.5		Red Brown, CLAYSTONE, silty, interbedded olive blue-gray fine grained micaceous sandstone (0.5-1' thick) at 129' and 134 feet bgs, yellow-orange to blue mottling, rubble zone, claystone is faintly micaceous, sandstone fissile, moderate cementation, dense.	
135	598					137.0	
140	593	HQ	96	23.96		Red Brown, CLAYSTONE, silty, interbedded olive blue-gray fine grained micaceous sandstone (0.5" thick) at 138 feet bgs, yellow-orange to blue mottling, rubble zone, claystone faintly micaceous with few carbonate nodules, sandstone high silt-clay content, moderate cementation, dense.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt; Sandstone; Coal; Shale; Claystone Interbedded Shale; Siltstone

ACRONYM LEGEND

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

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

Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
145	588					Red Brown, CLAYSTONE, silty, interbedded olive blue-gray fine grained micaceous sandstone (0.5" thick) at 138 feet bgs, yellow-orange to blue mottling, rubble zone, claystone faintly micaceous with few carbonate nodules, sandstone high silt-clay content, moderate cementation, dense. *(continued)*	
						147.0	
						Red Brown, CLAYSTONE, silty, clasts of olive blue-gray fine grained micaceous sandstone, rubble zone, claystone faintly micaceous, sandstone high silt-clay content, moderate cementation, dense.	
						148.0	
150	583					Blue Gray, SANDSTONE, light green, transition to blue gray layered fine sandy siltstone at 152'-153 feet bgs, micaceous, few cross beds, fissile, low cementation.	
		HQ	114	14.9			
						153.0	
155	578					Red Brown, CLAYSTONE, silty, clasts of olive blue-gray fine grained micaceous sandstone, claystone faintly micaceous, sandstone high silt-clay content, moderate cementation, dense.	
						156.0	
						Blue Gray, SANDSTONE, rubble zone, fissile, high silt-clay content, low cementation.	
						157.0	
160	573					Blue Gray, SANDSTONE, micaceous, few cross beds, fissile, low cementation.	
		HQ	62	39.5			
						162.0	
165	568					Red Brown, CLAYSTONE, silty, clasts of olive blue-gray fine grained micaceous sandstone, claystone faintly micaceous, sandstone high silt-clay content, moderate cementation, dense.	
						167.0	
						Red Brown, CLAYSTONE, silty, clasts of olive blue-gray fine grained micaceous sandstone, claystone faintly micaceous, sandstone high silt-clay content, moderate cementation, dense.	
						169.0	
170	563					Red, CLAYSTONE, red-purple, brown, yellow-orange-olive-blue mottling, moderately decomposed, moderate natural fractures, moderate cementation, dense.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal | Shale | Claystone Interbedded Shale | Siltstone

ACRONYM LEGEND

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
		HQ	84	40.48		172.0	
175	558					Red, CLAYSTONE, red-purple, brown, yellow-orange-olive-blue mottling, rubble zone.	
						179.0	
180	553						
185	548	HQ	216	44.9		Red, CLAYSTONE, red-purple, brown, yellow-orange-olive-blue mottling, carbonate nodules, moderately decomposed, moderate natural fractures, moderate cementation, dense.	
190	543						
195	538						
						197.0	
200	533					Red, CLAYSTONE, red-purple, brown, yellow-orange-olive-blue mottling, carbonate nodules, moderately decomposed, moderate natural fractures, moderate cementation, dense.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal | Shale | Claystone Interbedded Shale | Siltstone

ACRONYM LEGEND

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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
		HQ	120	26.3		Red, CLAYSTONE, red-purple, brown, yellow-orange-olive-blue mottling, carbonate nodules, moderately decomposed, moderate natural fractures, moderate cementation, dense. *(continued)*	
205	528						
						207.0	
						Red, CLAYSTONE, red-purple, brown, yellow-orange-olive-blue mottling, carbonate nodules, moderately decomposed, moderate natural fractures with slicken lines, moderate cementation, dense.	
210	523						
						211.0	
		HQ	114	62.7		211.5 Blue Gray, SHALE, moderate decomposition, natural fracture with large (0.2" diameter) pyrite crystallization, moderate cementation.	
						212.5 Olive, LIMESTONE, blue-gray, moderate fine micaceous sand, faint yellow chemical weathering, carbonate microcrystalization, natural fracture at 212 feet bgs, high cementation, hard, dense.	
215	518					Red Brown, SHALE, thin (<0.5" thick) layers of blue-gray claystone, yellow-orange mottling, moderately decomposed, moderate cementation, dense.	
						217.0	
220	513						
		HQ	108	56.9		Blue Gray, SANDSTONE, with thin calcareous beds (1"-2" thick) at 218' and 223 feet bgs, layered with light gray fine grained laminations throughout, micaceous, fractured along bedding (165-170 degrees), high cementation, hard, dense.	
225	508						
						227.0	
						Blue Gray, SANDSTONE, with thin calcareous beds (1"-2" thick) at 228' and 229.5 feet bgs, layered with light gray fine grained laminations throughout, micaceous, fractured along bedding (165-170 degrees), high cementation, hard, dense.	
230	503						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal | Shale | Claystone Interbedded Shale | Siltstone

ACRONYM LEGEND

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bgs = below ground surface
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NM = not measured
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PVC = polyvinyl chloride

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
		HQ	96	43.2		Blue Gray, SANDSTONE, with thin calcareous beds (1"-2" thick) at 228' and 229.5 feet bgs, layered with light gray fine grained laminations throughout, micaceous, fractured along bedding (165-170 degrees), high cementation, hard, dense. *(continued)*	
						232.0	
						Gray, SHALE, fissile, faintly micaceous, low cementation.	
235	498					235.0	
						Bottom of Boring @ 235.00 feet bgs	
240	493						
245	488						
250	483						
255	478						
260	473						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Sandstone | Coal | Shale | Claystone Interbedded Shale | Siltstone

ACRONYM LEGEND

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2022-11B

Client: Gavin Power, LLC
Project Name: RWL/FAR Monitoring Well Installation
Project Number: 0643653
Project Location: Cheshire, OH

DATE STARTED: 9/23/2022
DATE COMPLETED: 9/26/2022
DRILLING CONTRACTOR: Cascade Drilling
DRILLING METHODS: Wireline Rock Coring
LOGGED BY: K. Popyack
CHECKED BY: A. Harford
NOTES: Coordinates and elevation are approximate

TOTAL DEPTH: 237 feet bgs
DIAMETER: 6 inches
GROUND ELEVATION: 733
PVC ELEVATION: not available
NORTHING: 350561.0117
EASTING: 2071264.104

WELL DEVELOPMENT
METHOD(S): NA
DATE STARTED: NA
DATE ENDED: NA
DTW AT START: NA
DTW AT END: NA
VOLUME PURGED: NA

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		HQ	84			Brown, SANDY SILT, some subangular fine to coarse gravel, (0.5-2" diameter), fine to coarse, roots, poorly sorted, non-plastic, saturated.	
						3.5	
5	728					Gray, SILTSTONE, rock flour, low cementation, dry.	
						7.0	
		HQ	84	54.8		Light Gray, SILTSTONE, rubble zone at 8-9 feet Bgs.	
10	723						
15	718						
						16.0	
						Black, COAL, rubble zone, thinly bedded, brittle.	
						17.0	
						Gray, SILTSTONE, thinly bedded, rubble zone from 17-23 feet Bgs, brittle.	
20	713					20.0	
		HQ	51	0		no recovery / wash out.	
25	708					25.0	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Siltstone | Coal | Sandstone | Claystone Interbedded Shale | Shale

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
						Light Gray, SANDSTONE, micaceous, thin lithic cross bedding, fissile. *(continued)*	
						27.0	
30	703	HQ	52			Olive Gray, CLAYSTONE, few carbonate nodules, low cementation, natural vertical fractur at 33.5 feet Bgs.	
						34.0	
35	698					Light Gray, SANDSTONE, low cementation, rubble zone, fine to medium grained, micaceous.	
						37.0	
40	693	HQ	96			Olive Gray, CLAYSTONE, some oxidation around 40 feet, very brittle, almost rubble zone from 40-41 feet Bgs, brittle.	
						41.0	
45	688					Light Gray, SANDSTONE, thin pyrite lenses, thin organic lenses, thin carbonate lenses, some cross bedding, rubble zone at 46.5 feet Bgs, oxidation from 41-43 feet Bgs.	
						47.0	
50	683					Gray, SANDSTONE, rubble zone.	
						51.0	
		HQ	64	26.6		Red, CLAYSTONE, red-purple, intermixed olive-blue-gray claystone, moderate cementation, thin carbonate veins, dense.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Siltstone | Coal | Sandstone | Claystone Interbedded Shale | Shale

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2022-11B

Client: Gavin Power, LLC
Project Name: RWL/FAR 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	678					54.5 / Olive, SANDSTONE, blue gray, abundant claystone nodules (0.5-1"), abundant veining, high cementation, hard, moderately fractured, dense.	
						57.0 Light Gray, SANDSTONE, high cementation, hard, no fracturing, dense.	
						59.0 Olive Green, SILTSTONE, some purple siltstone, zones of oxidation, fine to medium grained, rubble zone from 59-60 feet Bgs, brittle.	
60	673	HQ	96.0			60.0	
						Blue Gray, SILTSTONE, some purple siltstone, zones of yellow-orange mottling, moderately decomposed, rubble zone at 63-63.5' Bgs.	
65	668					67.0	
70	663	HQ	90	44.4		Blue Gray, SANDSTONE, few zones of oxidation, shale layer at 67.5 feet Bgs (2" thick).	
						72.0	
75	658					Red Brown, CLAYSTONE, few blue-gray claystone, moderately decomposed.	
						77.0	
80	653	HQ	101			Red Brown, CLAYSTONE, trace blue-gray claystone beds, moderately decomposed, rubble zone at 85 feet Bgs.	

SAMPLE TYPE

- HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

- Sandy Silt
- Siltstone
- Coal
- Sandstone
- Claystone Interbedded Shale
- Shale

ACRONYM LEGEND

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
85	648					Red Brown, CLAYSTONE, trace blue-gray claystone beds, moderately decomposed, rubble zone at 85 feet Bgs. *(continued)*	
						87.0	
90	643	HQ	115	44.3		Red Brown, CLAYSTONE, sporadic blue gray claystone beds, moderately decomposed.	
						94.5	
95	638					Gray, SILTSTONE, some shale, moderately decomposed.	
						96.5	
						97.0 Olive, SANDSTONE, blue gray, fine-medium grained.	
100	633	HQ	86	50		Green, CLAYSTONE, dark gray, yellow-orange mottling, moderately decomposed, some red claystone veining, rubble zone at 97-97.5 feet Bgs.	
						102.0	
105	628					Red, CLAYSTONE, purple, yellow-orange to blue mottling, natural fractures, low cementation, moderately decomposed and fractured (mechanical and natural).	
						107.0	
110	623	HQ	37			Red, CLAYSTONE, purple, yellow-orange to blue mottling, moderately decomposed, rubble zone from 110-117 feet Bgs.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Siltstone | Coal | Sandstone | Claystone Interbedded Shale | Shale

ACRONYM LEGEND

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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	618					Red, CLAYSTONE, purple, yellow-orange to blue mottling, moderately decomposed, rubble zone from 110-117 feet Bgs. *(continued)*	
						117.0	
120	613	HQ	33	100		Red Brown, CLAYSTONE, purple, with blue carbonate nodules, yellow-orange to blue mottling, rubble zone, moderate cementation, moderately decomposed and fractured (mechanical and natural slicken lines), dense.	
125	608					126.0	
						Gray, SANDSTONE, fine to medium grained, micaceous.	
						127.0	
						Red Brown, CLAYSTONE, moderately decomposed.	
						128.5	
130	603	HQ	93	62.4		Blue Gray, SANDSTONE, olive blue-gray fine grained micaceous sandstone (0.5-1' thick) at 129ft and 134ft Bgs, fine to medium grained, micaceous, a lot of cross bedding.	
						133.0	
135	598					Red Brown, CLAYSTONE, purple, moderately decomposed.	
						136.0	
						Red Brown, CLAYSTONE, purple, interbedded blue-gray sandstone, sandstone is fine grained and micaceous.	
						137.0	
140	593					Red Brown, CLAYSTONE, moderately decomposed.	
		HQ	30	31.7			

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Siltstone | Coal | Sandstone | Claystone Interbedded Shale | Shale

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
145	588					Red Brown, CLAYSTONE, moderately decomposed. *(continued)*	
						147.0	
						Red Brown, CLAYSTONE, silty, moderate decomposition, no water return, water being accepted into the formation.	
						148.0	
150	583					Blue Gray, SANDSTONE, light green, fine-medium grained, micaceous, many cross beds, low cementation, rubble zone at 150-150.5 feet Bgs, vertical veining at 153 feet Bgs, transitions to a blue gray layered siltstone at 152.5' Bgs.	
		HQ	120.0	50.8			
						153.0	
155	578					Red Brown, CLAYSTONE, trace olive blue-gray fine grained sandstone, moderate cementation, dense.	
						156.0	
						Blue Gray, SANDSTONE, rubble zone, fissile, high silt-clay content, low cementation.	
						157.0	
160	573					Blue Gray, SANDSTONE, fine-medium grained, micaceous, few cross beds, fissile, low cementation.	
		HQ	62.0	39.5			
						162.0	
165	568					Red Brown, CLAYSTONE, silty, clasts of olive blue-gray fine grained micaceous, sandstone, claystone faintly micaceous, sandstone high silt-clay content, moderate cementation, dense.	
						167.0	
						Blue Gray, SANDSTONE, micaceous.	
						168.0	
170	563					Red, CLAYSTONE, purple-brown, very decomposed, moderate cementation, all rubble from 168-174 ft Bgs, dense.	

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Siltstone | Coal

Sandstone | Claystone Interbedded Shale | Shale

ACRONYM LEGEND

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE & RUN	RECOVERY (inches)	RQD %	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		HQ	42	40.5		Red, CLAYSTONE, purple-brown, very decomposed, moderate cementation, all rubble from 168-174 ft Bgs, dense. *(continued)*	
						174.0 — Red, CLAYSTONE, purple-brown, yellow-orange-olive-blue mottling, moderate cementation, rubble zone, dense.	
175	558					175.0 — Red, CLAYSTONE, purple-brown.	
		HQ	41.0	0		179.0 — Red, CLAYSTONE, purple-brown, yellow-orange-olive-blue mottling, carbonate nodules, very decomposed, rubble zone from 177-187'.	
180	553						
185	548					187.0	
		HQ	84	0		Red, CLAYSTONE, purple-brown, yellow-orange-olive-blue mottling, carbonate nodules, very decomposed, rubble zone from 187-197'.	
190	543						
195	538					197.0	
						Red, CLAYSTONE, purple brown, some blue medium grained sandstone, yellow-orange-olive-blue mottling, moderately decomposed, moderate cementation, rubble zone from 205-207' Bgs, dense.	
200	533						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt | Siltstone | Coal | Sandstone | Claystone Interbedded Shale | Shale

ACRONYM LEGEND

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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
		HQ	96	0		Red, CLAYSTONE, purple brown, some blue medium grained sandstone, yellow-orange-olive-blue mottling, moderately decomposed, moderate cementation, rubble zone from 205-207' Bgs, dense. *(continued)*	
205	528						
						207.0	
						Red, CLAYSTONE, purple-brown, yellow-orange-olive-blue mottling, carbonate nodules, moderately decomposed, moderately fractured (natural slicken lines), moderate cementation, dense.	
210	523						
						211.0	
						211.5 Blue Gray, SHALE, moderate decomposition, moderate cementation, natural fracture with large (0.2") pyrite crystallization.	
		HQ	114	62.7		Olive, LIMESTONE, blue-gray, moderate fine micaceous sand, faint yellow chemical weathering, high cementation, hard, carbonate microcrystalization, natural fracture at 212', dense. 212.5	
						Red Brown, SHALE, thin (<0.5") layers of blue-gray claystone, yellow-orange mottling, moderately decomposed, moderate cementation, moderate mechanical fractures, dense.	
215	518						
						217.0	
						Red Brown, SILTSTONE, moderately decomposed, yellow , green mottling.	
220	513					220.0	
		HQ	108	55.6		Blue Gray, SANDSTONE, very fine to fine grained, layered with light gray fine grained laminations throughout, micaceous, fractured along bedding (165-170 degrees), high cementation, hard, dense.	
225	508						
						227.0	
						Blue Gray, SANDSTONE, with thin calcareous beds (1"-2" thick) at 228ft and 229.5ft Bgs, fine grained, layered with light gray fine grained laminations throughout, micaceous, fractured along bedding, rubble zone at 227-227.5 feet Bgs, high cementation, hard, dense.	
230	503						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt; Siltstone; Coal; Sandstone; Claystone Interbedded Shale; Shale

ACRONYM LEGEND

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PVC = polyvinyl chloride

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Client: Gavin Power, LLC **Project Name:** RWL/FAR 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
235	498	HQ	120	75		Blue Gray, SANDSTONE, with thin calcareous beds (1"-2" thick) at 228ft and 229.5ft Bgs, fine grained, layered with light gray fine grained laminations throughout, micaceous, fractured along bedding, rubble zone at 227-227.5 feet Bgs, high cementation, hard, dense. *(continued)*	
						237.0	
						Bottom of Boring @ 227.00 feet bgs	
240	493						
245	488						
250	483						
255	478						
260	473						

SAMPLE TYPE

HQ Wireline Rock Coring (HQ)

GRAPHIC LOG LEGEND

Sandy Silt; Siltstone; Coal; Sandstone; Claystone Interbedded Shale; Shale

ACRONYM LEGEND

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APPENDIX C ANALYTICAL DATA SUMMARY

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

	Location	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
	Date	2016-08-24	2016-10-06	2016-12-01	2017-02-02	2017-03-23	2017-05-01	2017-06-12	2017-07-17	2018-03-15	2018-09-13	2019-03-12	2019-09-24	2020-03-24	2020-09-22	2021-03-22	2021-03-22	2021-09-19
	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L			417	424					380	370	380	380	390	380	390	390	360
Aluminum	mg/L					7.8 J	0.18	1.4 B	0.32									
Antimony	mg/L	2E-05 J	1E-05 J	3E-05	0.0001	0.002 U	0.002 U	0.002 U	0.002 U									
Arsenic	mg/L	0.0018	0.00177	0.00153	0.00192	0.0042 J	0.0017 J	0.0024 J	0.0017 J									
Barium	mg/L	0.0244	0.0233	0.019	0.0245	0.078 B	0.022	0.036	0.024									
Beryllium	mg/L	2E-05 U	5E-06 J	5E-06	2E-05 U	0.00042 J	0.001 U	0.001 U	0.001 U									
Bicarbonate Alkalinity as CaCO3	mg/L									350	330		340	350	350	350	350	320
Bicarbonate Alkalinity as HCO3	mg/L											350						
Boron	mg/L	0.289	0.278	0.296	0.283	0.33	0.33	0.34	0.35 JB	0.32		0.34	0.31	0.29	0.32	0.37	0.37	0.32
Bromide	mg/L			0.412	0.334	0.41 J	5 U	2.5 U	2.5 U									
Cadmium	mg/L	2E-05 U	5E-06 J	1E-05	5E-05	0.001 U	0.001 U	0.001 U	0.001 U									
Calcium	mg/L	2.7	2.78	2.64	2.57	3.9 B	2.5	3.2	2.6	2.6	2.8	2.6	2.6	2.5	2.7	3.1	3	2.7
Carbonate Alkalinity as CaCO3	mg/L									34	34	34	38	41	29	39	41	38
Chloride	mg/L	83.9	92	96.9	96.3	96	60	79	62	86	96	93	100	110	87	90	87	110
Chromium	mg/L	0.0018	0.0033	0.0007	0.00263	0.06	0.0019 J	0.0081	0.0019 J									
Cobalt	mg/L	0.00011	0.000202	4.6E-05	0.000151	0.0052	0.00026 J	0.0011	0.00042 J									
Conductivity, Field	uS/cm	2068	2149	2094	2158					2079				2014	1990	2005	2005	2047
Copper	mg/L					0.01 B	0.002 U	0.0048 B	0.002 U									
Dissolved Oxygen, Field	mg/L	0.88	3.16	1.59	1.86					0.2								
Dissolved Solids, Total	mg/L	1220	1300	1290	1290	1300 J	1200 J	1300	1300 J	1300		1300	1300	1300	1200	1300	1300	1400
Fluoride	mg/L	1.86	2	2.26	2.13	2.6	2.2	2.4	2.2	2.2	2.3	2.2	2.5	2.4	2.1	2.2	2.1	2.5
Iron	mg/L					8.3 JB	0.19	1.5	0.39									
Lead	mg/L	3.9E-05	9.6E-05	4.9E-05	0.000237	0.0052 J	0.00056 J	0.0011	0.00058 J									
Lithium	mg/L	0.02	0.023	0.017	0.014	0.021	0.016	0.018	0.016									
Magnesium	mg/L			0.724	0.723	2.4 B	0.75 J	1.1	0.8 J	0.66 J	0.69 J	0.76 J	0.74 J	0.73 J	0.64 J	0.82 J	0.76 J	0.7 J
Manganese	mg/L					0.084	0.01	0.026	0.014									
Mercury	mg/L	5E-06 U	5E-06 U	2E-06	5E-06 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U									
Molybdenum	mg/L	0.0389	0.0349	0.0331	0.0345	0.037	0.033	0.033	0.032									
Nickel	mg/L					0.039	0.002 U	0.0056	0.0018 J									
Oxidation-Reduction Potential, Field	mV																	
pH, Field	pH units	7.28	8.89	8.6	8.59	8.69	8.58	8.55	8.61	8.71	8.6	8.85	8.83	8.85	8.79	8.68	8.68	8.68
Potassium	mg/L			1.05	1.49	2.6 B	0.92 J	1.2	0.91 J	0.84 J	1	0.93 J	0.9 J	0.98 J	0.87 J	1.1	0.98 J	0.78 J
Radium-226	pCi/L	0.356	0.547	0.32	0.257	0.303	0.116	0.147	0.171									
Radium-226/228	pCi/L	1.348	1.827	0.595	0.701	0.497	0.339	0.539	0.53									
Radium-228	pCi/L	0.992	1.28	0.275	0.444	0.194 U	0.224 U	0.393	0.359									
Redox Potential, Field	mV	167.6	70.5	-68	88.2													
Selenium	mg/L	7E-05 J	4E-05 J	5E-05	0.0001 U	0.00073 J	0.005 U	0.005 U	0.005 U									
Silver	mg/L					0.0005 J	0.001 U	0.001 U	0.001 U									
Sodium	mg/L			414	405	440 JB	480 B	460 B	440 JB	440	460	470	490	430	450	470	470	460
Strontium	mg/L			0.199	0.19	0.22 B	0.19 B	0.2 B	0.19									
Sulfate	mg/L	493	516	567	521	560 J	570	560	560	560	570	570	540	540	530	430	490	530
Temperature, Field	deg C	15.16	18.6	15.2	12.4					13.1				13	16	14	14	15
Thallium	mg/L	2E-05 J	4E-05 J	1E-05	5.2E-05	0.001 U	0.001 U	0.001 U	0.001 U									
Turbidity, Field	NTU	3.3	5.1	6.7	1.9	61.2	28.9	31.1	5.7	1.2	1.96		3	16.5	0.3	4.3	4.3	0.4
Vanadium	mg/L					0.013			0.005 U									
Zinc	mg/L					0.026	0.02 U	0.02 U	0.02 U									

Notes:

FD = Field duplicate sample

N = Normal environmental sample

deg C = Degree Celcius

mg/L = Milligrams per liter

mV = Milivolts

NTU = Nephelometric Turbidity Unit

uS/cm = Microsiemens per centimeter

pCi/L = Picocuries per liter

B: Compound was found in the blank and sample.

J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

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

Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

	Location	2000	2000	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2016-03
	Date	2022-03-23	2022-09-20	2016-12-01	2017-02-08	2017-03-27	2017-05-01	2017-06-12	2018-10-29	2019-09-21	2020-03-24	2020-09-21	2021-04-15	2021-09-29	2022-03-23	2022-05-10	2022-09-20	2016-08-24
	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	210 J	380	709	680				730	740	750	760	780	770	330	750	780	
Aluminum	mg/L	0.064				61 J	34	27	28						2.6			
Antimony	mg/L	0.002 U		0.00029	0.0002	0.0014 JB	0.00087 J	0.00074 J	0.00058 J						0.002 U	0.002 U		0.00096
Arsenic	mg/L	0.0024		0.00826	0.0074	0.03	0.019	0.02	0.021						0.018	0.019		0.00059
Barium	mg/L	0.028		0.175	0.145	0.41 B	0.39	0.29	0.2						0.13	0.13		0.0321
Beryllium	mg/L	0.001 U		0.000166	0.000162	0.0031	0.0022	0.0016	0.0011						0.001 U	0.001 U		1E-05 J
Bicarbonate Alkalinity as CaCO3	mg/L	170 J	320						710	710	710	730	740	750	330	740	770	
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.37 J	0.35	0.461	0.462	0.46	0.48	0.51	0.48	0.44	0.41	0.45	0.45	0.44	0.59 J		0.45	0.43
Bromide	mg/L			2.7	2.25	2.6 J	2.4 J	2 J										
Cadmium	mg/L	0.00019		8E-05	6E-05	0.001 U	0.001 U	0.001 U	0.001 U						0.0001 U	0.001 U		0.00012
Calcium	mg/L	2.9	2.4	8.98	8.37	12 B	15	12	7.5	5.8	5	5.7	9	5.8	7.7		23	149
Carbonate Alkalinity as CaCO3	mg/L	42	54						27	21	34	28	34	23	5 U	9.5	8.8	
Chloride	mg/L	120	110	643	700	650	690	560	430	390	500	440	440	480	390		430	21.7
Chromium	mg/L	0.012 J		0.0011	0.0839	0.11 B	0.058	0.055	0.037						0.014 J	0.011		0.0002
Cobalt	mg/L	0.00027 J		0.00251	0.00382	0.023	0.014	0.013	0.0075						0.00094	0.0028		0.000403
Conductivity, Field	uS/cm	2124	2145	3638	3676						2692	2760	2783	2824	2641	2619	3094	1564
Copper	mg/L	0.005 U				0.023 B	0.018 B	0.019 B	0.0076						0.005 U			
Dissolved Oxygen, Field	mg/L	1.62	1.01	1.03	1.28										1.4	0.96	1.95	4.38
Dissolved Solids, Total	mg/L	1200	1200	1950	1960	2100 J	2400 J	2100	1800	1600	1400	1600	1800	1700	1600		2700	1090
Fluoride	mg/L	2.5	2.4 U	2.7	2.36	2.9	2.8	2.7	3.2	3.6	3.4	3.2	3.3	3.5	3.8	3.6	3 U	0.2
Iron	mg/L	0.18 J				67 JB	38	36	19						1.9			
Lead	mg/L	0.0005 U		0.00144	0.00165	0.031 J	0.019	0.018	0.0097						0.0011 J	0.0027		0.000324
Lithium	mg/L	0.016		0.024	0.019	0.084	0.05	0.051	0.051						0.024	0.026		0.03
Magnesium	mg/L	0.77	0.71 J	2.26	2.65	9.6 B	7.3	5.9	4	1.5	1.3	1.6	4.2	1.6	1.9	2.2	18	
Manganese	mg/L	0.027 J				0.21 B	0.17	0.13	0.062						0.02 J			
Mercury	mg/L	0.0002 U	0.0002 U	1.7E-05	5E-06 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U						0.0002 U	0.00013 J	0.0002 U	1.1E-05
Molybdenum	mg/L	0.034		0.105	0.125	0.12	0.1	0.12 J	0.16						0.14	0.13		0.0154
Nickel	mg/L	0.0019 J				0.074 B	0.039	0.04	0.025						0.0035 J			
Oxidation-Reduction Potential, Field	mV	-57.5	-35.5												12.2	42.5	138.4	
pH, Field	pH units	8.75	8.7	8.02	7.84	7.94	7.87	7.83	8.06	8.19	8.26	8.21	8.08	8.08	7.91	8	7.92	7.07
Potassium	mg/L	1	0.83 J	2.61	3.22	11 B	7.2	6	5.9	1.8	1.5	2	5.1	1.8	2.3	2.7	18	
Radium-226	pCi/L	0.674	0.156	0.555	0.193	0.937	0.45	1.48	0.909						1.19	0.169 U	2.62	0.306
Radium-226/228	pCi/L	1.1	0.857 J	0.975	1.483	2.93	0.95	2.05	1.71						1.7 U	0.68 U	5.52 J	0.409
Radium-228	pCi/L	0.421 U	0.701 J	0.42	1.29	2 G	0.5 U	0.57 U	0.797						0.506 U	0.511 U	2.9 J	0.103
Redox Potential, Field	mV			4	-122.2													20.9
Selenium	mg/L	0.0012 J		0.0013	0.0011	0.0068	0.0034 J	0.0046 J	0.0017 J						0.0025 J	0.0026 J		0.0002
Silver	mg/L	0.001 U				0.00074 J	0.00023 J	0.00061 J	0.0005 J						0.001 U			
Sodium	mg/L	460	460	605	628	730 JB	740 B	730	630	620	590	610	630	640	600	610	660	
Strontium	mg/L	0.21		0.593	0.567	0.84 B	0.94 B	0.69 B	0.52						0.47			
Sulfate	mg/L	500	530	77.8	65.3	84 J	84	86	73	74	72	84	76	70	61		66	446
Temperature, Field	deg C	16	17.7	12.5	13.1						14	16	13	14	15	14.8	18	15.8
Thallium	mg/L	0.001 U		4E-05	3E-05 J	0.00031 J	0.001 U	0.001 U	0.0002 J						0.001 U	0.001 U		2E-05 J
Turbidity, Field	NTU	0.1	8.86	123.9	265.2	530.1	336.7	236.9	1000	60	24.3	43.1	683	19.7	70.7	122	1077.17	6.4
Vanadium	mg/L																	
Zinc	mg/L	0.28 J				0.11	0.07	0.059	0.041						0.3 J			

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03	2016-03
Date		2016-10-03	2016-12-01	2017-01-31	2017-03-27	2017-04-27	2017-06-07	2017-07-14	2018-03-21	2018-09-25	2019-03-15	2019-09-24	2020-03-25	2020-09-21	2021-03-16	2021-09-24	2022-03-28	2022-09-12
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L		482	443					430	430	440 B	450	500	340	340	320	250	290
Aluminum	mg/L				0.03 J	0.05 U	0.05 U	0.045 J									0.036 J	
Antimony	mg/L	0.00041	0.0004	0.00026	0.002 U	0.002 U	0.002 U	0.002 U									0.002 U	
Arsenic	mg/L	0.00092	0.0007	0.00063	0.00058 J	0.001 J	0.00082 J	0.00088 J									0.0021	
Barium	mg/L	0.0383	0.0256	0.0241	0.026 JB	0.024	0.026	0.025									0.025	
Beryllium	mg/L	7.2E-05	1E-05 J	6E-06 J	0.001 U	0.001 U	0.001 U	0.001 U									0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L								430	430	440 B	450	500	340	340	320	250	290
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.35	0.361	0.416	0.43	0.44 B	0.45	0.44	0.43	0.43	0.41	0.39	1.6	1.7	1.7	2.1	2.2 J	2.8
Bromide	mg/L		0.614	3.5	0.4 J	2.5 U	2.5 UJ	2.5 U										
Cadmium	mg/L	0.0001	0.00016	6E-05	0.001 U	0.001 U	0.001 U	0.001 U									0.0001 U	
Calcium	mg/L	129	128	134	140 B	140	150	140	140	140	120	130	290	330	370	450	450	490
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	21.8	22.7	867	22	23	22 J	22	24	23	23	24	32	50	38	30	24	26
Chromium	mg/L	0.0002	0.000162	0.000852	0.00064 JB	0.002 U	0.002 U	0.002 U									0.005 U	
Cobalt	mg/L	0.000563	0.0005	0.000246	0.00029 J	0.00055 J	0.00019 J	0.00034 J									0.0019	
Conductivity, Field	uS/cm	1599	1595	1328					1511				2101	2232	2462	2700	2738	2781
Copper	mg/L				0.0018 JB	0.002 U	0.002 U	0.002 U									0.005 U	
Dissolved Oxygen, Field	mg/L	1.15	1.77	2.38					0.26								0.76	0.4
Dissolved Solids, Total	mg/L	1080	1020	1990	1100	1100 J	1000	1000 J	1100	1000	1000	1000	1300	1800	2100	2300	2300 J	
Fluoride	mg/L	0.18	0.16	2.33	0.21 J	0.19 J	0.21 J	0.19 J	0.24	0.22	0.19	0.23	0.19	0.13	0.18	0.19	0.15	0.13
Iron	mg/L				0.087 JB	0.068 J	0.064 J	0.087 J									1.8	
Lead	mg/L	0.000456	0.000213	0.000105	0.00026 J	0.001 U	0.001 U	0.001 U									0.0005 U	
Lithium	mg/L	0.03	0.034	0.031	0.029	0.034	0.029	0.034									0.036	
Magnesium	mg/L		38.6	40.5	40 B	40	46	40	40	41	40	42	81	81	94	110	97	110
Manganese	mg/L				0.051 B	0.1	0.11	0.061									3	
Mercury	mg/L	4E-05	3.9E-05	1.8E-05	0.0002 U	0.0002 U	0.0002 U	0.0002 U									0.0002 U	0.0002 U
Molybdenum	mg/L	0.00646	0.00649	0.00523	0.0049 J	0.0043 J	0.004 J	0.0038 J									0.0022 J	
Nickel	mg/L				0.0015 JB	0.002 U	0.002 U	0.002 U									0.003 J	
Oxidation-Reduction Potential, Field	mV																-52.7	-30.2
pH, Field	pH units	6.91	6.99	6.93	6.93	6.9	6.88	6.93	7.03	7	7.13	7.27	6.93	6.82	6.79	6.65	6.73	6.59
Potassium	mg/L		4.63	5.03	4.3 JB	4.4	4.8	4.6	4.6	4.6	8.4	5.3	6.2	6.3	7.2	6.9	6.9	7.1
Radium-226	pCi/L	0.225	0.266	0.854	0.194	0.195	0.201	0.207									0.689	0.107 U
Radium-226/228	pCi/L	1.295	0.44	1.121	0.456	0.541	0.59	1.02									2.16	0.939
Radium-228	pCi/L	1.07	0.174	0.267	0.262 U	0.347	0.389	0.816									1.47	0.832
Redox Potential, Field	mV	48.2	50.5	73.5														
Selenium	mg/L	0.0003	0.0001	0.0001	0.005 U	0.005 U	0.005 U	0.005 U									0.00099 J	
Silver	mg/L				3E-05 J	0.001 U	0.00041 J	0.00044 J									0.001 U	
Sodium	mg/L		171	156	150 JB	160 B	150 B	150 B	160	150	190	190	150	110	130	130	93	96
Strontium	mg/L		2.95	3.25	3.6 JB	3.7	4.4 B	3.4 J									8.3	
Sulfate	mg/L	445	362	132	390	420	440 J	400	400	410	400	360	980	1200	1300	1500	1500	1700
Temperature, Field	deg C	15.6	12.8	13					12.6				14	14	14	14	12	14.5
Thallium	mg/L	3E-05 J	2E-05 J	2E-05 J	0.001 U	0.001 U	0.001 U	0.001 U									0.001 U	
Turbidity, Field	NTU	9	8.1	4.9	2.1	1.3	1.4	6.4	1	1.68		4	1	4	6.5	5.1	2.7	11.34
Vanadium	mg/L																	
Zinc	mg/L				0.02 U	0.02 U	0.02 U	0.02 U									0.02 U	

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-04	2016-05
Date		2016-08-24	2017-01-31	2017-03-27	2017-04-27	2017-06-07	2017-07-14	2018-03-22	2018-09-11	2019-03-15	2019-09-24	2020-03-25	2020-09-21	2021-04-15	2021-11-03	2022-03-28	2022-09-12	2016-06-08
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L		50.7						250	290 B	300	340	280	300	280	260	290	
Aluminum	mg/L			0.39 J	0.05 U	0.058	0.05 U									0.23		
Antimony	mg/L	0.00116	0.00033	0.00067 JB	0.00087 J	0.002 U	0.00097 J		0.002 U	0.002 U						0.002 U		
Arsenic	mg/L	0.00421	0.00259	0.0054	0.0044 J	0.0019 J	0.0039 J		0.0016 J	0.0015 J						0.00091 J		
Barium	mg/L	0.117	0.065	0.14 JB	0.16	0.41	0.24		0.091	0.077						0.053		
Beryllium	mg/L	4E-05 U	2.2E-05	0.001 U	0.001 U	0.001 U	0.00038 J		0.00058 J	0.00085 J						0.001 U		
Bicarbonate Alkalinity as CaCO3	mg/L								250	290 B	300	340	280	300	280	260	290	
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.343	0.227	0.27	0.27 B	0.36	0.3		0.38	0.39	0.39	0.87	0.75	2.3	3.3	3 J	3	
Bromide	mg/L		0.896	4 J	7.4 J	9.3 J	4.8 J			1								
Cadmium	mg/L	5E-05	7E-05	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.00021 J						0.0001 U		
Calcium	mg/L	9.88	47.6	22 B	18	33	24		87	93	96	120	120	520	540	560	460	
Carbonate Alkalinity as CaCO3	mg/L								5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Chloride	mg/L	1060	204	820	1700	2100 J	1100		240	180	200	380	1000	46	29	25	26	
Chromium	mg/L	0.0305	0.00651	0.0054 JB	0.0027	0.002 U	0.0016 J		0.002 U	0.002 U						0.0046 J		
Cobalt	mg/L	0.000641	0.000173	0.00026 J	0.001 U	0.001 U	0.00027 J		0.001 U	0.00031 J						0.0014		
Conductivity, Field	uS/cm	6270	1328					2138				2822	6404	2948	2831	3032	2858	
Copper	mg/L			0.0024 B	0.002 U	0.002 U	0.002 U									0.0071 J		
Dissolved Oxygen, Field	mg/L	1.04	2.38					3.92								1.74	0.52	
Dissolved Solids, Total	mg/L	2630	952	1900	3300 J	3600	2400 J		1100	1200	920	1500	2400	2600	2700	2400 J		
Fluoride	mg/L	1.28	0.5	1.4	1.2	1.2 J	1.1		0.36	0.29	0.32	0.45	0.73	0.15	0.15	0.15	0.13	
Iron	mg/L			0.38 JB	0.1 U	0.1 U	0.1 U									0.86		
Lead	mg/L	0.000238	0.000454	0.00043 J	0.001 U	0.001 U	0.00055 J		0.001 U	0.001 U						0.0005 U		
Lithium	mg/L	0.236	0.035	0.044	0.072	0.066	0.066		0.053	0.05						0.035		
Magnesium	mg/L		6.97	3.8 B	4.2	13	5.8				38	39	36	110	100	110	90	
Manganese	mg/L			0.0083 B	0.005	0.022	0.01									1.7		
Mercury	mg/L	1.3E-05	7E-06	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U						0.0002 U	0.0002 U	
Molybdenum	mg/L	0.0864	0.0728	0.12 J	0.11	0.051	0.093		0.015	0.01						0.002 U		
Nickel	mg/L			0.0034 B	0.002 U	0.002 U	0.0015 J									0.0037 J		
Oxidation-Reduction Potential, Field	mV															69.2	79.2	
pH, Field	pH units	8.4	6.93	7.79	7.82	7.8	8.22	7.75	7.62	7.62	7.71	7.76	8.56	6.73	6.61	6.68	6.56	7.88
Potassium	mg/L		7.01	7.3 JB	13	7.2	9.3				8.6	7.4	16	9.3	8.2	8.3	7	
Radium-226	pCi/L	0.656	0.617	0.823	0.651	0.481	0.552 J		0.247	0.307						0.595	0.385 U	
Radium-226/228	pCi/L	1.08	1.328	1.51	1.27	1.19	1.21		0.512	0.482						1.37	1.22 U	
Radium-228	pCi/L	0.424	0.711	0.689	0.614	0.71	0.663		0.265 U	0.175 U						0.772	0.839 U	
Redox Potential, Field	mV	-174.3	73.5															
Selenium	mg/L	0.0021	0.0007	0.0026 J	0.0022 J	0.005 U	0.0032 J		0.005 U	0.005 U						0.005 U		
Silver	mg/L			0.00016 J	0.001 U	0.00017 J	7E-05 J									0.001 U		
Sodium	mg/L		219	670 JB	710	1400 B	880 B				260	380	980	100	77	73	57	
Strontium	mg/L		1.34	0.94 JB	1.3	1.5 B	1.5									7.6		
Sulfate	mg/L	252	326	330	230	190 J	290		420	410	390	520	750	1800	1800	1800	1700	
Temperature, Field	deg C	15.2	13					12.3				13	14	12	14	11	15.5	
Thallium	mg/L	3E-05 J	1E-05 J	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U						0.001 U		
Turbidity, Field	NTU	9.1	4.9	6.4	2.8	2.8	6.4	3	1.28		4	60.9		253	143	71.7	18.98	8.5
Vanadium	mg/L																	
Zinc	mg/L			0.02 U	0.02 U	0.02 U	0.02 U									0.02 U		

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-05	2016-05	2016-05	2016-05	2016-05	2016-05	2016-05	2016-05	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06
Date		2016-08-25	2016-10-05	2016-12-01	2017-02-01	2017-03-27	2017-04-27	2017-06-08	2017-07-14	2016-08-25	2016-10-03	2016-12-01	2017-02-01	2017-03-27	2017-04-27	2017-06-08	2017-07-14	2018-03-22
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L			229	211							490	554					
Aluminum	mg/L					0.3 J	0.05 U	0.5	0.55					3.7 J	0.17	3.6	1.7	
Antimony	mg/L	0.00015	0.0001 J	8E-05	4E-05 J	0.002 U	0.00072 J	0.00067 J	0.002 U	0.00019	0.00025	0.00023	0.00026	0.00047 JB	0.00078 J	0.002 U	0.002 U	
Arsenic	mg/L	0.00078	0.00074	0.00051	0.00028	0.005 U	0.005 U	0.00088 J	0.00079 J	0.00225	0.0023	0.00195	0.00214	0.0034 J	0.0017 J	0.0026 J	0.0024 J	
Barium	mg/L	0.052	0.0432	0.0382	0.0331	0.049 JB	0.043	0.044 B	0.038	0.0707	0.0649	0.0525	0.0515	0.068 JB	0.05	0.064 B	0.059	
Beryllium	mg/L	0.000107	6E-05 J	3.4E-05	8E-06 J	0.001 U	0.001 U	0.00067 J	0.001 U	0.000198	0.000143	3.4E-05	6.8E-05	0.001 U	0.001 U	0.00035 J	0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L																	
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.116	0.088	0.088	0.11	0.1	0.1 JB	0.11	0.1	0.501	0.424	0.418	0.463	0.5	0.52 B	0.52	0.5	
Bromide	mg/L			0.552	0.155	0.17 J	0.15 J	0.23 J	0.26 J			2.18	1.85	2.4 J	2.1 J	2.3 J	2.1 J	
Cadmium	mg/L	3E-05	2E-05 J	1E-05 J	8E-06 J	0.001 U	0.001 U	0.001 U	0.001 U	1E-05 J	2E-05 J	3E-05	4E-05	0.00061 J	0.001 U	0.001 U	0.001 U	
Calcium	mg/L	40.2	35.8	45	39.7	66 B	53	40	31	5.87	5.51	4.6	4.45	5 B	3.5	4.1	4	
Carbonate Alkalinity as CaCO3	mg/L																	
Chloride	mg/L	16.3	17.2	16.9	11.4	9.2	9.6	14	16	545	560	515	548	550	550	570	540	
Chromium	mg/L	0.0015	0.0012	0.000802	0.000582	0.0017 JB	0.002 U	0.0033	0.0025	0.0092	0.077	0.0205	0.0625	0.068 JB	0.022	0.058 J	0.062	
Cobalt	mg/L	0.00299	0.00267	0.00158	0.000274	0.00042 J	0.00028 J	0.0011	0.00088 J	0.00208	0.00283	0.00156	0.00106	0.0019	0.00068 J	0.0038	0.0018	
Conductivity, Field	uS/cm	717	670	694	708					2898	2931	3126	2933					2792
Copper	mg/L					0.00073 JB	0.002 U	0.0039	0.0042 B					0.005 JB	0.002 U	0.0071	0.007 B	
Dissolved Oxygen, Field	mg/L	7.62	8.64	7.9	9.83					0.6	0.58	1.02	1.4					0.38
Dissolved Solids, Total	mg/L	474	406	430	388	500	460 J	410	400 J	1560	1560	1570	1540	1600	1600 J	1700	1600 J	
Fluoride	mg/L	0.19	0.19	0.19	0.18	0.2	0.21	0.22	0.22	5.28	5.09	4.89	5.2	6	5.9	6.3	6.1	
Iron	mg/L					0.45 JB	0.1 U	0.93	0.78					3.4 JB	0.24	3.3	1.7	
Lead	mg/L	0.00194	0.00137	0.000848	0.000206	0.00036 J	0.001 U	0.0012	0.00077 J	0.00371	0.00151	0.00039	0.000607	0.0016 J	0.001 U	0.0013	0.00083 J	
Lithium	mg/L	0.019	0.016	0.011	0.012	0.011	0.013	0.012	0.014	0.029	0.024	0.027	0.034	0.034	0.032	0.031	0.032	
Magnesium	mg/L			18.1	19.6	22 B	20	19	16			1.28	1.4	1.7 B	1	1.8	1.3	
Manganese	mg/L					0.0099 B	0.005 U	0.022	0.02					0.022 B	0.0068	0.019	0.018	
Mercury	mg/L	8E-06	1E-05	1.7E-05	5E-06 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	5E-06 J	1.1E-05	1.6E-05	3E-06 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Molybdenum	mg/L	0.00109	0.00115	0.00231	0.00071	0.00064 J	0.01 U	0.0012 J	0.01 U	0.0595	0.0952	0.0674	0.0804	0.091 J	0.076	0.074	0.073	
Nickel	mg/L					0.0013 JB	0.002 U	0.0026	0.0027					0.031 B	0.029	0.13	0.05	
Oxidation-Reduction Potential, Field	mV																	
pH, Field	pH units	7.89	7.93	7.79	7.8	7.48	7.82		8.01	8.51	8.36	8.36	8.45	8.44	8.49	8.39	8.28	8.43
Potassium	mg/L			2.72	2.35	2.4 JB	2.3	2.5	2.3			3.45	10.5	7.2 JB	6	5.6	4.8	
Radium-226	pCi/L	0.5	0.369	0.299	0.4	0.176	0.14	0.0681 U	0.13	0.325	0.818	0.392	0.252	0.163	0.163	0.195	0.152	
Radium-226/228	pCi/L	1.027	0.703	1.429	0.40713	0.365 U	0.0784 U	0.0846 U	0.575	0.756	2.268	1.052	0.604	0.381	0.395	0.362 U	0.651	
Radium-228	pCi/L	0.527	0.334	1.13	0.00713	0.189 U	-0.0618 U	0.0165 U	0.445	0.431	1.45	0.66	0.352	0.217 U	0.232 U	0.167 U	0.498	
Redox Potential, Field	mV	162.5	206.5	119.4	162.7					72.2	60.6	79.4	107.6					
Selenium	mg/L	0.0005	0.0005	0.0002	0.0001	0.005 U	0.005 U	0.005 U	0.005 U	0.0003	0.0002	0.0003	0.0003	0.005 U	0.005 U	0.005 U	0.001 J	
Silver	mg/L					0.001 U	0.001 U	0.001 U	0.0013					0.0012	0.001 U	9.1E-05 J	0.00017 J	
Sodium	mg/L			84.5	69.3	71 JB	74 B	82	74 B			637	499	610 JB	620	590	600 B	
Strontium	mg/L			0.879	0.89	1.1 JB	1.1	0.87 B	0.81			0.274	0.269	0.3 JB	0.29	0.24 B	0.27	
Sulfate	mg/L	138	120	116	132	150	160	140	130	103	96.5	95.1	94.8	110	110	120	110	
Temperature, Field	deg C	18.2	16.8	13	11.8					19.1	16	12.9	12					13.3
Thallium	mg/L	2E-05 J	0.0002 U	2E-05 J	3E-05 J	0.001 U	0.001 U	0.001 U	0.001 U	3E-05 J	2E-05 J	2E-05 J	2E-05 J	0.001 U	0.001 U	0.001 U	0.001 U	
Turbidity, Field	NTU	280.1	160.9	56.6	9.6	5.4	13.6		7.7	99.6	45.2	52.9	48.5	43.5	68.6	59.1	30.7	49
Vanadium	mg/L																	
Zinc	mg/L					0.02 U	0.02 U	0.02 U	0.02 U					0.0097 J	0.02 U	0.02 U	0.02 U	

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-06	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07
Date		2018-09-25	2018-09-25	2019-03-26	2019-09-22	2020-03-15	2020-03-15	2020-09-17	2021-03-17	2021-09-24	2022-03-28	2022-09-12	2016-08-24	2016-10-05	2016-11-30	2017-01-31	2017-03-22	2017-04-27
Sample Type		FD	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	490	490	510	500	510	510	480	490	510	480	530			514	483		
Aluminum	mg/L										0.1						57 J	9.8
Antimony	mg/L										0.002 U		0.00126	0.00091	0.00079	0.00045	0.0015 J	0.0024
Arsenic	mg/L										0.0011 J		0.00772	0.00705	0.00666	0.0042	0.016	0.0034 J
Barium	mg/L										0.058		0.107	0.141	0.115	0.188	0.83 JB	0.7
Beryllium	mg/L										0.001 U		0.000368	0.00027	0.000183	0.000428	0.0026	0.00091 J
Bicarbonate Alkalinity as CaCO3	mg/L	460	470	460	470	470	470	460	470	470	460	490						
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.48	0.49	0.5	0.45	0.46	0.48	0.46	0.5	0.46	0.47 J	0.47	0.313	0.297	0.348	0.365	0.4	0.42 B
Bromide	mg/L														5.48	0.308	4.5 J	8 J
Cadmium	mg/L										0.0001 U		7E-05	8E-05 J	0.0001	8E-05	0.001 U	0.001 U
Calcium	mg/L	4.4	4.8	4.9	4.4	4.1	4.2	5.1	5	4.8	4.5	4.8	13.3	11.5	8.2	9.9	15 B	25
Carbonate Alkalinity as CaCO3	mg/L	26	23	41	35	36	36	24	26	47	21	43						
Chloride	mg/L	600	620	580	540	650	660	630	620	630	660	630	421	609	643	23.6	1000	1900
Chromium	mg/L										0.0023 J		0.0015	0.0022	0.00163	0.00322	0.063 J	0.011
Cobalt	mg/L										0.00028 J		0.00105	0.000905	0.000573	0.00167	0.016	0.0028
Conductivity, Field	uS/cm					2888	2888	2979	2946	2972	3114	3040	2883	3250	2246	3388		
Copper	mg/L										0.005 U						0.044 JB	0.0079
Dissolved Oxygen, Field	mg/L										1.5	2.49	3.47	3.81	3.75	1.94		
Dissolved Solids, Total	mg/L	1400	1400	1600	1500	1600	1600	1400	1700	1400	1400 J		1740	1850	1900	1000	2300	3900 J
Fluoride	mg/L	5.8	5.7	5.6	5.8	5.5	5.5	5.5	5.1	5.4	5.4	5.7	1.89	2.04	1.94	0.18	2.3	1.6
Iron	mg/L										0.077 J						49 JB	8.5
Lead	mg/L										0.0005 U		0.00336	0.00292	0.00215	0.00336	0.031 J	0.0054
Lithium	mg/L										0.02		0.235	0.193	0.202	0.163	0.16	0.062
Magnesium	mg/L	1.4	1.4	1.6	1.4	1.3	1.4	1.5	1.4	1.3	1.3	1.5			1.36	2.83	11 B	8.3
Manganese	mg/L										0.011						0.24 B	0.075
Mercury	mg/L								0.0002 U		0.0002 U	0.0002 U	1.2E-05	1.7E-05	8E-06	5E-05 J	0.0002 U	0.0002 U
Molybdenum	mg/L										0.056		0.0808	0.0841	0.0953	0.0689	0.092 J	0.056
Nickel	mg/L										0.011						0.043	0.0086
Oxidation-Reduction Potential, Field	mV										52.6	10.4						
pH, Field	pH units		8.24	8.52	8.59	8.47	8.47	8.52	8.3	8.28	8.57	8.32	10.86	10.56	10.61	10.01	9.94	9.44
Potassium	mg/L	3	3.4	4.8	3.8	2.7	2.9	2.9	2.1	3.7	3.1	4.8			33.9	24.1	23 JB	6.5
Radium-226	pCi/L										0.0869 U	0.278 U	0.427	0.977	1.13	1.18	2.63	6.4
Radium-226/228	pCi/L										0.347 U	0.716	0.427	3.077	2.17	2.84	4.35	12.7
Radium-228	pCi/L										0.26 U	0.437 U		2.1	1.04	1.66	1.72 G	6.29 G
Redox Potential, Field	mV												6.4	63	20.4	22		
Selenium	mg/L										0.005 U		0.0008	0.001	0.0007	0.0008	0.004 J	0.0015 J
Silver	mg/L										0.001 U						0.00078 J	0.00019 J
Sodium	mg/L	600	610	600	590	600	610	610	620	630	670	700			562	635	930 JB	1300
Strontium	mg/L										0.34				0.624	0.815	1.3 JB	2.3
Sulfate	mg/L	100	100	110	110	100	100	99	96	99	98	100	229	235	178	371	120	99
Temperature, Field	deg C					13	13	14	14	14	13	16.6	15.6	15.3	14.1	12.8		
Thallium	mg/L										0.001 U		8.4E-05	9E-05 J	4E-05 J	6.1E-05	0.00052 J	0.001 U
Turbidity, Field	NTU		43.9		71	37.6	37.6	24.1	26.1	15.2	5.8	12.11	213	98.2	88.1	455.1	850	13721
Vanadium	mg/L																0.066	
Zinc	mg/L										0.02 U						0.12	0.02

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-07	2016-08	2016-08	2016-08
Date		2017-08-10	2018-04-05	2018-10-23	2019-03-26	2019-09-22	2020-03-15	2020-03-24	2020-09-17	2021-03-23	2021-09-24	2022-03-29	2022-05-09	2022-09-13	2022-10-20	2016-08-24	2016-10-05	2016-11-30
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L		360	300	430	320	360	320	350	350	310	310	320	310	290			1580
Aluminum	mg/L	40										2.4						
Antimony	mg/L	0.0017 JB										0.00071 J	0.001 J			0.00134	0.00083	0.00095
Arsenic	mg/L	0.016										0.0029	0.0022 J			0.00795	0.00691	0.00652
Barium	mg/L	1.3										0.58	0.3			0.312	0.279	0.416
Beryllium	mg/L	0.0028										0.00034 J	0.001 U			4E-05 U	0.000182	0.000123
Bicarbonate Alkalinity as CaCO3	mg/L		190	120	72	59	45	5 U	160	31	290	230	5 U	290	210			
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.44	0.45	0.42	0.38	0.39	0.41	0.28	0.41	0.32	0.42	0.5 J		0.46		0.318	0.286	0.294
Bromide	mg/L	5.5																5.56
Cadmium	mg/L	0.00059 J										0.00015	0.001 U			2E-05 J	3E-05 J	5E-05
Calcium	mg/L	41	12	12	6.3	7.8	6	34	9.7	8.2	15	23		29		33.8	48.9	57
Carbonate Alkalinity as CaCO3	mg/L		170	180	350	260	310	110	190	310	24	82	220	16	82			
Chloride	mg/L	1200	1200	1100	810	1000	1100	970	1100	840	1200	1100		1300	1300	452	645	650
Chromium	mg/L	0.059										0.0058	0.0029 J			0.0012	0.0033	0.00434
Cobalt	mg/L	0.015										0.0028	0.00092 J			0.000353	0.00278	0.00172
Conductivity, Field	uS/cm		4913				3442	4166	4034	3449	4555	4443	3565	5341	5141	8521	8800	5904
Copper	mg/L	0.04 B										0.011						
Dissolved Oxygen, Field	mg/L		2.48									6.11	6.39	1.65	2.36	10.52	5.81	6.2
Dissolved Solids, Total	mg/L	2500 J	2300	1800	2100	1900	1800 J	1900	1800	2000	2000	2200		2500 J	2300	2480	2660	2730
Fluoride	mg/L	2.6	2.8	2.9	2.6	3.3	3.1	2.5	3.1	2.2	3.1	3	2.7	2.9	2.9	1.92	1.85	1.56
Iron	mg/L	47										3.8						
Lead	mg/L	0.036 B										0.0038	0.0017			0.000143	0.00216	0.00207
Lithium	mg/L	0.19										0.046	0.18			0.665	0.6	0.702
Magnesium	mg/L	12	3.9	3.4	2.6	2.3	2.3	0.88 J	3.1	1.4	4.1	5.2	1.2	5.8				0.41
Manganese	mg/L	0.31										0.077						
Mercury	mg/L	0.0002 U										0.0002 U	0.0002 U	0.0002 U		2.4E-05	7E-06	3.7E-05
Molybdenum	mg/L	0.11 B										0.077	0.081			0.121	0.0735	0.0982
Nickel	mg/L	0.051										0.015						
Oxidation-Reduction Potential, Field	mV											26.2	117.8	-33.4	110.5			
pH, Field	pH units	9.1	9.49	9.75	10.41	10.4	9.85	11.98	9.65	10.59	8.44	8.73	11.63	8.35	8.81	12.52	12.41	12.59
Potassium	mg/L	19	6.6	6.8	8.4	4.4	4.3	7.4	4.3	9.8	3.3	3.5	9	4.7				92.4
Radium-226	pCi/L	3.74 J										1.17	0.93	1.01		0.768	1.06	0.975
Radium-226/228	pCi/L	8.09 J										2.33	1.91	1.81		1.898	2.97	2.005
Radium-228	pCi/L	4.34 G										1.16	0.979	0.803		1.13	1.91	1.03
Redox Potential, Field	mV															-71.6	-38.5	-81.2
Selenium	mg/L	0.0052										0.0016 J	0.005 U			0.0028	0.0022	0.0019
Silver	mg/L	0.0037										0.0015						
Sodium	mg/L	1000	920	850	840	760	730	640	790	670	860	950	620	920				704
Strontium	mg/L	2.8 B										1.3						3.59
Sulfate	mg/L	77	60	49	46	36	36	30	27	26	25	21		27	19	133	126	120
Temperature, Field	deg C		13.8				13	14	15	14	15	11	14.4	15.7	15	16	16.2	13.8
Thallium	mg/L	0.00066 J										0.00043 J	0.00047 J			9E-05 J	7E-05 J	5E-05 J
Turbidity, Field	NTU	1037	174	81.4		32	9.8	14.1	7.1	12.6	7	208.8	4.28	254.07	335.01	871	253.7	121.7
Vanadium	mg/L																	
Zinc	mg/L	0.12										0.021						

Notes:

FD = Field duplicate sample

N = Normal environmental sample

deg C = Degree Celcius

mg/L = Milligrams per liter

mV = Milivolts

NTU = Nephelometric Turbidity Unit

uS/cm = Microsiemens per centimeter

pCi/L = Picocuries per liter

B: Compound was found in the blank and sample.

J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

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

Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-08	2016-09	2016-09	2016-09
Date		2017-01-31	2017-03-22	2017-04-27	2017-06-07	2018-09-25	2019-03-26	2019-09-22	2020-03-15	2020-03-24	2020-09-17	2021-03-23	2021-09-24	2022-03-29	2022-05-03	2016-08-23	2016-10-03	2016-11-29
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	1400				1700	2000	1800	1100	1900	620	1900	1000	1900	1700			1250
Aluminum	mg/L		4.7 J	0.39	8.1									0.17				
Antimony	mg/L	0.00078	0.0012 J	0.0051	0.0013 J									0.002 U	0.002 U	0.00076	0.00087	0.00082
Arsenic	mg/L	0.00489	0.0054	0.0075	0.014									0.0012 J	0.0027 J	0.0117	0.0145	0.0149
Barium	mg/L	0.446	0.97 JB	0.7	0.76									1.5	1.4	0.684	0.566	0.49
Beryllium	mg/L	5.9E-05 J	0.001 U	0.001 U	0.005 U									0.001 U	0.001 U	8.5E-05	3E-05 J	2E-05 J
Bicarbonate 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			
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.279	0.22	0.28 B	0.32	0.1	0.056 J	0.071 J	0.24	0.029 J	0.16	0.1 U	0.17	0.2 U		0.093	0.411	0.126
Bromide	mg/L	2.93	3.1 J	25 U	5 J													6.45
Cadmium	mg/L	1E-05 J	0.001 U	0.001 U	0.001 U									0.0001 U	0.001 U	6E-05 U	6E-05 U	4E-05 J
Calcium	mg/L	80.6	190 B	140	140	340	450	390	190	510	190	620	240	660		78.6	202	49.7
Carbonate Alkalinity as CaCO3	mg/L					140	70	100	63	48	100	35	45	83	65			
Chloride	mg/L	879	700	890	1200 J	920	510	610	1500	270	1400	180	860	110		1500	1520	1490
Chromium	mg/L	0.00374	0.011 J	0.0027	0.015 J									0.0024 J	0.005 U	0.0455	0.0371	0.0299
Cobalt	mg/L	0.00095	0.0024	0.00039 J	0.0037									0.00039 J	0.0002 J	0.00056	0.000324	0.000245
Conductivity, Field	uS/cm	7708							8027	8693	7699	8172	7178	9065	7194	14047	13957	15285
Copper	mg/L		0.026 JB	0.019	0.043 B									0.0066				
Dissolved Oxygen, Field	mg/L	4.23												5.59	1.28	5.1	2.86	2.39
Dissolved Solids, Total	mg/L	2750	2700	2900 J	3000	2400	2900	2700	2300 J	1700	2300	2400	1700	2100		4820	4480	4180
Fluoride	mg/L	2.03	2	1.8 J	2.3 J	1.4	0.99	1.1	1.6	0.69	1.4	0.53	0.96	0.51	0.63	1.67	1.58	1.02
Iron	mg/L		4.5 JB	0.1 U	8.6									0.1 U				
Lead	mg/L	0.000987	0.0044 J	0.001 U	0.006									0.00079	0.001 U	0.00215	0.000743	0.000281
Lithium	mg/L	0.652	0.85	0.75	0.64									0.42	0.37	0.561	0.082	0.392
Magnesium	mg/L	0.162	0.75 JB	1 U	1.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1 U			0.058
Manganese	mg/L		0.031 B	0.005 U	0.051									0.01 U				
Mercury	mg/L	9E-06	0.0002 U	0.0002 U	0.0002 U									0.0002 U	0.0002 U	1.2E-05	4E-06 J	6E-06
Molybdenum	mg/L	0.102	0.094 J	0.12	0.14									0.0088	0.023	0.18	0.155	0.149
Nickel	mg/L		0.01	0.004	0.013									0.0054				
Oxidation-Reduction Potential, Field	mV													-77.6	-150.2			
pH, Field	pH units	12.45	12.65	12.35	12.42	12.45	12.67	12.43	11.89	12.67	12	12.43	11.59	12.49	11.79	12.49	12.6	12.64
Potassium	mg/L	99.3	110 JB	77	59	44	48	44	23	36	17	31	15	28	24			55
Radium-226	pCi/L	1.43	4.8	4.25	2.11									7.91	2.69	1.06	0.889	1.34
Radium-226/228	pCi/L	2.62	6.4	5.53	2.43									11.4	2.89	1.924	2.559	1.729
Radium-228	pCi/L	1.19	1.6	1.27	0.319 U									3.49	0.2 U	0.864	1.67	0.389
Redox Potential, Field	mV	-89.5														-68.6	-135.4	-113.7
Selenium	mg/L	0.0012	0.002 J	0.0022 J	0.0043 J									0.0012 J	0.005 U	0.0042	0.0038	0.0037
Silver	mg/L		0.001 U	0.001 UJ	0.00026 J									0.00073 J				
Sodium	mg/L	747	920 JB	1100	1200 B	830	680	740	1100	310	1100	240	990	210	420			591
Strontium	mg/L	4.23	7.2 JB	6.7	5.7 B									11				2.74
Sulfate	mg/L	90.4	71	70	89 J	27	14	16	28	12	23	6.4	15	4.9 J		77.1	72.2	73
Temperature, Field	deg C	13.1							12	14	15	14	14	10	15.3	15.9	15	13.5
Thallium	mg/L	3E-05 J	0.001 U	0.001 U	0.001 U									0.001 U	0.001 U	7E-05 J	4E-05 J	0.0002 U
Turbidity, Field	NTU	110.9	108.8	627.3	380.4	17.6		94	6.2	4.2	4.1	0.7	0.5	1.2	2.64	8.7	8.6	6.8
Vanadium	mg/L		0.017															
Zinc	mg/L		0.1 U	0.02 U	0.03									0.02 U				

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-09	2016-10	2016-10	2016-10
Date		2017-01-30	2017-03-21	2017-04-25	2017-06-06	2017-07-12	2018-03-22	2018-09-13	2019-09-24	2020-03-12	2020-09-14	2021-03-19	2021-09-20	2021-09-20	2022-03-30	2016-08-23	2016-10-03	2016-11-29
Sample Type		N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	1830	1400					820	1100	1400	1400	1500	1500	1500	1300			217
Aluminum	mg/L			1.3	3.3	1.9 B									0.3			
Antimony	mg/L	0.00078	0.0014 J	0.0012 J	0.02 U	0.001 JB									0.0014 J	0.00027	9E-05 J	0.0002 J
Arsenic	mg/L	0.0144	0.026 J	0.016	0.016 J	0.016									0.012	0.00323	0.00281	0.00304
Barium	mg/L	0.433	0.42 JB	0.52	0.53	0.52									0.28	0.235	0.183	0.162
Beryllium	mg/L	2E-05 U	0.001 U	0.001 U	0.001 UJ	0.001 U									0.001 U	8E-05 U	0.0001 U	0.0002 U
Bicarbonate Alkalinity as CaCO3	mg/L							5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U			
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.131	0.19	0.16 J	0.18 B	0.16 B			0.24	0.21	0.13	0.14	0.13	0.12	0.4 U	0.449	0.386	0.438
Bromide	mg/L	5.69	5.8 J	50 U	7.5	5.8 J												30.4
Cadmium	mg/L	1E-05 J	0.001 U	0.001 U	0.01 U	0.001 U									6.6E-05 J	4E-05 J	0.0001 U	4E-05 J
Calcium	mg/L	42.3	30 B	35	47	55		16	18	230	79	60	56	52	48	179	209	254
Carbonate Alkalinity as CaCO3	mg/L							180	120	120	180	150	75	77	140			
Chloride	mg/L	1520	1600	2000	1700	1600		1800	1200	630	760	750	860	870	870	3600	5000	6040
Chromium	mg/L	0.0256	0.027 J	0.025	0.029 J	0.025									0.0097	0.0007	0.0003	0.00461
Cobalt	mg/L	0.000208	0.00092 J	0.00032 J	0.01 U	0.00071 J									0.00057	0.000699	0.000869	0.00198
Conductivity, Field	uS/cm	12613					9465			8091	8864	8971	8996	8996	9317	8802	16158	15133
Copper	mg/L			0.013	0.022 B	0.017									0.0077 J			
Dissolved Oxygen, Field	mg/L	2.91					0.32								1.14	3.72	2.77	6.96
Dissolved Solids, Total	mg/L	3900	4100	4300 J	4300	3900 J			2100	2300	2200	2700	2700	2200	2800	6820	9040	11000
Fluoride	mg/L	1.39	1.9 J	2.1 J	1.8	1.5 J		2	1.9	1.1	0.92	0.97	1	1.1	1.1	0.66	0.5	0.5 J
Iron	mg/L			0.1 U	1.2	0.55									0.4 U			
Lead	mg/L	0.000118	0.0021 J	0.001 U	0.001	0.00068 J									0.0005 U	0.00143	0.000325	0.000492
Lithium	mg/L	0.324	0.23	0.3	0.27	0.25									0.12	0.138	0.142	0.189
Magnesium	mg/L	0.006 J		1 U	10 U	0.22 J		1 U	1.2	0.75 J	0.33 J	1 U	1 U	1 U	0.5 U			67.4
Manganese	mg/L		0.016 B	0.005 U	0.05 U	0.0041 J									0.01 U			
Mercury	mg/L	5E-06 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U									0.00015 J	4E-06 J	5E-06 U	2E-06 J
Molybdenum	mg/L	0.137	0.19 J	0.17	0.17	0.16									0.14	0.0367	0.0128	0.0278
Nickel	mg/L			0.0015 J	0.02 U	0.0031									0.0034 J			
Oxidation-Reduction Potential, Field	mV														-138.2			
pH, Field	pH units	12.66	12.55	12.44	12.46	12.49	12.59	12.07	12.45	12.61	12.6	12.38	12.33	12.33	12.48	9.79	7.48	8.29
Potassium	mg/L	48.8	28 JB	31	29	24		15	13	21	12	9.4	9.6	8.8	9.1			30.8
Radium-226	pCi/L	1.65	1.95	1.33	1.93	1.83 J									0.295	1.31	1.47	1.32
Radium-226/228	pCi/L	2.472	2.69	2.29	3.76	2.61 J									0.691 U	2.85	2.5	3.15
Radium-228	pCi/L	0.822	0.744 U	0.966	1.83	0.772 J									0.396 U	1.54	1.03	1.83
Redox Potential, Field	mV	-112.6														70.1	104.1	122.9
Selenium	mg/L	0.0029	0.0051 J	0.0029 J	0.05 U	0.0034 JB									0.0031 J	0.001	0.0002 J	0.0005 J
Silver	mg/L			0.001 U	0.00031 J	0.00074 J									0.0012			
Sodium	mg/L	997	1700 JB	1600	1700 B	1500		1600	1200	870	930	980	1100	1000	1100			1510
Strontium	mg/L	2.34	1.8 JB	2.6	1.4 B	2.2									2.4			12.1
Sulfate	mg/L	61.7	64	88 J	65	85		74	56	71	53	44	42	43	43	874	857	897
Temperature, Field	deg C	9.3					12.8			13	14	13	14	14	14	16.8	15.9	15
Thallium	mg/L	4E-05 J	0.001 U	0.001 U	0.001 U	0.001 U									0.00049 J	7E-05 J	0.0002 U	5E-05 U
Turbidity, Field	NTU	2.1	22.3	56.3	35.1	61.3	9	20.8	103	90.4	37.7	21.6	2.3	2.3	8.7	30.6	8.7	2.4
Vanadium	mg/L																	
Zinc	mg/L			0.02 U	0.2 U	0.02 U									0.02 U			

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
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Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10	2016-10
Date		2017-01-30	2017-03-21	2017-04-25	2017-06-06	2017-07-12	2018-04-06	2018-10-01	2019-03-27	2019-09-24	2020-03-30	2020-09-14	2020-09-14	2021-03-17	2021-09-20	2022-03-30	2022-09-14	2022-10-20
Sample Type		N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	199	170				180 B	140	150	130	150	120	120	120	110	36	18	770
Aluminum	mg/L			0.05 U	0.5 U	0.035 JB										1 U		
Antimony	mg/L	0.00023	0.002 U	0.002 U	0.02 U	0.002 U										0.04 U		
Arsenic	mg/L	0.00443	0.0037 J	0.0025 J	0.05 U	0.0039 J										0.04 U		
Barium	mg/L	0.339	0.17 JB	0.17	0.25	0.24										0.51		
Beryllium	mg/L	1E-05 J	0.001 U	0.001 U	0.001 UJ	0.001 U										0.001 U		
Bicarbonate Alkalinity as CaCO3	mg/L						180 B	140	150	130	150	120	120	120	110	36	18	5 U
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.421	0.56	0.49	0.57 B	0.54 B	0.55	0.52	0.51	0.47	0.48	0.5	0.48	0.47	0.43	2.4 U	0.39	
Bromide	mg/L	35.8	35	53	50	49												
Cadmium	mg/L	0.00026	0.001 U	0.001 U	0.01 U	0.001 U										0.002 U		
Calcium	mg/L	344	380 B	390	440	500	610	650	550	710	730	680	700	680	650	650	550	
Carbonate Alkalinity as CaCO3	mg/L						50 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	28
Chloride	mg/L	7380	7800	12000	11000	12000	14000	16000	13000	15000	18000	16000	15000	15000	15000	19000	15000	7000
Chromium	mg/L	0.00983	0.00071 J	0.002 U	0.02 U	0.0011 J										0.1 U		
Cobalt	mg/L	0.00275	0.0015	0.0013	0.0069 J	0.0046										0.01 U		
Conductivity, Field	uS/cm	19419					35660				36786	37634	37634	38220	38449	39405	38197	22220
Copper	mg/L			0.002 U	0.02 U	0.002 U										0.1 U		
Dissolved Oxygen, Field	mg/L	4.79					1.53									1.48	1.29	1.01
Dissolved Solids, Total	mg/L	12600	9600	17000 J	17000	15000 J	20000	23000	16000	24000	37000	26000	26000	23000	22000	23000	18000	11000
Fluoride	mg/L	0.7 J	2.5 U	5 U	1.3 U	2.5 U	5 U	2.5 U	2.9	2.5 U	2.5 U	0.31 J	0.33 J	1 U	2.5 U	5 U	2.5 U	0.65
Iron	mg/L			0.13	2.9	2.8										2 U		
Lead	mg/L	0.00257	0.00056 J	0.001 U	0.001 U	0.001 U										0.0005 U		
Lithium	mg/L	0.246	0.21	0.23	0.29	0.29										0.51		
Magnesium	mg/L	91.1		110	160	160	200	210	190	330	220	230	220	220	220	260	200	
Manganese	mg/L		0.68 B	0.52	1.8	1.4										0.39		
Mercury	mg/L	3E-06 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U								0.0002 U		0.0002 U	0.0002 U	
Molybdenum	mg/L	0.0258	0.011 J	0.015	0.011 J	0.016										0.022		
Nickel	mg/L			0.0053	0.02 U	0.024										0.1 U		
Oxidation-Reduction Potential, Field	mV															-36.9	-91.9	-16.3
pH, Field	pH units	7.68	7.31	7.21	7.51	7.86	7.1	7.11	7.25	7.27	7.35	7.46	7.46	7.16	7.46	8.82	9.79	12.26
Potassium	mg/L	42.9	26 JB	28	29	29	28	29	31 F1	42	31	32	29	37	60	150	140	
Radium-226	pCi/L	0.874	0.869	1.05	1.47	1.61 J										1.3	2.18	
Radium-226/228	pCi/L	2.304	1.71	2.19	3.93	4.91 J										7.56	12.1	
Radium-228	pCi/L	1.43	0.839	1.14	2.45	3.29										6.26	9.92	
Redox Potential, Field	mV	103.2																
Selenium	mg/L	0.0003	0.0015 J	0.005 U	0.05 U	0.0014 JB										0.1 U		
Silver	mg/L			0.001 U	0.0008 J	0.00062 J										0.0008 J		
Sodium	mg/L	1370	4700 JB	4400	5900 B	6000	7300	7100 B	6900	7600	7400	7900	8100	7500	8000	8900	8400	
Strontium	mg/L	16.2	20 JB	21	27 B	26										48		
Sulfate	mg/L	834	790	1100	640	670	540	560	550	350	400	320	350	310	300	360	230	260
Temperature, Field	deg C	11.3					13.5				14	15	15	14	15	19	15.7	13.5
Thallium	mg/L	8E-05 J	0.001 U	0.001 U	0.001 U	0.001 U										0.001 U		
Turbidity, Field	NTU	21.9	4.1	77.3	10.1	10.3	4	2.62		7	14	1.3	1.4	1.2	1.8	7	14.51	45.53
Vanadium	mg/L																	
Zinc	mg/L			0.02 U	0.2 U	0.02 U										0.4 U		

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2016-11	2016-11	2016-11	2016-11	2016-11	2016-11	2018-01	2018-01	2018-01	2018-01	2018-01	2018-01	2018-01	2018-01	2018-01	2018-01	2018-01
Date		2016-08-23	2016-08-26	2017-01-30	2017-03-21	2017-04-25	2021-03-17	2019-11-14	2020-03-24	2020-09-22	2021-03-22	2021-09-27	2022-03-25	2022-05-09	2022-07-13	2022-07-13	2022-08-19	2022-09-21
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	FD
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L			326	290			800	680	460	380	290	210	230	300	310	310	250
Aluminum	mg/L					0.05 U							0.26					
Antimony	mg/L	0.00533		0.00068	0.002 U	0.00081 J							0.002 U	0.002 U	0.00064 J	0.00084 J	0.0007 J	
Arsenic	mg/L	0.0038		0.00586	0.0049 J	0.0022 J							0.13	0.13	0.1	0.11	0.11	
Barium	mg/L	0.154		0.681	0.33 JB	0.41							0.75	0.69	0.6	0.65	0.58	
Beryllium	mg/L	4E-05 U		9.2E-05	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							5 U	5 U	5 U	5 U	5 U	90	37	5 U	5 U	5 U	26
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.278		0.3	0.36	0.35	0.48	0.9	0.71	0.61	0.56	0.45	0.44 J	0.36	0.39	0.39		0.44
Bromide	mg/L			10.5	10	11 J												
Cadmium	mg/L	0.0002		0.00027	0.00035 J	0.001 U							0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Calcium	mg/L	10.3		25	28 B	34	120	14 B	13	20	27	37	40	34	32	33		31
Carbonate Alkalinity as CaCO3	mg/L							370	370	340	320	290	120	200	270	270	250	220
Chloride	mg/L		403	2170	2400	2800	6000	1500	2000	2600	3200	3100	3200	3800	3300	3200		3100
Chromium	mg/L	0.0349		0.00944	0.037 J	0.002 U							0.0038 J	0.005 U	0.006	0.005 U	0.0031 J	
Cobalt	mg/L	0.000731		0.00238	0.00076 J	0.0013							0.00039 J	0.00019 J	0.00045 J	0.001 U	0.00055 J	
Conductivity, Field	uS/cm	7110		7954			16763		7311	8200	8597	8727	10152	98.12		10179	10162	10197
Copper	mg/L					0.003							0.005 U					
Dissolved Oxygen, Field	mg/L	7.22		3.52									2.41	5.58		1.97	0.71	1.93
Dissolved Solids, Total	mg/L		3060	4400	5200	4900 J	9700	3200	4400	4400	5800	4400	5300	6200	5600	5800		4600
Fluoride	mg/L		2.21	2.01	2.4	2.2 J	0.92	3.3	3.3	3.3	3	2.8	2.8	2.7	2.8	2.8	2.7	2.2 U
Iron	mg/L					0.1 U							0.23					
Lead	mg/L	0.00261		0.00424	0.0054 J	0.001 U							0.0005 U	0.001 U	0.0008 J	0.00065 J	0.001 U	
Lithium	mg/L	0.593		0.086	0.08	0.074							0.04 J	0.008 U	0.0047 J	0.0055 J	0.0069 J	
Magnesium	mg/L			9.05		11	41	2.3	0.3 J	0.21 J	1 U	0.47 J	0.83	0.25 J	0.24 J	0.44 J	1 U	0.3 J
Manganese	mg/L				0.031 B	0.039							0.0054 J					
Mercury	mg/L	8E-06		8E-06	0.0002 U	0.0002 U	0.0002 U						0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L	0.223		0.248	0.14 J	0.14							0.066	0.072	0.053	0.057	0.057	
Nickel	mg/L					0.038							0.017					
Oxidation-Reduction Potential, Field	mV												-160.3	-225.2		-189.7	-303.3	275.6
pH, Field	pH units	12.23		8.5	8.95	8.35	7.46	12.14	12.09	11.65	11.32	10.78	9.85	10.59		11.08	10.87	10.86
Potassium	mg/L			32.5	21 JB	15	30	3.5	2	2.6	2.8	3.5	4.3	3.4	3.3	3.4	3.3	3.3
Radium-226	pCi/L	1.44		1.07	0.934	1							1.46	1.01	1.02	0.905	0.822	0.965
Radium-226/228	pCi/L	2.62		2.041	1.81	1.56							3.47	1.57	2.64 J	2.19 J	2.01	2.92
Radium-228	pCi/L	1.18		0.971	0.872	0.564							2.01	0.565 U	1.62 J	1.29 J	1.19	1.95
Redox Potential, Field	mV	-93.7		40.3														
Selenium	mg/L	0.0054		0.0007	0.003 J	0.005 U							0.0027 J	0.0021 J	0.0034 J	0.0044 J	0.0088	
Silver	mg/L					0.0001 J							0.001 U					
Sodium	mg/L			911	1800 JB	1800	3400	1100	1300	1600	1800	1900	2600	2200	2300	2100	2200	2100
Strontium	mg/L			1.72	2.1 JB	2.7							3.9					
Sulfate	mg/L		529	497	560	750	380	37	39	5 U	35	36	38	36	38	38		42
Temperature, Field	deg C	16.2		12.1			14		14	16	16	16	12	13.7		17	15.7	15.6
Thallium	mg/L	0.000266		0.000105	0.001 U	0.001 U							0.001 U	0.001 U	0.001 U	0.0002 J	0.0019 J	
Turbidity, Field	NTU	7.1		67.4	22.4	73.2	21.9	42	20.4	16.8	16.9	14.9	6.3	1.63		47.63	4.4	12.6
Vanadium	mg/L																	
Zinc	mg/L					0.015 J							0.02 U					

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
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Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2018-01	2018-02	2018-02	2018-02	2018-02	2018-02	2018-02	2018-03	2018-03	2018-03	2018-03	2018-03	2018-03	2018-03	2018-03	2018-04	2018-04
Date		2022-09-21	2019-11-14	2020-04-08	2020-11-16	2021-04-08	2021-11-03	2022-04-20	2019-11-14	2020-04-08	2020-11-16	2021-04-08	2021-11-03	2022-04-20	2022-09-13	2022-09-29	2019-11-14	2020-04-08
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	250		260		270	250	270				500	530	370	330			
Aluminum	mg/L				15						5.8							
Antimony	mg/L				0.001 J						0.0023							
Arsenic	mg/L				0.011						0.012							
Barium	mg/L				1.6						0.48							
Beryllium	mg/L				0.00085 J						0.0004 J							
Bicarbonate Alkalinity as CaCO3	mg/L	22		260		270	250	270				500	530	370	330			
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.45	0.35	0.32	0.38	0.34	0.37	0.39	0.31	0.31	0.32	0.31	0.38	0.33	0.34			0.24
Bromide	mg/L				16						5.6							
Cadmium	mg/L				0.001 U						0.00027 J							
Calcium	mg/L	31	49 B	54	57	68	56	61	120 B	34	80	170	140	210	220			62
Carbonate Alkalinity as CaCO3	mg/L	220		5 U		5 U	5 U	5 U				5 U	5 U	5 U	5 U			
Chloride	mg/L	3100	3800	4000	200	4600	4500	4600	5900	1500	52	1200	1800	630			25	26
Chromium	mg/L				0.22						0.016							
Cobalt	mg/L				0.01						0.0033							
Conductivity, Field	uS/cm	10197		11760	10750	11240	12120	12570		6569	4938	5300	6385	3727	3451			1675
Copper	mg/L				0.055						0.012							
Dissolved Oxygen, Field	mg/L	1.93																
Dissolved Solids, Total	mg/L	4900	4900	5500	6600	7100	6400	7100	7500	3100	2200	3100	3600	2200	1600 J		860	980
Fluoride	mg/L	2.2 U	1.8	1.6	0.4 J	1.5	1.5	1.5	1.3	1.9	0.87	0.85	1	0.44			0.8	0.67
Iron	mg/L				58						7.7							
Lead	mg/L				0.0092						0.0033							
Lithium	mg/L				0.075						0.023							
Magnesium	mg/L	0.3 J	16	18	19	20	18	18	33	8.7	11	34	30	48	54			15
Manganese	mg/L				0.39						0.26							
Mercury	mg/L	0.0002 U													0.00014 J			
Molybdenum	mg/L				0.16						0.036							
Nickel	mg/L				0.037						0.017							
Oxidation-Reduction Potential, Field	mV	275.6																
pH, Field	pH units	10.86	6.93	7.97	7.96	7.04	7.31	7.51	7.29	8.18	8.15	7.45	7.72	7.1	6.7		6.65	7.2
Potassium	mg/L	3.3	8.1	5.6	7.6	6.6	5.2	5.1	6.7	3.5	5.1	4.7	5.3	4.2	4.7			3.7
Radium-226	pCi/L	0.96														1.42		
Radium-226/228	pCi/L	2.11														3.96 J		
Radium-228	pCi/L	1.15														2.54 J		
Redox Potential, Field	mV																	
Selenium	mg/L				0.005 U						0.005 U							
Silver	mg/L				0.00046 J						0.00033 J							
Sodium	mg/L	2100	2200	2400	2200	2500	2300	2300	2800	1300	870	980	1200	460	450			370
Strontium	mg/L				4.9						1.9							
Sulfate	mg/L	43	87	65	93	83	61	74	150	250	230	520	470	700			490	470
Temperature, Field	deg C	15.6		17	14	19	12	16		18	15	18	14	17	19			18
Thallium	mg/L				0.001 U						0.001 U							
Turbidity, Field	NTU	12.6		305	358	322	101	58.5		35.1	159	70.1	65	15.8	66.5			46
Vanadium	mg/L																	
Zinc	mg/L				0.25						0.032							

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
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Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location	2018-04	2018-04	2018-04	2019-02	2019-02	2019-02	2019-02	2019-02	2019-02	2019-02	2019-02	2019-02	2019-02	2019-06	2019-06	2019-06	2019-06	2019-06
Date	2020-11-16	2021-04-08	2022-04-20	2020-09-15	2021-03-16	2021-03-16	2021-09-25	2022-03-25	2022-03-25	2022-05-04	2022-07-13	2022-08-17	2020-09-15	2021-03-16	2021-09-25	2022-05-04	2022-09-16
Sample Type	N	N	N	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L		340	380	1800	1700	1700	1600	1400	1400	1500	1400	1500	220	180	310		170
Aluminum	mg/L	58							1.5	1.5								
Antimony	mg/L	0.0021							0.002 U	0.00084 J	0.002 U	0.002 U	0.002 U					
Arsenic	mg/L	0.079							0.0052	0.0052	0.0056	0.009	0.0058					
Barium	mg/L	0.62							0.65	0.63	0.71	0.76	0.57					
Beryllium	mg/L	0.0032							0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
Bicarbonate Alkalinity as CaCO3	mg/L		330	380	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	220	180	310		170
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.21	0.19	0.27	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.23	0.28	0.25		0.24
Bromide	mg/L	0.3 J																
Cadmium	mg/L	0.00034 J							0.0001 U	0.0001 U	0.001 U	0.001 U	0.001 U					
Calcium	mg/L	74	62	61	220	250	240	230	260	260	230	240	290	27	72	160		230
Carbonate Alkalinity as CaCO3	mg/L		11	5 U	120	52	53	54	69	69	64	26	16	5.6	5 U	5 U		5 U
Chloride	mg/L	28	33	48	190	180	190	180	160	150	150	120	110	1900	3800	6500		9400 J
Chromium	mg/L	0.24							0.0035 J	0.0034 J	0.005 U	0.011	0.0061					
Cobalt	mg/L	0.088							0.00023 J	0.00023 J	0.001 U	0.00085 J	0.0003 J					
Conductivity, Field	uS/cm	1977	2093	2086	8754	8179	8179	7521	7782	7782	7142	6942	7416	7203	11882	18046	22032	25787
Copper	mg/L	0.11							0.0064 J	0.0063 J								
Dissolved Oxygen, Field	mg/L								2.92	2.92	2.94	6.03	6.76				4.81	6.94
Dissolved Solids, Total	mg/L	1100	1200	1300	1900	1800	1700	1800	1800	1800	1600	1300	1700	2900	7400	9400		3200
Fluoride	mg/L	0.5 U	0.74	0.69	0.86	0.7	0.73	0.71	0.6	0.63	0.62	0.59	0.43	1.5	1.3	0.83		0.9 J
Iron	mg/L	120							0.1 U	0.1 U								
Lead	mg/L	0.06							0.0005 U	0.0005 U	0.001 U	0.0012	0.00065 J					
Lithium	mg/L	0.074							0.26	0.25	0.29	0.25	0.23					
Magnesium	mg/L	32	17	17	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	7.7	21	52		84
Manganese	mg/L	1.7							0.01 U	0.01 U								
Mercury	mg/L								0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U					0.0002 U
Molybdenum	mg/L	0.14							0.017	0.017	0.017	0.02	0.015					
Nickel	mg/L	0.13							0.0024 J	0.0023 J								
Oxidation-Reduction Potential, Field	mV								-123.5	-123.5	-157	-114.9	-96.3				62.9	95.4
pH, Field	pH units	7.68	7.55	7.37	12.62	12.47	12.47	12.26	12.23	12.23	12.14	12.42	12.58	8.46	7.95	7.68	7.46	7.06
Potassium	mg/L	12	5.6	4.3	33	21	21	16	14	13	12	13	13	3.8	7.2	15		17
Radium-226	pCi/L								2.05	2.3	1.79	2.05	1.78				3.59	5.21
Radium-226/228	pCi/L								2.94	3.36	1.93	3.64 J	2.54				4.53	15.7
Radium-228	pCi/L								0.887	1.07	0.137 U	1.59 J	0.762				0.943	10.4
Redox Potential, Field	mV																	
Selenium	mg/L	0.0043 J							0.005 U	0.005 U	0.005 U	0.0018 J	0.0013 J					
Silver	mg/L	0.0007 J							0.001 U	0.00052 J								
Sodium	mg/L	300	300	350	560	540	530	550	500	490	420	400	410	1500	2300	3900		5200
Strontium	mg/L	0.96							2.2	2.1								
Sulfate	mg/L	460	510	530	3.1 J	2.8 J	3 J	2.7 J	2.4	2.6	2.3	9.7	6.4	750	710	410		310 J
Temperature, Field	deg C	16	19	17	13	12	12	13	12	12	12.7	15.6	14.5	14	13	14	13.7	22.3
Thallium	mg/L	0.0006 J							0.001 U	0.001 U	0.001 U	0.001 U	0.0002 J					
Turbidity, Field	NTU	854	617	384	19.8	0.6	0.6	0.1	0.6	0.6	0.31	98.41	5.9	13.4	156	146	54.4	47.51
Vanadium	mg/L																	
Zinc	mg/L	0.4							0.02 U	0.02 U								

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		2019-07	2019-07	2019-07	2019-07	2019-07	2019-07	2019-09	2019-09	2019-09	2019-09	93100	93100	93100	93100	93100	93100	93100
Date		2021-09-25	2022-03-24	2022-05-04	2022-07-20	2022-08-18	2022-09-15	2021-09-25	2022-03-24	2022-08-18	2022-09-16	2016-08-23	2016-10-05	2016-12-02	2017-02-02	2017-03-29	2017-04-28	2017-06-12
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	160	190	200	220	230	210	170	270	210	180			393	359			
Aluminum	mg/L		0.61						26							1.8 J	0.044 J	3.8 B
Antimony	mg/L		0.002 U	0.002 U	0.002 U	0.00058 J			0.002 U	0.0017 J		4E-05 J	6E-05 J	5E-05 J	5E-05 J	0.0012 J	0.002 U	0.002 U
Arsenic	mg/L		0.0032 J	0.003 J	0.0032 J	0.0023 J			0.014	0.037 J		0.00164	0.00207	0.00174	0.00156	0.002 J	0.0016 J	0.002 J
Barium	mg/L		0.43	0.37	0.55	0.65			27	25		0.602	0.69	0.468	0.521	0.64 B	0.65	0.65
Beryllium	mg/L		0.004 U	0.001 U	0.001 U	0.001 U			0.003 J	0.0089		1E-05 J	5.3E-05	1E-05 J	1E-05 J	0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	160	190	200	220	230	210	170	270	210	180							
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.42	1.1 J	0.47	0.52	0.51	0.55	0.29	1 J	0.36	0.3	0.432	0.429	0.39	0.415	0.45	0.47 B	0.48
Bromide	mg/L													7.81	8.8	8.9 J	8.9 J	10
Cadmium	mg/L		0.0004 U	0.001 U	0.001 U	0.00033 J			0.00022 J	0.00041 J		4E-05 U	1E-05 J	4E-05 U	4E-05 U	0.001 U	0.001 U	0.001 U
Calcium	mg/L	740	1000	730	880	840	780	690	1200	800	620	20.3	22.2	14.1	16.8	17 B	16	20
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	16000	16000	17000	17000	19000	18000	16000	18000	18000	18000 J	2180	2310	1770	199	2200	2200	2100
Chromium	mg/L		0.02 U	0.005 U	0.011	0.017			0.19	0.42		0.0022	0.0049	0.00586	0.00582	0.0098	0.002 U	0.04
Cobalt	mg/L		0.0045	0.0067	0.0044	0.0039			0.016	0.069		0.00062	0.00129	0.00235	0.00195	0.0012	0.00027 J	0.0099
Conductivity, Field	uS/cm	36854	44987	41930	45882	46294	45379	39000	44025	46681	40991	6544	7642	5904	7014			
Copper	mg/L		0.02 U						0.02 U							0.0028 B	0.002 U	0.0051 B
Dissolved Oxygen, Field	mg/L		1.67	3.43	1.22	1.68	6.58		0.46	0.69	6.2	1.22	0.51	0.91	1.18			
Dissolved Solids, Total	mg/L	2900	26000	27000	21000		8200	5500	24000		17000	3630	3980	3420	3600	3900 J	3700 J	3600
Fluoride	mg/L	2.5 U	5 U	5 U	50 U	1 U	2.5 U	2.5 U	5 U	1 U	1 J	2.17	2.05	1.97	2.18	2.4	2.2	2.3
Iron	mg/L		2.1						140							1.7 JB	0.082 J	1
Lead	mg/L		0.002 U	0.001 U	0.00096 J	0.0018 J			0.045	0.072		0.000244	0.00093	0.000135	0.000189	0.001 J	0.001 U	0.00046 J
Lithium	mg/L		0.27	0.24	0.29	0.32			0.3	0.51 J		0.048	0.058	0.046	0.04	0.044	0.047	0.043
Magnesium	mg/L	200	250	220	250	280	250	220	310	310	280			4.4	5.37	6.2 B	5.6	6.1
Manganese	mg/L		1.6						3.5							0.046	0.032	0.055
Mercury	mg/L		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.00021	0.00054 J	5E-06 U	3E-06 J	5E-06 U	5E-06 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L		0.0098	0.0086	0.0094	0.012			0.0074 J	0.061		0.087	0.0889	0.125	0.106	0.11	0.11	0.11 J
Nickel	mg/L		0.0088 J						0.069							0.0065	0.002 U	0.038
Oxidation-Reduction Potential, Field	mV		-65	-30.9	-42.4	66	81.2		-173.5	-145.1	135.4							
pH, Field	pH units	6.93	6.98	6.75	6.8	6.82	7.09	7.32	7.18	7.01	6.42	7.97	7.85	7.78	7.87	7.82	7.86	7.77
Potassium	mg/L	21	25	19	23	24	40	26	38	44	82			3.87	4.57	3.1 B	2.6	2.7
Radium-226	pCi/L		1.02	0.806	1.19	1.35	13		36.3	39.8		0.637	0.909	0.863	0.544	0.538	0.565	0.736
Radium-226/228	pCi/L		1.87	0.98	2.77	2.72 J	33		102	111		2.587	1.969	1.538	1.252	0.869	1.14	1.19
Radium-228	pCi/L		0.847	0.174 U	1.58 U	1.37	19.9		65.9	70.8		1.95	1.06	0.675	0.708	0.332 U	0.58	0.458
Redox Potential, Field	mV											-98.5	788	35.3	-138.6			
Selenium	mg/L		0.0049 J	0.0012 J	0.005 U	0.0027 J			0.0077 J	0.0091 J		0.0001 J	0.0002 J	0.0003	0.0002 J	0.0007 J	0.005 U	0.005 U
Silver	mg/L		0.004 U						0.004 U							0.001 U	0.001 U	0.00036 J
Sodium	mg/L	8700	10000	9900	9200	9600	8900	7600	8900	8600	5500			1270	1050	1400 JB	1500	1500
Strontium	mg/L		62						64					1.18	1.4	1.7 B	1.9	1.7 B
Sulfate	mg/L	530	510	530	510	480	490	50 U	100 U	20 U	2.1	11.4	8.4	12.2	9.9	15 J	13 J	15
Temperature, Field	deg C	14	15	13.4	15.1	15.9	25.6	13	13	16.3	17.2	19.02	18.6	14.9	14.1			
Thallium	mg/L		0.004 U	0.001 U	0.001 U	0.0012 U			0.004 U	0.001 U		0.0001 U	3E-05 J	2E-05 J	4E-05 J	0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	316	62.3	9.1	88.34	85.15	19.75	556	1270.5	1752.32	1024.97	7	42.7	7.4	15.3	31.1	6.4	2.8
Vanadium	mg/L																	
Zinc	mg/L		0.08 U						0.12							0.02 U	0.02 U	0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location	93100	93100	93100	93100	93100	93100	93100	93100	93100	93100	93100	93100	93100	93100	93100	93100	93108	93108
Date	2017-07-18	2017-07-18	2018-03-15	2018-09-24	2019-03-11	2019-03-11	2019-09-23	2020-03-19	2020-03-19	2020-09-22	2021-03-25	2021-09-28	2022-03-28	2022-09-16	2022-09-16	2016-08-24	2016-10-06
Sample Type	FD	N	N	N	FD	N	N	FD	N	N	N	N	N	FD	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L			360	320	320	320	330	330	330	320	330	330	330	320	330		
Aluminum	mg/L	1.8	1.7											0.033 J				
Antimony	mg/L	0.002 U	0.002 U											0.002 U			0.0001	3E-05 J
Arsenic	mg/L	0.0019 J	0.002 J											0.0018 J			0.00196	0.00153
Barium	mg/L	0.66	0.66											0.51			0.174	0.164
Beryllium	mg/L	0.001 U	0.001 U											0.001 U			4.1E-05	1E-05 J
Bicarbonate Alkalinity as CaCO3	mg/L			360	320			330	330	330	320	320	330	330	320	330		
Bicarbonate Alkalinity as HCO3	mg/L					320	320											
Boron	mg/L	0.49 JB	0.5 JB	0.45	0.45	0.48	0.49	0.46	0.47	0.47	0.48	0.44	0.46	0.51 J	0.44	0.45	0.429	0.404
Bromide	mg/L	8.7 J	8.8 J															
Cadmium	mg/L	0.001 U	0.001 U											0.0001 U			7E-05	3E-05
Calcium	mg/L	17	17	14	18	17	17	18	17	18	19	18	17	15	16	17	6.09	5.87
Carbonate Alkalinity as CaCO3	mg/L			5 U	5 U	5 U	5 U	5 U	4.6 J	5 U	5 U	3 J	5 U	5 U	5 U	5 U		
Chloride	mg/L	2200	2200	1800	2200	2100	2100	2000	2200	2200	2200	2100	2200	2000	2100 J	2200 J	745	731
Chromium	mg/L	0.011	0.011											0.015			0.0086	0.0062
Cobalt	mg/L	0.0033	0.0031											0.0024			0.00113	0.00039
Conductivity, Field	uS/cm			6107					6772	6772	6702	6959	6635	6548	7123	7123	3490	3589
Copper	mg/L	0.002 U	0.002 U											0.005 U				
Dissolved Oxygen, Field	mg/L			0.2										0.28	0.36	0.36	1.67	0.81
Dissolved Solids, Total	mg/L	3400 J	3600 J	3300	3100	3100	3100	2900	3200	3900	3100	3800	3300	2900 J	3900 J	460 J	1940	1900
Fluoride	mg/L	2.3	2.3	2.6	2.7	2.2	2.2	2.7	2.6	2.6	2.3	2.5	2.7	2.6	2.6 J	2.6 J	4.59	4.46
Iron	mg/L	0.42	0.41											0.099 J				
Lead	mg/L	0.001 U	0.001 U											0.0005 U			0.00206	0.000516
Lithium	mg/L	0.048	0.048											0.039			0.027	0.028
Magnesium	mg/L	6.2	6.2	4.1	5.4	5.9	6.1	6.3	5.3	5.6	5.8	5.7	5.3	5.5	5.1	5.2		
Manganese	mg/L	0.045	0.044											0.028				
Mercury	mg/L	0.0002 U	0.0002 U											0.0002 U	0.0002 U	0.0002 U	5E-06	1.5E-05
Molybdenum	mg/L	0.097	0.098											0.12			0.254	0.267
Nickel	mg/L	0.0096	0.0087											0.012				
Oxidation-Reduction Potential, Field	mV													-2.2	-181.1	-181.1		
pH, Field	pH units		7.71	7.93	7.89		8.06	8.04	8.02	8.02	7.94	7.87	7.97	8.03	7.81	7.81	7.59	7.87
Potassium	mg/L	2.7	2.7	2.1	2.6	2.6	2.6	2.9	2.5	2.5	2.6	2.5	2.5	2.7	2.6	2.7		
Radium-226	pCi/L	0.691 J	0.758 J											0.704	0.382	0.394	0.74	0.639
Radium-226/228	pCi/L	1.32	1.41											1.57	2.44 J	1.08	2.68	2.059
Radium-228	pCi/L	0.63	0.648											0.863	2.06 J	0.687 U	1.94	1.42
Redox Potential, Field	mV																-29.9	-145.3
Selenium	mg/L	0.005 U	0.005 U											0.005 U			0.0002 J	6E-05 J
Silver	mg/L	6.9E-05 J	6.3E-05 J											0.001 U				
Sodium	mg/L	1500 JB	1500 JB	1200	1400	1500	1500	1400	1400	1400	1400	1400	1400	1400	1300	1400		
Strontium	mg/L	1.7	1.7											1.5				
Sulfate	mg/L	14 J	14 J	22	16	17 J	18 J	16	17	17	13	16	16	14	13 J	13 J	73.1	66.1
Temperature, Field	deg C			15.2					16	16	17	15	17	12	20	20	18.33	15
Thallium	mg/L	0.001 U	0.001 U											0.001 U			0.000125	4E-05 J
Turbidity, Field	NTU		6	4.6	1.18			7	4	4	1.4	2	2.6	4	53.35	53.35	28.9	9.7
Vanadium	mg/L	0.005 U	0.005 U															
Zinc	mg/L	0.02 U	0.02 U											0.02 U				

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

	Location	93108	93108	93108	93108	93108	93108	93108	93108	93108	93108	93108	94136	94136	94136	94136	94136	94136
	Date	2016-12-02	2017-02-02	2017-03-23	2017-05-02	2017-06-12	2017-07-18	2018-03-15	2018-09-14	2021-09-20	2022-03-28	2022-09-19	2016-08-24	2016-10-06	2016-12-01	2017-02-01	2017-03-23	2017-04-28
	Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	720	672					640	640	520	460	470			331	323		
Aluminum	mg/L			2.5 J	0.13	0.041 JB	7.1				0.036 J						0.057	0.037 J
Antimony	mg/L	0.00023	0.00016	0.002 U	0.002 U	0.002 U	0.002 U				0.002 U		2E-05 J	3E-05 J	2E-05	1E-05 J	0.0017 J	0.002 U
Arsenic	mg/L	0.0025	0.00166	0.0018 J	0.0013 J	0.0016 J	0.0029 J				0.0027		0.00037	0.00048	0.00042	0.00039	0.0012 J	0.005 U
Barium	mg/L	0.199	0.157	0.19 B	0.18	0.18	0.22				0.43		0.0865	0.0894	0.102	0.0877	0.11 B	0.1
Beryllium	mg/L	0.000162	0.000107	0.001 U	0.001 U	0.001 U	0.00047 J				0.001 U		2E-05 U	1E-05 J	1E-05	5E-06 J	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L							640	640	520	460	470						
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.391	0.411	0.5	0.48	0.46	0.48 JB	0.45	0.47	0.44	0.48 J	0.45	0.405	0.395	0.349	0.362	0.46	0.43 B
Bromide	mg/L	2.42	2.16	2.4 J	2.7 J	2.8	2.6 J								4.07	3.25	3.7 J	3.7 J
Cadmium	mg/L	0.0003	0.00019	0.001 U	0.001 U	0.0014	0.00024 J				0.0001 U		6E-06 J	6E-06 J	6E-06	5E-06 J	0.001 U	0.001 U
Calcium	mg/L	6.55	5.85	6 B	5.9	5.8	6.4	5.6	6.4	15	13	14	23.2	22	19.2	17.7	19 B	17
Carbonate Alkalinity as CaCO3	mg/L							5 U	5 U	5 U	5 U	5 U						
Chloride	mg/L	681	688	700	820	790	750	770	720	1500	1600	1600	888	927	887	882	910	900
Chromium	mg/L	0.0263	0.025	0.02	0.004	0.002 U	0.067				0.005 U		0.0012	0.002	0.0013	0.00124	0.0019 J	0.002 U
Cobalt	mg/L	0.00393	0.00262	0.002	0.00037 J	0.00025 J	0.0059				0.0005 U		0.000107	0.00029	0.00015	0.000122	0.0004 J	0.00079 J
Conductivity, Field	uS/cm	3580	3545					3606		5299	5821	6189	3541	3581	3578	3558		
Copper	mg/L			0.008 B	0.002 U	0.002 U	0.021				0.005 U						0.00085 JB	0.002 U
Dissolved Oxygen, Field	mg/L	1.01	1.42					0.64			0.16	0.4	1.08	0.58	0.77	1.7		
Dissolved Solids, Total	mg/L	1950	1900	1800 J	1900 J	2000	1800 J	2100	1700	2800	2200 J	3200	1850	1820	1840	1750	1800 J	2000 J
Fluoride	mg/L	4.15	4.57	5.4	5.1	5.3	5.5	4.6	4.9	3.2	3.1	3.1 J	0.96	0.94	1.03	0.9	1.2	1.2
Iron	mg/L			2.7 JB	0.25	0.12	8.3				0.58						0.067 JB	0.1 U
Lead	mg/L	0.00639	0.00385	0.0026 J	0.0007 J	0.001 U	0.0074				0.0005 U		5.3E-05	0.000164	0.000142	7.9E-05	0.00031 J	0.001 U
Lithium	mg/L	0.033	0.024	0.025	0.025	0.029	0.033				0.038		0.028	0.033	0.035	0.029	0.026	0.028
Magnesium	mg/L	2.33	2.18	2.2 B	2	1.8	2.9	1.7	1.9 J	3.8	4.6	4.3			4.46	4.13	4.5 B	3.9
Manganese	mg/L			0.051	0.027	0.031	0.092				0.18						0.058	0.03
Mercury	mg/L	1E-05	9E-06	0.0002 U	0.0002 U	0.0002 U	0.0002 U				0.0002 U	0.0002 U	5E-06 U	5E-06 U	2E-06	5E-06 U	0.0002 U	0.0002 U
Molybdenum	mg/L	0.237	0.23	0.25	0.24	0.23 J	0.24				0.099		0.0135	0.015	0.0137	0.0133	0.02	0.015
Nickel	mg/L			0.014	0.0033	0.0015 J	0.05				0.0025 J						0.0015 J	0.004
Oxidation-Reduction Potential, Field	mV										-155.9	-188.4						
pH, Field	pH units	7.96	7.9	8.07	7.99	7.87	7.84	7.97	7.7	7.48	7.43	7.49	7.54	7.69	7.72	7.74	7.81	7.76
Potassium	mg/L	2.59	2.53	1.8 B	1.4	1.3	2.7	1.3	1.4 J	1.9	2.2	1.9			2.38	4.27	2.1 B	2
Radium-226	pCi/L	1.02	0.322	0.355	0.289	0.351	0.527				0.706	0.562	0.312	0.984	0.122	0.304	0.211	0.338
Radium-226/228	pCi/L	1.229	0.502	0.471	0.919	0.704	2.09				1.74	1.8 J	2.592	2.264	1.642	0.665	0.398	0.584
Radium-228	pCi/L	0.209	0.18	0.116 U	0.63	0.353	1.56				1.04	1.24 J	2.28	1.28	1.52	0.361	0.188 U	0.246 U
Redox Potential, Field	mV	-112.7	-121.3										170.7	11.5	-50.1	26.4		
Selenium	mg/L	0.0004	0.0002	0.005 U	0.005 U	0.005 U	0.005 U				0.005 U		4E-05 J	8E-05 J	7E-05	5E-05 J	0.0012 J	0.005 U
Silver	mg/L			0.001 U	0.001 U	0.001 U	6.2E-05 J				0.00052 J						0.001 U	0.001 U
Sodium	mg/L	827	595	790 JB	790 B	790	760 JB	810	820	1100	1200	1300			557	496	750 JB	690
Strontium	mg/L	0.434	0.41	0.46 B	0.5 B	0.45 B	0.46				1.2				0.686	0.616	0.74 B	0.69
Sulfate	mg/L	68.1	72.3	83 J	82	84	90	85	85	39	22	27	91.6	75.1	63.8	52.7	78 J	83
Temperature, Field	deg C	12.9	12.9					14.8		15	12	16	17.44	15.8	15.3	14		
Thallium	mg/L	0.000159	0.000126	0.001 U	0.001 U	0.001 U	0.00021 J				0.001 U		1E-05 J	9.9E-05	1E-05	5E-05 U	0.001 U	0.001 U
Turbidity, Field	NTU	18.3	15.9	50.1	16.4	8.6	287.1	4.8	10.1	7.2	3.3	0.55	4	8.4	9.2	21.1	6.4	195.4
Vanadium	mg/L			0.0045 J			0.013										0.00054 J	
Zinc	mg/L			0.019 J	0.02 U	0.02 U	0.036				0.02 U						0.02 U	0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

	Location	94136	94136	94136	94136	94136	94136	94136	94136	94136	94136	94136	94136	94136	94136	94136	94137	94137
	Date	2017-06-09	2017-07-17	2017-07-17	2018-03-08	2018-03-08	2018-09-12	2019-03-07	2019-09-17	2019-09-17	2020-03-25	2020-09-25	2021-03-22	2021-09-19	2022-03-23	2022-09-21	2016-08-24	2016-10-06
	Sample Type	N	FD	N	FD	N	N	N	FD	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L						310	310	330	340	370	340	360	300	200 J	310		
Aluminum	mg/L	0.69	0.05 U	0.05 U											0.21			
Antimony	mg/L	0.01 U	0.002 U	0.002 U											0.002 U		5E-05	3E-05 J
Arsenic	mg/L	0.025 U	0.005 U	0.005 U											0.00075 J		0.00179	0.00244
Barium	mg/L	0.099 B	0.11	0.1											0.1		0.0524	0.0578
Beryllium	mg/L	0.001 U	0.001 U	0.001 U											0.001 U		2E-05 U	2E-05 U
Bicarbonate Alkalinity as CaCO3	mg/L						310		330	330	360	340	350	300	200 J	310		
Bicarbonate Alkalinity as HCO3	mg/L							310										
Boron	mg/L	0.54	0.42 JB	0.44 JB	0.49	0.54		0.33	0.41	0.44	0.48	0.41	0.46	0.35	0.45 J	0.35	0.021	0.017
Bromide	mg/L	3.8 J	4.2 J	4.2 J														
Cadmium	mg/L	0.005 U	0.001 U	0.001 U											0.0001 U		6E-05	2E-05
Calcium	mg/L	16	17	17	29	34	17	15	14	14	13	14	14	14	15	13	147	163
Carbonate Alkalinity as CaCO3	mg/L						5 U	5 U	5.9	6	6.1	5.1	7.7	5 U	5 U	5 U		
Chloride	mg/L	940	950	960	940	950	970	900	870	870	960	830	830	930	1100	920 J	27.5	27.7
Chromium	mg/L	0.005 J	0.0032	0.001 J											0.005 U		0.0035	0.0055
Cobalt	mg/L	0.0014 J	0.0007 J	0.00065 J											0.00037 J		0.0922	0.495
Conductivity, Field	uS/cm					3896					3409	3397	3396	3381	3977	3521	1252	1305
Copper	mg/L	0.01 U	0.002 U	0.002 U											0.005 U			
Dissolved Oxygen, Field	mg/L					4.05									0.13	0.36	1.08	0.73
Dissolved Solids, Total	mg/L	2000	1800 J	1900 J	1900	1900		1700	2000	1900	1700	1400	1600	1800	1600	1100 J	958	856
Fluoride	mg/L	1.4	1.1	1.1	1.1	1.1	1.2	1.1	1.3	1.4	1.4	1.4	1.4	1.3	1.3	1.3 U	0.11	0.1 J
Iron	mg/L	0.6	0.1 U	0.1 U											0.22 J			
Lead	mg/L	0.001 U	0.001 U	0.001 U											0.0005 U		0.0002	0.000152
Lithium	mg/L	0.025	0.03	0.029											0.029		0.011	0.017
Magnesium	mg/L	4.1 J	4.3	4.3	6.5	7.4	3.9	3.8	3.5	3.5	3.5	3.6	3.5	3.5	3.9	3.5		
Manganese	mg/L	0.079	0.098	0.089											0.11			
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U											0.0002 U	0.0002 U	8E-06	3E-06 J
Molybdenum	mg/L	0.017 J	0.015	0.015											0.014 J		0.00275	0.00353
Nickel	mg/L	0.01 U	0.002 U	0.002 U											0.005 U			
Oxidation-Reduction Potential, Field	mV														-57.8	-156.4		
pH, Field	pH units	7.8		7.89		7.74	7.87	8		8.02	8.06	8.07	7.95	7.87	7.88	7.92	7.11	6.93
Potassium	mg/L	2.1 J	2	2	2.4	2.6	2.1	1.8	1.9	1.9	1.9	1.9	1.9	1.7	2.2	1.8		
Radium-226	pCi/L	0.191	0.123	0.22											0.434	0.289	0.171	1.71
Radium-226/228	pCi/L	0.528	0.521	0.765											0.845	0.352 U	2.681	2.373
Radium-228	pCi/L	0.337 U	0.398	0.545											0.411	0.0631 U	2.51	0.663
Redox Potential, Field	mV																-32.2	-21.4
Selenium	mg/L	0.025 U	0.005 U	0.005 U											0.0012 J		5E-05 J	9E-05 J
Silver	mg/L	0.005 U	0.001 U	0.001 U											0.001 U			
Sodium	mg/L	750	720 JB	720 JB	790	800	760	710	750	760	690	690	710	650	740	720		
Strontium	mg/L	0.65 B	0.73	0.73											0.66			
Sulfate	mg/L	99	60	61	150	180	75	60	81	85	73	67	65	59	55	52	348	330
Temperature, Field	deg C					14.7					15	16	16	17	16	18.1	19.28	17
Thallium	mg/L	0.001 U	0.001 U	0.001 U											0.001 U		4E-05 J	4E-05 J
Turbidity, Field	NTU	8.5		5.9		1.1	2.94			12	7	2.9	2	5.6	4	14.87	5.9	9.7
Vanadium	mg/L		0.005 U	0.005 U														
Zinc	mg/L	0.1 U	0.02 U	0.02 U											0.02 U			

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		94137	94137	94137	94137	94137	94137	94137	94137	94137	94137	94137	94137	94137	94137	94137	94137	94139
Date		2016-12-01	2017-02-01	2017-03-23	2017-04-28	2017-06-09	2017-07-17	2018-03-08	2018-09-12	2019-03-11	2019-09-17	2020-03-25	2020-09-25	2021-03-22	2021-09-19	2022-03-23	2022-09-21	2016-08-23
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	341	360						330	330	340	350	330	340	310	210 J	370	
Aluminum	mg/L			0.039 J	0.05 U	0.27	0.05 U									0.38 J		
Antimony	mg/L	3E-05	4E-05 J	0.00038 J	0.002 U	0.002 U	0.002 U									0.002 U		4E-05 J
Arsenic	mg/L	0.00211	0.00138	0.0026 J	0.0012 J	0.0036 J	0.0028 J									0.024		0.00328
Barium	mg/L	0.0553	0.049	0.068 B	0.056	0.065 B	0.059									0.058		0.0893
Beryllium	mg/L	5E-06	2E-05 U	0.001 U	0.001 U	0.001 U	0.001 U									0.001 U		6.5E-05
Bicarbonate Alkalinity as CaCO3	mg/L								330		340	350	330	340	310	210 J	370	
Bicarbonate Alkalinity as HCO3	mg/L									330								
Boron	mg/L	0.022	0.037	0.04 J	0.028 JB	0.039 J	0.072 JB	0.035 J^		0.037 J	0.1 U	0.1 U	0.024 J	0.1 U	0.1 U	0.2 U	0.1 U	0.498
Bromide	mg/L	0.106	0.085	0.11 J	2.5 U	0.11 J	0.09 J											
Cadmium	mg/L	7E-05	5E-05	0.001 U	0.001 U	0.001 U	0.001 U									0.00029		1E-05 J
Calcium	mg/L	154	148	160 B	160	160	160	150	160	150	150	150	150	160	140	170	140	6.7
Carbonate Alkalinity as CaCO3	mg/L								5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Chloride	mg/L	27.8	27.5	29	29	29	28	28	28	28	26	27	28	26	28	27	27 U	487
Chromium	mg/L	0.0014	0.00169	0.0031	0.002 U	0.0049	0.0038									0.0097 J		0.0008
Cobalt	mg/L	0.0503	0.056	0.12	0.031	0.097	0.17									0.51		0.000397
Conductivity, Field	uS/cm	1283	1302					1281				1221	1213	1212	1210	1251	1273	2454
Copper	mg/L			0.00065 JB	0.002 U	0.0045	0.002 U									0.005 U		
Dissolved Oxygen, Field	mg/L	0.83	1.29					1.61								0.31	0.26	1.05
Dissolved Solids, Total	mg/L	867	883	890 J	920 J	880	920 J	890		870	890	870	830	880	900	870	620	1420
Fluoride	mg/L	0.12	0.11	0.14	0.12 J	0.13 J	0.12	0.12 J	0.11	0.25 U	0.11	0.12	0.12	0.11	0.13	0.13	0.11 U	4.22
Iron	mg/L			0.67 JB	0.19	1.6	0.83									6.4		
Lead	mg/L	0.000156	7E-05	0.00019 J	0.001 U	0.00053 J	0.001 U									0.0026 J		0.000963
Lithium	mg/L	0.015	0.007	0.0078 J	0.0096	0.0088	0.0088									0.0089 J		0.02
Magnesium	mg/L	47.9	47.4	51 B	47	50	48	51	49	51	48	47	49	48	46	48	48	
Manganese	mg/L			0.088	0.06	0.13	0.14									0.82		
Mercury	mg/L	5E-06	2E-06 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U									0.0002 U	0.0002 U	5E-06 U
Molybdenum	mg/L	0.00287	0.00633	0.0034 J	0.0027 J	0.0031 J	0.0026 J									0.002 U		0.2
Nickel	mg/L			0.0028	0.0019 J	0.0039	0.003									0.01		
Oxidation-Reduction Potential, Field	mV															-165.3	-282.3	
pH, Field	pH units	6.98	7.02	7.03	6.96	7.05	6.96	6.98	7.01	7.13	7.13	7.14	7.2	7.02	7.03	7.05	7.14	8.19
Potassium	mg/L	1.82	2.18	1.7 B	1.7	1.8	1.7	1.7	1.9	2	1.8	1.6	1.7	1.7	1.6	1.8	1.6	
Radium-226	pCi/L	0.29	0.257	0.239	0.111	0.0957	0.0922									0.461	0.215	1.34
Radium-226/228	pCi/L	1.268	3.127	0.261 U	0.201 U	0.331 U	0.3 U									1.1	0.427 U	16.81
Radium-228	pCi/L	0.978	2.87	0.0221 U	0.0903 U	0.235 U	0.208 U									0.644	0.212 U	15.47
Redox Potential, Field	mV	-55.4	-74.7															-51.8
Selenium	mg/L	5E-05	0.0001 U	0.00056 J	0.005 U	0.005 U	0.005 U									0.0015 J		0.0002
Silver	mg/L			6E-05 J	0.001 U	6.8E-05 J	0.001 U									0.00065 J		
Sodium	mg/L	70.7	65	68 JB	64 B	68	68 JB	67	64	67	65	61	64	64	59	68	65 J	
Strontium	mg/L	0.298	0.276	0.32 B	0.29	0.28 B	0.29									0.29		
Sulfate	mg/L	349	332	360 J	360	360	370	360	370	370	350	390	330	330	340	340	320	56.1
Temperature, Field	deg C	15.7	14					14.7				14	17	17	17	18	19.2	20.42
Thallium	mg/L	4E-05	0.000166	0.001 U	0.001 U	0.001 U	0.001 U									0.00042 J		5E-05 U
Turbidity, Field	NTU	7.8	7.1	8	13.9	4.5	6.7	2.3	4.31		3	2.5	1.3	8.1	1.6	63.4	11.11	69.7
Vanadium	mg/L			0.00076 J			0.005 U											
Zinc	mg/L			0.02 U	0.02 U	0.02 U	0.02 U									0.02 UJ		

Notes:

FD = Field duplicate sample

N = Normal environmental sample

deg C = Degree Celcius

mg/L = Milligrams per liter

mV = Milivolts

NTU = Nephelometric Turbidity Unit

uS/cm = Microsiemens per centimeter

pCi/L = Picocuries per liter

B: Compound was found in the blank and sample.

J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

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Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		94139	94139	94139	94139	94139	94139	94139	94139	94139	94139	94139	94139	94139	94139	94139	94139	94139
Date		2016-10-05	2016-12-02	2017-02-02	2017-03-29	2017-04-28	2017-06-12	2017-06-12	2017-07-18	2018-03-15	2018-09-24	2019-03-11	2019-09-23	2020-03-19	2020-09-22	2021-03-25	2021-09-28	2022-03-28
Sample Type		N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L		563	555						510	500	500	490	520	500	500	500	490
Aluminum	mg/L				1.1 J	0.092	3.8 B	5.1 B	32									3.4
Antimony	mg/L	3E-05 J	6E-05	3E-05 J	0.0017 J	0.002 U	0.002 U	0.002 U	0.002 U									0.002 U
Arsenic	mg/L	0.00322	0.00438	0.00317	0.0031 J	0.0033 J	0.0047 J	0.0051	0.008									0.0036
Barium	mg/L	0.0852	0.0969	0.081	0.097 B	0.092	0.11	0.12	0.29									0.13
Beryllium	mg/L	2.7E-05	7.1E-05	2E-05 J	0.001 U	0.001 U	0.001 U	0.00038 J	0.0015									0.00033 J
Bicarbonate Alkalinity as CaCO3	mg/L									490	490		470	490	470	480	480	470
Bicarbonate Alkalinity as HCO3	mg/L											480						
Boron	mg/L	0.507	0.458	0.456	0.52	0.54 B	0.53	0.54	0.54 JB	0.51	0.5	0.54	0.51	0.51	0.51	0.55	0.53	0.52 J
Bromide	mg/L		1.75	1.57	1.9 J	1.8 J	1.8 J	1.8 J	1.8 J									
Cadmium	mg/L	1E-05 J	2E-05 U	6E-06 J	0.001 U	0.001 U	0.001 U	0.001 U	0.00034 J									7.9E-05 J
Calcium	mg/L	5.6	7.99	6.66	5.5 B	7.1	9.6	10	13	7.1	6.8	6.7	7.5	7.4	8.1	6.9	6.6	6.6
Carbonate Alkalinity as CaCO3	mg/L									15	13	17	19	27	24	27	22	18
Chloride	mg/L	503	450	500	510	510	480	480	520	500	560	500	480	560	560	480	520	490
Chromium	mg/L	0.0017	0.00236	0.000647	0.0017 J	0.002 U	0.0029	0.0052	0.014									0.0019 J
Cobalt	mg/L	0.00031	0.000507	0.000159	0.00037 J	0.001 U	0.00062 J	0.00082 J	0.0035									0.00093
Conductivity, Field	uS/cm	2630	2608	2726						2550				2467	2493	2486	2473	2565
Copper	mg/L				0.0014 JB	0.002 U	0.007 B	0.0063 B	0.019									0.0057 J
Dissolved Oxygen, Field	mg/L	0.41	0.79	1.27						1.29								0.57
Dissolved Solids, Total	mg/L	1460	1390	1360	1500 J	1500 J	1400	1400	1400 J	1400	1400	1300	1300	1300	1400	1400	1500	1300 J
Fluoride	mg/L	4.08	4.05	4.11	4.6	4.7	5	5	5.1	4.4	4.6	4.4	4.7	4.6	4.6	4.5	4.8	4.5
Iron	mg/L				0.62 JB	0.048 J	1.7	2.4	16									1.6
Lead	mg/L	0.00125	0.000921	0.000319	0.001 J	0.001 U	0.0025	0.004	0.029									0.0039 J
Lithium	mg/L	0.026	0.026	0.014	0.019	0.019	0.018	0.019	0.024									0.019
Magnesium	mg/L		2.44	2	1.9 B	2.1	3.2	3.4	7.5	2.3	2.1	2.3	2.9	2.3	2.9	2	1.9	2.4
Manganese	mg/L				0.026	0.017	0.023	0.033	0.28									0.042
Mercury	mg/L	5E-06 U	1E-05	3E-06 J	0.0002 U	0.0002 U	0.0002 U	0.0002 UJ	0.0002 U									0.0002 U
Molybdenum	mg/L	0.231	0.214	0.195	0.22	0.21	0.19 J	0.2 J	0.19									0.16
Nickel	mg/L				0.00089 J	0.002 U	0.0025	0.0027	0.013									0.0039 J
Oxidation-Reduction Potential, Field	mV																	-11.5
pH, Field	pH units	8.18	8.17	8.13	8.12	8.14		8.01	7.92	8.19	8.17	8.37	8.36	8.35	8.22	8.22	8.28	8.34
Potassium	mg/L		2.6	1.97	1.4 B	1.4	1.5	1.6	2.4	1.4	1.4	1.4	1.6	1.3	1.5	1.4	1.4	1.5
Radium-226	pCi/L	0.464	0.936	0.454	0.387	0.547	0.559	0.61	0.886 J									0.874
Radium-226/228	pCi/L	1.634	1.606	1.196	0.797	0.907	1.12	0.971	2.21									1.57
Radium-228	pCi/L	1.17	0.67	0.742	0.41 U	0.36 U	0.565	0.361 U	1.32									0.693 U
Redox Potential, Field	mV	-191.2	-43.3	-102.6														
Selenium	mg/L	0.0001	0.0002	3E-05 J	0.00089 J	0.005 U	0.005 U	0.00091 J	0.0029 J									0.005 U
Silver	mg/L				0.001 U	0.001 U	0.001 U	0.001 U	0.00019 J									0.001 U
Sodium	mg/L		425	451	580 JB	570	530	550	560 JB	550	590	560	510	550	520	550	570	560
Strontium	mg/L		0.453	0.395	0.4 B	0.46	0.48 B	0.51 B	0.75									0.48
Sulfate	mg/L	49	52.8	51	62 J	62	70	69	66	65	74	66	60	62	59	59	61	57
Temperature, Field	deg C	17.9	14.8	14.3						15.7				16	17	15	18	14
Thallium	mg/L	5E-05 U	2E-05 J	2E-05 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U									0.001 U
Turbidity, Field	NTU	8.8	169.8	8.7	5	5.9		90.8	69.3	22	10.8		34	7.4	309	9.8	4.9	50.3
Vanadium	mg/L								0.0079									
Zinc	mg/L				0.02 U	0.02 U	0.02 U	0.02 U	0.081									0.02 U

Notes:
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Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

	Location	94139	96152	96152	96152	96152	96152	96152	96152	96152	96152	96152	96152	96152	96152	96153R	96153R	96153R
	Date	2022-09-16	2019-03-28	2019-09-22	2020-03-26	2020-09-17	2021-03-10	2021-09-29	2022-03-31	2022-05-10	2022-07-20	2022-08-16	2022-08-16	2022-09-14	2022-10-21	2016-08-23	2016-10-03	2016-11-29
	Sample Type	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	490	450	450	470	550	560	590	600	470	590	480	480	500	510			262
Aluminum	mg/L								2.7									
Antimony	mg/L								0.002 U	0.002 U	0.002 U	0.002 U	0.002 U			0.00059	0.00036	0.00024
Arsenic	mg/L								0.024	0.0022 J	0.0092	0.0054	0.0054			0.00237	0.00142	0.0013
Barium	mg/L								0.49	0.51	0.83	0.66	0.69			0.0315	0.0901	0.136
Beryllium	mg/L								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.000515	0.000196	0.00019
Bicarbonate Alkalinity as CaCO3	mg/L	460	450	450	470	550	560	590	600	470	590	480	480	500	510			
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.52	0.43	0.41	0.43	0.43	0.45	0.48	1.2 U	0.45				0.48		0.448	0.423	0.463
Bromide	mg/L																	0.2 U
Cadmium	mg/L								0.0001 U	0.001 U	0.001 U	0.001 U	0.001 U			8E-05	0.0001	2E-05 J
Calcium	mg/L	7.3	85	61	64	50	43	41	54	49				46		189	208	177
Carbonate Alkalinity as CaCO3	mg/L	26	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	520 J	4900	4300	4800	3400	3200	3100	3000	3500				3200	3300	34.3	16.1	11.6
Chromium	mg/L								0.0093	0.005 U	0.005 U	0.0027 J	0.003 J			0.0034	0.0027	0.00261
Cobalt	mg/L								0.008	0.002	0.003	0.0025	0.0025			0.0234	0.0266	0.00693
Conductivity, Field	uS/cm	2613			12690	10609	10275	4382	10560	9762	10590	10594	10594	10779	10518	3013	2934	2473
Copper	mg/L								0.012 J									
Dissolved Oxygen, Field	mg/L	0.37							1.24	0.36	0.67	0.52	0.52	0.65	0.59	4.65	3.74	1.71
Dissolved Solids, Total	mg/L	950	6400	6200	6600	4500	5100	5000	4900	5000				4500 J	5200	2300	2160	1700
Fluoride	mg/L	4.9 J	0.84	0.91	0.86	0.97	0.72	1	0.85	0.91	0.77 J	0.78	0.72 J	0.78 J	0.72	0.8	0.72	0.67
Iron	mg/L								7.3									
Lead	mg/L								0.0059 J	0.001 U	0.00051 J	0.001 U	0.00045 J			0.00648	0.00278	0.00277
Lithium	mg/L								0.098	0.069	0.083	0.088	0.091			0.096	0.081	0.053
Magnesium	mg/L	2.4	28	24	23	17	16	14	19	16	16	16	17	15				33.6
Manganese	mg/L								0.53									
Mercury	mg/L	0.0002 U							0.0002 U	0.00015 J	0.0002 U	0.0002 U	0.0002 U	0.0002 U		8E-06	2E-06 J	1.5E-05
Molybdenum	mg/L								0.002 U	0.0032 J	0.0038 J	0.0037 J	0.004 J			0.0126	0.0114	0.00812
Nickel	mg/L								0.017									
Oxidation-Reduction Potential, Field	mV	-66.7							187.5	-110.9	-195.1	-109.4	-109.4	-141.2	-100.9			
pH, Field	pH units	8.2	7.71	7.55	7.75	7.68	7.56	7.39	7.41	7.16	7.53	7.33	7.33	7.29	7.21	7.18	6.99	7.35
Potassium	mg/L	1.6	14	11	11	9.3	8.9	8.4	9 J	8.3	8.3	8.1	8.4	8.2				6.7
Radium-226	pCi/L	0.464							3.74	1.14	2.33	1.49	1.09	1.92		0.634	0.403	0.968
Radium-226/228	pCi/L	1.37							5.19	2.75	5.15	3.53	3.49	4.24 J		2.434	1.963	1.64
Radium-228	pCi/L	0.902 U							1.45 U	1.61	2.81	2.04	2.4	2.32 J		1.8	1.56	0.672
Redox Potential, Field	mV															36.1	136.7	227.2
Selenium	mg/L								0.0015 J	0.005 U	0.005 U	0.005 U	0.005 U			0.0009	0.0005	0.0006
Silver	mg/L								0.00064 J									
Sodium	mg/L	550	2800	2500	2500	2100	2000	2000	2300	2100	2200	2200	2300	2100				287
Strontium	mg/L								3.1									3.22
Sulfate	mg/L	63 J	19	16	20	28	27	66	92	43				49	42	1290	1320	973
Temperature, Field	deg C	19.1			15	14	13	13	13	12.7	14.5	13.5	13.5	13.3	13.2	14.3	14.6	13.3
Thallium	mg/L								0.001 U	0.001 U	0.001 U	0.001 U	0.0017 J			5E-05 J	8E-05 J	2E-05 J
Turbidity, Field	NTU	53.7		252	230	76.1	159	56.6	536.5	16.33	19.03	15.01	15.01	9	9.21	141.2	65	49.6
Vanadium	mg/L																	
Zinc	mg/L								0.02									

Notes:

FD = Field duplicate sample

N = Normal environmental sample

deg C = Degree Celcius

mg/L = Milligrams per liter

mV = Milivolts

NTU = Nephelometric Turbidity Unit

uS/cm = Microsiemens per centimeter

pCi/L = Picocuries per liter

B: Compound was found in the blank and sample.

J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

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

Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96153R	96154R
Date		2017-03-21	2017-04-25	2017-06-06	2017-07-12	2018-03-22	2018-09-13	2019-03-29	2019-09-19	2020-03-15	2020-03-24	2020-09-15	2021-03-19	2021-09-20	2022-03-30	2022-09-13	2022-10-25	2016-08-23
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	84					71	140	5 U	280	270	230	260	350	250	260	250	
Aluminum	mg/L		0.56	0.47	0.085 B										0.31			
Antimony	mg/L	0.00085 J	0.002 U	0.00057 J	0.002 U		0.002 U								0.00071 J			0.00091
Arsenic	mg/L	0.0044 J	0.005 U	0.005 U	0.005 U		0.005 U								0.002 U			0.00644
Barium	mg/L	0.061 JB	0.027	0.037	0.03		0.028								0.022			0.13
Beryllium	mg/L	0.012	0.0048	0.00038 J	0.001 U		0.0052								0.00031 J			0.000546
Bicarbonate Alkalinity as CaCO3	mg/L						71	140	5 U	280	270	230	260	120	250	260	250	
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.23	0.25	0.48 B	0.48 B		0.32	0.39	0.18	0.54	0.51	0.5	0.58	0.51	0.58 J	0.55		0.441
Bromide	mg/L	5 U	5 U	5 U	5 U													
Cadmium	mg/L	0.00036 J	0.00024 J	0.001 U	0.001 U		0.00027 J								0.0001 U			5E-05
Calcium	mg/L	210 B	200	72	130		150	150	160	92	120	140	120	120	59	120		9.41
Carbonate Alkalinity as CaCO3	mg/L						5 U	5 U	5 U	5 U	5 U	5 U	5 U	230	5 U	5 U	5 U	
Chloride	mg/L	16	20	35	19		19	21	20	31	14	15	13	11	17	10	13	413
Chromium	mg/L	0.0028 J	0.002 U	0.002 U	0.002 U		0.002 U								0.005 U			0.0022
Cobalt	mg/L	0.3	0.29	0.012	0.0063		0.2								0.0013			0.00204
Conductivity, Field	uS/cm					2256				2396	2274	2131	2165	2104	2783	2297	2021	2462
Copper	mg/L		0.002 U	0.002 U	0.0034										0.005 U			
Dissolved Oxygen, Field	mg/L					0.12									0.61	2.65	8.73	0.68
Dissolved Solids, Total	mg/L	1800	1900 J	1800	1600 J		1600	1500	1600	1500 J	1700	1500	1500	1500	140 J	1300 J	1300	1940
Fluoride	mg/L	2.3	2.3	1.4	1.2		1.4	1.1	2.6	1.2	1	0.81	0.87	0.8	0.83	0.75 J	0.87	3.32
Iron	mg/L		30	0.94	0.14										0.87			
Lead	mg/L	0.0014 J	0.001 U	0.00045 J	0.001 U		0.001 U								0.0005 U			0.00565
Lithium	mg/L	0.18	0.2	0.069	0.054		0.16								0.036 J			0.08
Magnesium	mg/L		73	17	26			53	69	19	23	28	23	23	11	23		
Manganese	mg/L	18 B	17	1.6	0.99										0.13			
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U								0.0002 U	0.0002 U		2.5E-05
Molybdenum	mg/L	0.0065 J	0.0042 J	0.02	0.0068 J		0.003 J								0.012			0.0557
Nickel	mg/L		0.27	0.018	0.0061										0.0019 J			
Oxidation-Reduction Potential, Field	mV														128.8	46.5	193	
pH, Field	pH units	6.46	6.19	7.2	7.49	7.14	6.04	6.59	5.31	7.42	7.36	7.23	7.4	7.41	7.62	7.37	7.63	9.5
Potassium	mg/L	10 JB	11	5.3	5.8			15	11	5.5	5.8	6	5.5	5.8	3.8 J	5.8		
Radium-226	pCi/L	0.476	0.475	0.335	0.05 U		0.328								0.1 U	0.279		1.21
Radium-226/228	pCi/L	0.764	0.926	0.607	0.702		0.72								0.28 U	1.12		1.566
Radium-228	pCi/L	0.288 U	0.451	0.272 U	0.652 J		0.393 U								0.18 U	0.845		0.356
Redox Potential, Field	mV																	97.1
Selenium	mg/L	0.0053 J	0.0017 J	0.0014 J	0.001 JB		0.005 U								0.005 U			0.001
Silver	mg/L		0.001 U	0.001 U	0.001 U										0.001 U			
Sodium	mg/L	160 JB	190	490 B	330			280	150	420	350	330	320	320	510	310		
Strontium	mg/L	1.5 JB	1.4	1.3 B	2.6										1.4			
Sulfate	mg/L	1200	1700	1000	1000		1100	1100	1100	1200	1100	910	900	950	880	930	900	99.2
Temperature, Field	deg C					12.2				13	13	14	12	14	12	14.4	13.9	16.5
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U								0.001 U			6.4E-05
Turbidity, Field	NTU	113.6	87.4	19.2	30.7	7	69.4		85	4	10.5	9.8	2.9	7.7	14.2	9.92	81.21	737
Vanadium	mg/L																	
Zinc	mg/L		0.61	0.018 J	0.02 U										0.02 U			

Notes:

FD = Field duplicate sample

N = Normal environmental sample

deg C = Degree Celcius

mg/L = Milligrams per liter

mV = Milivolts

NTU = Nephelometric Turbidity Unit

uS/cm = Microsiemens per centimeter

pCi/L = Picocuries per liter

B: Compound was found in the blank and sample.

J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

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

Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

	Location	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R	96154R
	Date	2016-10-03	2016-11-29	2017-01-30	2017-03-21	2017-04-25	2017-06-06	2017-07-12	2018-03-22	2018-09-13	2019-03-29	2019-03-29	2019-09-19	2020-03-12	2020-09-14	2021-03-19	2021-09-20	2022-03-30
	Sample Type	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L		558	607	600					460	350	350	280	560	530	570	550 J	550
Aluminum	mg/L					0.42	1.4	0.96 B										0.4
Antimony	mg/L	0.00098	0.00046	0.00078	0.0014 J	0.0014 J	0.002 U	0.0006 JB										0.002 U
Arsenic	mg/L	0.00668	0.00409	0.00277	0.0049 J	0.0093	0.0022 J	0.0025 J										0.0023
Barium	mg/L	0.115	0.219	0.194	0.28 JB	0.067	0.12	0.11										0.16
Beryllium	mg/L	0.000319	0.000679	0.000166	0.001 U	0.001 U	0.001 UJ	0.001 U										0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L									110	5 U	5 U	5 U	280	470	410	500 J	440
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.395	0.504	0.454	0.49	0.5	0.53 B	0.53 B			0.38	0.38	0.39	0.43	0.45	0.51	0.53	0.61 J
Bromide	mg/L		1.48	1.36	1.5 J	1.4 J	2.4	1.8 J										
Cadmium	mg/L	2E-05	4E-05	4E-05	0.001 U	0.001 U	0.001 U	0.001 U										0.0001 U
Calcium	mg/L	5.34	10.5	22.1	31 B	2.1	4.8	4.3		3.2	61	61	26	17	7	8.3	14	11
Carbonate Alkalinity as CaCO3	mg/L									350	130	130	180	280	58	160	48 J	110
Chloride	mg/L	452	410	446	410	410	470	490		410	340	330	350	490	470	370	520	490
Chromium	mg/L	0.0057	0.0121	0.00249	0.0051 J	0.002 U	0.0078 J	0.0013 J										0.005 U
Cobalt	mg/L	0.00176	0.00443	0.000799	0.00095 J	0.00037 J	0.00042 J	0.00022 J										0.0002 J
Conductivity, Field	uS/cm	2602	2562	2549					2650					2483	2545	2551	2567	2802
Copper	mg/L					0.002 U	0.0043 B	0.002 U										0.005 U
Dissolved Oxygen, Field	mg/L	0.59	1.16	1.02					0.15									0.84
Dissolved Solids, Total	mg/L	1550	1850	1590	1400	1400 J	1500	1500 J			860	850	900	1400	1400	1400	1300	1400
Fluoride	mg/L	3.36	3.4	3.33	4.2	4.5	4.1	4.5		4.4	3.3	3.3	3.9	4	4.2	3.8	4.4	4.4
Iron	mg/L					0.29	1.4	0.64										0.33 J
Lead	mg/L	0.00371	0.00967	0.0031	0.0021 J	0.001 U	0.00077 J	0.00048 J										0.0005 U
Lithium	mg/L	0.054	0.04	0.137	0.24	0.19	0.048	0.049										0.036 J
Magnesium	mg/L		4.24	1.48		0.55 J	1.5	1.4		0.51 J	0.34 J	0.41 J	0.24 J	1.5	1.3	1.2	1.5	1.3
Manganese	mg/L				0.02 B	0.011	0.013	0.0053										0.0046 J
Mercury	mg/L	1E-05	3E-05	1.8E-05	0.0002 U	0.0002 U	0.0002 U	0.0002 U										0.0002 U
Molybdenum	mg/L	0.102	0.0724	0.0692	0.09 J	0.093	0.1	0.1										0.1
Nickel	mg/L					0.002 U	0.0028	0.002 U										0.005 U
Oxidation-Reduction Potential, Field	mV																	40.2
pH, Field	pH units	9.36	8.67	9.64	10.67	10.32	8.76	8.82	9.85	10.11		12.06	11.7	9.76	8.93	9.18	8.57	8.97
Potassium	mg/L		7.64	33.8	58 JB	41	6	6.1		12	20	20	10	7.2	3.6	4.4	3.8	4 J
Radium-226	pCi/L	0.53	1.68	0.96	0.696	0.664	0.251	0.213										0.296
Radium-226/228	pCi/L	1.434	2.328	1.762	1.21	0.894	0.655	0.577										0.557
Radium-228	pCi/L	0.904	0.648	0.802	0.51	0.23 U	0.405	0.364 UJ										0.26 U
Redox Potential, Field	mV	54.8	175.9	139.8														
Selenium	mg/L	0.001	0.002	0.0006	0.00096 J	0.005 U	0.005 U	0.005 U										0.0011 J
Silver	mg/L					0.001 U	0.0017	0.00021 J										0.001 U
Sodium	mg/L		478	449	540 JB	510	540 B	590		450	340	340	320	520	500	530	570	600
Strontium	mg/L		0.425	1.37	2.6 JB	0.57	0.36 B	0.38										0.53
Sulfate	mg/L	87.4	125	66.8	64	60	100	100		42	29	29	33	33	36	36	41	42
Temperature, Field	deg C	14.4	13.3	11.2					12.6					13	14	13	14	16
Thallium	mg/L	0.000144	0.000121	0.000114	0.001 U	0.001 U	0.001 U	0.001 U										0.001 U
Turbidity, Field	NTU	209.7	642.7	349.1	98.6	63.9	44.8	16.2	6	6.23			41	140	87.9	53.9	59.9	22.8
Vanadium	mg/L																	
Zinc	mg/L					0.02 U	0.02 U	0.02 U										0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location	96154R	96154R	96156	96156	96156	96156	96156	96156	96156	96156	96156	96157	96157	96157	96158	96158	96158
Date	2022-09-14	2022-10-19	2016-08-23	2016-10-03	2016-11-29	2017-01-30	2017-03-21	2017-04-25	2017-06-06	2017-07-12	2018-03-26	2021-09-28	2022-03-29	2022-09-12	2021-09-28	2022-03-29	2022-03-29
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	520	510				165	150					440	340	380	330	320	320
Aluminum	mg/L								0.05 U	0.079	0.084 B			0.12			1.5	1.4
Antimony	mg/L			0.0001 J	0.00141	0.00208	0.00022	0.0025	0.002 U	0.0017 J	0.0012 JB			0.002 U			0.002 U	0.00089 J
Arsenic	mg/L			0.0141	0.0184	0.0398	0.00202	0.0035 J	0.0042 J	0.0043 J	0.0036 J			0.03			0.0011 J	0.0011 J
Barium	mg/L			16.2	17.4	17.7	14.8	16 JB	16	16	15			0.42			0.43	0.42
Beryllium	mg/L			0.0002 U	0.000129	0.0003 J	2E-05 U	0.00043 J	0.001 U	0.001 UJ	0.001 U			0.001 U			0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	460	450										440	340	380	330	320	320
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.48		0.394	0.357	0.375	0.379	0.46	0.4	0.43 B	0.4 B		0.15	0.16 J	0.12	0.4	0.39 J	0.4 J
Bromide	mg/L						58.6	57	73	67	51							
Cadmium	mg/L			0.00022	0.00221	0.00419	0.0001	0.00043 J	0.00027 J	0.00088 J	0.0015			0.0001 U			0.0001 U	7.5E-05 J
Calcium	mg/L	35		409	354	399	346	380 B	380	390	370		55	61	51	64	67	66
Carbonate Alkalinity as CaCO3	mg/L	57	63										5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	430	440	11700			12000	13000	17000	12000	12000		240	290	210	1100	1000	1000
Chromium	mg/L			0.0011	0.0195	0.0598	0.000629	0.0011 J	0.002 U	0.0077 J	0.016			0.0014 J			0.0056	0.0059
Cobalt	mg/L			0.00194	0.00371	0.00517	0.00145	0.0021	0.0016	0.0015	0.0017			0.00054			0.0029	0.0029
Conductivity, Field	uS/cm	2529	2529	30150	32283	17682	30266					32509	1358	1639	1481	3724	4072	4072
Copper	mg/L								0.82	1.3 B	1.3			0.005 U			0.0026 J	0.0025 J
Dissolved Oxygen, Field	mg/L	0.51	0.65	2.61	2.64	5.31	4.89					0.24		0.35	1.44		1.12	1.12
Dissolved Solids, Total	mg/L	1200	1500	18300			18100	15000	19000 J	21000	15000 J		740	800 J		2000	2000	2000
Fluoride	mg/L	4.2	4.1	0.33			2 U	2.5 U	5 U	1.3 U	2.5 U		0.93	0.88	0.86	1.3	1.2	1.3
Iron	mg/L								4.5	7.7	2.7			2.9			3.6	3.6
Lead	mg/L			0.00236	0.0218	0.0455	0.00115	0.0022 J	0.001 U	0.0055	0.0033			0.00053			0.0018	0.0018
Lithium	mg/L			0.269	0.252	0.296	0.294	0.22	0.25	0.25	0.23			0.0051 J			0.039	0.037
Magnesium	mg/L	12				117	111		130	140	130		12	12	12	13	14	13
Manganese	mg/L							0.93 B	0.75	0.79	0.74			0.16			0.18	0.17
Mercury	mg/L	0.0002 U		5E-06 U	0.0002 U	2.1E-05	1.1E-05	0.0002 U	0.0002 U	0.0002 U	0.0002 U			0.0002 U	0.0002 U		0.0002 U	0.0002 U
Molybdenum	mg/L			0.00987	0.017	0.0225	0.0054	0.0056 J	0.0073 J	0.017	0.0086 J			0.0064			0.005	0.0051
Nickel	mg/L								0.0045	0.0049	0.055			0.005 U			0.0048 J	0.0046 J
Oxidation-Reduction Potential, Field	mV	-19.5	148											-212.6	-159.1		-105.2	-105.2
pH, Field	pH units	8.62	8.38	7.07	6.83	7.23	6.77	8.93	8.32	7.26	8.04	7.4	7.6	7.49	7.47	7.34	7.29	7.29
Potassium	mg/L	14				36.5	47.4	22 JB	22	22	21		1.6	1.5	1.6	3.3	3.5	3.3
Radium-226	pCi/L	1.39		33.8			51.2	94	86.5	64.4	59.3 J			0.518	0.818 J		0.821	1.09
Radium-226/228	pCi/L	2.53 J		75.85	41.96		122.3	189	189	138	119 J			1.49	1.54 J		3.57	3.52
Radium-228	pCi/L	1.14 J		42.05	41.96		71.1	95.2	103	73.4	60.2			0.974	0.724 U		2.75	2.43
Redox Potential, Field	mV			-82.4	-66.3	176.5	102.7											
Selenium	mg/L			0.0006 J	0.0004 J	0.001 J	0.0001	0.0013 J	0.005 U	0.00091 J	0.0011 JB			0.005 U			0.005 U	0.005 U
Silver	mg/L								6.6E-05 J	0.001 U	8.9E-05 J			0.001 U			0.001 U	0.00062 J
Sodium	mg/L	500				2620	1400	6800 JB	6100	1 U	6400		220	250	210	700	750	830
Strontium	mg/L					30.4	25.3	31 JB	33	31 B	27			0.84			2.2	2.5
Sulfate	mg/L	72	65	1.9			1 J	50 U	100 U	25 U	50 U		4.3	2	3.4	20	15	16
Temperature, Field	deg C	15.4	13.2	15.2	16.1	15.7	9.1					12.7	16	14	17.1	16	13	13
Thallium	mg/L			0.0005 U	0.0002 J	0.0002 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
Turbidity, Field	NTU	811.12	762.15	9	38.2	123.8	64.8	81.7	72.5	83.2	48	1	2.8	36.6	13.04	1.5	71.3	71.3
Vanadium	mg/L																	
Zinc	mg/L								0.19	0.18	0.16			0.02 U			0.02 U	0.02 U

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		96158	9631	9801	9801	9801	9801	9801	9801	9801	9801	9801	9801	9801	9801	9801	9801	9801
Date		2022-09-12	2021-09-27	2016-08-24	2016-10-06	2016-12-02	2017-02-01	2017-03-29	2017-06-09	2017-06-09	2017-07-17	2018-03-16	2018-09-12	2019-03-12	2019-09-24	2020-03-24	2021-09-27	2021-09-27
Sample Type		N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	FD	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	340	290			141	160					130	130	140	130	140	150	150
Aluminum	mg/L							0.25 U	1.3 U	1.3 U	0.1 U							
Antimony	mg/L			0.0005 U	0.0005 U	5E-05 U	0.0005 U	0.01 U	0.05 U	0.05 U	0.004 U		0.002 U					
Arsenic	mg/L			0.00075	0.00109	0.00072	0.00056	0.025 U	0.13 U	0.13 U	0.01 U		0.005 U					
Barium	mg/L			5.16	4.84	4.63	4.33	5 B	4.7 B	5 B	5.3		4.8					
Beryllium	mg/L			0.0002 U	0.0002 U	2E-05 U	0.0002 U	0.005 U	0.001 U	0.001 U	0.002 U		0.001 U					
Bicarbonate Alkalinity as CaCO3	mg/L	340	290									130	130		130	140	150	150
Bicarbonate Alkalinity as HCO3	mg/L													140				
Boron	mg/L	0.38	0.38	0.378	0.329	0.353	0.404	0.42	0.45	0.45	0.52 JB	0.44	0.44	0.44	0.42	0.38	0.43	0.4
Bromide	mg/L					34.3	36.2	41	36 J	35 J	39 J							
Cadmium	mg/L			0.0002 U	0.0002 U	2E-05 U	0.0002 U	0.005 U	0.025 U	0.025 U	0.002 U		0.001 U					
Calcium	mg/L	64	310	202	198	184	180	180 B	170	190	200	220	200	180	250	180	200	190
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U									5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L	1100	9700	7930	7950	7210	7330	8800	8300	8100	9000	8300	8400	150	9300	8900	7600	7700
Chromium	mg/L			0.0045	0.0024	0.00216	0.000768	0.0017 J	0.05 U	0.05 U	0.0025 J		0.0018 J					
Cobalt	mg/L			0.00173	0.00172	0.000975	0.000957	0.0014 J	0.025 U	0.025 U	0.0011 J		0.0015					
Conductivity, Field	uS/cm	3890	27285	2129	23618	23470	22980					22901				21314	19963	19963
Copper	mg/L							0.01 U	0.05 U	0.05 U	0.004 U							
Dissolved Oxygen, Field	mg/L	0.91		3.03	0.71	2.8	1.53					0.22						
Dissolved Solids, Total	mg/L		2900	12600	13000	12300	11300	13000 J	14000	14000	14000 J	13000	14000	11000 HT	14000	11000	8100	9300
Fluoride	mg/L	1.2	2.5 U	0.87	0.61	0.6 J	0.91	1 J	5 U	5 U	5 U	2.5 U	1	0.05 U	1.1	1.1	0.9	0.85
Iron	mg/L							0.51 JB	2.5 U	2.5 U	0.43							
Lead	mg/L			0.0001 J	0.0001 J	0.000354	9E-05 J	0.005 U	0.005 U	0.005 U	0.002 U		0.001 U					
Lithium	mg/L			0.141	0.142	0.16	0.159	0.12	0.13	0.12	0.15		0.13					
Magnesium	mg/L	14	87			54.6	55.2	63 B	58	63	63	61		69	83 J	54	56	53
Manganese	mg/L							0.57	0.44	0.47	0.51							
Mercury	mg/L	0.0002 U		5E-06 U	1.6E-05	1.6E-05	1E-05	0.0002 U	0.0002 U	0.0002 U	0.0002 U		0.0002 U					
Molybdenum	mg/L			0.00533	0.00723	0.00651	0.0068	0.0042 J	0.05 U	0.05 U	0.004 J		0.0039 J					
Nickel	mg/L							0.01 U	0.05 U	0.05 U	0.0035 J							
Oxidation-Reduction Potential, Field	mV	-101.1																
pH, Field	pH units	7.31	7.16	6.95	7.16	6.92	7.03	7.2		7.21	7.16	7.32	7.34	7.51	7.49	7.4	7.26	7.26
Potassium	mg/L	3.3	10			14.4	18.6	9.6 B	8.3 J	9.3 J	9.5	9.2		9.1	12 J	8.7	9.5	8.9
Radium-226	pCi/L	0.92 J		3.39	6.84	3.47	4.19	4.48	4.49	3.83	4.35 J		5.31					
Radium-226/228	pCi/L	2.68 J		8.15	13.99	7.83	9.95	10.5	10.3	11.3	11 J		11.5					
Radium-228	pCi/L	1.76		4.76	7.15	4.36	5.76	5.98	5.8	7.43	6.64 J		6.16					
Redox Potential, Field	mV			124.2	-91.8	85.3	-87.4											
Selenium	mg/L			0.001 U	0.001 U	0.001 U	0.001 U	0.025 U	0.13 U	0.13 U	0.01 U		0.005 U					
Silver	mg/L							0.005 U	0.005 U	0.005 U	0.002 U							
Sodium	mg/L	730	5900			4310	1650	4400 JB	4200	4700	4600 JB	4700		4800	4400	4200	4400	4400
Strontium	mg/L					16.4	15.6	19 B	13 B	13 B	20							
Sulfate	mg/L	21	34 J	3.4	7.2	6.7	3.4	8.6 J	100 U	100 U	100 U	50 U	6.3 J	1 U	5.2 J	8.9 J	5.9 J	5.9 J
Temperature, Field	deg C	18.2	16	19.72	16.5	14.2	13.5					14.9				14	15	15
Thallium	mg/L			0.0002 J	0.0001 J	0.000528	0.0005 U	0.005 U	0.005 U	0.005 U	0.002 U		0.001 U					
Turbidity, Field	NTU	30.1	4.7	4.7	9.7	3	3.9	7.7		3.2	3.5	1.5	4.22		6	1.4	5.4	5.4
Vanadium	mg/L										0.01 U							
Zinc	mg/L							0.1 U	0.5 U	0.5 U	0.04 U							

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		9801	9801	9802	9802	9802	9802	9802	9802	9802	9802	9802	9802	9802	9802	9802	9802	9802
Date		2022-03-25	2022-09-19	2016-08-24	2016-10-06	2016-12-02	2017-02-01	2017-03-29	2017-06-09	2017-07-17	2018-03-16	2018-09-12	2019-03-12	2019-09-24	2020-03-24	2020-09-22	2021-03-25	2021-09-28
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	140	140			796	645				610	570	590	590	610	590	600	590
Aluminum	mg/L	0.05 U						0.071 J	0.22	0.05 U								
Antimony	mg/L	0.002 U		3E-05 J	4E-05 J	2E-05 J	3E-05 J	0.00034 J	0.002 U	0.002 U								
Arsenic	mg/L	0.00088 J		0.00091	0.00072	0.0012	0.00103	0.00094 J	0.00083 J	0.00089 J								
Barium	mg/L	5.1		0.0781	0.0711	0.0664	0.069	0.08 B	0.086 B	0.082								
Beryllium	mg/L	0.001 U		5E-06 J	2E-05 U	7E-06 J	6E-06 J	0.001 U	0.00035 J	0.001 U								
Bicarbonate Alkalinity as CaCO3	mg/L	140	140								610	570		590	610	590	600	590
Bicarbonate Alkalinity as HCO3	mg/L												590					
Boron	mg/L	0.49 J	0.44	0.172	0.157	0.178	0.242	0.18	0.19	0.27 JB	0.2		0.2	0.21	0.22	0.24	0.22	0.2
Bromide	mg/L					0.499	0.157	2.5 U	2.5 U	2.5 U								
Cadmium	mg/L	0.0001 U		2E-05	1E-05 J	0.0001	5E-05	0.001 U	0.001 U	0.001 U								
Calcium	mg/L	210	180	29.3	28.7	24.5	28	29 B	31 J	30	30	36	31	26	26	26	27	28
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	7700	7600	36.1	35.2	39.1	38	39	38	40	39	35	39	38	41	47	42	42
Chromium	mg/L	0.005 U		0.0013	0.0028	0.00206	0.000823	0.00081 J	0.0025	0.0011 J								
Cobalt	mg/L	0.0011		0.000954	0.00112	0.000847	0.00108	0.0011	0.00048 J	0.00041 J								
Conductivity, Field	uS/cm	22640	22895	1311	1361	1354	1366				13.31				1265	1284	1292	1275
Copper	mg/L	0.005 U						0.00056 JB	0.0017 JB	0.002 U								
Dissolved Oxygen, Field	mg/L	0.03	0.35	1.81	0.73	2.01	1.68				1.46							
Dissolved Solids, Total	mg/L	12000	11000	766	784	796	810	820 J	830	810 J	810		780	740	780	790	730	780
Fluoride	mg/L	0.93	0.92 U	0.88	0.8	0.8	0.84	0.96	0.99	0.95	1	0.94	0.91	1	1	0.9	1	1.1
Iron	mg/L	0.098 J						0.18 JB	0.27	0.058 J								
Lead	mg/L	0.0005 U		4.4E-05	3.1E-05	4.3E-05	6E-05	0.00026 J	0.001 U	0.001 U								
Lithium	mg/L	0.2 U		0.015	0.018	0.022	0.012	0.014	0.012	0.014								
Magnesium	mg/L	76	58			6.8	7.8	8.2 B	9	8.6	8.1	9.3	8.8	7.8	7.1	7	7.4	7.8
Manganese	mg/L	0.58						0.48	0.1	0.28								
Mercury	mg/L	0.0002 U	0.0002 U	5E-06 U	5E-06 U	1.1E-05	5E-06 U	0.0002 U	0.0002 U	0.0002 U								
Molybdenum	mg/L	0.0041 J		0.0064	0.00563	0.00543	0.00525	0.0051 J	0.0046 J	0.0048 J								
Nickel	mg/L	0.005 U						0.00079 J	0.0018 J	0.0022								
Oxidation-Reduction Potential, Field	mV	-131.4	-81															
pH, Field	pH units	7.43	7.35	6.94	7.25	7.3	7.19	7.24	7.2	7.11	7.31	7.59	7.51	7.43	7.4	7.32	7.34	7.33
Potassium	mg/L	12	8.5			1.66	2.05	1.5 B	1.5	1.6	1.5	1.9	1.7	1.6	1.6	1.5	1.5	1.5
Radium-226	pCi/L	3.87	3.69	0.443	0.327	0.603	0.245	0.173	0.181	0.188								
Radium-226/228	pCi/L	8.7	9.34 J	2.763	0.638	0.832	0.506	0.31 U	0.276 U	0.786								
Radium-228	pCi/L	4.82	5.64 J	2.32	0.311	0.229	0.261	0.136 U	0.0949 U	0.597								
Redox Potential, Field	mV			14.6	-32.9	9	-49.4											
Selenium	mg/L	0.0015 J		5E-05 J	4E-05 J	3E-05 J	5E-05 J	0.005 U	0.005 U	0.0012 J								
Silver	mg/L	0.001 U						0.001 U	0.001 U	0.001 U								
Sodium	mg/L	1300	5200			253	270	260 JB	270	290 JB	290	260	290	300	280	290	290	280
Strontium	mg/L	1.3				0.58	0.601	0.62 B	0.55 B	0.65								
Sulfate	mg/L	3.7 J	10 U	65.8	57.5	60.2	58.9	70 J	72	71	68	68	73	69	70	73	70	71
Temperature, Field	deg C	14	17.7	20.37	18.2	14.3	13.6				16.8				16	17	16	18
Thallium	mg/L	0.001 U		5.8E-05	8.4E-05	5.8E-05	5E-05 J	0.001 U	0.001 U	0.001 U								
Turbidity, Field	NTU	3.2	3.32	0.4	2.5	14.4	6.5	6.9	1.6	7.5	2.1	35.3		5	0.8	1	1.3	0.9
Vanadium	mg/L									0.005 U								
Zinc	mg/L	0.02 U						0.02 U	0.02 U	0.02 U								

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		9802	9802	9806	9806	9806	9806	9806	9806	9806	9806	9806	9806	9806	9806	9806	9806	9806
Date		2022-03-25	2022-09-19	2016-12-02	2017-02-08	2017-03-27	2017-05-01	2017-06-27	2018-03-20	2018-09-11	2019-03-14	2019-09-26	2020-03-25	2020-09-17	2021-03-20	2021-09-27	2022-03-24	2022-09-20
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	580	580	350	346				330	330	390 B	320	370	350	340	330	290	330
Aluminum	mg/L	0.51				2.4 J	2.8	0.057									0.021 J	
Antimony	mg/L	0.002 U		0.00011	6E-05	0.0003 JB	0.00068 J	0.002 U		0.002 U	0.002 U						0.002 U	
Arsenic	mg/L	0.002 U		0.00207	0.00113	0.0011 J	0.0015 J	0.001 J		0.005 U	0.005 U						0.002 U	
Barium	mg/L	0.076		0.0676	0.05	0.057 B	0.058	0.041		0.031	0.033						0.02	
Beryllium	mg/L	0.001 U		0.000269	0.000122	0.001 U	0.00038 J	0.001 U		0.00061 JF2F1	0.001 U						0.001 U	
Bicarbonate Alkalinity as CaCO3	mg/L	580	580						300	310	390 B	300	370	340	320	300	290	290
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.18 J	0.19	0.256	25	0.31	0.32	0.35	0.29	0.27	0.23	0.3	0.22	0.21	0.29	0.25	0.25	0.29
Bromide	mg/L			0.82	0.65	0.94 J	0.77 J	0.96			0.23 J							
Cadmium	mg/L	0.0001 U		0.00037	0.0001	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U						0.0001 U	
Calcium	mg/L	36	30	5.35	159	4 B	4.2	3.7	3.6	9.6	37	4.1	31	37	7.2	8.9	26	3
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U						22	19	5 U	26	5 U	7.3	17	25	5 U	37
Chloride	mg/L	32	37	187	191	200	200	200	210	94	38	190	53	51	180	160	79	200
Chromium	mg/L	0.0042 J		0.00653	0.00291	0.004 B	0.0054	0.002 U		0.002 U	0.0015 J						0.005 U	
Cobalt	mg/L	0.0033		0.00516	0.00231	0.0016	0.0017	0.001 U		0.001 U	0.00046 J						0.0005 U	
Conductivity, Field	uS/cm	1338	1377	1500	1574				1533				1666	1691	1464	1497	1709	1554
Copper	mg/L	0.005 U				0.0031 B	0.0066 B	0.002 U									0.005 U	
Dissolved Oxygen, Field	mg/L	1.01	0.64	1.44	1.25				1.78								8.85	2.65
Dissolved Solids, Total	mg/L	780 J	340	860	874	890 J	860 J	870	880	850	1000	1900	930	1100	890	950	980	750
Fluoride	mg/L	0.87	0.99 U	1.14	1.08	1.4	1.3	1.3	1.3	0.87	0.34	1.4	0.44	0.39	1.3	1	0.59	1.4 U
Iron	mg/L	0.71				2 JB	2.2	0.058 J									0.1 U	
Lead	mg/L	0.0005 U		0.00481	0.00227	0.0018 J	0.0028	0.001 U		0.001 U	0.001 U						0.0005 U	
Lithium	mg/L	0.014 J		0.022	0.249	0.013	0.012	0.012		0.036 F2F1	0.045						0.049	
Magnesium	mg/L	9.5	8.8	2.21	171	1.4 B	1.5	0.92 J	0.85 J			1.5	13	16	2.2	3.9	12	0.8 J
Manganese	mg/L	0.088				0.034 B	0.03	0.02 B									0.0077 J	
Mercury	mg/L	0.0002 U	0.0002 U	0.000131	6E-06	0.0002 U	0.0002 U	0.0002 U		0.0002 U	0.0002 U						0.0002 U	0.0002 U
Molybdenum	mg/L	0.0028 J		0.011	0.0107	0.012	0.011	0.023		0.0061	0.0023 J						0.0038	
Nickel	mg/L	0.0032 J				0.0037 B	0.0036	0.002 U									0.005 U	
Oxidation-Reduction Potential, Field	mV	-73.9	-62														126.9	100.8
pH, Field	pH units	7.31	7.33	8.61	8.49	8.59	8.4	8.4	8.64	8.5	7.74	8.73	7.86	8.2	8.47	8.59	7.95	8.56
Potassium	mg/L	1.7	1.5	2.09	18.4	1.6 B	1.7	0.84 J	0.96 J			1.1	2.9	3.2	1.4	1.7	3	0.75 J
Radium-226	pCi/L	0.366 U	0.124	0.658	0.221	0.154	0.149	0.199		0.151	0.0571 U						0.0498 U	0.127
Radium-226/228	pCi/L	1.16	0.622	0.7334	0.711	0.378	0.235 U	0.353		0.257 U	0.0148 U						0.97	0.382 U
Radium-228	pCi/L	0.797	0.498 U	0.0754	0.49	0.224 U	0.0855 U	0.154 U		0.106 U	-0.0422 U						0.92	0.255 U
Redox Potential, Field	mV			-14.2	69.1													
Selenium	mg/L	0.005 U		0.0007	0.0003	0.005 U	0.0011 J	0.005 U		0.0015 J	0.00098 J						0.0012 J	
Silver	mg/L	0.001 U				0.00084 J	0.0012	0.001 U									0.001 U	
Sodium	mg/L	270	270	277	213	320 JB	350 B	350	320			320	310	350	290	330	360	290
Strontium	mg/L	0.64		0.166	1.28	0.15 B	0.16 B	0.13									1.2	
Sulfate	mg/L	57	64	116	113	130 J	130	130	130	240	450	130	510	490	140	230	450	130
Temperature, Field	deg C	17	18.7	11	12.4				11.8				13	14	13	13	13	14.9
Thallium	mg/L	0.001 U		7E-05	4E-05 J	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U						0.001 U	
Turbidity, Field	NTU	41.5	2.67	301.9	74.3	110.6	40.6	53.8	13	4.33		32	2.3	0.8	23.3	5.3	2.1	7.33
Vanadium	mg/L																	
Zinc	mg/L	0.02 U				0.0093 J	0.02 U	0.02 U									0.12	

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
U: Indicates the analyte was analyzed for but not detected.
Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location	9910	9910	9910	9910	9910	9910	9910	9910	9910	9910	MW-16	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
Date	2016-10-03	2018-09-25	2019-03-26	2019-09-22	2020-03-15	2020-09-17	2021-03-17	2021-09-24	2022-07-14	2022-09-14	2022-05-05	2020-09-11	2021-03-20	2021-09-19	2022-03-24	2022-05-05	2022-05-05
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
Analyte	Unit																
Alkalinity, Total as CaCO3	mg/L		830	860	850	870	840	870	870	820			270	300	270	270	250	260
Aluminum	mg/L															0.033 J		
Antimony	mg/L									0.002 U						0.002 U	0.002 U	0.002 U
Arsenic	mg/L									0.0021 J						0.027	0.018	0.017
Barium	mg/L									0.26						1.7	2.4	2.2
Beryllium	mg/L									0.001 U						0.001 U	0.001 U	0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L		830	840	840	850	840	870	850	820			270	300	270	270	250	260
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L		0.52	0.52	0.49	0.51	0.51	0.55	0.52				0.39	0.41	0.44	0.62 J	0.42	0.4
Bromide	mg/L																	
Cadmium	mg/L									0.001 U						0.0001 U	0.001 U	0.001 U
Calcium	mg/L		12	13	13	11	14	13	15				94	87	96	120	83	78
Carbonate Alkalinity as CaCO3	mg/L		5 U	23	6.9	19	5 U	5 U	15	5 U			5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L		840	880	800	850	850	810	870		1100		4500	4200	4500	4000	4200	4200
Chromium	mg/L									0.034						0.005 U	0.005 U	0.005 U
Cobalt	mg/L									0.00058 J						0.0005 U	0.001 U	0.001 U
Conductivity, Field	uS/cm	4918				4626	4577	4584	4732	51788	5195	4945	12829	12407	12893	13574	12056	12056
Copper	mg/L															0.005 U		
Dissolved Oxygen, Field	mg/L	1.58								1.87	9.33	1.13				0.2	0.59	0.59
Dissolved Solids, Total	mg/L		2400	2900	2700	2900	2300	2500	2400		2500		7500	7200	7900	6900	6500	5800
Fluoride	mg/L		2	1.9	2	2	2	1.9	1.9	1.8 J	1.9		1.4	1.6	1.7	2.2	1.6	1.7
Iron	mg/L															3.4		
Lead	mg/L									0.00048 J						0.0005 U	0.001 U	0.001 U
Lithium	mg/L									0.025						0.088	0.08	0.075
Magnesium	mg/L		4	4.2	4.3	3.9	4.3	4.3	4.7	4.3			18	18	18	21	18	18
Manganese	mg/L															0.4		
Mercury	mg/L							0.0002 U		0.0002 U						0.00021 J	0.0002 U	0.0002 U
Molybdenum	mg/L									0.017						0.01	0.0091	0.0071
Nickel	mg/L															0.0027 J		
Oxidation-Reduction Potential, Field	mV									27.1	78.9	36				-276.6	-351.1	-351.1
pH, Field	pH units	7.58	7.64	7.76	7.8	7.88	7.8	7.69	7.67	7.55	7.81	7.58	7.29	7.27	7.39	7.29	7.36	7.36
Potassium	mg/L		2.9	3.2	3	3	3	3	2.9	2.9			5.3	5.2	5.5	7.4	5.5	5.2
Radium-226	pCi/L									0.289		0.37 U				2.17	2.18	2.2
Radium-226/228	pCi/L									0.842 J		1.04 U				5.34	4.91	5.08
Radium-228	pCi/L									0.553 U		0.674 U				3.17	2.73	2.88
Redox Potential, Field	mV	208.7																
Selenium	mg/L									0.0064						0.0013 J	0.005 U	0.005 U
Silver	mg/L															0.001 U		
Sodium	mg/L		1100	1100	1000	980	980	1000	1100	1100			2400	2500	2600	2700	2700	2500
Strontium	mg/L															7.3		
Sulfate	mg/L		110	120	100	110	94	92	96		120		19	43	47	110	48	60
Temperature, Field	deg C	16.7				13	14	14	16	15.5	17.9	14.5	14	14	15	14	14.2	14.2
Thallium	mg/L									0.001 U						0.001 U	0.001 U	0.001 U
Turbidity, Field	NTU	184.3	46.5		69	85.3	26	43.6	11.7	18.09	5.9	55.7	1.2	2.7	0	149.3	0.78	0.78
Vanadium	mg/L																	
Zinc	mg/L															0.011 J		

Notes:
FD = Field duplicate sample
N = Normal environmental sample
deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
uS/cm = Microsiemens per centimeter
pCi/L = Picocuries per liter
B: Compound was found in the blank and sample.
J: Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
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Empty cells = Not analyzed

Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		MW-17	MW-17	MW-17	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20
Date		2022-07-18	2022-08-17	2022-09-19	2016-08-23	2016-10-05	2016-12-01	2017-04-25	2017-06-06	2017-07-14	2018-03-26	2019-09-19	2020-03-15	2020-03-24	2020-09-15	2021-03-19	2021-09-20	2022-03-30
Sample Type		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Analyte	Unit																	
Alkalinity, Total as CaCO3	mg/L	220	240	230			259					150	170	170	160	160	170	160
Aluminum	mg/L							0.05 U	0.043 J	0.15								0.05 U
Antimony	mg/L	0.002 U	0.002 U		4E-05 J	0.0002 U	0.0001 U	0.002 U	0.002 U	0.002 U								0.002 U
Arsenic	mg/L	0.0052	0.0028 J		0.00938	0.01	0.00917	0.0048 J	0.0086	0.013								0.0018 J
Barium	mg/L	1.9	2.2		0.0274	0.0228	0.0233	0.025	0.027	0.029								0.017
Beryllium	mg/L	0.001 U	0.001 U		0.000234	0.000265	0.000276	0.00032 J	0.00055 J	0.00088 J								0.001 U
Bicarbonate Alkalinity as CaCO3	mg/L	220	240	230								150	170	170	160	160	170	160
Bicarbonate Alkalinity as HCO3	mg/L																	
Boron	mg/L	0.32	0.4	0.45	0.126	0.272	0.104	0.15 J	0.19 B	0.15		0.12	0.19 U	0.16	0.1	0.23	0.099 J	0.2 U
Bromide	mg/L						0.422	5 U	0.5 U	5 U								
Cadmium	mg/L	0.001 U	0.001 U		8E-05	2E-05 J	4E-05 U	0.001 U	0.001 U	0.001 U								0.0001 U
Calcium	mg/L	72	91	78	495	483	465	500	500	500		470	470	470	450	420	440	510
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	4500	4500	4200	60.1	25.2	16.4	11	6.5	8.2 J		1.9	2	2.1	1.8	1.8	1.8	1.8
Chromium	mg/L	0.005 U	0.005 U		0.0028	0.0018	0.00121	0.002 U	0.0018 J	0.0025								0.005 U
Cobalt	mg/L	0.001 U	0.00058 J		0.128	0.134	0.143	0.13	0.13	0.14								0.19
Conductivity, Field	uS/cm	13140	13350	13344	2819	3042	2935				2817		2523	2455	2402	2428	2360	2581
Copper	mg/L							0.002 U	0.002 U	0.002 U								0.005 U
Dissolved Oxygen, Field	mg/L	0.41	0.39	0.74	2.93	1.5	4.67				1.76							6.78
Dissolved Solids, Total	mg/L	4700	6700	5700	2660	2710	2620	2500 J	2600	2600 J		2600	2500 J	2100	2100	2300	2100	2100
Fluoride	mg/L	1.7	1.5	1.7 J	0.95	1	1	1.2	0.93	0.9		1.3	1.3	1.2	1.3	1.3	1.4	1.5
Iron	mg/L							27	32	37								10
Lead	mg/L	0.001 U	0.001 U		0.000201	0.00013	3E-05 J	0.001 U	0.001 U	0.00089 J								0.0005 U
Lithium	mg/L	0.063	0.079		0.174	0.171	0.188	0.16	0.16	0.16								0.18
Magnesium	mg/L	15	16	15			106	100	100	110		110	110	110	100	94	100	100
Manganese	mg/L							15	15	16								16
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	5E-06 U	5E-06 U	5E-06 U	0.0002 U	0.0002 U	0.0002 U								0.0002 U
Molybdenum	mg/L	0.006	0.02		0.0089	0.00543	0.00249	0.0016 J	0.002 J	0.0027 J								0.002 U
Nickel	mg/L							0.1	0.11	0.12								0.16
Oxidation-Reduction Potential, Field	mV	-197.5	-138.7	-129.9														179.5
pH, Field	pH units	7.3	7.07	7.06	6.88	6.52	6.5	6.51	6.52	6.51	6.56	6.35	6.4	6.81	6.36	6.38	6.37	6.18
Potassium	mg/L	4.7	5.3	5			9.01	7.8	7.8	8		6.4	6.4	6.4	5.6	5.3	5.4	5.9 J
Radium-226	pCi/L	2.55	2.73	2.79	0.31	0.344	0.322	0.181	0.192	0.327								0.00138 U
Radium-226/228	pCi/L	5.8	6.7	6.59 J	0.684	1.494	0.866	0.594	0.425	0.73								0.618 U
Radium-228	pCi/L	3.25	3.97	3.79 J	0.374	1.15	0.544	0.413	0.234 U	0.404								0.617 U
Redox Potential, Field	mV				-41	-55.5	-47.5											
Selenium	mg/L	0.005 U	0.005 U		0.0001 J	0.0002 J	0.0001 J	0.005 U	0.005 U	0.0015 J								0.0013 J
Silver	mg/L							0.001 U	0.001 U	0.001 U								0.0026
Sodium	mg/L	2900	2600	2700			64.6	52	51 B	53 B		26	28	28	27	25	24	24
Strontium	mg/L						3.08	3.6	3.3 B	3.2 B								2.4
Sulfate	mg/L	50 U	28	17	1610	1810	1610	2200	1700	1600		1700	1800	1700	1500	1500	1600	1500
Temperature, Field	deg C	15.8	16.2	15.8	16.53	15.4	12.1				12.4		12	13	14	13	14	12
Thallium	mg/L	0.001 U	0.0002 J		0.000598	0.00033	9E-05 J	0.001 U	0.001 U	0.001 U								0.00028 J
Turbidity, Field	NTU	50.86	9.71	8.53	42.4	9.6	9.2	6.1	1.4	4.8	1	67	456	248	123	75.1	173	65.7
Vanadium	mg/L																	
Zinc	mg/L							0.02 U	0.02	0.038								0.15

Notes:
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Appendix C
Analytical Data Summary
Fly Ash Reservoir & Residual Waste Landfill
Gavin Power Plant

Location		MW-20	MW-20	MW-20	MW-20	MW-20	MW-20
Date		2022-05-03	2022-07-14	2022-08-16	2022-09-13	2022-09-13	2022-10-25
Sample Type		N	N	N	FD	N	N
Analyte	Unit						
Alkalinity, Total as CaCO3	mg/L	160	160	150	160	160	170
Aluminum	mg/L						
Antimony	mg/L	0.002 U	0.002 U	0.002 U			
Arsenic	mg/L	0.005 U	0.0017 J	0.00076 J			
Barium	mg/L	0.018	0.016	0.016			
Beryllium	mg/L	0.001 U	0.001 U	0.001 U			
Bicarbonate Alkalinity as CaCO3	mg/L	160	160	150	160	160	170
Bicarbonate Alkalinity as HCO3	mg/L						
Boron	mg/L				0.12	0.12	
Bromide	mg/L						
Cadmium	mg/L	0.001 U	0.00022 J	0.00037 J			
Calcium	mg/L				450	440	
Carbonate Alkalinity as CaCO3	mg/L	5 U	5 U	5 U	5 U	5 U	5 U
Chloride	mg/L				1.8 J	1.8 J	1.8
Chromium	mg/L	0.005 U	0.005 U	0.005 U			
Cobalt	mg/L	0.2	0.15	0.21			
Conductivity, Field	uS/cm	2264	2458	2469	2437	2437	2311
Copper	mg/L						
Dissolved Oxygen, Field	mg/L	3.09	1.83	0.42	0.61	0.61	0.72
Dissolved Solids, Total	mg/L				2100 J	2000 J	2100
Fluoride	mg/L	1.6	1.4 J	1.5	1.4	1.4	1.4
Iron	mg/L						
Lead	mg/L	0.001 U	0.001 U	0.001 U			
Lithium	mg/L	0.21	0.15	0.18			
Magnesium	mg/L	100	89	110	100	100	
Manganese	mg/L						
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Molybdenum	mg/L	0.005 U	0.005 U	0.005 U			
Nickel	mg/L						
Oxidation-Reduction Potential, Field	mV	80.2	110.2	154.9	111.9	111.9	180.4
pH, Field	pH units	6.19	6.14	6.28	6.12	6.12	6.22
Potassium	mg/L	5.7	4.5	5.5	5.4	5.3	
Radium-226	pCi/L	0.0886 U	0.147 U	0.108	0.0656 U	0.0352 U	
Radium-226/228	pCi/L	0.23 U	0.852	0.383 U	0.538	0.442	
Radium-228	pCi/L	0.142 U	0.705 J	0.275 U	0.472	0.406	
Redox Potential, Field	mV						
Selenium	mg/L	0.0017 J	0.005 U	0.0023 J			
Silver	mg/L						
Sodium	mg/L	22	20	25	23	23	
Strontium	mg/L						
Sulfate	mg/L				1700	1700	1600
Temperature, Field	deg C	13	15.3	14.5	15.7	15.7	14.2
Thallium	mg/L	0.001 U	0.001 U	0.0015 J			
Turbidity, Field	NTU	91.1	145.47	40.59	19.97	19.97	29.27
Vanadium	mg/L						
Zinc	mg/L						

Notes:
FD = Field duplicate sample
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deg C = Degree Celcius
mg/L = Milligrams per liter
mV = Milivolts
NTU = Nephelometric Turbidity Unit
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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.
Empty cells = Not analyzed

APPENDIX D LABORATORY REPORTS

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-164205-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
4/27/2022 9:58:11 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-164205-1

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.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-164205-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-164205-1

Comments
No additional comments.

Receipt
The samples were received on 3/28/2022 1:31 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.2º C.

RAD
Method PrecSep-21: Radium-226 Prep Batch 160-558016: The following samples were prepared at a reduced aliquot due to Matrix: 94137-F-20220323-01 (240-164205-2). 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 160-558019: The following samples were prepared at a reduced aliquot due to Matrix: 94137-F-20220323-01 (240-164205-2). 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 160-558044: The following samples were prepared at a reduced aliquot due to Matrix: 2000-F-20220323-01 (240-164205-3) and 2003-F-20220323-01 (240-164205-4). 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 160-558057: The following samples were prepared at a reduced aliquot due to Matrix: 2000-F-20220323-01 (240-164205-3) and 2003-F-20220323-01 (240-164205-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Methods 9320: Radium 228 Batch 160-558019: 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. 94137-F-20220323-01 (240-164205-2), (LCS 160-558019/1-A), (LCSD 160-558019/2-A) and (MB 160-558019/23-A)

Methods 9315: Radium-226 batch 558016: 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. 94137-F-20220323-01 (240-164205-2), (LCS 160-558016/1-A), (LCSD 160-558016/2-A) and (MB 160-558016/23-A)

Method 9320: Radium 228 Batch 160-558057: The following sample(s) did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interference. During preparation the analyst visually noted matrix effects. The data have been reported with this narrative. 2003-F-20220323-01 (240-164205-4)

Methods 9320: Radium 228 Batch 160-558057: 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. 94163-F-20220323-01 (240-164205-1), 2000-F-20220323-01 (240-164205-3), 2003-F-20220323-01 (240-164205-4), EB-001-F-F20220323-01 (240-164205-5), (LCS 160-558057/1-A), (LCSD 160-558057/2-A) and (MB 160-558057/23-A)

Method 9315: Radium-226 batch 558044: 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: 2003-F-20220323-01 (240-164205-4). Analytical results are reported with the detection limit achieved.

Methods 9315: Radium-226 batch 558044: 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. 94163-F-20220323-01 (240-164205-1), 2000-F-20220323-01 (240-164205-3), 2003-F-20220323-01 (240-164205-4), EB-001-F-F20220323-01 (240-164205-5), (LCS 160-558044/1-A), (LCSD

Job ID: 240-164205-1 (Continued)

Laboratory: Eurofins Canton (Continued)

160-558044/2-A) and (MB 160-558044/23-A)

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

Metals
Method 3005A: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: 2003-F-20220323-01 (240-164205-4). The sample(s) was preserved to the appropriate pH in the laboratory.

No additional analytical or quality issues were noted, other than those described above or 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: Federal CCR Wells

Job ID: 240-164205-1

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: 240-164205-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-164205-1	94163-F-20220323-01	Water	03/23/22 11:26	03/28/22 13:31
240-164205-2	94137-F-20220323-01	Water	03/23/22 12:17	03/28/22 13:31
240-164205-3	2000-F-20220323-01	Water	03/23/22 13:10	03/28/22 13:31
240-164205-4	2003-F-20220323-01	Water	03/23/22 14:41	03/28/22 13:31
240-164205-5	EB-001-F-F20220323-01	Water	03/23/22 15:35	03/28/22 13:31

Detection Summary

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

Job ID: 240-164205-1

Client Sample ID: 94163-F-20220323-01 — Lab Sample ID: 240-164205-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450		400	110	ug/L	2		6010D	Total/NA
Aluminum	210		50	17	ug/L	1		6020B	Total/NA
Arsenic	0.75	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	100		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	15000		500	190	ug/L	1		6020B	Total/NA
Chromium	2.7	J B	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.37	J	0.50	0.19	ug/L	1		6020B	Total/NA
Iron	220	B	100	36	ug/L	1		6020B	Total/NA
Lithium	29		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	3900		500	150	ug/L	1		6020B	Total/NA
Manganese	110		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	14		2.0	1.2	ug/L	1		6020B	Total/NA
Potassium	2200		500	150	ug/L	1		6020B	Total/NA
Selenium	1.2	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	740000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	660		1.0	0.56	ug/L	1		6020B	Total/NA
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	1100		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	1.3		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	55		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	1600		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 94137-F-20220323-01 — Lab Sample ID: 240-164205-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	380	F1 F2	50	17	ug/L	1		6020B	Total/NA
Arsenic	24		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	58		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.29		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	170000		500	190	ug/L	1		6020B	Total/NA
Chromium	9.7	B	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	510		2.0	0.76	ug/L	4		6020B	Total/NA
Copper	3.1	J	5.0	1.8	ug/L	1		6020B	Total/NA
Iron	6400	B	100	36	ug/L	1		6020B	Total/NA
Lead	2.6		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	8.9	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	48000		500	150	ug/L	1		6020B	Total/NA
Manganese	820		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	2.0		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	10		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1800		500	150	ug/L	1		6020B	Total/NA
Selenium	1.5	J	5.0	0.96	ug/L	1		6020B	Total/NA
Silver	0.65	J	1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	68000		1000	610	ug/L	1		6020B	Total/NA
Strontium	290		1.0	0.56	ug/L	1		6020B	Total/NA
Thallium	0.42	J	1.0	0.26	ug/L	1		6020B	Total/NA
Zinc	19	J F2 F1	20	10	ug/L	1		6020B	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	27		1.0	0.28	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 94137-F-20220323-01 (Continued) — Lab Sample ID: 240-164205-2

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	340		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	870		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2000-F-20220323-01 — Lab Sample ID: 240-164205-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	370		200	56	ug/L	1		6010D	Total/NA
Aluminum	64		50	17	ug/L	1		6020B	Total/NA
Arsenic	2.4		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	28		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.19		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	2900		500	190	ug/L	1		6020B	Total/NA
Chromium	12	B	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.27	J	0.50	0.19	ug/L	1		6020B	Total/NA
Iron	180	B	100	36	ug/L	1		6020B	Total/NA
Lead	0.36	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	16		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	770		500	150	ug/L	1		6020B	Total/NA
Manganese	27		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	34		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	1.9	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1000		500	150	ug/L	1		6020B	Total/NA
Selenium	1.2	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	460000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	210		1.0	0.56	ug/L	1		6020B	Total/NA
Zinc	280		20	10	ug/L	1		6020B	Total/NA
Total Alkalinity	210		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
Carbonate Alkalinity as CaCO3	42		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	120		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	2.5		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	500		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	1200		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2003-F-20220323-01 — Lab Sample ID: 240-164205-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	590		400	110	ug/L	2		6010D	Total/NA
Aluminum	2600		50	17	ug/L	1		6020B	Total/NA
Arsenic	18		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	130		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	7700		500	190	ug/L	1		6020B	Total/NA
Chromium	14	B	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.94		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	1900	B	100	36	ug/L	1		6020B	Total/NA
Lead	1.1		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	24		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	1900		500	150	ug/L	1		6020B	Total/NA
Manganese	20		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	140		2.0	1.2	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2003-F-20220323-01 (Continued)
Lab Sample ID: 240-164205-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	3.5	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	2300		500	150	ug/L	1		6020B	Total/NA
Selenium	2.5	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	600000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	470		1.0	0.56	ug/L	1		6020B	Total/NA
Zinc	300		20	10	ug/L	1		6020B	Total/NA
Total Alkalinity	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	390		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	3.8		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	61		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	1600		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-F20220323-01
Lab Sample ID: 240-164205-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	67	J	200	56	ug/L	1		6010D	Total/NA
Chromium	13	B	5.0	1.1	ug/L	1		6020B	Total/NA
Copper	2.6	J	5.0	1.8	ug/L	1		6020B	Total/NA
Iron	140	B	100	36	ug/L	1		6020B	Total/NA
Lead	0.35	J	0.50	0.24	ug/L	1		6020B	Total/NA
Manganese	9.1	J	10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	2.3		2.0	1.2	ug/L	1		6020B	Total/NA
Zinc	420		20	10	ug/L	1		6020B	Total/NA
Total Alkalinity	26		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	26		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Total Dissolved Solids	48		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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

Job ID: 240-164205-1

Client Sample ID: 94163-F-20220323-01

Date Collected: 03/23/22 11:26
Date Received: 03/28/22 13:31

Lab Sample ID: 240-164205-1

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**450**		400	110	ug/L		04/01/22 09:00	04/04/22 12:06	2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**210**		50	17	ug/L		04/01/22 09:00	04/06/22 17:22	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 17:22	1
Arsenic	**0.75**	**J**	2.0	0.75	ug/L		04/01/22 09:00	04/06/22 17:22	1
Barium	**100**		2.0	0.88	ug/L		04/01/22 09:00	04/06/22 17:22	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 17:22	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/01/22 09:00	04/06/22 17:22	1
Calcium	**15000**		500	190	ug/L		04/01/22 09:00	04/06/22 17:22	1
Chromium	**2.7**	**J B**	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 17:22	1
Cobalt	**0.37**	**J**	0.50	0.19	ug/L		04/01/22 09:00	04/06/22 17:22	1
Copper	5.0	U	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 17:22	1
Iron	**220**	**B**	100	36	ug/L		04/01/22 09:00	04/06/22 17:22	1
Lead	0.50	U	0.50	0.24	ug/L		04/01/22 09:00	04/06/22 17:22	1
Lithium	**29**		10	2.5	ug/L		04/01/22 09:00	04/06/22 17:22	1
Magnesium	**3900**		500	150	ug/L		04/01/22 09:00	04/06/22 17:22	1
Manganese	**110**		10	3.6	ug/L		04/01/22 09:00	04/06/22 17:22	1
Molybdenum	**14**		2.0	1.2	ug/L		04/01/22 09:00	04/06/22 17:22	1
Nickel	5.0	U	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 17:22	1
Potassium	**2200**		500	150	ug/L		04/01/22 09:00	04/06/22 17:22	1
Selenium	**1.2**	**J**	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 17:22	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 17:22	1
Sodium	**740000**		4000	2400	ug/L		04/01/22 09:00	04/07/22 14:28	4
Strontium	**660**		1.0	0.56	ug/L		04/01/22 09:00	04/06/22 17:22	1
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 17:22	1
Zinc	20	U	20	10	ug/L		04/01/22 09:00	04/06/22 17:22	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		03/29/22 09:00	03/29/22 17:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**200**		5.0	2.6	mg/L			04/04/22 15:51	1
Bicarbonate Alkalinity as CaCO3	**200**		5.0	2.6	mg/L			04/04/22 15:51	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/04/22 15:51	1
Chloride	**1100**		10	2.8	mg/L			03/30/22 04:58	10
Fluoride	**1.3**		0.10	0.048	mg/L			03/30/22 04:37	2
Sulfate	**55**		2.0	0.70	mg/L			03/30/22 04:37	2
Total Dissolved Solids	**1600**		40	31	mg/L			03/29/22 11:25	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	**0.434**		0.234	0.237	1.00	0.282	pCi/L	03/31/22 09:27	04/25/22 21:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*40 - 110*	*03/31/22 09:27*	*04/25/22 21:13*	*1*

Eurofins Canton

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

Job ID: 240-164205-1

Client Sample ID: 94163-F-20220323-01
Date Collected: 03/23/22 11:26
Date Received: 03/28/22 13:31

Lab Sample ID: 240-164205-1
Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.411		0.249	0.252	1.00	0.376	pCi/L	03/31/22 10:06	04/25/22 12:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*40 - 110*	*03/31/22 10:06*	*04/25/22 12:10*	*1*
Y Carrier	*83.4*		*40 - 110*	*03/31/22 10:06*	*04/25/22 12:10*	*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	0.845		0.342	0.346	5.00	0.376	pCi/L		04/26/22 15:49	1

Client Sample ID: 94137-F-20220323-01
Lab Sample ID: 240-164205-2

Date Collected: 03/23/22 12:17
Matrix: Water
Date Received: 03/28/22 13:31

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/01/22 09:00	04/04/22 10:44	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**380**	**F1 F2**	50	17	ug/L		04/01/22 09:00	04/06/22 16:17	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 16:17	1
Arsenic	**24**		2.0	0.75	ug/L		04/01/22 09:00	04/06/22 16:17	1
Barium	**58**		2.0	0.88	ug/L		04/01/22 09:00	04/06/22 16:17	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 16:17	1
Cadmium	**0.29**		0.10	0.055	ug/L		04/01/22 09:00	04/06/22 16:17	1
Calcium	**170000**		500	190	ug/L		04/01/22 09:00	04/06/22 16:17	1
Chromium	**9.7**	**B**	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 16:17	1
Cobalt	**510**		2.0	0.76	ug/L		04/01/22 09:00	04/07/22 14:31	4
Copper	**3.1**	**J**	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 16:17	1
Iron	**6400**	**B**	100	36	ug/L		04/01/22 09:00	04/06/22 16:17	1
Lead	**2.6**		0.50	0.24	ug/L		04/01/22 09:00	04/06/22 16:17	1
Lithium	**8.9**	**J**	10	2.5	ug/L		04/01/22 09:00	04/06/22 16:17	1
Magnesium	**48000**		500	150	ug/L		04/01/22 09:00	04/06/22 16:17	1
Manganese	**820**		10	3.6	ug/L		04/01/22 09:00	04/06/22 16:17	1
Molybdenum	**2.0**		2.0	1.2	ug/L		04/01/22 09:00	04/06/22 16:17	1
Nickel	**10**		5.0	1.9	ug/L		04/01/22 09:00	04/06/22 16:17	1
Potassium	**1800**		500	150	ug/L		04/01/22 09:00	04/06/22 16:17	1
Selenium	**1.5**	**J**	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 16:17	1
Silver	**0.65**	**J**	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 16:17	1
Sodium	**68000**		1000	610	ug/L		04/01/22 09:00	04/06/22 16:17	1
Strontium	**290**		1.0	0.56	ug/L		04/01/22 09:00	04/06/22 16:17	1
Thallium	**0.42**	**J**	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 16:17	1
Zinc	**19**	**J F2 F1**	20	10	ug/L		04/01/22 09:00	04/06/22 16:17	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		03/29/22 09:00	03/29/22 17:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**210**		5.0	2.6	mg/L			04/04/22 15:58	1
Bicarbonate Alkalinity as CaCO3	**210**		5.0	2.6	mg/L			04/04/22 15:58	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/04/22 15:58	1
Chloride	**27**		1.0	0.28	mg/L			03/30/22 05:20	1
Fluoride	**0.13**		0.050	0.024	mg/L			03/30/22 05:20	1
Sulfate	**340**		5.0	1.7	mg/L			03/30/22 05:42	5
Total Dissolved Solids	**870**		10	7.8	mg/L			03/29/22 11:25	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	**0.461**		0.205	0.209	1.00	0.236	pCi/L	03/30/22 13:44	04/21/22 10:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*03/30/22 13:44*	*04/21/22 10:17*	*1*

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

Job ID: 240-164205-1

Client Sample ID: 94137-F-20220323-01
Date Collected: 03/23/22 12:17
Date Received: 03/28/22 13:31

Lab Sample ID: 240-164205-2
Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.644		0.347	0.352	1.00	0.516	pCi/L	03/30/22 14:11	04/18/22 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:23*	*1*
Y Carrier	*85.2*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:23*	*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	1.10		0.403	0.409	5.00	0.516	pCi/L		04/22/22 14:40	1

Client Sample ID: 2000-F-20220323-01
Lab Sample ID: 240-164205-3

Date Collected: 03/23/22 13:10
Matrix: Water
Date Received: 03/28/22 13:31

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**370**		200	56	ug/L		04/01/22 09:00	04/04/22 10:53	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**64**		50	17	ug/L		04/01/22 09:00	04/06/22 17:26	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 17:26	1
Arsenic	**2.4**		2.0	0.75	ug/L		04/01/22 09:00	04/06/22 17:26	1
Barium	**28**		2.0	0.88	ug/L		04/01/22 09:00	04/06/22 17:26	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 17:26	1
Cadmium	**0.19**		0.10	0.055	ug/L		04/01/22 09:00	04/06/22 17:26	1
Calcium	**2900**		500	190	ug/L		04/01/22 09:00	04/06/22 17:26	1
Chromium	**12**	**B**	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 17:26	1
Cobalt	**0.27**	**J**	0.50	0.19	ug/L		04/01/22 09:00	04/06/22 17:26	1
Copper	5.0	U	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 17:26	1
Iron	**180**	**B**	100	36	ug/L		04/01/22 09:00	04/06/22 17:26	1
Lead	**0.36**	**J**	0.50	0.24	ug/L		04/01/22 09:00	04/06/22 17:26	1
Lithium	**16**		10	2.5	ug/L		04/01/22 09:00	04/06/22 17:26	1
Magnesium	**770**		500	150	ug/L		04/01/22 09:00	04/06/22 17:26	1
Manganese	**27**		10	3.6	ug/L		04/01/22 09:00	04/06/22 17:26	1
Molybdenum	**34**		2.0	1.2	ug/L		04/01/22 09:00	04/06/22 17:26	1
Nickel	**1.9**	**J**	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 17:26	1
Potassium	**1000**		500	150	ug/L		04/01/22 09:00	04/06/22 17:26	1
Selenium	**1.2**	**J**	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 17:26	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 17:26	1
Sodium	**460000**		4000	2400	ug/L		04/01/22 09:00	04/07/22 14:54	4
Strontium	**210**		1.0	0.56	ug/L		04/01/22 09:00	04/06/22 17:26	1
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 17:26	1
Zinc	**280**		20	10	ug/L		04/01/22 09:00	04/06/22 17:26	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		03/29/22 09:00	03/29/22 17:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**210**		5.0	2.6	mg/L			04/04/22 16:08	1
Bicarbonate Alkalinity as CaCO3	**170**		5.0	2.6	mg/L			04/04/22 16:08	1
Carbonate Alkalinity as CaCO3	**42**		5.0	2.6	mg/L			04/04/22 16:08	1
Chloride	**120**		1.0	0.28	mg/L			03/30/22 06:04	1
Fluoride	**2.5**		0.050	0.024	mg/L			03/30/22 06:04	1
Sulfate	**500**		5.0	1.7	mg/L			03/30/22 06:25	5
Total Dissolved Solids	**1200**		20	16	mg/L			03/29/22 11:25	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	**0.674**		0.334	0.339	1.00	0.377	pCi/L	03/31/22 09:27	04/25/22 21:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.4*		*40 - 110*	*03/31/22 09:27*	*04/25/22 21:13*	*1*

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

Job ID: 240-164205-1

Client Sample ID: 2000-F-20220323-01

Date Collected: 03/23/22 13:10
Date Received: 03/28/22 13:31

Lab Sample ID: 240-164205-3

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.421	U	0.349	0.351	1.00	0.555	pCi/L	03/31/22 10:06	04/25/22 12:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.4*		*40 - 110*	*03/31/22 10:06*	*04/25/22 12:10*	*1*
Y Carrier	*83.4*		*40 - 110*	*03/31/22 10:06*	*04/25/22 12:10*	*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	**1.10**		0.483	0.488	5.00	0.555	pCi/L		04/26/22 15:49	1

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

Job ID: 240-164205-1

Client Sample ID: 2003-F-20220323-01

Date Collected: 03/23/22 14:41
Date Received: 03/28/22 13:31

Lab Sample ID: 240-164205-4

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**590**		400	110	ug/L		04/01/22 09:00	04/04/22 12:12	2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**2600**		50	17	ug/L		04/01/22 09:00	04/06/22 17:30	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 17:30	1
Arsenic	**18**		2.0	0.75	ug/L		04/01/22 09:00	04/06/22 17:30	1
Barium	**130**		2.0	0.88	ug/L		04/01/22 09:00	04/06/22 17:30	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 17:30	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/01/22 09:00	04/06/22 17:30	1
Calcium	**7700**		500	190	ug/L		04/01/22 09:00	04/06/22 17:30	1
Chromium	**14**	**B**	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 17:30	1
Cobalt	**0.94**		0.50	0.19	ug/L		04/01/22 09:00	04/06/22 17:30	1
Copper	**2.2**	**J**	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 17:30	1
Iron	**1900**	**B**	100	36	ug/L		04/01/22 09:00	04/06/22 17:30	1
Lead	**1.1**		0.50	0.24	ug/L		04/01/22 09:00	04/06/22 17:30	1
Lithium	**24**		10	2.5	ug/L		04/01/22 09:00	04/06/22 17:30	1
Magnesium	**1900**		500	150	ug/L		04/01/22 09:00	04/06/22 17:30	1
Manganese	**20**		10	3.6	ug/L		04/01/22 09:00	04/06/22 17:30	1
Molybdenum	**140**		2.0	1.2	ug/L		04/01/22 09:00	04/06/22 17:30	1
Nickel	**3.5**	**J**	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 17:30	1
Potassium	**2300**		500	150	ug/L		04/01/22 09:00	04/06/22 17:30	1
Selenium	**2.5**	**J**	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 17:30	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 17:30	1
Sodium	**600000**		4000	2400	ug/L		04/01/22 09:00	04/07/22 14:57	4
Strontium	**470**		1.0	0.56	ug/L		04/01/22 09:00	04/06/22 17:30	1
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 17:30	1
Zinc	**300**		20	10	ug/L		04/01/22 09:00	04/06/22 17:30	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		03/29/22 09:00	03/29/22 17:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**330**		5.0	2.6	mg/L			04/04/22 16:13	1
Bicarbonate Alkalinity as CaCO3	**330**		5.0	2.6	mg/L			04/04/22 16:13	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/04/22 16:13	1
Chloride	**390**		10	2.8	mg/L			03/30/22 07:13	10
Fluoride	**3.8**		0.050	0.024	mg/L			03/30/22 06:52	1
Sulfate	**61**		1.0	0.35	mg/L			03/30/22 06:52	1
Total Dissolved Solids	**1600**		20	16	mg/L			03/29/22 11:25	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	**1.19**	**G**	0.799	0.806	1.00	1.06	pCi/L	03/31/22 09:27	04/25/22 21:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*42.2*		*40 - 110*	*03/31/22 09:27*	*04/25/22 21:13*	*1*

Eurofins Canton

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

Job ID: 240-164205-1

Client Sample ID: 2003-F-20220323-01
Date Collected: 03/23/22 14:41
Date Received: 03/28/22 13:31

Lab Sample ID: 240-164205-4
Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.506	U G	1.03	1.04	1.00	1.77	pCi/L	03/31/22 10:06	04/25/22 12:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*42.2*		*40 - 110*	*03/31/22 10:06*	*04/25/22 12:10*	*1*
Y Carrier	*83.0*		*40 - 110*	*03/31/22 10:06*	*04/25/22 12:10*	*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	1.70	U	1.30	1.32	5.00	1.77	pCi/L		04/26/22 15:49	1

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

Job ID: 240-164205-1

Client Sample ID: EB-001-F-F20220323-01

Date Collected: 03/23/22 15:35
Date Received: 03/28/22 13:31

Lab Sample ID: 240-164205-5

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**67**	**J**	200	56	ug/L		04/01/22 09:00	04/04/22 10:57	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/01/22 09:00	04/06/22 17:34	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 17:34	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/01/22 09:00	04/06/22 17:34	1
Barium	2.0	U	2.0	0.88	ug/L		04/01/22 09:00	04/06/22 17:34	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 17:34	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/01/22 09:00	04/06/22 17:34	1
Calcium	500	U	500	190	ug/L		04/01/22 09:00	04/06/22 17:34	1
Chromium	**13**	**B**	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 17:34	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/01/22 09:00	04/06/22 17:34	1
Copper	**2.6**	**J**	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 17:34	1
Iron	**140**	**B**	100	36	ug/L		04/01/22 09:00	04/06/22 17:34	1
Lead	**0.35**	**J**	0.50	0.24	ug/L		04/01/22 09:00	04/06/22 17:34	1
Lithium	10	U	10	2.5	ug/L		04/01/22 09:00	04/06/22 17:34	1
Magnesium	500	U	500	150	ug/L		04/01/22 09:00	04/06/22 17:34	1
Manganese	**9.1**	**J**	10	3.6	ug/L		04/01/22 09:00	04/06/22 17:34	1
Molybdenum	**2.3**		2.0	1.2	ug/L		04/01/22 09:00	04/06/22 17:34	1
Nickel	5.0	U	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 17:34	1
Potassium	500	U	500	150	ug/L		04/01/22 09:00	04/06/22 17:34	1
Selenium	5.0	U	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 17:34	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 17:34	1
Sodium	1000	U	1000	610	ug/L		04/01/22 09:00	04/06/22 17:34	1
Strontium	1.0	U	1.0	0.56	ug/L		04/01/22 09:00	04/06/22 17:34	1
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 17:34	1
Zinc	**420**		20	10	ug/L		04/01/22 09:00	04/06/22 17:34	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		03/29/22 09:00	03/29/22 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**26**		5.0	2.6	mg/L			04/04/22 16:16	1
Bicarbonate Alkalinity as CaCO3	**26**		5.0	2.6	mg/L			04/04/22 16:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/04/22 16:16	1
Chloride	1.0	U	1.0	0.28	mg/L			04/05/22 12:27	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/05/22 12:27	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/05/22 12:27	1
Total Dissolved Solids	**48**		10	7.8	mg/L			03/29/22 11:25	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	**0.393**		0.220	0.223	1.00	0.271	pCi/L	03/31/22 09:27	04/25/22 21:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*40 - 110*	*03/31/22 09:27*	*04/25/22 21:09*	*1*

Eurofins Canton

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

Job ID: 240-164205-1

Client Sample ID: EB-001-F-F20220323-01

Date Collected: 03/23/22 15:35
Date Received: 03/28/22 13:31

Lab Sample ID: 240-164205-5

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.115	U	0.221	0.222	1.00	0.377	pCi/L	03/31/22 10:06	04/25/22 12:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*40 - 110*	*03/31/22 10:06*	*04/25/22 12:10*	*1*
Y Carrier	*82.2*		*40 - 110*	*03/31/22 10:06*	*04/25/22 12:10*	*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	**0.507**		0.312	0.315	5.00	0.377	pCi/L		04/26/22 15:49	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164205-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
240-164205-1	94163-F-20220323-01	88.9
240-164205-2	94137-F-20220323-01	89.6
240-164205-3	2000-F-20220323-01	85.4
240-164205-4	2003-F-20220323-01	42.2
240-164205-5	EB-001-F-F20220323-01	95.8
LCS 160-558016/1-A	Lab Control Sample	86.2
LCS 160-558044/1-A	Lab Control Sample	92.8
LCSD 160-558016/2-A	Lab Control Sample Dup	91.1
LCSD 160-558044/2-A	Lab Control Sample Dup	96.0
MB 160-558016/23-A	Method Blank	90.9
MB 160-558044/23-A	Method Blank	96.0

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-164205-1	94163-F-20220323-01	88.9	83.4
240-164205-2	94137-F-20220323-01	89.6	85.2
240-164205-3	2000-F-20220323-01	85.4	83.4
240-164205-4	2003-F-20220323-01	42.2	83.0
240-164205-5	EB-001-F-F20220323-01	95.8	82.2
LCS 160-558019/1-A	Lab Control Sample	86.2	82.6
LCS 160-558057/1-A	Lab Control Sample	92.8	86.4
LCSD 160-558019/2-A	Lab Control Sample Dup	91.1	81.5
LCSD 160-558057/2-A	Lab Control Sample Dup	96.0	83.0
MB 160-558019/23-A	Method Blank	90.9	89.7
MB 160-558057/23-A	Method Blank	96.0	88.6

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-348358/1-A
Matrix: Water
Analysis Batch: 348701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348358

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/01/22 09:00	04/04/22 10:20	1

Lab Sample ID: LCS 310-348358/2-A
Matrix: Water
Analysis Batch: 348701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348358

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2000	2200		ug/L		110	80 - 120

Lab Sample ID: 240-164205-1 MS
Matrix: Water
Analysis Batch: 348701

Client Sample ID: 94163-F-20220323-01
Prep Type: Total/NA
Prep Batch: 348358

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	450		2000	2660		ug/L		110	75 - 125

Lab Sample ID: 240-164205-1 MSD
Matrix: Water
Analysis Batch: 348701

Client Sample ID: 94163-F-20220323-01
Prep Type: Total/NA
Prep Batch: 348358

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	450		2000	2680		ug/L		112	75 - 125	1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-348369/1-A
Matrix: Water
Analysis Batch: 349094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348369

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/01/22 09:00	04/06/22 16:09	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 16:09	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/01/22 09:00	04/06/22 16:09	1
Barium	2.0	U	2.0	0.88	ug/L		04/01/22 09:00	04/06/22 16:09	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 16:09	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/01/22 09:00	04/06/22 16:09	1
Calcium	500	U	500	190	ug/L		04/01/22 09:00	04/06/22 16:09	1
Chromium	4.99	J	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 16:09	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/01/22 09:00	04/06/22 16:09	1
Copper	5.0	U	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 16:09	1
Iron	53.1	J	100	36	ug/L		04/01/22 09:00	04/06/22 16:09	1
Lead	0.50	U	0.50	0.24	ug/L		04/01/22 09:00	04/06/22 16:09	1
Lithium	10	U	10	2.5	ug/L		04/01/22 09:00	04/06/22 16:09	1
Magnesium	500	U	500	150	ug/L		04/01/22 09:00	04/06/22 16:09	1
Manganese	10	U	10	3.6	ug/L		04/01/22 09:00	04/06/22 16:09	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/01/22 09:00	04/06/22 16:09	1
Nickel	5.0	U	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 16:09	1
Potassium	500	U	500	150	ug/L		04/01/22 09:00	04/06/22 16:09	1
Selenium	5.0	U	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 16:09	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 16:09	1

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

Lab Sample ID: MB 310-348369/1-A
Matrix: Water
Analysis Batch: 349094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348369

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	1000	U	1000	610	ug/L		04/01/22 09:00	04/06/22 16:09	1
Strontium	1.0	U	1.0	0.56	ug/L		04/01/22 09:00	04/06/22 16:09	1
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 16:09	1
Zinc	136		20	10	ug/L		04/01/22 09:00	04/06/22 16:09	1

Lab Sample ID: MB 310-348369/1-A
Matrix: Water
Analysis Batch: 349243

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348369

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	20	U	20	10	ug/L		04/01/22 09:00	04/07/22 14:25	1

Lab Sample ID: LCS 310-348369/2-A
Matrix: Water
Analysis Batch: 349094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348369

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	200	205		ug/L		103	80 - 120
Antimony	200	214		ug/L		107	80 - 120
Arsenic	200	208		ug/L		104	80 - 120
Barium	100	100		ug/L		100	80 - 120
Beryllium	100	101		ug/L		101	80 - 120
Cadmium	100	96.0		ug/L		96	80 - 120
Calcium	2000	1990		ug/L		99	80 - 120
Chromium	100	100		ug/L		100	80 - 120
Cobalt	100	100		ug/L		100	80 - 120
Copper	200	212		ug/L		106	80 - 120
Iron	200	211		ug/L		105	80 - 120
Lead	200	204		ug/L		102	80 - 120
Lithium	200	209		ug/L		105	80 - 120
Magnesium	2000	2070		ug/L		104	80 - 120
Manganese	100	101		ug/L		101	80 - 120
Molybdenum	200	206		ug/L		103	80 - 120
Nickel	200	204		ug/L		102	80 - 120
Potassium	2000	2030		ug/L		102	80 - 120
Selenium	400	381		ug/L		95	80 - 120
Silver	100	105		ug/L		105	80 - 120
Sodium	2000	2070		ug/L		104	80 - 120
Strontium	200	202		ug/L		101	80 - 120
Thallium	200	201		ug/L		100	80 - 120

Lab Sample ID: 240-164205-2 MS
Matrix: Water
Analysis Batch: 349094

Client Sample ID: 94137-F-20220323-01
Prep Type: Total/NA
Prep Batch: 348369

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	380	F1 F2	200	723	F1	ug/L		170	75 - 125
Antimony	2.0	U	200	221		ug/L		111	75 - 125
Arsenic	24		200	240		ug/L		108	75 - 125

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

Lab Sample ID: 240-164205-2 MS
Matrix: Water
Analysis Batch: 349094

Client Sample ID: 94137-F-20220323-01
Prep Type: Total/NA
Prep Batch: 348369

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	58		100	161		ug/L		103	75 - 125
Beryllium	1.0	U	100	104		ug/L		104	75 - 125
Cadmium	0.29		100	101		ug/L		100	75 - 125
Calcium	170000		2000	174000	4	ug/L		266	75 - 125
Chromium	9.7	B	100	107		ug/L		98	75 - 125
Copper	3.1	J	200	214		ug/L		105	75 - 125
Iron	6400	B	200	6970	4	ug/L		283	75 - 125
Lead	2.6		200	202		ug/L		100	75 - 125
Lithium	8.9	J	200	219		ug/L		105	75 - 125
Magnesium	48000		2000	52400	4	ug/L		202	75 - 125
Manganese	820		100	931	4	ug/L		112	75 - 125
Molybdenum	2.0		200	205		ug/L		101	75 - 125
Nickel	10		200	206		ug/L		98	75 - 125
Potassium	1800		2000	3930		ug/L		105	75 - 125
Selenium	1.5	J	400	388		ug/L		97	75 - 125
Silver	0.65	J	100	101		ug/L		101	75 - 125
Sodium	68000		2000	70300	4	ug/L		136	75 - 125
Strontium	290		200	498		ug/L		105	75 - 125
Thallium	0.42	J	200	197		ug/L		99	75 - 125
Zinc	19	J F2 F1	200	211		ug/L		96	75 - 125

Lab Sample ID: 240-164205-2 MS
Matrix: Water
Analysis Batch: 349243

Client Sample ID: 94137-F-20220323-01
Prep Type: Total/NA
Prep Batch: 348369

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	510		100	592	4	ug/L		83	75 - 125

Lab Sample ID: 240-164205-2 MSD
Matrix: Water
Analysis Batch: 349094

Client Sample ID: 94137-F-20220323-01
Prep Type: Total/NA
Prep Batch: 348369

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	380	F1 F2	200	916	F1 F2	ug/L		266	75 - 125	24	20
Antimony	2.0	U	200	222		ug/L		111	75 - 125	0	20
Arsenic	24		200	241		ug/L		109	75 - 125	1	20
Barium	58		100	168		ug/L		110	75 - 125	4	20
Beryllium	1.0	U	100	106		ug/L		106	75 - 125	2	20
Cadmium	0.29		100	102		ug/L		102	75 - 125	1	20
Calcium	170000		2000	172000	4	ug/L		178	75 - 125	1	20
Chromium	9.7	B	100	112		ug/L		103	75 - 125	4	20
Copper	3.1	J	200	216		ug/L		107	75 - 125	1	20
Iron	6400	B	200	7290	4	ug/L		441	75 - 125	4	20
Lead	2.6		200	207		ug/L		102	75 - 125	3	20
Lithium	8.9	J	200	217		ug/L		104	75 - 125	1	20
Magnesium	48000		2000	51900	4	ug/L		176	75 - 125	1	20
Manganese	820		100	922	4	ug/L		102	75 - 125	1	20
Molybdenum	2.0		200	207		ug/L		103	75 - 125	1	20
Nickel	10		200	211		ug/L		100	75 - 125	2	20

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

Lab Sample ID: 240-164205-2 MSD
Matrix: Water
Analysis Batch: 349094

Client Sample ID: 94137-F-20220323-01
Prep Type: Total/NA
Prep Batch: 348369

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Potassium	1800		2000	3940		ug/L		106	75 - 125	0	20
Selenium	1.5	J	400	391		ug/L		97	75 - 125	1	20
Silver	0.65	J	100	104		ug/L		103	75 - 125	2	20
Sodium	68000		2000	69700	4	ug/L		108	75 - 125	1	20
Strontium	290		200	496		ug/L		104	75 - 125	0	20
Thallium	0.42	J	200	201		ug/L		100	75 - 125	2	20
Zinc	19	J F2 F1	200	298	F1 F2	ug/L		139	75 - 125	34	20

Lab Sample ID: 240-164205-2 MSD
Matrix: Water
Analysis Batch: 349243

Client Sample ID: 94137-F-20220323-01
Prep Type: Total/NA
Prep Batch: 348369

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cobalt	510		100	606	4	ug/L		98	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-521090/1-A
Matrix: Water
Analysis Batch: 521433

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521090

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.168	J	0.20	0.13	ug/L		03/29/22 09:00	03/29/22 17:15	1

Lab Sample ID: LCS 240-521090/2-A
Matrix: Water
Analysis Batch: 521433

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.55		ug/L		111	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-521729/4
Matrix: Water
Analysis Batch: 521729

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			04/04/22 14:30	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/04/22 14:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/04/22 14:30	1

Lab Sample ID: LCS 240-521729/3
Matrix: Water
Analysis Batch: 521729

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

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: 240-164205-2 DU
Matrix: Water
Analysis Batch: 521729

Client Sample ID: 94137-F-20220323-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	210		190		mg/L		11	20
Bicarbonate Alkalinity as CaCO3	210		190		mg/L		11	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 240-521184/3
Matrix: Water
Analysis Batch: 521184

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			03/29/22 22:48	1
Fluoride	0.050	U	0.050	0.024	mg/L			03/29/22 22:48	1
Sulfate	1.0	U	1.0	0.35	mg/L			03/29/22 22:48	1

Lab Sample ID: LCS 240-521184/4
Matrix: Water
Analysis Batch: 521184

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	51.8		mg/L		104	90 - 110
Fluoride	2.50	2.72		mg/L		109	90 - 110
Sulfate	50.0	52.4		mg/L		105	90 - 110

Lab Sample ID: MB 240-521707/3
Matrix: Water
Analysis Batch: 521707

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			04/04/22 13:13	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/04/22 13:13	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/04/22 13:13	1

Lab Sample ID: LCS 240-521707/4
Matrix: Water
Analysis Batch: 521707

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.1		mg/L		100	90 - 110
Fluoride	2.50	2.55		mg/L		102	90 - 110
Sulfate	50.0	51.7		mg/L		103	90 - 110

Lab Sample ID: MB 240-521783/3
Matrix: Water
Analysis Batch: 521783

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			04/05/22 11:47	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/05/22 11:47	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/05/22 11:47	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 240-521783/4
Matrix: Water
Analysis Batch: 521783

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.7		mg/L		99	90 - 110
Fluoride	2.50	2.55		mg/L		102	90 - 110
Sulfate	50.0	51.3		mg/L		103	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-521170/1
Matrix: Water
Analysis Batch: 521170

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			03/29/22 11:25	1

Lab Sample ID: LCS 240-521170/2
Matrix: Water
Analysis Batch: 521170

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	144		mg/L		96	80 - 120

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-558016/23-A
Matrix: Water
Analysis Batch: 561497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558016

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.03338	U	0.0810	0.0811	1.00	0.183	pCi/L	03/30/22 13:44	04/21/22 12:21	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.9*		*40 - 110*	*03/30/22 13:44*	*04/21/22 12:21*	*1*

Lab Sample ID: LCS 160-558016/1-A
Matrix: Water
Analysis Batch: 561508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558016

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.81		1.22	1.00	0.203	pCi/L	95	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*86.2*		*40 - 110*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCSD 160-558016/2-A
Matrix: Water
Analysis Batch: 561508

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558016

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	11.71		1.29	1.00	0.154	pCi/L	103	75 - 125	0.36	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*91.1*		*40 - 110*

Lab Sample ID: MB 160-558044/23-A
Matrix: Water
Analysis Batch: 562034

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558044

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1590	U	0.167	0.168	1.00	0.267	pCi/L	03/31/22 09:27	04/26/22 08:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*40 - 110*	*03/31/22 09:27*	*04/26/22 08:45*	*1*

Lab Sample ID: LCS 160-558044/1-A
Matrix: Water
Analysis Batch: 561960

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558044

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	11.07		1.40	1.00	0.383	pCi/L	98	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.8*		*40 - 110*

Lab Sample ID: LCSD 160-558044/2-A
Matrix: Water
Analysis Batch: 561960

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558044

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	9.850		1.26	1.00	0.347	pCi/L	87	75 - 125	0.46	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.0*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-558019/23-A
Matrix: Water
Analysis Batch: 560821

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558019

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1893	U	0.224	0.225	1.00	0.369	pCi/L	03/30/22 14:11	04/18/22 12:45	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110	03/30/22 14:11	04/18/22 12:45	1
Y Carrier	89.7		40 - 110	03/30/22 14:11	04/18/22 12:45	1

Lab Sample ID: LCS 160-558019/1-A
Matrix: Water
Analysis Batch: 560834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558019

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.70	9.974		1.18	1.00	0.422	pCi/L	115	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.2		40 - 110
Y Carrier	82.6		40 - 110

Lab Sample ID: LCSD 160-558019/2-A
Matrix: Water
Analysis Batch: 560834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558019

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.70	9.870		1.16	1.00	0.419	pCi/L	113	75 - 125	0.04	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	91.1		40 - 110
Y Carrier	81.5		40 - 110

Lab Sample ID: MB 160-558057/23-A
Matrix: Water
Analysis Batch: 561955

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558057

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.04922	U	0.211	0.211	1.00	0.370	pCi/L	03/31/22 10:06	04/25/22 12:20	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110	03/31/22 10:06	04/25/22 12:20	1
Y Carrier	88.6		40 - 110	03/31/22 10:06	04/25/22 12:20	1

Lab Sample ID: LCS 160-558057/1-A
Matrix: Water
Analysis Batch: 561994

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558057

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.68	8.913		1.04	1.00	0.322	pCi/L	103	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	92.8		40 - 110
Y Carrier	86.4		40 - 110

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-558057/2-A
Matrix: Water
Analysis Batch: 561994

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558057

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.68	8.838		1.03	1.00	0.354	pCi/L	102	75 - 125	0.04	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.0*		*40 - 110*
Y Carrier	*83.0*		*40 - 110*

Metals

Prep Batch: 348358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	3005A	
240-164205-2	94137-F-20220323-01	Total/NA	Water	3005A	
240-164205-3	2000-F-20220323-01	Total/NA	Water	3005A	
240-164205-4	2003-F-20220323-01	Total/NA	Water	3005A	
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	3005A	
MB 310-348358/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-348358/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164205-1 MS	94163-F-20220323-01	Total/NA	Water	3005A	
240-164205-1 MSD	94163-F-20220323-01	Total/NA	Water	3005A	

Prep Batch: 348369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	3005A	
240-164205-2	94137-F-20220323-01	Total/NA	Water	3005A	
240-164205-3	2000-F-20220323-01	Total/NA	Water	3005A	
240-164205-4	2003-F-20220323-01	Total/NA	Water	3005A	
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	3005A	
MB 310-348369/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-348369/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164205-2 MS	94137-F-20220323-01	Total/NA	Water	3005A	
240-164205-2 MSD	94137-F-20220323-01	Total/NA	Water	3005A	

Analysis Batch: 348701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	6010D	348358
240-164205-2	94137-F-20220323-01	Total/NA	Water	6010D	348358
240-164205-3	2000-F-20220323-01	Total/NA	Water	6010D	348358
240-164205-4	2003-F-20220323-01	Total/NA	Water	6010D	348358
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	6010D	348358
MB 310-348358/1-A	Method Blank	Total/NA	Water	6010D	348358
LCS 310-348358/2-A	Lab Control Sample	Total/NA	Water	6010D	348358
240-164205-1 MS	94163-F-20220323-01	Total/NA	Water	6010D	348358
240-164205-1 MSD	94163-F-20220323-01	Total/NA	Water	6010D	348358

Analysis Batch: 349094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-2	94137-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-3	2000-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-4	2003-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	6020B	348369
MB 310-348369/1-A	Method Blank	Total/NA	Water	6020B	348369
LCS 310-348369/2-A	Lab Control Sample	Total/NA	Water	6020B	348369
240-164205-2 MS	94137-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-2 MSD	94137-F-20220323-01	Total/NA	Water	6020B	348369

Analysis Batch: 349098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-3	2000-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-4	2003-F-20220323-01	Total/NA	Water	6020B	348369

Metals (Continued)

Analysis Batch: 349098 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	6020B	348369
240-164205-2 MS	94137-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-2 MSD	94137-F-20220323-01	Total/NA	Water	6020B	348369

Analysis Batch: 349243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-2	94137-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-3	2000-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-4	2003-F-20220323-01	Total/NA	Water	6020B	348369
MB 310-348369/1-A	Method Blank	Total/NA	Water	6020B	348369
240-164205-2 MS	94137-F-20220323-01	Total/NA	Water	6020B	348369
240-164205-2 MSD	94137-F-20220323-01	Total/NA	Water	6020B	348369

Prep Batch: 521090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	7470A	
240-164205-2	94137-F-20220323-01	Total/NA	Water	7470A	
240-164205-3	2000-F-20220323-01	Total/NA	Water	7470A	
240-164205-4	2003-F-20220323-01	Total/NA	Water	7470A	
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	7470A	
MB 240-521090/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-521090/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 521433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	7470A	521090
240-164205-2	94137-F-20220323-01	Total/NA	Water	7470A	521090
240-164205-3	2000-F-20220323-01	Total/NA	Water	7470A	521090
240-164205-4	2003-F-20220323-01	Total/NA	Water	7470A	521090
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	7470A	521090
MB 240-521090/1-A	Method Blank	Total/NA	Water	7470A	521090
LCS 240-521090/2-A	Lab Control Sample	Total/NA	Water	7470A	521090

General Chemistry

Analysis Batch: 521170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	SM 2540C	
240-164205-2	94137-F-20220323-01	Total/NA	Water	SM 2540C	
240-164205-3	2000-F-20220323-01	Total/NA	Water	SM 2540C	
240-164205-4	2003-F-20220323-01	Total/NA	Water	SM 2540C	
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	SM 2540C	
MB 240-521170/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521170/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 521184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	300.0	
240-164205-1	94163-F-20220323-01	Total/NA	Water	300.0	
240-164205-2	94137-F-20220323-01	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 521184 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-2	94137-F-20220323-01	Total/NA	Water	300.0	
240-164205-3	2000-F-20220323-01	Total/NA	Water	300.0	
240-164205-3	2000-F-20220323-01	Total/NA	Water	300.0	
240-164205-4	2003-F-20220323-01	Total/NA	Water	300.0	
240-164205-4	2003-F-20220323-01	Total/NA	Water	300.0	
MB 240-521184/3	Method Blank	Total/NA	Water	300.0	
LCS 240-521184/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 521707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-521707/3	Method Blank	Total/NA	Water	300.0	
LCS 240-521707/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 521729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	2320B-1997	
240-164205-2	94137-F-20220323-01	Total/NA	Water	2320B-1997	
240-164205-3	2000-F-20220323-01	Total/NA	Water	2320B-1997	
240-164205-4	2003-F-20220323-01	Total/NA	Water	2320B-1997	
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	2320B-1997	
MB 240-521729/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-521729/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-164205-2 DU	94137-F-20220323-01	Total/NA	Water	2320B-1997	

Analysis Batch: 521783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	300.0	
MB 240-521783/3	Method Blank	Total/NA	Water	300.0	
LCS 240-521783/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 558016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-2	94137-F-20220323-01	Total/NA	Water	PrecSep-21	
MB 160-558016/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-558016/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-558016/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 558019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-2	94137-F-20220323-01	Total/NA	Water	PrecSep_0	
MB 160-558019/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-558019/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-558019/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 558044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	PrecSep-21	
240-164205-3	2000-F-20220323-01	Total/NA	Water	PrecSep-21	
240-164205-4	2003-F-20220323-01	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 558044 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	PrecSep-21	
MB 160-558044/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-558044/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-558044/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 558057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164205-1	94163-F-20220323-01	Total/NA	Water	PrecSep_0	
240-164205-3	2000-F-20220323-01	Total/NA	Water	PrecSep_0	
240-164205-4	2003-F-20220323-01	Total/NA	Water	PrecSep_0	
240-164205-5	EB-001-F-F20220323-01	Total/NA	Water	PrecSep_0	
MB 160-558057/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-558057/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-558057/2-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: 240-164205-1

Client Sample ID: 94163-F-20220323-01

Lab Sample ID: 240-164205-1

Date Collected: 03/23/22 11:26

Matrix: Water

Date Received: 03/28/22 13:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		2	348701	04/04/22 12:06	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349094	04/06/22 17:22	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 17:22	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		4	349243	04/07/22 14:28	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 17:42	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	521729	04/04/22 15:51	BLW	TAL CAN
Total/NA	Analysis	300.0		2	521184	03/30/22 04:37	MED	TAL CAN
Total/NA	Analysis	300.0		10	521184	03/30/22 04:58	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521170	03/29/22 11:25	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558044	03/31/22 09:27	LPS	TAL SL
Total/NA	Analysis	9315		1	561960	04/25/22 21:13	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558057	03/31/22 10:06	LPS	TAL SL
Total/NA	Analysis	9320		1	561994	04/25/22 12:10	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562211	04/26/22 15:49	CAH	TAL SL

Client Sample ID: 94137-F-20220323-01

Lab Sample ID: 240-164205-2

Date Collected: 03/23/22 12:17

Matrix: Water

Date Received: 03/28/22 13:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		1	348701	04/04/22 10:44	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349094	04/06/22 16:17	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		4	349243	04/07/22 14:31	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 17:48	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	521729	04/04/22 15:58	BLW	TAL CAN
Total/NA	Analysis	300.0		1	521184	03/30/22 05:20	MED	TAL CAN
Total/NA	Analysis	300.0		5	521184	03/30/22 05:42	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521170	03/29/22 11:25	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558016	03/30/22 13:44	LPS	TAL SL
Total/NA	Analysis	9315		1	561497	04/21/22 10:17	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558019	03/30/22 14:11	LPS	TAL SL
Total/NA	Analysis	9320		1	560820	04/18/22 12:23	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	561602	04/22/22 14:40	SCB	TAL SL

Client Sample ID: 2000-F-20220323-01

Lab Sample ID: 240-164205-3

Date Collected: 03/23/22 13:10

Matrix: Water

Date Received: 03/28/22 13:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		1	348701	04/04/22 10:53	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349094	04/06/22 17:26	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 17:26	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		4	349243	04/07/22 14:54	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 17:50	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	521729	04/04/22 16:08	BLW	TAL CAN
Total/NA	Analysis	300.0		1	521184	03/30/22 06:04	MED	TAL CAN
Total/NA	Analysis	300.0		5	521184	03/30/22 06:25	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521170	03/29/22 11:25	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558044	03/31/22 09:27	LPS	TAL SL
Total/NA	Analysis	9315		1	561960	04/25/22 21:13	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558057	03/31/22 10:06	LPS	TAL SL
Total/NA	Analysis	9320		1	561994	04/25/22 12:10	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562211	04/26/22 15:49	CAH	TAL SL

Client Sample ID: 2003-F-20220323-01

Lab Sample ID: 240-164205-4

Date Collected: 03/23/22 14:41

Matrix: Water

Date Received: 03/28/22 13:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		2	348701	04/04/22 12:12	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349094	04/06/22 17:30	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 17:30	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		4	349243	04/07/22 14:57	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 17:52	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	521729	04/04/22 16:13	BLW	TAL CAN
Total/NA	Analysis	300.0		1	521184	03/30/22 06:52	MED	TAL CAN
Total/NA	Analysis	300.0		10	521184	03/30/22 07:13	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521170	03/29/22 11:25	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558044	03/31/22 09:27	LPS	TAL SL
Total/NA	Analysis	9315		1	561960	04/25/22 21:13	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558057	03/31/22 10:06	LPS	TAL SL
Total/NA	Analysis	9320		1	561994	04/25/22 12:10	CLP	TAL SL

Lab Chronicle

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

Job ID: 240-164205-1

Client Sample ID: 2003-F-20220323-01

Lab Sample ID: 240-164205-4

Date Collected: 03/23/22 14:41

Matrix: Water

Date Received: 03/28/22 13:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	562211	04/26/22 15:49	CAH	TAL SL

Client Sample ID: EB-001-F-F20220323-01

Lab Sample ID: 240-164205-5

Date Collected: 03/23/22 15:35

Matrix: Water

Date Received: 03/28/22 13:31

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		1	348701	04/04/22 10:57	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349094	04/06/22 17:34	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 17:34	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 17:54	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	521729	04/04/22 16:16	BLW	TAL CAN
Total/NA	Analysis	300.0		1	521783	04/05/22 12:27	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521170	03/29/22 11:25	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558044	03/31/22 09:27	LPS	TAL SL
Total/NA	Analysis	9315		1	561955	04/25/22 21:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558057	03/31/22 10:06	LPS	TAL SL
Total/NA	Analysis	9320		1	561994	04/25/22 12:10	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562211	04/26/22 15:49	CAH	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
Job ID: 240-164205-1
Project/Site: Federal CCR Wells

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	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22 *
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	11-06-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	04-20-22
Oregon	NELAP	4062	04-20-22
Pennsylvania	NELAP	68-00340	04-24-22
Texas	NELAP	T104704517-22-16	04-06-22
Virginia	NELAP	11570	09-14-22
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	04-20-22
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164205-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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
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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

S.4/S.2

Chain of Custody Record

Columbus 209

eurofins

Client Information	Sampler: Kemron	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740.373.4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List) D	6010B, 7470, 6020(See Metals List) N	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) D	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) N	9315_Ra226, 9320_Ra228 D	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity) N	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
94136-F-20220323-01	032322	1126	G	W			1	1	2	1				
94137-F-20220323-01	032322	1317	G	W			1	1	2	1				
2000-F-20220323-01	032322	1310	G	W			1	1	2	1				
2003-F-20220323-01	032322	1441	G	W			1	1	2	1				
~~EQBlank-F-20220323-01~~	~~032322~~	~~1535~~	~~G~~	~~W~~			1	1	2	1				
EB-001-F-20220323-01	032322	1535	G	W			1	1	2	1				

240-164205 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		032522 0700			3-25-22 12:20	ETA
2		3-25-22 1700	ETA	Mandy Blue	3-28-22 8:00	CHRC
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client Light Stone Generator Site Name _____ Cooler unpacked by:

Cooler Received on 3-28-22 Opened on 3-28-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1 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_____	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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

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:

2003-F-20220323-01 Nitric Acid
Ph of 1

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	13.8	13.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	5.4	5.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	2.3	2.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	2.3	2.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	2.6	2.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	3.9	3.7	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
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

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
94163-F-20220323-01	240-164205-C-1	Plastic 500ml - with Nitric Acid	<2			
94163-F-20220323-01	240-164205-D-1	Plastic 1 liter - Nitric Acid	<2			
94163-F-20220323-01	240-164205-E-1	Plastic 1 liter - Nitric Acid	<2			
94163-F-20220323-01	240-164205-F-1	Plastic 250ml - with Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150196.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-164205-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/10/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
94163-F-20220323-01 (240-164205-1)	3/23/22	11:26 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
94137-F-20220323-01 (240-164205-2)	3/23/22	12:17 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2000-F-20220323-01 (240-164205-3)	3/23/22	13:10 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2003-F-20220323-01 (240-164205-4)	3/23/22	14:41 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-F20220323-01 (240-164205-5)	3/23/22	15:35 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: Sierra Worthington	Date/Time: MAR 29 2022 0900	Company ETAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

4/27/2022

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240-164205 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Canton

City/State: CITY | STATE: OH | Project:

Receipt Information

Date/Time Received: DATE 3/29/22 | TIME 0935 | Received By: N

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes* Cooler ID
Multiple Coolers?	☐ Yes	☒ No	*If yes* Cooler # _____ of _____
Cooler Custody Seals Present? No	☐ Yes	☒ No	*If yes.* Cooler custody seals intact? ☐ Yes ☐
Sample Custody Seals Present? No	☐ Yes	☒ No	*If yes* Sample custody seals intact? ☐ Yes ☐
Trip Blank Present?	☐ Yes	☒ No	*If yes* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other._____ ☐ NONE

Thermometer ID: N | Correction Factor (°C): TOO

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 1	CONTAINER 2
Container(s) used	PL 500 Nitric	PL 250 Nitric
Uncorrected Temp (°C)	10.1	10.4
Corrected Temp (°C)	10.1	10.4

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE. If yes, contact PM before proceeding If no, proceed with login

Additional Comments

no COC

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164205-1

Login Number: 164205
List Number: 2
Creator: Kizer, Preston V

List Source: Eurofins Cedar Falls
List Creation: 03/29/22 11:46 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (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: 240-164205-1

Login Number: 164205
List Number: 3
Creator: Johnson, Autumn R

List Source: Eurofins St. Louis
List Creation: 03/29/22 04:52 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	

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164205-1

Login Number: 164205
List Number: 4
Creator: Johnson, Autumn R

List Source: Eurofins St. Louis
List Creation: 03/30/22 06:21 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-164211-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
4/22/2022 3:46:12 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

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.

Table of Contents

Definitions/Glossary

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

Job ID: 240-164211-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	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

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

Job ID: 240-164211-1

Job ID: 240-164211-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-164211-1

Comments
No additional comments.

Receipt
The samples were received on 3/28/2022 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 2.1º C, 2.1º C, 2.4º C, 3.7º C, 5.2º C and 13.6º C.

RAD
Method PrecSep-21: Radium-226 Prep Batch 160-558016: The following samples were prepared at a reduced aliquot due to Matrix: 9806-F-20220324-01 (240-164211-1), MW17-F-20220324-01 (240-164211-2), 2019-09-F-20220324-01 (240-164211-3) and 2019-07-F-20220324-01 (240-164211-4). 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 160-558019: The following samples were prepared at a reduced aliquot due to Matrix: 9806-F-20220324-01 (240-164211-1), MW17-F-20220324-01 (240-164211-2), 2019-09-F-20220324-01 (240-164211-3) and 2019-07-F-20220324-01 (240-164211-4). 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 160-558019: The following sample(s) did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interference. During preparation the analyst visually noted matrix effects. The data have been reported with this narrative. 2019-09-F-20220324-01 (240-164211-3)

Methods 9320: Radium 228 Batch 160-558019: 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. 9806-F-20220324-01 (240-164211-1), MW17-F-20220324-01 (240-164211-2), 2019-09-F-20220324-01 (240-164211-3), 2019-07-F-20220324-01 (240-164211-4), EB-001-F-20220324-01 (240-164211-5), (LCS 160-558019/1-A), (LCSD 160-558019/2-A) and (MB 160-558019/23-A)

Methods 9315: Radium-226 batch 558016: 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. 9806-F-20220324-01 (240-164211-1), MW17-F-20220324-01 (240-164211-2), 2019-09-F-20220324-01 (240-164211-3), 2019-07-F-20220324-01 (240-164211-4), EB-001-F-20220324-01 (240-164211-5), (LCS 160-558016/1-A), (LCSD 160-558016/2-A) and (MB 160-558016/23-A)

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 300.0: The following samples were diluted due to the nature of the sample matrix: 2019-09-F-20220324-01 (240-164211-3) and 2019-07-F-20220324-01 (240-164211-4). 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

Job ID: 240-164211-1

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: 240-164211-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-164211-1	9806-F-20220324-01	Water	03/24/22 09:34	03/28/22 08:00
240-164211-2	MW17-F-20220324-01	Water	03/24/22 10:40	03/28/22 08:00
240-164211-3	2019-09-F-20220324-01	Water	03/24/22 13:06	03/28/22 08:00
240-164211-4	2019-07-F-20220324-01	Water	03/24/22 15:05	03/28/22 08:00
240-164211-5	EB-001-F-20220324-01	Water	03/24/22 15:40	03/28/22 08:00

Detection Summary

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

Job ID: 240-164211-1

Client Sample ID: 9806-F-20220324-01

Lab Sample ID: 240-164211-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	250		200	56	ug/L	1		6010D	Total/NA
Aluminum	21	J	50	17	ug/L	1		6020B	Total/NA
Barium	20		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	26000		500	190	ug/L	1		6020B	Total/NA
Chromium	4.2	J B	5.0	1.1	ug/L	1		6020B	Total/NA
Iron	91	J B	100	36	ug/L	1		6020B	Total/NA
Lithium	49		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	12000		500	150	ug/L	1		6020B	Total/NA
Manganese	7.7	J	10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	3.8		2.0	1.2	ug/L	1		6020B	Total/NA
Potassium	3000		500	150	ug/L	1		6020B	Total/NA
Selenium	1.2	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	360000		1000	610	ug/L	1		6020B	Total/NA
Strontium	1200		1.0	0.56	ug/L	1		6020B	Total/NA
Zinc	120		20	10	ug/L	1		6020B	Total/NA
Total Alkalinity	290	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	290	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	79		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.59		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	450		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	980		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW17-F-20220324-01

Lab Sample ID: 240-164211-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	620	J	1200	340	ug/L	6		6010D	Total/NA
Aluminum	33	J	50	17	ug/L	1		6020B	Total/NA
Arsenic	27		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	1700		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	120000		500	190	ug/L	1		6020B	Total/NA
Chromium	1.7	J B	5.0	1.1	ug/L	1		6020B	Total/NA
Iron	3400	B	100	36	ug/L	1		6020B	Total/NA
Lithium	88		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	21000		500	150	ug/L	1		6020B	Total/NA
Manganese	400		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	10		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	2.7	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	7400		500	150	ug/L	1		6020B	Total/NA
Selenium	1.3	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	2700000		10000	6100	ug/L	10		6020B	Total/NA
Strontium	7300		10	5.6	ug/L	10		6020B	Total/NA
Zinc	11	J	20	10	ug/L	1		6020B	Total/NA
Mercury	0.21	B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	270	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	270	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	4000		50	14	mg/L	50		300.0	Total/NA
Fluoride	2.2		0.50	0.24	mg/L	10		300.0	Total/NA
Sulfate	110		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	6900		100	78	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 240-164211-1

Client Sample ID: 2019-09-F-20220324-01 — Lab Sample ID: 240-164211-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1000	J	3000	840	ug/L	15		6010D	Total/NA
Aluminum	26000		200	68	ug/L	4		6020B	Total/NA
Arsenic	14		8.0	3.0	ug/L	4		6020B	Total/NA
Barium	27000		100	44	ug/L	50		6020B	Total/NA
Beryllium	3.0	J	4.0	1.1	ug/L	4		6020B	Total/NA
Cadmium	0.22	J	0.40	0.22	ug/L	4		6020B	Total/NA
Calcium	1200000		2000	760	ug/L	4		6020B	Total/NA
Chromium	190	B	20	4.4	ug/L	4		6020B	Total/NA
Cobalt	16		2.0	0.76	ug/L	4		6020B	Total/NA
Copper	16	J	20	7.2	ug/L	4		6020B	Total/NA
Iron	140000	B	400	140	ug/L	4		6020B	Total/NA
Lead	45		2.0	0.96	ug/L	4		6020B	Total/NA
Lithium	300		40	10	ug/L	4		6020B	Total/NA
Magnesium	310000		2000	600	ug/L	4		6020B	Total/NA
Manganese	3500		40	14	ug/L	4		6020B	Total/NA
Molybdenum	7.4	J	8.0	4.8	ug/L	4		6020B	Total/NA
Nickel	69		20	7.6	ug/L	4		6020B	Total/NA
Potassium	38000		2000	600	ug/L	4		6020B	Total/NA
Selenium	7.7	J	20	3.8	ug/L	4		6020B	Total/NA
Sodium	8900000		50000	31000	ug/L	50		6020B	Total/NA
Strontium	64000		50	28	ug/L	50		6020B	Total/NA
Zinc	120		80	40	ug/L	4		6020B	Total/NA
Total Alkalinity	270	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	270	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	18000		100	28	mg/L	100		300.0	Total/NA
Total Dissolved Solids	24000		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2019-07-F-20220324-01 — Lab Sample ID: 240-164211-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1100	J	4000	1100	ug/L	20		6010D	Total/NA
Aluminum	610		200	68	ug/L	4		6020B	Total/NA
Arsenic	3.2	J	8.0	3.0	ug/L	4		6020B	Total/NA
Barium	430		8.0	3.5	ug/L	4		6020B	Total/NA
Calcium	1000000		2000	760	ug/L	4		6020B	Total/NA
Chromium	6.6	J B	20	4.4	ug/L	4		6020B	Total/NA
Cobalt	4.5		2.0	0.76	ug/L	4		6020B	Total/NA
Iron	2100	B	400	140	ug/L	4		6020B	Total/NA
Lithium	270		40	10	ug/L	4		6020B	Total/NA
Magnesium	250000		2000	600	ug/L	4		6020B	Total/NA
Manganese	1600		40	14	ug/L	4		6020B	Total/NA
Molybdenum	9.8		8.0	4.8	ug/L	4		6020B	Total/NA
Nickel	8.8	J	20	7.6	ug/L	4		6020B	Total/NA
Potassium	25000		2000	600	ug/L	4		6020B	Total/NA
Selenium	4.9	J	20	3.8	ug/L	4		6020B	Total/NA
Sodium	10000000		50000	31000	ug/L	50		6020B	Total/NA
Strontium	62000		50	28	ug/L	50		6020B	Total/NA
Total Alkalinity	190	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	190	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	16000		100	28	mg/L	100		300.0	Total/NA
Sulfate	510		100	35	mg/L	100		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 2019-07-F-20220324-01 (Continued) — Lab Sample ID: 240-164211-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	26000		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220324-01 — Lab Sample ID: 240-164211-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	1.4	J B	5.0	1.1	ug/L	1		6020B	Total/NA
Copper	4.3	J	5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.36	J	0.50	0.24	ug/L	1		6020B	Total/NA
Strontium	0.67	J	1.0	0.56	ug/L	1		6020B	Total/NA
Chloride	0.30	J	1.0	0.28	mg/L	1		300.0	Total/NA
Total Dissolved Solids	95		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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

Job ID: 240-164211-1

Client Sample ID: 9806-F-20220324-01

Date Collected: 03/24/22 09:34
Date Received: 03/28/22 08:00

Lab Sample ID: 240-164211-1

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**250**		200	56	ug/L		04/01/22 09:00	04/04/22 10:59	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**21**	**J**	50	17	ug/L		04/01/22 09:00	04/06/22 17:38	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 17:38	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/01/22 09:00	04/06/22 17:38	1
Barium	**20**		2.0	0.88	ug/L		04/01/22 09:00	04/06/22 17:38	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 17:38	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/01/22 09:00	04/06/22 17:38	1
Calcium	**26000**		500	190	ug/L		04/01/22 09:00	04/06/22 17:38	1
Chromium	**4.2**	**J B**	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 17:38	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/01/22 09:00	04/06/22 17:38	1
Copper	5.0	U	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 17:38	1
Iron	**91**	**J B**	100	36	ug/L		04/01/22 09:00	04/06/22 17:38	1
Lead	0.50	U	0.50	0.24	ug/L		04/01/22 09:00	04/06/22 17:38	1
Lithium	**49**		10	2.5	ug/L		04/01/22 09:00	04/06/22 17:38	1
Magnesium	**12000**		500	150	ug/L		04/01/22 09:00	04/06/22 17:38	1
Manganese	**7.7**	**J**	10	3.6	ug/L		04/01/22 09:00	04/06/22 17:38	1
Molybdenum	**3.8**		2.0	1.2	ug/L		04/01/22 09:00	04/06/22 17:38	1
Nickel	5.0	U	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 17:38	1
Potassium	**3000**		500	150	ug/L		04/01/22 09:00	04/06/22 17:38	1
Selenium	**1.2**	**J**	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 17:38	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 17:38	1
Sodium	**360000**		1000	610	ug/L		04/01/22 09:00	04/06/22 17:38	1
Strontium	**1200**		1.0	0.56	ug/L		04/01/22 09:00	04/06/22 17:38	1
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 17:38	1
Zinc	**120**		20	10	ug/L		04/01/22 09:00	04/06/22 17:38	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		03/29/22 09:00	03/29/22 17:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**290**	**B**	5.0	2.6	mg/L			04/07/22 15:59	1
Bicarbonate Alkalinity as CaCO3	**290**	**B**	5.0	2.6	mg/L			04/07/22 15:59	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 15:59	1
Chloride	**79**		1.0	0.28	mg/L			04/01/22 16:06	1
Fluoride	**0.59**		0.050	0.024	mg/L			04/01/22 16:06	1
Sulfate	**450**		5.0	1.7	mg/L			04/01/22 16:26	5
Total Dissolved Solids	**980**		20	16	mg/L			03/30/22 17:19	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	0.0498	U	0.138	0.138	1.00	0.255	pCi/L	03/30/22 13:44	04/21/22 10:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.7*		*40 - 110*	*03/30/22 13:44*	*04/21/22 10:19*	*1*

Eurofins Canton

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

Job ID: 240-164211-1

Client Sample ID: 9806-F-20220324-01

Date Collected: 03/24/22 09:34
Date Received: 03/28/22 08:00

Lab Sample ID: 240-164211-1

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.920		0.382	0.392	1.00	0.529	pCi/L	03/30/22 14:11	04/18/22 12:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.7*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:26*	*1*
Y Carrier	*80.4*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:26*	*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	0.970		0.406	0.416	5.00	0.529	pCi/L		04/22/22 14:43	1

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

Job ID: 240-164211-1

Client Sample ID: MW17-F-20220324-01

Date Collected: 03/24/22 10:40
Date Received: 03/28/22 08:00

Lab Sample ID: 240-164211-2

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	620	J	1200	340	ug/L		04/01/22 09:00	04/04/22 12:14	6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	33	J	50	17	ug/L		04/01/22 09:00	04/06/22 17:42	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 17:42	1
Arsenic	27		2.0	0.75	ug/L		04/01/22 09:00	04/06/22 17:42	1
Barium	1700		2.0	0.88	ug/L		04/01/22 09:00	04/06/22 17:42	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 17:42	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/01/22 09:00	04/06/22 17:42	1
Calcium	120000		500	190	ug/L		04/01/22 09:00	04/06/22 17:42	1
Chromium	1.7	J B	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 17:42	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/01/22 09:00	04/06/22 17:42	1
Copper	5.0	U	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 17:42	1
Iron	3400	B	100	36	ug/L		04/01/22 09:00	04/06/22 17:42	1
Lead	0.50	U	0.50	0.24	ug/L		04/01/22 09:00	04/06/22 17:42	1
Lithium	88		10	2.5	ug/L		04/01/22 09:00	04/06/22 17:42	1
Magnesium	21000		500	150	ug/L		04/01/22 09:00	04/06/22 17:42	1
Manganese	400		10	3.6	ug/L		04/01/22 09:00	04/06/22 17:42	1
Molybdenum	10		2.0	1.2	ug/L		04/01/22 09:00	04/06/22 17:42	1
Nickel	2.7	J	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 17:42	1
Potassium	7400		500	150	ug/L		04/01/22 09:00	04/06/22 17:42	1
Selenium	1.3	J	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 17:42	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 17:42	1
Sodium	2700000		10000	6100	ug/L		04/01/22 09:00	04/07/22 15:00	10
Strontium	7300		10	5.6	ug/L		04/01/22 09:00	04/07/22 15:00	10
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 17:42	1
Zinc	11	J	20	10	ug/L		04/01/22 09:00	04/06/22 17:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.21	B	0.20	0.13	ug/L		03/29/22 09:00	03/29/22 17:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	270	B	5.0	2.6	mg/L			04/07/22 16:04	1
Bicarbonate Alkalinity as CaCO3	270	B	5.0	2.6	mg/L			04/07/22 16:04	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 16:04	1
Chloride	4000		50	14	mg/L			04/01/22 17:47	50
Fluoride	2.2		0.50	0.24	mg/L			04/01/22 16:46	10
Sulfate	110		10	3.5	mg/L			04/01/22 16:46	10
Total Dissolved Solids	6900		100	78	mg/L			03/30/22 17:19	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	2.17		0.365	0.414	1.00	0.201	pCi/L	03/30/22 13:44	04/21/22 10:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.5*		*40 - 110*	*03/30/22 13:44*	*04/21/22 10:20*	*1*

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

Job ID: 240-164211-1

Client Sample ID: MW17-F-20220324-01

Date Collected: 03/24/22 10:40
Date Received: 03/28/22 08:00

Lab Sample ID: 240-164211-2

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.17		0.546	0.619	1.00	0.597	pCi/L	03/30/22 14:11	04/18/22 12:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.5*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:26*	*1*
Y Carrier	*80.0*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:26*	*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	5.34		0.657	0.745	5.00	0.597	pCi/L		04/22/22 14:43	1

Client Sample ID: 2019-09-F-20220324-01
Lab Sample ID: 240-164211-3

Date Collected: 03/24/22 13:06
Matrix: Water
Date Received: 03/28/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1000**	**J**	3000	840	ug/L		04/01/22 09:00	04/04/22 11:36	15

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**26000**		200	68	ug/L		04/01/22 09:00	04/06/22 17:46	4
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 17:46	1
Arsenic	**14**		8.0	3.0	ug/L		04/01/22 09:00	04/06/22 17:46	4
Barium	**27000**		100	44	ug/L		04/01/22 09:00	04/07/22 15:03	50
Beryllium	**3.0**	**J**	4.0	1.1	ug/L		04/01/22 09:00	04/06/22 17:46	4
Cadmium	**0.22**	**J**	0.40	0.22	ug/L		04/01/22 09:00	04/06/22 17:46	4
Calcium	**1200000**		2000	760	ug/L		04/01/22 09:00	04/06/22 17:46	4
Chromium	**190**	**B**	20	4.4	ug/L		04/01/22 09:00	04/06/22 17:46	4
Cobalt	**16**		2.0	0.76	ug/L		04/01/22 09:00	04/06/22 17:46	4
Copper	**16**	**J**	20	7.2	ug/L		04/01/22 09:00	04/06/22 17:46	4
Iron	**140000**	**B**	400	140	ug/L		04/01/22 09:00	04/06/22 17:46	4
Lead	**45**		2.0	0.96	ug/L		04/01/22 09:00	04/06/22 17:46	4
Lithium	**300**		40	10	ug/L		04/01/22 09:00	04/06/22 17:46	4
Magnesium	**310000**		2000	600	ug/L		04/01/22 09:00	04/06/22 17:46	4
Manganese	**3500**		40	14	ug/L		04/01/22 09:00	04/06/22 17:46	4
Molybdenum	**7.4**	**J**	8.0	4.8	ug/L		04/01/22 09:00	04/06/22 17:46	4
Nickel	**69**		20	7.6	ug/L		04/01/22 09:00	04/06/22 17:46	4
Potassium	**38000**		2000	600	ug/L		04/01/22 09:00	04/06/22 17:46	4
Selenium	**7.7**	**J**	20	3.8	ug/L		04/01/22 09:00	04/06/22 17:46	4
Silver	4.0	U	4.0	2.0	ug/L		04/01/22 09:00	04/06/22 17:46	4
Sodium	**8900000**		50000	31000	ug/L		04/01/22 09:00	04/07/22 15:03	50
Strontium	**64000**		50	28	ug/L		04/01/22 09:00	04/07/22 15:03	50
Thallium	4.0	U	4.0	1.0	ug/L		04/01/22 09:00	04/06/22 17:46	4
Zinc	**120**		80	40	ug/L		04/01/22 09:00	04/06/22 17:46	4

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		03/29/22 09:00	03/29/22 18:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**270**	**B**	5.0	2.6	mg/L			04/07/22 18:16	1
Bicarbonate Alkalinity as CaCO3	**270**	**B**	5.0	2.6	mg/L			04/07/22 18:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 18:16	1
Chloride	**18000**		100	28	mg/L			03/30/22 10:08	100
Fluoride	5.0	U	5.0	2.4	mg/L			04/01/22 18:07	100
Sulfate	100	U	100	35	mg/L			04/01/22 18:07	100
Total Dissolved Solids	**24000**		1000	780	mg/L			03/30/22 20:35	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	**36.3**		2.65	4.20	1.00	0.892	pCi/L	03/30/22 13:44	04/21/22 10:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*03/30/22 13:44*	*04/21/22 10:19*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164211-1
Project/Site: Federal CCR Wells

Client Sample ID: 2019-09-F-20220324-01
Lab Sample ID: 240-164211-3

Date Collected: 03/24/22 13:06
Matrix: Water
Date Received: 03/28/22 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	65.9	G	3.42	6.96	1.00	1.49	pCi/L	03/30/22 14:11	04/18/22 12:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.8*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:26*	*1*
Y Carrier	*83.7*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:26*	*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	102		4.33	8.13	5.00	1.49	pCi/L		04/22/22 14:43	1

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

Job ID: 240-164211-1

Client Sample ID: 2019-07-F-20220324-01

Date Collected: 03/24/22 15:05
Date Received: 03/28/22 08:00

Lab Sample ID: 240-164211-4

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1100	J	4000	1100	ug/L		04/01/22 09:00	04/04/22 12:22	20

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	610		200	68	ug/L		04/01/22 09:00	04/06/22 18:06	4
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 18:06	1
Arsenic	3.2	J	8.0	3.0	ug/L		04/01/22 09:00	04/06/22 18:06	4
Barium	430		8.0	3.5	ug/L		04/01/22 09:00	04/06/22 18:06	4
Beryllium	4.0	U	4.0	1.1	ug/L		04/01/22 09:00	04/06/22 18:06	4
Cadmium	0.40	U	0.40	0.22	ug/L		04/01/22 09:00	04/06/22 18:06	4
Calcium	1000000		2000	760	ug/L		04/01/22 09:00	04/06/22 18:06	4
Chromium	6.6	J B	20	4.4	ug/L		04/01/22 09:00	04/06/22 18:06	4
Cobalt	4.5		2.0	0.76	ug/L		04/01/22 09:00	04/06/22 18:06	4
Copper	20	U	20	7.2	ug/L		04/01/22 09:00	04/06/22 18:06	4
Iron	2100	B	400	140	ug/L		04/01/22 09:00	04/06/22 18:06	4
Lead	2.0	U	2.0	0.96	ug/L		04/01/22 09:00	04/06/22 18:06	4
Lithium	270		40	10	ug/L		04/01/22 09:00	04/06/22 18:06	4
Magnesium	250000		2000	600	ug/L		04/01/22 09:00	04/06/22 18:06	4
Manganese	1600		40	14	ug/L		04/01/22 09:00	04/06/22 18:06	4
Molybdenum	9.8		8.0	4.8	ug/L		04/01/22 09:00	04/06/22 18:06	4
Nickel	8.8	J	20	7.6	ug/L		04/01/22 09:00	04/06/22 18:06	4
Potassium	25000		2000	600	ug/L		04/01/22 09:00	04/06/22 18:06	4
Selenium	4.9	J	20	3.8	ug/L		04/01/22 09:00	04/06/22 18:06	4
Silver	4.0	U	4.0	2.0	ug/L		04/01/22 09:00	04/06/22 18:06	4
Sodium	10000000		50000	31000	ug/L		04/01/22 09:00	04/07/22 15:07	50
Strontium	62000		50	28	ug/L		04/01/22 09:00	04/07/22 15:07	50
Thallium	4.0	U	4.0	1.0	ug/L		04/01/22 09:00	04/06/22 18:06	4
Zinc	80	U	80	40	ug/L		04/01/22 09:00	04/06/22 18:06	4

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		03/29/22 09:00	03/29/22 18:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	190	B	5.0	2.6	mg/L			04/07/22 18:22	1
Bicarbonate Alkalinity as CaCO3	190	B	5.0	2.6	mg/L			04/07/22 18:22	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 18:22	1
Chloride	16000		100	28	mg/L			04/01/22 18:47	100
Fluoride	5.0	U	5.0	2.4	mg/L			04/01/22 18:47	100
Sulfate	510		100	35	mg/L			04/01/22 18:47	100
Total Dissolved Solids	26000		1000	780	mg/L			03/30/22 20:35	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	1.02		0.271	0.286	1.00	0.236	pCi/L	03/30/22 13:44	04/21/22 10:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*40 - 110*	*03/30/22 13:44*	*04/21/22 10:19*	*1*

Eurofins Canton

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

Job ID: 240-164211-1

Client Sample ID: 2019-07-F-20220324-01

Date Collected: 03/24/22 15:05
Date Received: 03/28/22 08:00

Lab Sample ID: 240-164211-4

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.847		0.398	0.406	1.00	0.585	pCi/L	03/30/22 14:11	04/18/22 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:23*	*1*
Y Carrier	*80.7*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:23*	*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	1.87		0.482	0.497	5.00	0.585	pCi/L		04/22/22 14:43	1

Client Sample ID: EB-001-F-20220324-01
Lab Sample ID: 240-164211-5

Date Collected: 03/24/22 15:40
Matrix: Water
Date Received: 03/28/22 08:00

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/01/22 09:00	04/04/22 11:43	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/01/22 09:00	04/06/22 18:13	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 18:13	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/01/22 09:00	04/06/22 18:13	1
Barium	2.0	U	2.0	0.88	ug/L		04/01/22 09:00	04/06/22 18:13	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 18:13	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/01/22 09:00	04/06/22 18:13	1
Calcium	500	U	500	190	ug/L		04/01/22 09:00	04/06/22 18:13	1
Chromium	**1.4**	**J B**	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 18:13	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/01/22 09:00	04/06/22 18:13	1
Copper	**4.3**	**J**	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 18:13	1
Iron	100	U	100	36	ug/L		04/01/22 09:00	04/06/22 18:13	1
Lead	**0.36**	**J**	0.50	0.24	ug/L		04/01/22 09:00	04/06/22 18:13	1
Lithium	10	U	10	2.5	ug/L		04/01/22 09:00	04/06/22 18:13	1
Magnesium	500	U	500	150	ug/L		04/01/22 09:00	04/06/22 18:13	1
Manganese	10	U	10	3.6	ug/L		04/01/22 09:00	04/06/22 18:13	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/01/22 09:00	04/06/22 18:13	1
Nickel	5.0	U	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 18:13	1
Potassium	500	U	500	150	ug/L		04/01/22 09:00	04/06/22 18:13	1
Selenium	5.0	U	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 18:13	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 18:13	1
Sodium	1000	U	1000	610	ug/L		04/01/22 09:00	04/06/22 18:13	1
Strontium	**0.67**	**J**	1.0	0.56	ug/L		04/01/22 09:00	04/06/22 18:13	1
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 18:13	1
Zinc	20	U	20	10	ug/L		04/01/22 09:00	04/06/22 18:13	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		03/29/22 09:00	03/29/22 18:14	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			04/07/22 18:26	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 18:26	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 18:26	1
Chloride	**0.30**	**J**	1.0	0.28	mg/L			03/30/22 12:18	1
Fluoride	0.050	U	0.050	0.024	mg/L			03/30/22 12:18	1
Sulfate	1.0	U	1.0	0.35	mg/L			03/30/22 12:18	1
Total Dissolved Solids	**95**		10	7.8	mg/L			03/30/22 20:35	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	-0.00421	U	0.0932	0.0932	1.00	0.198	pCi/L	03/30/22 13:44	04/21/22 10:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.6*		*40 - 110*	*03/30/22 13:44*	*04/21/22 10:17*	*1*

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

Job ID: 240-164211-1

Client Sample ID: EB-001-F-20220324-01

Date Collected: 03/24/22 15:40
Date Received: 03/28/22 08:00

Lab Sample ID: 240-164211-5

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00559	U	0.303	0.303	1.00	0.540	pCi/L	03/30/22 14:11	04/18/22 12:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.6*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:23*	*1*
Y Carrier	*86.4*		*40 - 110*	*03/30/22 14:11*	*04/18/22 12:23*	*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	0.00138	U	0.317	0.317	5.00	0.540	pCi/L		04/22/22 14:43	1

Tracer/Carrier Summary

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

Job ID: 240-164211-1

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)
240-164211-1	9806-F-20220324-01	86.7
240-164211-2	MW17-F-20220324-01	99.5
240-164211-3	2019-09-F-20220324-01	98.8
240-164211-4	2019-07-F-20220324-01	93.1
240-164211-5	EB-001-F-20220324-01	69.6
LCS 160-558016/1-A	Lab Control Sample	86.2
LCSD 160-558016/2-A	Lab Control Sample Dup	91.1
MB 160-558016/23-A	Method Blank	90.9

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)
240-164211-1	9806-F-20220324-01	86.7	80.4
240-164211-2	MW17-F-20220324-01	99.5	80.0
240-164211-3	2019-09-F-20220324-01	98.8	83.7
240-164211-4	2019-07-F-20220324-01	93.1	80.7
240-164211-5	EB-001-F-20220324-01	69.6	86.4
LCS 160-558019/1-A	Lab Control Sample	86.2	82.6
LCSD 160-558019/2-A	Lab Control Sample Dup	91.1	81.5
MB 160-558019/23-A	Method Blank	90.9	89.7

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-348358/1-A
Matrix: Water
Analysis Batch: 348701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348358

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/01/22 09:00	04/04/22 10:20	1

Lab Sample ID: LCS 310-348358/2-A
Matrix: Water
Analysis Batch: 348701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348358

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2000	2200		ug/L		110	80 - 120

Lab Sample ID: 240-164211-3 DU
Matrix: Water
Analysis Batch: 348701

Client Sample ID: 2019-09-F-20220324-01
Prep Type: Total/NA
Prep Batch: 348358

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	1000	J	928	J	ug/L		12	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-348369/1-A
Matrix: Water
Analysis Batch: 349094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348369

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/01/22 09:00	04/06/22 16:09	1
Antimony	2.0	U	2.0	0.69	ug/L		04/01/22 09:00	04/06/22 16:09	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/01/22 09:00	04/06/22 16:09	1
Barium	2.0	U	2.0	0.88	ug/L		04/01/22 09:00	04/06/22 16:09	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/01/22 09:00	04/06/22 16:09	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/01/22 09:00	04/06/22 16:09	1
Calcium	500	U	500	190	ug/L		04/01/22 09:00	04/06/22 16:09	1
Chromium	4.99	J	5.0	1.1	ug/L		04/01/22 09:00	04/06/22 16:09	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/01/22 09:00	04/06/22 16:09	1
Copper	5.0	U	5.0	1.8	ug/L		04/01/22 09:00	04/06/22 16:09	1
Iron	53.1	J	100	36	ug/L		04/01/22 09:00	04/06/22 16:09	1
Lead	0.50	U	0.50	0.24	ug/L		04/01/22 09:00	04/06/22 16:09	1
Lithium	10	U	10	2.5	ug/L		04/01/22 09:00	04/06/22 16:09	1
Magnesium	500	U	500	150	ug/L		04/01/22 09:00	04/06/22 16:09	1
Manganese	10	U	10	3.6	ug/L		04/01/22 09:00	04/06/22 16:09	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/01/22 09:00	04/06/22 16:09	1
Nickel	5.0	U	5.0	1.9	ug/L		04/01/22 09:00	04/06/22 16:09	1
Potassium	500	U	500	150	ug/L		04/01/22 09:00	04/06/22 16:09	1
Selenium	5.0	U	5.0	0.96	ug/L		04/01/22 09:00	04/06/22 16:09	1
Silver	1.0	U	1.0	0.49	ug/L		04/01/22 09:00	04/06/22 16:09	1
Sodium	1000	U	1000	610	ug/L		04/01/22 09:00	04/06/22 16:09	1
Strontium	1.0	U	1.0	0.56	ug/L		04/01/22 09:00	04/06/22 16:09	1
Thallium	1.0	U	1.0	0.26	ug/L		04/01/22 09:00	04/06/22 16:09	1
Zinc	136		20	10	ug/L		04/01/22 09:00	04/06/22 16:09	1

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

Lab Sample ID: MB 310-348369/1-A
Matrix: Water
Analysis Batch: 349243

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 348369

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	20	U	20	10	ug/L		04/01/22 09:00	04/07/22 14:25	1

Lab Sample ID: LCS 310-348369/2-A
Matrix: Water
Analysis Batch: 349094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 348369

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	200	205		ug/L		103	80 - 120
Antimony	200	214		ug/L		107	80 - 120
Arsenic	200	208		ug/L		104	80 - 120
Barium	100	100		ug/L		100	80 - 120
Beryllium	100	101		ug/L		101	80 - 120
Cadmium	100	96.0		ug/L		96	80 - 120
Calcium	2000	1990		ug/L		99	80 - 120
Chromium	100	100		ug/L		100	80 - 120
Cobalt	100	100		ug/L		100	80 - 120
Copper	200	212		ug/L		106	80 - 120
Iron	200	211		ug/L		105	80 - 120
Lead	200	204		ug/L		102	80 - 120
Lithium	200	209		ug/L		105	80 - 120
Magnesium	2000	2070		ug/L		104	80 - 120
Manganese	100	101		ug/L		101	80 - 120
Molybdenum	200	206		ug/L		103	80 - 120
Nickel	200	204		ug/L		102	80 - 120
Potassium	2000	2030		ug/L		102	80 - 120
Selenium	400	381		ug/L		95	80 - 120
Silver	100	105		ug/L		105	80 - 120
Sodium	2000	2070		ug/L		104	80 - 120
Strontium	200	202		ug/L		101	80 - 120
Thallium	200	201		ug/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-521090/1-A
Matrix: Water
Analysis Batch: 521433

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521090

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.168	J	0.20	0.13	ug/L		03/29/22 09:00	03/29/22 17:15	1

Lab Sample ID: LCS 240-521090/2-A
Matrix: Water
Analysis Batch: 521433

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.55		ug/L		111	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-522121/4
Matrix: Water
Analysis Batch: 522121

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	2.75	J	5.0	2.6	mg/L			04/07/22 14:42	1
Bicarbonate Alkalinity as CaCO3	2.75	J	5.0	2.6	mg/L			04/07/22 14:42	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 14:42	1

Lab Sample ID: LCS 240-522121/3
Matrix: Water
Analysis Batch: 522121

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	123		mg/L		102	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-521184/3
Matrix: Water
Analysis Batch: 521184

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			03/29/22 22:48	1
Fluoride	0.050	U	0.050	0.024	mg/L			03/29/22 22:48	1
Sulfate	1.0	U	1.0	0.35	mg/L			03/29/22 22:48	1

Lab Sample ID: LCS 240-521184/4
Matrix: Water
Analysis Batch: 521184

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	51.8		mg/L		104	90 - 110
Fluoride	2.50	2.72		mg/L		109	90 - 110
Sulfate	50.0	52.4		mg/L		105	90 - 110

Lab Sample ID: MB 240-521550/3
Matrix: Water
Analysis Batch: 521550

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			04/01/22 13:45	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/01/22 13:45	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/01/22 13:45	1

Lab Sample ID: LCS 240-521550/4
Matrix: Water
Analysis Batch: 521550

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.0		mg/L		100	90 - 110
Fluoride	2.50	2.57		mg/L		103	90 - 110
Sulfate	50.0	51.7		mg/L		103	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-521342/1
Matrix: Water
Analysis Batch: 521342

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			03/30/22 17:19	1

Lab Sample ID: LCS 240-521342/2
Matrix: Water
Analysis Batch: 521342

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	135		mg/L		90	80 - 120

Lab Sample ID: MB 240-521344/1
Matrix: Water
Analysis Batch: 521344

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			03/30/22 20:35	1

Lab Sample ID: LCS 240-521344/2
Matrix: Water
Analysis Batch: 521344

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	137		mg/L		91	80 - 120

Lab Sample ID: 240-164211-5 DU
Matrix: Water
Analysis Batch: 521344

Client Sample ID: EB-001-F-20220324-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	95		98.0		mg/L		3	20

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-558016/23-A
Matrix: Water
Analysis Batch: 561497

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558016

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.03338	U	0.0810	0.0811	1.00	0.183	pCi/L	03/30/22 13:44	04/21/22 12:21	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.9*		*40 - 110*	*03/30/22 13:44*	*04/21/22 12:21*	*1*

Lab Sample ID: LCS 160-558016/1-A
Matrix: Water
Analysis Batch: 561508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558016

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.81		1.22	1.00	0.203	pCi/L	95	75 - 125

Method: 9315 - Radium 226 by GFPC (Continued)

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.2		40 - 110

Lab Sample ID: LCSD 160-558016/2-A
Matrix: Water
Analysis Batch: 561508

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558016

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	11.71		1.29	1.00	0.154	pCi/L	103	75 - 125	0.36	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	91.1		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-558019/23-A
Matrix: Water
Analysis Batch: 560821

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558019

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1893	U	0.224	0.225	1.00	0.369	pCi/L	03/30/22 14:11	04/18/22 12:45	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110	03/30/22 14:11	04/18/22 12:45	1
Y Carrier	89.7		40 - 110	03/30/22 14:11	04/18/22 12:45	1

Lab Sample ID: LCS 160-558019/1-A
Matrix: Water
Analysis Batch: 560834

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558019

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.70	9.974		1.18	1.00	0.422	pCi/L	115	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.2		40 - 110
Y Carrier	82.6		40 - 110

Lab Sample ID: LCSD 160-558019/2-A
Matrix: Water
Analysis Batch: 560834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558019

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.70	9.870		1.16	1.00	0.419	pCi/L	113	75 - 125	0.04	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	91.1		40 - 110
Y Carrier	81.5		40 - 110

Metals

Prep Batch: 348358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	3005A	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	3005A	
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	3005A	
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	3005A	
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	3005A	
MB 310-348358/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-348358/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164211-3 DU	2019-09-F-20220324-01	Total/NA	Water	3005A	

Prep Batch: 348369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	3005A	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	3005A	
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	3005A	
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	3005A	
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	3005A	
MB 310-348369/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-348369/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 348701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	6010D	348358
240-164211-2	MW17-F-20220324-01	Total/NA	Water	6010D	348358
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	6010D	348358
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	6010D	348358
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	6010D	348358
MB 310-348358/1-A	Method Blank	Total/NA	Water	6010D	348358
LCS 310-348358/2-A	Lab Control Sample	Total/NA	Water	6010D	348358
240-164211-3 DU	2019-09-F-20220324-01	Total/NA	Water	6010D	348358

Analysis Batch: 349094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-2	MW17-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	6020B	348369
MB 310-348369/1-A	Method Blank	Total/NA	Water	6020B	348369
LCS 310-348369/2-A	Lab Control Sample	Total/NA	Water	6020B	348369

Analysis Batch: 349098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-2	MW17-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	6020B	348369

Analysis Batch: 349243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-2	MW17-F-20220324-01	Total/NA	Water	6020B	348369

Metals (Continued)

Analysis Batch: 349243 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	6020B	348369
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	6020B	348369
MB 310-348369/1-A	Method Blank	Total/NA	Water	6020B	348369

Prep Batch: 521090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	7470A	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	7470A	
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	7470A	
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	7470A	
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	7470A	
MB 240-521090/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-521090/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 521433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	7470A	521090
240-164211-2	MW17-F-20220324-01	Total/NA	Water	7470A	521090
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	7470A	521090
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	7470A	521090
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	7470A	521090
MB 240-521090/1-A	Method Blank	Total/NA	Water	7470A	521090
LCS 240-521090/2-A	Lab Control Sample	Total/NA	Water	7470A	521090

General Chemistry

Analysis Batch: 521184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	300.0	
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	300.0	
MB 240-521184/3	Method Blank	Total/NA	Water	300.0	
LCS 240-521184/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 521342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	SM 2540C	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	SM 2540C	
MB 240-521342/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521342/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 521344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	SM 2540C	
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	SM 2540C	
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	SM 2540C	
MB 240-521344/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521344/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-164211-5 DU	EB-001-F-20220324-01	Total/NA	Water	SM 2540C	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164211-1
Project/Site: Federal CCR Wells

General Chemistry

Analysis Batch: 521550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	300.0	
240-164211-1	9806-F-20220324-01	Total/NA	Water	300.0	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	300.0	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	300.0	
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	300.0	
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	300.0	
MB 240-521550/3	Method Blank	Total/NA	Water	300.0	
LCS 240-521550/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 522121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	2320B-1997	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	2320B-1997	
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	2320B-1997	
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	2320B-1997	
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	2320B-1997	
MB 240-522121/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-522121/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Rad

Prep Batch: 558016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	PrecSep-21	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	PrecSep-21	
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	PrecSep-21	
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	PrecSep-21	
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	PrecSep-21	
MB 160-558016/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-558016/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-558016/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 558019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164211-1	9806-F-20220324-01	Total/NA	Water	PrecSep_0	
240-164211-2	MW17-F-20220324-01	Total/NA	Water	PrecSep_0	
240-164211-3	2019-09-F-20220324-01	Total/NA	Water	PrecSep_0	
240-164211-4	2019-07-F-20220324-01	Total/NA	Water	PrecSep_0	
240-164211-5	EB-001-F-20220324-01	Total/NA	Water	PrecSep_0	
MB 160-558019/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-558019/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-558019/2-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: 240-164211-1

Client Sample ID: 9806-F-20220324-01

Lab Sample ID: 240-164211-1

Date Collected: 03/24/22 09:34

Matrix: Water

Date Received: 03/28/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		1	348701	04/04/22 10:59	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349094	04/06/22 17:38	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 17:38	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 17:56	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 15:59	JMR	TAL CAN
Total/NA	Analysis	300.0		1	521550	04/01/22 16:06	JMB	TAL CAN
Total/NA	Analysis	300.0		5	521550	04/01/22 16:26	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521342	03/30/22 17:19	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558016	03/30/22 13:44	LPS	TAL SL
Total/NA	Analysis	9315		1	561508	04/21/22 10:19	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558019	03/30/22 14:11	LPS	TAL SL
Total/NA	Analysis	9320		1	560834	04/18/22 12:26	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	561603	04/22/22 14:43	SCB	TAL SL

Client Sample ID: MW17-F-20220324-01

Lab Sample ID: 240-164211-2

Date Collected: 03/24/22 10:40

Matrix: Water

Date Received: 03/28/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		6	348701	04/04/22 12:14	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349094	04/06/22 17:42	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 17:42	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		10	349243	04/07/22 15:00	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 17:58	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 16:04	JMR	TAL CAN
Total/NA	Analysis	300.0		10	521550	04/01/22 16:46	JMB	TAL CAN
Total/NA	Analysis	300.0		50	521550	04/01/22 17:47	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521342	03/30/22 17:19	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558016	03/30/22 13:44	LPS	TAL SL
Total/NA	Analysis	9315		1	561508	04/21/22 10:20	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558019	03/30/22 14:11	LPS	TAL SL
Total/NA	Analysis	9320		1	560834	04/18/22 12:26	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	561603	04/22/22 14:43	SCB	TAL SL

Lab Chronicle

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

Job ID: 240-164211-1

Client Sample ID: 2019-09-F-20220324-01

Lab Sample ID: 240-164211-3

Date Collected: 03/24/22 13:06

Matrix: Water

Date Received: 03/28/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		15	348701	04/04/22 11:36	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		4	349094	04/06/22 17:46	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 17:46	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		50	349243	04/07/22 15:03	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 18:05	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 18:16	JMR	TAL CAN
Total/NA	Analysis	300.0		100	521184	03/30/22 10:08	MED	TAL CAN
Total/NA	Analysis	300.0		100	521550	04/01/22 18:07	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521344	03/30/22 20:35	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558016	03/30/22 13:44	LPS	TAL SL
Total/NA	Analysis	9315		1	561508	04/21/22 10:19	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558019	03/30/22 14:11	LPS	TAL SL
Total/NA	Analysis	9320		1	560834	04/18/22 12:26	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	561603	04/22/22 14:43	SCB	TAL SL

Client Sample ID: 2019-07-F-20220324-01

Lab Sample ID: 240-164211-4

Date Collected: 03/24/22 15:05

Matrix: Water

Date Received: 03/28/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		20	348701	04/04/22 12:22	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		4	349094	04/06/22 18:06	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 18:06	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		50	349243	04/07/22 15:07	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 18:12	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 18:22	JMR	TAL CAN
Total/NA	Analysis	300.0		100	521550	04/01/22 18:47	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521344	03/30/22 20:35	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558016	03/30/22 13:44	LPS	TAL SL
Total/NA	Analysis	9315		1	561508	04/21/22 10:19	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558019	03/30/22 14:11	LPS	TAL SL
Total/NA	Analysis	9320		1	560820	04/18/22 12:23	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	561603	04/22/22 14:43	SCB	TAL SL

Lab Chronicle

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

Job ID: 240-164211-1

Client Sample ID: EB-001-F-20220324-01

Date Collected: 03/24/22 15:40
Date Received: 03/28/22 08:00

Lab Sample ID: 240-164211-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			348358	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6010D		1	348701	04/04/22 11:43	CTB	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349094	04/06/22 18:13	SAP	TAL CF
Total/NA	Prep	3005A			348369	04/01/22 09:00	JNR	TAL CF
Total/NA	Analysis	6020B		1	349098	04/06/22 18:13	SAP	TAL CF
Total/NA	Prep	7470A			521090	03/29/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521433	03/29/22 18:14	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 18:26	JMR	TAL CAN
Total/NA	Analysis	300.0		1	521184	03/30/22 12:18	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521344	03/30/22 20:35	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558016	03/30/22 13:44	LPS	TAL SL
Total/NA	Analysis	9315		1	561497	04/21/22 10:17	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558019	03/30/22 14:11	LPS	TAL SL
Total/NA	Analysis	9320		1	560820	04/18/22 12:23	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	561603	04/22/22 14:43	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
Job ID: 240-164211-1
Project/Site: Federal CCR Wells

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	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22 *
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	11-06-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	04-20-22
Oregon	NELAP	4062	04-20-22
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-22-16	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 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	04-06-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164211-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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
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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

Columbus 209

eurofins | environment testing America

Client Information	Sampler: Kenron	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740.373.4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List) D	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) N	9315_Ra226, 9320_Ra228 D	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity) N	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
9800-F-20220324-01	032422	0934	G	W			1	1	2	1		
MW17-F-20220324-01	032422	1040	G	W			1	1	2	1		
2019-09-F-20220324-01	032422	1306	G	W			1	1	2	1		
2019-07-F-20220324-01	032422	1505	G	W			1	1	2	1		
EB-001-F-20220324-01	032422	1540	G	W			1	1	2	1		

240-164211 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 032522 0900	Company	Received by:	Date/Time: 3-25-22	Company ETT
Relinquished by:	Date/Time: 3-25-22 1700	Company ETT	Received by:	Date/Time: 3-28-22 8:00	Company eetnc
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 160421**
Canton Facility

Client Light Stone Site Name _____ Cooler unpacked by: Mandy Bee

Cooler Received on 3-28-22 Opened on 3-28-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TP 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_____	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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

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:

Sample 2019-09-F-2022 0324-01
Nitric pH 3

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login # : 164241

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	13.8	13.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	5.4	5.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	2.3	2.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	2.3	2.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	2.6	2.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	3.9	3.7	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
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	

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
9806-F-20220324-01	240-164211-C-1	Plastic 500ml - with Nitric Acid	<2			
9806-F-20220324-01	240-164211-D-1	Plastic 1 liter - Nitric Acid	<2			
9806-F-20220324-01	240-164211-E-1	Plastic 1 liter - Nitric Acid	<2			
9806-F-20220324-01	240-164211-F-1	Plastic 250ml - with Nitric Acid	<2			
MW17-F-20220324-10	240-164211-C-2	Plastic 500ml - with Nitric Acid	<2			
MW17-F-20220324-10	240-164211-D-2	Plastic 1 liter - Nitric Acid	<2			
MW17-F-20220324-10	240-164211-E-2	Plastic 1 liter - Nitric Acid	<2			
MW17-F-20220324-10	240-164211-F-2	Plastic 250ml - with Nitric Acid	<2			
2019-09-F-202203274-01	240-164211-C-3	Plastic 500ml - with Nitric Acid	<2			
2019-09-F-202203274-01	240-164211-D-3	Plastic 1 liter - Nitric Acid	<2			
2019-09-F-202203274-01	240-164211-E-3	Plastic 1 liter - Nitric Acid	<2			
2019-09-F-202203274-01	240-164211-F-3	Plastic 250ml - with Nitric Acid	<2			
2019-07-F-20220324-01	240-164211-C-4	Plastic 500ml - with Nitric Acid	<2			
2019-07-F-20220324-01	240-164211-D-4	Plastic 1 liter - Nitric Acid	<2			
2019-07-F-20220324-01	240-164211-E-4	Plastic 1 liter - Nitric Acid	<2			
2019-07-F-20220324-01	240-164211-F-4	Plastic 250ml - with Nitric Acid	<2			
EB-001-F-20220324-01	240-164211-C-5	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220324-01	240-164211-D-5	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220324-01	240-164211-E-5	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220324-01	240-164211-F-5	Plastic 250ml - with Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150202.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-164211-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/10/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
9806-F-20220324-01 (240-164211-1)	3/24/22	09:34 Eastern		Water			X	X	X	2	. Recount of TAR after 21 day ingrowth if > action limit; save planchet
MW17-F-20220324-10 (240-164211-2)	3/24/22	10:40 Eastern		Water			X	X	X	2	. Recount of TAR after 21 day ingrowth if > action limit; save planchet
2019-09-F-202203274-01 (240-164211-3)	3/24/22	13:06 Eastern		Water			X	X	X	2	. Recount of TAR after 21 day ingrowth if > action limit; save planchet
2019-07-F-20220324-01 (240-164211-4)	3/24/22	15:05 Eastern		Water			X	X	X	2	. Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220324-01 (240-164211-5)	3/24/22	15:40 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Pat McMeen	3/28 15:26	ETA	FED EX		
2	FED EX			Sierra Worthington	MAR 2 9 2022 0900	ETAS
3						

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

4/22/2022

eurofins | Environment Testing America

240-164211 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

21'

Client Information

Client: Canton

City/State: CITY | STATE: OH | Project:

Receipt Information

Date/Time Received: DATE 3/29/22 | TIME 0935 | Received By: N

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other._____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes* Cooler ID
Multiple Coolers?	☐ Yes	☒ No	*If yes* Cooler # _____ of _____
Cooler Custody Seals Present? No	☐ Yes	☒ No	*If yes* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present? No	☐ Yes	☒ No	*If yes* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☒ No	*If yes* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other._____ ☐ NONE

Thermometer ID: N | Correction Factor (°C): +0.0

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 1	CONTAINER 2
Container(s) used	PL 500 Nitric	PL 250 Nitric
Uncorrected Temp (°C)	10.1	10.4
Corrected Temp (°C)	10.1	10.4

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

no COC

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164211-1

Login Number: 164211
List Number: 2
Creator: Kizer, Preston V

List Source: Eurofins Cedar Falls
List Creation: 03/29/22 11:46 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (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: 240-164211-1

Login Number: 164211
List Number: 3
Creator: Johnson, Autumn R

List Source: Eurofins St. Louis
List Creation: 03/29/22 02:17 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-164309-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
5/17/2022 2:32:31 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-164309-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-164309-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-164309-1

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 3/30/2022 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 10 coolers at receipt time were 0.1º C, 0.2º C, 0.3º C, 0.5º C, 0.6º C, 0.8º C, 0.9º C, 1.2º C, 1.4º C and 8.2º C.

RAD
Method PrecSep-21: Radium-226 Prep Batch 160-558258: The following samples were prepared at a reduced aliquot due to Matrix: 93108-F-20220328-01 (240-164309-1), 94139-F-20220328-01 (240-164309-2), 2016-04-F-20220328-01 (240-164309-5) and 2016-06-F-20220328-01 (240-164309-6). 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 160-558261: The following samples were prepared at a reduced aliquot due to Matrix: 93108-F-20220328-01 (240-164309-1), 94139-F-20220328-01 (240-164309-2), 2016-04-F-20220328-01 (240-164309-5) and 2016-06-F-20220328-01 (240-164309-6). 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 160-558261: The following sample(s) did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interference. During preparation the analyst visually noted matrix effects. The data have been reported with this narrative. 94139-F-20220328-01 (240-164309-2)

Methods 9320: Radium 228 Batch 160-558261: 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. 93108-F-20220328-01 (240-164309-1), 94139-F-20220328-01 (240-164309-2), 93100-F-20220328-01 (240-164309-3), 2016-03-F-20220328-01 (240-164309-4), 2016-04-F-20220328-01 (240-164309-5), 2016-06-F-20220328-01 (240-164309-6), EB-001-F-20220328-01 (240-164309-7), (LCS 160-558261/1-A), (LCSD 160-558261/2-A) and (MB 160-558261/23-A)

Methods 9315: Radium-226 prep batch 160-558258: 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. 93108-F-20220328-01 (240-164309-1), 94139-F-20220328-01 (240-164309-2), 93100-F-20220328-01 (240-164309-3), 2016-03-F-20220328-01 (240-164309-4), 2016-04-F-20220328-01 (240-164309-5), 2016-06-F-20220328-01 (240-164309-6), EB-001-F-20220328-01 (240-164309-7), (LCS 160-558258/1-A), (LCSD 160-558258/2-A) and (MB 160-558258/23-A)

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

Metals
Method 3005A: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: 93108-F-20220328-01 (240-164309-1). The sample was preserved to the appropriate pH in the laboratory.

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 in the Definitions/Glossary page.

Method Summary

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

Job ID: 240-164309-1

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: 240-164309-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-164309-1	93108-F-20220328-01	Water	03/28/22 09:39	03/30/22 09:50
240-164309-2	94139-F-20220328-01	Water	03/28/22 10:32	03/30/22 09:50
240-164309-3	93100-F-20220328-01	Water	03/28/22 11:03	03/30/22 09:50
240-164309-4	2016-03-F-20220328-01	Water	03/28/22 12:26	03/30/22 09:50
240-164309-5	2016-04-F-20220328-01	Water	03/28/22 13:26	03/30/22 09:50
240-164309-6	2016-06-F-20220328-01	Water	03/28/22 14:53	03/30/22 09:50
240-164309-7	EB-001-F-20220328-01	Water	03/28/22 15:10	03/30/22 09:50

Detection Summary

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

Job ID: 240-164309-1

Client Sample ID: 93108-F-20220328-01 — Lab Sample ID: 240-164309-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	480		400	110	ug/L	2		6010D	Total/NA
Aluminum	36	J	50	17	ug/L	1		6020B	Total/NA
Arsenic	2.7		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	430		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	13000		500	190	ug/L	1		6020B	Total/NA
Iron	580		100	36	ug/L	1		6020B	Total/NA
Lithium	38		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	4600		500	150	ug/L	1		6020B	Total/NA
Manganese	180		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	99	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	2.5	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	2200		500	150	ug/L	1		6020B	Total/NA
Silver	0.52	J	1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	1200000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	1200		1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	460		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	460		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1600		20	5.7	mg/L	20		300.0	Total/NA
Fluoride	3.1		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	22		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	2200		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 94139-F-20220328-01 — Lab Sample ID: 240-164309-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	520		200	56	ug/L	1		6010D	Total/NA
Aluminum	3400		50	17	ug/L	1		6020B	Total/NA
Arsenic	3.6		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	130		2.0	0.88	ug/L	1		6020B	Total/NA
Beryllium	0.33	J	1.0	0.27	ug/L	1		6020B	Total/NA
Cadmium	0.079	J	0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	6600		500	190	ug/L	1		6020B	Total/NA
Chromium	1.9	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.93		0.50	0.19	ug/L	1		6020B	Total/NA
Copper	5.7		5.0	1.8	ug/L	1		6020B	Total/NA
Iron	1600		100	36	ug/L	1		6020B	Total/NA
Lead	3.9		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	19		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	2400		500	150	ug/L	1		6020B	Total/NA
Manganese	42		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	160	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	3.9	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1500		500	150	ug/L	1		6020B	Total/NA
Sodium	560000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	480		1.0	0.56	ug/L	1		6020B	Total/NA
Zinc	13	J	20	10	ug/L	1		6020B	Total/NA
Total Alkalinity	490		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	470		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	18		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	490		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	4.5		0.10	0.048	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 94139-F-20220328-01 (Continued) — Lab Sample ID: 240-164309-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	57		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	1300		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 93100-F-20220328-01 — Lab Sample ID: 240-164309-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	510		400	110	ug/L	2		6010D	Total/NA
Aluminum	33	J	50	17	ug/L	1		6020B	Total/NA
Arsenic	1.8	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	510		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	15000		500	190	ug/L	1		6020B	Total/NA
Chromium	15		5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	2.4		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	99	J	100	36	ug/L	1		6020B	Total/NA
Lithium	39		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	5500		500	150	ug/L	1		6020B	Total/NA
Manganese	28		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	120	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	12		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	2700		500	150	ug/L	1		6020B	Total/NA
Sodium	1400000		10000	6100	ug/L	10		6020B	Total/NA
Strontium	1500		1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	2000	F1	20	5.7	mg/L	20		300.0	Total/NA
Fluoride	2.6		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	14		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	2900		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2016-03-F-20220328-01 — Lab Sample ID: 240-164309-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2200		200	56	ug/L	1		6010D	Total/NA
Aluminum	36	J	50	17	ug/L	1		6020B	Total/NA
Arsenic	2.1		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	25		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	450000		2000	760	ug/L	4		6020B	Total/NA
Cobalt	1.9		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	1800		100	36	ug/L	1		6020B	Total/NA
Lithium	36		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	97000		2000	600	ug/L	4		6020B	Total/NA
Manganese	3000		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	2.2	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	3.0	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	6900		500	150	ug/L	1		6020B	Total/NA
Selenium	0.99	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	93000		1000	610	ug/L	1		6020B	Total/NA
Strontium	8300		10	5.6	ug/L	10		6020B	Total/NA
Total Alkalinity	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	24		2.0	0.57	mg/L	2		300.0	Total/NA
Fluoride	0.15		0.10	0.048	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2016-03-F-20220328-01 (Continued) — Lab Sample ID: 240-164309-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1500		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	2300		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2016-04-F-20220328-01 — Lab Sample ID: 240-164309-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3000		200	56	ug/L	1		6010D	Total/NA
Aluminum	230		50	17	ug/L	1		6020B	Total/NA
Arsenic	0.91	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	53		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	560000		2000	760	ug/L	4		6020B	Total/NA
Chromium	4.6	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	1.4		0.50	0.19	ug/L	1		6020B	Total/NA
Copper	7.1		5.0	1.8	ug/L	1		6020B	Total/NA
Iron	860		100	36	ug/L	1		6020B	Total/NA
Lithium	35		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	110000		2000	600	ug/L	4		6020B	Total/NA
Manganese	1700		10	3.6	ug/L	1		6020B	Total/NA
Nickel	3.7	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	8300		500	150	ug/L	1		6020B	Total/NA
Sodium	73000		1000	610	ug/L	1		6020B	Total/NA
Strontium	7600		10	5.6	ug/L	10		6020B	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	25		2.0	0.57	mg/L	2		300.0	Total/NA
Fluoride	0.15		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	1800		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	2400		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2016-06-F-20220328-01 — Lab Sample ID: 240-164309-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	470		200	56	ug/L	1		6010D	Total/NA
Aluminum	100		50	17	ug/L	1		6020B	Total/NA
Arsenic	1.1	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	58		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	4500		500	190	ug/L	1		6020B	Total/NA
Chromium	2.3	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.28	J	0.50	0.19	ug/L	1		6020B	Total/NA
Iron	77	J	100	36	ug/L	1		6020B	Total/NA
Lithium	20		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	1300		500	150	ug/L	1		6020B	Total/NA
Manganese	11		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	56	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	11		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	3100		500	150	ug/L	1		6020B	Total/NA
Sodium	670000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	340		1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	480		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	460		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	21		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	660		10	2.8	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2016-06-F-20220328-01 (Continued) — Lab Sample ID: 240-164309-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	5.4		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	98		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	1400		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220328-01 — Lab Sample ID: 240-164309-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	500		200	56	ug/L	1		6010D	Total/NA
Copper	5.9		5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.89		0.50	0.24	ug/L	1		6020B	Total/NA
Sodium	720	J	1000	610	ug/L	1		6020B	Total/NA
Zinc	14	J	20	10	ug/L	1		6020B	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.

Client Sample ID: 93108-F-20220328-01
Lab Sample ID: 240-164309-1

Date Collected: 03/28/22 09:39
Matrix: Water
Date Received: 03/30/22 09:50

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**480**		400	110	ug/L		04/21/22 09:00	04/25/22 14:29	2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**36**	**J**	50	17	ug/L		04/21/22 09:00	05/09/22 19:57	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 19:57	1
Arsenic	**2.7**		2.0	0.75	ug/L		04/21/22 09:00	05/09/22 19:57	1
Barium	**430**		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 19:57	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 19:57	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 19:57	1
Calcium	**13000**		500	190	ug/L		04/21/22 09:00	05/09/22 19:57	1
Chromium	5.0	U	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 19:57	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 19:57	1
Copper	5.0	U	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 19:57	1
Iron	**580**		100	36	ug/L		04/21/22 09:00	05/09/22 19:57	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 19:57	1
Lithium	**38**		10	2.5	ug/L		04/21/22 09:00	05/09/22 19:57	1
Magnesium	**4600**		500	150	ug/L		04/21/22 09:00	05/09/22 19:57	1
Manganese	**180**		10	3.6	ug/L		04/21/22 09:00	05/09/22 19:57	1
Molybdenum	**99**	**B**	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 19:57	1
Nickel	**2.5**	**J**	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 19:57	1
Potassium	**2200**		500	150	ug/L		04/21/22 09:00	05/09/22 19:57	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 19:57	1
Silver	**0.52**	**J**	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 19:57	1
Sodium	**1200000**		4000	2400	ug/L		04/21/22 09:00	05/10/22 15:26	4
Strontium	**1200**		1.0	0.56	ug/L		04/21/22 09:00	05/09/22 19:57	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 19:57	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 19:57	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		03/31/22 09:00	04/01/22 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**460**		5.0	2.6	mg/L			04/08/22 10:14	1
Bicarbonate Alkalinity as CaCO3	**460**		5.0	2.6	mg/L			04/08/22 10:14	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:14	1
Chloride	**1600**		20	5.7	mg/L			04/01/22 21:48	20
Fluoride	**3.1**		0.25	0.12	mg/L			04/01/22 20:48	5
Sulfate	**22**		5.0	1.7	mg/L			04/01/22 20:48	5
Total Dissolved Solids	**2200**		50	39	mg/L			04/01/22 13:12	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	**0.706**		0.324	0.330	1.00	0.410	pCi/L	04/01/22 11:12	04/26/22 10:40	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*40 - 110*	*04/01/22 11:12*	*04/26/22 10:40*	*1*

Client Sample ID: 93108-F-20220328-01
Lab Sample ID: 240-164309-1

Date Collected: 03/28/22 09:39
Matrix: Water
Date Received: 03/30/22 09:50

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.04		0.414	0.425	1.00	0.600	pCi/L	04/01/22 11:42	04/25/22 12:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:22*	*1*
Y Carrier	*87.1*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:22*	*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	1.74		0.526	0.538	5.00	0.600	pCi/L		04/26/22 17:31	1

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

Job ID: 240-164309-1

Client Sample ID: 94139-F-20220328-01

Date Collected: 03/28/22 10:32
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-2

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	520		200	56	ug/L		04/21/22 09:00	04/21/22 17:23	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	3400		50	17	ug/L		04/21/22 09:00	05/09/22 20:00	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:00	1
Arsenic	3.6		2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:00	1
Barium	130		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:00	1
Beryllium	0.33	J	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:00	1
Cadmium	0.079	J	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:00	1
Calcium	6600		500	190	ug/L		04/21/22 09:00	05/09/22 20:00	1
Chromium	1.9	J	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:00	1
Cobalt	0.93		0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:00	1
Copper	5.7		5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:00	1
Iron	1600		100	36	ug/L		04/21/22 09:00	05/09/22 20:00	1
Lead	3.9		0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:00	1
Lithium	19		10	2.5	ug/L		04/21/22 09:00	05/09/22 20:00	1
Magnesium	2400		500	150	ug/L		04/21/22 09:00	05/09/22 20:00	1
Manganese	42		10	3.6	ug/L		04/21/22 09:00	05/09/22 20:00	1
Molybdenum	160	B	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:00	1
Nickel	3.9	J	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:00	1
Potassium	1500		500	150	ug/L		04/21/22 09:00	05/09/22 20:00	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:00	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:00	1
Sodium	560000		4000	2400	ug/L		04/21/22 09:00	05/10/22 15:29	4
Strontium	480		1.0	0.56	ug/L		04/21/22 09:00	05/09/22 20:00	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:00	1
Zinc	13	J	20	10	ug/L		04/21/22 09:00	05/09/22 20:00	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		03/31/22 09:00	04/01/22 14:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	490		5.0	2.6	mg/L			04/08/22 10:24	1
Bicarbonate Alkalinity as CaCO3	470		5.0	2.6	mg/L			04/08/22 10:24	1
Carbonate Alkalinity as CaCO3	18		5.0	2.6	mg/L			04/08/22 10:24	1
Chloride	490		10	2.8	mg/L			04/01/22 22:29	10
Fluoride	4.5		0.10	0.048	mg/L			04/01/22 22:08	2
Sulfate	57		2.0	0.70	mg/L			04/01/22 22:08	2
Total Dissolved Solids	1300		20	16	mg/L			04/01/22 13:12	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	0.874		0.518	0.524	1.00	0.676	pCi/L	04/01/22 11:12	04/26/22 10:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*63.5*		*40 - 110*	*04/01/22 11:12*	*04/26/22 10:38*	*1*

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

Job ID: 240-164309-1

Client Sample ID: 94139-F-20220328-01

Date Collected: 03/28/22 10:32
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-2

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.693	U G	0.697	0.700	1.00	1.13	pCi/L	04/01/22 11:42	04/25/22 12:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*63.5*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:25*	*1*
Y Carrier	*86.4*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:25*	*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	**1.57**		0.868	0.874	5.00	1.13	pCi/L		04/26/22 17:31	1

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

Job ID: 240-164309-1

Client Sample ID: 93100-F-20220328-01

Date Collected: 03/28/22 11:03
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-3

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**510**		400	110	ug/L		04/21/22 09:00	04/25/22 14:31	2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**33**	**J**	50	17	ug/L		04/21/22 09:00	05/09/22 20:04	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:04	1
Arsenic	**1.8**	**J**	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:04	1
Barium	**510**		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:04	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:04	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:04	1
Calcium	**15000**		500	190	ug/L		04/21/22 09:00	05/09/22 20:04	1
Chromium	**15**		5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:04	1
Cobalt	**2.4**		0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:04	1
Copper	5.0	U	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:04	1
Iron	**99**	**J**	100	36	ug/L		04/21/22 09:00	05/09/22 20:04	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:04	1
Lithium	**39**		10	2.5	ug/L		04/21/22 09:00	05/09/22 20:04	1
Magnesium	**5500**		500	150	ug/L		04/21/22 09:00	05/09/22 20:04	1
Manganese	**28**		10	3.6	ug/L		04/21/22 09:00	05/09/22 20:04	1
Molybdenum	**120**	**B**	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:04	1
Nickel	**12**		5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:04	1
Potassium	**2700**		500	150	ug/L		04/21/22 09:00	05/09/22 20:04	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:04	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:04	1
Sodium	**1400000**		10000	6100	ug/L		04/21/22 09:00	05/16/22 16:42	10
Strontium	**1500**		1.0	0.56	ug/L		04/21/22 09:00	05/09/22 20:04	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:04	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:04	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		03/31/22 09:00	04/01/22 15:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**330**		5.0	2.6	mg/L			04/08/22 10:29	1
Bicarbonate Alkalinity as CaCO3	**330**		5.0	2.6	mg/L			04/08/22 10:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:29	1
Chloride	**2000**	**F1**	20	5.7	mg/L			04/01/22 23:09	20
Fluoride	**2.6**		0.25	0.12	mg/L			04/01/22 22:49	5
Sulfate	**14**		5.0	1.7	mg/L			04/01/22 22:49	5
Total Dissolved Solids	**2900**		50	39	mg/L			04/01/22 13:12	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	**0.704**		0.230	0.239	1.00	0.205	pCi/L	04/01/22 11:12	04/26/22 13:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.5*		*40 - 110*	*04/01/22 11:12*	*04/26/22 13:12*	*1*

Eurofins Canton

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

Job ID: 240-164309-1

Client Sample ID: 93100-F-20220328-01

Date Collected: 03/28/22 11:03
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-3

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.863		0.270	0.281	1.00	0.344	pCi/L	04/01/22 11:42	04/25/22 12:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.5*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:25*	*1*
Y Carrier	*84.1*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:25*	*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	1.57		0.355	0.369	5.00	0.344	pCi/L		04/26/22 17:31	1

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

Job ID: 240-164309-1

Client Sample ID: 2016-03-F-20220328-01

Date Collected: 03/28/22 12:26
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-4

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2200		200	56	ug/L		04/21/22 09:00	04/21/22 17:27	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	36	J	50	17	ug/L		04/21/22 09:00	05/09/22 20:08	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:08	1
Arsenic	2.1		2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:08	1
Barium	25		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:08	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:08	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:08	1
Calcium	450000		2000	760	ug/L		04/21/22 09:00	05/10/22 15:32	4
Chromium	5.0	U	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:08	1
Cobalt	1.9		0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:08	1
Copper	5.0	U	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:08	1
Iron	1800		100	36	ug/L		04/21/22 09:00	05/09/22 20:08	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:08	1
Lithium	36		10	2.5	ug/L		04/21/22 09:00	05/09/22 20:08	1
Magnesium	97000		2000	600	ug/L		04/21/22 09:00	05/10/22 15:32	4
Manganese	3000		10	3.6	ug/L		04/21/22 09:00	05/09/22 20:08	1
Molybdenum	2.2	B	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:08	1
Nickel	3.0	J	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:08	1
Potassium	6900		500	150	ug/L		04/21/22 09:00	05/09/22 20:08	1
Selenium	0.99	J	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:08	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:08	1
Sodium	93000		1000	610	ug/L		04/21/22 09:00	05/09/22 20:08	1
Strontium	8300		10	5.6	ug/L		04/21/22 09:00	05/11/22 18:23	10
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:08	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:08	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		03/31/22 09:00	04/01/22 15:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	250		5.0	2.6	mg/L			04/08/22 10:34	1
Bicarbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L			04/08/22 10:34	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:34	1
Chloride	24		2.0	0.57	mg/L			04/02/22 00:09	2
Fluoride	0.15		0.10	0.048	mg/L			04/02/22 00:09	2
Sulfate	1500		10	3.5	mg/L			04/02/22 00:29	10
Total Dissolved Solids	2300		20	16	mg/L			04/01/22 13:12	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	0.689		0.242	0.250	1.00	0.219	pCi/L	04/01/22 11:12	04/26/22 13:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.4*		*40 - 110*	*04/01/22 11:12*	*04/26/22 13:12*	*1*

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

Job ID: 240-164309-1

Client Sample ID: 2016-03-F-20220328-01

Date Collected: 03/28/22 12:26
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-4

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.47		0.323	0.350	1.00	0.342	pCi/L	04/01/22 11:42	04/25/22 12:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.4*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:25*	*1*
Y Carrier	*85.2*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:25*	*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	2.16		0.404	0.430	5.00	0.342	pCi/L		04/26/22 17:31	1

Client Sample ID: 2016-04-F-20220328-01
Lab Sample ID: 240-164309-5

Date Collected: 03/28/22 13:26
Matrix: Water
Date Received: 03/30/22 09:50

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3000**		200	56	ug/L		04/21/22 09:00	04/21/22 17:29	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**230**		50	17	ug/L		04/21/22 09:00	05/09/22 20:12	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:12	1
Arsenic	**0.91**	**J**	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:12	1
Barium	**53**		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:12	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:12	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:12	1
Calcium	**560000**		2000	760	ug/L		04/21/22 09:00	05/10/22 15:36	4
Chromium	**4.6**	**J**	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:12	1
Cobalt	**1.4**		0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:12	1
Copper	**7.1**		5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:12	1
Iron	**860**		100	36	ug/L		04/21/22 09:00	05/09/22 20:12	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:12	1
Lithium	**35**		10	2.5	ug/L		04/21/22 09:00	05/09/22 20:12	1
Magnesium	**110000**		2000	600	ug/L		04/21/22 09:00	05/10/22 15:36	4
Manganese	**1700**		10	3.6	ug/L		04/21/22 09:00	05/09/22 20:12	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:12	1
Nickel	**3.7**	**J**	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:12	1
Potassium	**8300**		500	150	ug/L		04/21/22 09:00	05/09/22 20:12	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:12	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:12	1
Sodium	**73000**		1000	610	ug/L		04/21/22 09:00	05/09/22 20:12	1
Strontium	**7600**		10	5.6	ug/L		04/21/22 09:00	05/11/22 18:42	10
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:12	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:12	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		03/31/22 09:00	04/01/22 15:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**260**		5.0	2.6	mg/L			04/08/22 10:39	1
Bicarbonate Alkalinity as CaCO3	**260**		5.0	2.6	mg/L			04/08/22 10:39	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:39	1
Chloride	**25**		2.0	0.57	mg/L			04/15/22 18:32	2
Fluoride	**0.15**		0.10	0.048	mg/L			04/15/22 18:32	2
Sulfate	**1800**		10	3.5	mg/L			04/15/22 18:52	10
Total Dissolved Solids	**2400**		40	31	mg/L			04/01/22 13:12	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	**0.595**		0.289	0.294	1.00	0.328	pCi/L	04/01/22 11:12	04/26/22 13:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.2*		*40 - 110*	*04/01/22 11:12*	*04/26/22 13:12*	*1*

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

Job ID: 240-164309-1

Client Sample ID: 2016-04-F-20220328-01

Date Collected: 03/28/22 13:26
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-5

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.772		0.445	0.451	1.00	0.679	pCi/L	04/01/22 11:42	04/25/22 12:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.2*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:25*	*1*
Y Carrier	*86.7*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:25*	*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	1.37		0.531	0.538	5.00	0.679	pCi/L		04/26/22 17:31	1

Client Sample ID: 2016-06-F-20220328-01

Date Collected: 03/28/22 14:53
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-6

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**470**		200	56	ug/L		04/21/22 09:00	04/21/22 17:31	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**100**		50	17	ug/L		04/21/22 09:00	05/09/22 20:16	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:16	1
Arsenic	**1.1**	**J**	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:16	1
Barium	**58**		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:16	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:16	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:16	1
Calcium	**4500**		500	190	ug/L		04/21/22 09:00	05/09/22 20:16	1
Chromium	**2.3**	**J**	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:16	1
Cobalt	**0.28**	**J**	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:16	1
Copper	5.0	U	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:16	1
Iron	**77**	**J**	100	36	ug/L		04/21/22 09:00	05/09/22 20:16	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:16	1
Lithium	**20**		10	2.5	ug/L		04/21/22 09:00	05/09/22 20:16	1
Magnesium	**1300**		500	150	ug/L		04/21/22 09:00	05/09/22 20:16	1
Manganese	**11**		10	3.6	ug/L		04/21/22 09:00	05/09/22 20:16	1
Molybdenum	**56**	**B**	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:16	1
Nickel	**11**		5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:16	1
Potassium	**3100**		500	150	ug/L		04/21/22 09:00	05/09/22 20:16	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:16	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:16	1
Sodium	**670000**		4000	2400	ug/L		04/21/22 09:00	05/10/22 15:39	4
Strontium	**340**		1.0	0.56	ug/L		04/21/22 09:00	05/09/22 20:16	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:16	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:16	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		03/31/22 09:00	04/01/22 15:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**480**		5.0	2.6	mg/L			04/08/22 10:44	1
Bicarbonate Alkalinity as CaCO3	**460**		5.0	2.6	mg/L			04/08/22 10:44	1
Carbonate Alkalinity as CaCO3	**21**		5.0	2.6	mg/L			04/08/22 10:44	1
Chloride	**660**		10	2.8	mg/L			04/02/22 02:30	10
Fluoride	**5.4**		0.10	0.048	mg/L			04/02/22 02:10	2
Sulfate	**98**		2.0	0.70	mg/L			04/02/22 02:10	2
Total Dissolved Solids	**1400**		40	31	mg/L			04/01/22 13:12	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	0.0869	U	0.266	0.267	1.00	0.487	pCi/L	04/01/22 11:12	04/26/22 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*40 - 110*	*04/01/22 11:12*	*04/26/22 10:36*	*1*

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

Job ID: 240-164309-1

Client Sample ID: 2016-06-F-20220328-01

Date Collected: 03/28/22 14:53
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-6

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.260	U	0.308	0.309	1.00	0.508	pCi/L	04/01/22 11:42	04/25/22 12:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:26*	*1*
Y Carrier	*87.1*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:26*	*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	0.347	U	0.407	0.408	5.00	0.508	pCi/L		04/26/22 17:31	1

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

Job ID: 240-164309-1

Client Sample ID: EB-001-F-20220328-01

Date Collected: 03/28/22 15:10
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-7

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**500**		200	56	ug/L		04/21/22 09:00	04/21/22 17:38	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/21/22 09:00	05/09/22 20:24	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:24	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:24	1
Barium	2.0	U	2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:24	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:24	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:24	1
Calcium	500	U	500	190	ug/L		04/21/22 09:00	05/09/22 20:24	1
Chromium	5.0	U	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:24	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:24	1
Copper	**5.9**		5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:24	1
Iron	100	U	100	36	ug/L		04/21/22 09:00	05/09/22 20:24	1
Lead	**0.89**		0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:24	1
Lithium	10	U	10	2.5	ug/L		04/21/22 09:00	05/09/22 20:24	1
Magnesium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 20:24	1
Manganese	10	U	10	3.6	ug/L		04/21/22 09:00	05/09/22 20:24	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:24	1
Nickel	5.0	U	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:24	1
Potassium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 20:24	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:24	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:24	1
Sodium	**720**	**J**	1000	610	ug/L		04/21/22 09:00	05/09/22 20:24	1
Strontium	1.0	U	1.0	0.56	ug/L		04/21/22 09:00	05/09/22 20:24	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:24	1
Zinc	**14**	**J**	20	10	ug/L		04/21/22 09:00	05/09/22 20:24	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		03/31/22 09:00	04/01/22 15:14	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			04/08/22 10:47	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:47	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:47	1
Chloride	1.0	U	1.0	0.28	mg/L			04/02/22 02:50	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/02/22 02:50	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/02/22 02:50	1
Total Dissolved Solids	**500**		10	7.8	mg/L			04/01/22 13:12	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	0.189	0.189	1.00	0.374	pCi/L	04/01/22 11:12	04/26/22 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*62.5*		*40 - 110*	*04/01/22 11:12*	*04/26/22 10:36*	*1*

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

Job ID: 240-164309-1

Client Sample ID: EB-001-F-20220328-01

Date Collected: 03/28/22 15:10
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-7

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0195	U	0.354	0.354	1.00	0.628	pCi/L	04/01/22 11:42	04/25/22 12:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*62.5*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:26*	*1*
Y Carrier	*87.9*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:26*	*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	0.0335	U	0.401	0.401	5.00	0.628	pCi/L		04/26/22 17:31	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164309-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
240-164309-1	93108-F-20220328-01	99.0
240-164309-2	94139-F-20220328-01	63.5
240-164309-3	93100-F-20220328-01	98.5
240-164309-4	2016-03-F-20220328-01	88.4
240-164309-5	2016-04-F-20220328-01	80.2
240-164309-6	2016-06-F-20220328-01	88.9
240-164309-7	EB-001-F-20220328-01	62.5
LCS 160-558258/1-A	Lab Control Sample	94.1
LCSD 160-558258/2-A	Lab Control Sample Dup	94.3
MB 160-558258/23-A	Method Blank	89.6

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)
240-164309-1	93108-F-20220328-01	99.0	87.1
240-164309-2	94139-F-20220328-01	63.5	86.4
240-164309-3	93100-F-20220328-01	98.5	84.1
240-164309-4	2016-03-F-20220328-01	88.4	85.2
240-164309-5	2016-04-F-20220328-01	80.2	86.7
240-164309-6	2016-06-F-20220328-01	88.9	87.1
240-164309-7	EB-001-F-20220328-01	62.5	87.9
LCS 160-558261/1-A	Lab Control Sample	94.1	89.0
LCSD 160-558261/2-A	Lab Control Sample Dup	94.3	84.5
MB 160-558261/23-A	Method Blank	89.6	93.5

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-350546/1-A
Matrix: Water
Analysis Batch: 350890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 350546

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/21/22 09:00	04/21/22 16:55	1

Lab Sample ID: LCS 310-350546/2-A
Matrix: Water
Analysis Batch: 350890

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350546

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2000	2040		ug/L		102	80 - 120

Lab Sample ID: 240-164309-6 DU
Matrix: Water
Analysis Batch: 350890

Client Sample ID: 2016-06-F-20220328-01
Prep Type: Total/NA
Prep Batch: 350546

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	470		482		ug/L		2	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-350549/1-A
Matrix: Water
Analysis Batch: 352527

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 350549

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/21/22 09:00	05/09/22 19:02	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 19:02	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 19:02	1
Barium	2.0	U	2.0	0.88	ug/L		04/21/22 09:00	05/09/22 19:02	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 19:02	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 19:02	1
Calcium	500	U	500	190	ug/L		04/21/22 09:00	05/09/22 19:02	1
Chromium	5.0	U	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 19:02	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 19:02	1
Copper	5.0	U	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 19:02	1
Iron	100	U	100	36	ug/L		04/21/22 09:00	05/09/22 19:02	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 19:02	1
Lithium	10	U	10	2.5	ug/L		04/21/22 09:00	05/09/22 19:02	1
Magnesium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 19:02	1
Manganese	10	U	10	3.6	ug/L		04/21/22 09:00	05/09/22 19:02	1
Molybdenum	1.62	J	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 19:02	1
Nickel	5.0	U	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 19:02	1
Potassium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 19:02	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 19:02	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 19:02	1
Sodium	1000	U	1000	610	ug/L		04/21/22 09:00	05/09/22 19:02	1
Strontium	1.0	U	1.0	0.56	ug/L		04/21/22 09:00	05/09/22 19:02	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 19:02	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 19:02	1

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

Lab Sample ID: LCS 310-350549/2-A
Matrix: Water
Analysis Batch: 352527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350549

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	200	183		ug/L		91	80 - 120
Antimony	200	195		ug/L		98	80 - 120
Arsenic	200	179		ug/L		90	80 - 120
Barium	100	99.5		ug/L		99	80 - 120
Beryllium	100	98.7		ug/L		99	80 - 120
Cadmium	100	95.8		ug/L		96	80 - 120
Calcium	2000	1810		ug/L		91	80 - 120
Chromium	100	103		ug/L		103	80 - 120
Cobalt	100	106		ug/L		106	80 - 120
Copper	200	196		ug/L		98	80 - 120
Iron	200	214		ug/L		107	80 - 120
Lead	200	211		ug/L		105	80 - 120
Lithium	200	203		ug/L		101	80 - 120
Magnesium	2000	1810		ug/L		90	80 - 120
Manganese	100	93.5		ug/L		93	80 - 120
Molybdenum	200	196		ug/L		98	80 - 120
Nickel	200	189		ug/L		95	80 - 120
Potassium	2000	1870		ug/L		93	80 - 120
Selenium	400	359		ug/L		90	80 - 120
Silver	100	96.3		ug/L		96	80 - 120
Sodium	2000	2180		ug/L		109	80 - 120
Strontium	200	192		ug/L		96	80 - 120
Thallium	200	210		ug/L		105	80 - 120
Zinc	200	181		ug/L		90	80 - 120

Lab Sample ID: 240-164309-6 DU
Matrix: Water
Analysis Batch: 352527

Client Sample ID: 2016-06-F-20220328-01
Prep Type: Total/NA
Prep Batch: 350549

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	100		112		ug/L		8	20
Antimony	2.0	U	2.0	U	ug/L		NC	20
Arsenic	1.1	J	1.11	J	ug/L		0.9	20
Barium	58		58.5		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	4500		4530		ug/L		1	20
Calcium	4700		4770		ug/L		2	20
Chromium	2.3	J	2.36	J	ug/L		5	20
Cobalt	0.28	J	0.304	J	ug/L		7	20
Copper	5.0	U	5.0	U	ug/L		NC	20
Iron	77	J	79.9	J	ug/L		3	20
Lead	0.50	U	0.50	U	ug/L		NC	20
Lithium	20		22.1		ug/L		11	20
Magnesium	1300		1320		ug/L		3	20
Manganese	11		10.5		ug/L		2	20
Molybdenum	56	B	57.0		ug/L		2	20
Nickel	11		11.4		ug/L		3	20
Potassium	3100		3230		ug/L		4	20

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

Lab Sample ID: 240-164309-6 DU
Matrix: Water
Analysis Batch: 352527

Client Sample ID: 2016-06-F-20220328-01
Prep Type: Total/NA
Prep Batch: 350549

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Selenium	5.0	U	5.0	U	ug/L		NC	20
Silver	1.0	U	1.0	U	ug/L		NC	20
Strontium	340		347		ug/L		3	20
Thallium	1.0	U	1.0	U	ug/L		NC	20
Zinc	20	U	20	U	ug/L		NC	20

Lab Sample ID: 240-164309-6 DU
Matrix: Water
Analysis Batch: 352697

Client Sample ID: 2016-06-F-20220328-01
Prep Type: Total/NA
Prep Batch: 350549

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sodium	670000		667000		ug/L		0.5	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-521346/1-A
Matrix: Water
Analysis Batch: 521614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		03/31/22 09:00	04/01/22 14:48	1

Lab Sample ID: LCS 240-521346/2-A
Matrix: Water
Analysis Batch: 521614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.26		ug/L		105	80 - 120

Lab Sample ID: 240-164309-1 MS
Matrix: Water
Analysis Batch: 521614

Client Sample ID: 93108-F-20220328-01
Prep Type: Total/NA
Prep Batch: 521346

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U F1	1.00	1.25	F1	ug/L		125	80 - 120

Lab Sample ID: 240-164309-1 MSD
Matrix: Water
Analysis Batch: 521614

Client Sample ID: 93108-F-20220328-01
Prep Type: Total/NA
Prep Batch: 521346

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	1.17		ug/L		117	80 - 120	7	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-522218/4
Matrix: Water
Analysis Batch: 522218

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			04/08/22 10:09	1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-522218/4
Matrix: Water
Analysis Batch: 522218

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:09	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:09	1

Lab Sample ID: LCS 240-522218/3
Matrix: Water
Analysis Batch: 522218

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		98	86 - 123

Lab Sample ID: 240-164309-1 DU
Matrix: Water
Analysis Batch: 522218

Client Sample ID: 93108-F-20220328-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	460		460		mg/L		0.5	20
Bicarbonate Alkalinity as CaCO3	460		460		mg/L		0.5	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 240-521550/3
Matrix: Water
Analysis Batch: 521550

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			04/01/22 13:45	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/01/22 13:45	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/01/22 13:45	1

Lab Sample ID: LCS 240-521550/4
Matrix: Water
Analysis Batch: 521550

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.0		mg/L		100	90 - 110
Fluoride	2.50	2.57		mg/L		103	90 - 110
Sulfate	50.0	51.7		mg/L		103	90 - 110

Lab Sample ID: 240-164309-3 MS
Matrix: Water
Analysis Batch: 521550

Client Sample ID: 93100-F-20220328-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2000	F1	1000	3290	F1	mg/L		127	80 - 120
Fluoride	2.6		50.0	51.9		mg/L		99	80 - 120
Sulfate	15	J	1000	987		mg/L		97	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-164309-3 MSD
Matrix: Water
Analysis Batch: 521550

Client Sample ID: 93100-F-20220328-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2000	F1	1000	2850		mg/L		83	80 - 120	14	15
Fluoride	2.6		50.0	51.4		mg/L		98	80 - 120	1	15
Sulfate	15	J	1000	986		mg/L		97	80 - 120	0	15

Lab Sample ID: MB 240-522943/3
Matrix: Water
Analysis Batch: 522943

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			04/15/22 13:59	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/15/22 13:59	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/15/22 13:59	1

Lab Sample ID: LCS 240-522943/4
Matrix: Water
Analysis Batch: 522943

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	2.52		mg/L		101	90 - 110
Sulfate	50.0	51.3		mg/L		103	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-521554/1
Matrix: Water
Analysis Batch: 521554

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			04/01/22 13:12	1

Lab Sample ID: LCS 240-521554/2
Matrix: Water
Analysis Batch: 521554

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	126		mg/L		84	80 - 120

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-558258/23-A
Matrix: Water
Analysis Batch: 562034

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558258

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.05627	U	0.117	0.117	1.00	0.266	pCi/L	04/01/22 11:12	04/26/22 13:09	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*04/01/22 11:12*	*04/26/22 13:09*	*1*

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: LCS 160-558258/1-A
Matrix: Water
Analysis Batch: 562034

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558258

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.50		1.28	1.00	0.287	pCi/L	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.1*		*40 - 110*

Lab Sample ID: LCSD 160-558258/2-A
Matrix: Water
Analysis Batch: 562034

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558258

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	10.45		1.28	1.00	0.293	pCi/L	92	75 - 125	0.02	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*94.3*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-558261/23-A
Matrix: Water
Analysis Batch: 561956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558261

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1310	U	0.211	0.211	1.00	0.357	pCi/L	04/01/22 11:42	04/25/22 12:24	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:24*	*1*
Y Carrier	*93.5*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:24*	*1*

Lab Sample ID: LCS 160-558261/1-A
Matrix: Water
Analysis Batch: 561955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558261

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.68	10.38		1.18	1.00	0.338	pCi/L	120	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.1*		*40 - 110*
Y Carrier	*89.0*		*40 - 110*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-558261/2-A
Matrix: Water
Analysis Batch: 561955

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558261

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.68	9.889		1.16	1.00	0.457	pCi/L	114	75 - 125	0.21	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*94.3*		*40 - 110*
Y Carrier	*84.5*		*40 - 110*

Metals

Prep Batch: 350546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	3005A	
240-164309-2	94139-F-20220328-01	Total/NA	Water	3005A	
240-164309-3	93100-F-20220328-01	Total/NA	Water	3005A	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	3005A	
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	3005A	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	3005A	
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	3005A	
MB 310-350546/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-350546/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164309-6 DU	2016-06-F-20220328-01	Total/NA	Water	3005A	

Prep Batch: 350549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	3005A	
240-164309-2	94139-F-20220328-01	Total/NA	Water	3005A	
240-164309-3	93100-F-20220328-01	Total/NA	Water	3005A	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	3005A	
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	3005A	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	3005A	
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	3005A	
MB 310-350549/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-350549/2-A	Lab Control Sample	Total/NA	Water	3005A	
240-164309-6 DU	2016-06-F-20220328-01	Total/NA	Water	3005A	

Analysis Batch: 350890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-2	94139-F-20220328-01	Total/NA	Water	6010D	350546
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	6010D	350546
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	6010D	350546
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	6010D	350546
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	6010D	350546
MB 310-350546/1-A	Method Blank	Total/NA	Water	6010D	350546
LCS 310-350546/2-A	Lab Control Sample	Total/NA	Water	6010D	350546
240-164309-6 DU	2016-06-F-20220328-01	Total/NA	Water	6010D	350546

Analysis Batch: 350972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	6010D	350546
240-164309-3	93100-F-20220328-01	Total/NA	Water	6010D	350546

Analysis Batch: 352527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-2	94139-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-3	93100-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	6020B	350549
MB 310-350549/1-A	Method Blank	Total/NA	Water	6020B	350549
LCS 310-350549/2-A	Lab Control Sample	Total/NA	Water	6020B	350549

Metals (Continued)

Analysis Batch: 352527 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-6 DU	2016-06-F-20220328-01	Total/NA	Water	6020B	350549

Analysis Batch: 352547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-2	94139-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-3	93100-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	6020B	350549
MB 310-350549/1-A	Method Blank	Total/NA	Water	6020B	350549
LCS 310-350549/2-A	Lab Control Sample	Total/NA	Water	6020B	350549
240-164309-6 DU	2016-06-F-20220328-01	Total/NA	Water	6020B	350549

Analysis Batch: 352697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-2	94139-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-6 DU	2016-06-F-20220328-01	Total/NA	Water	6020B	350549

Analysis Batch: 352849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	6020B	350549
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	6020B	350549

Analysis Batch: 353289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-3	93100-F-20220328-01	Total/NA	Water	6020B	350549

Prep Batch: 521346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	7470A	
240-164309-2	94139-F-20220328-01	Total/NA	Water	7470A	
240-164309-3	93100-F-20220328-01	Total/NA	Water	7470A	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	7470A	
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	7470A	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	7470A	
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	7470A	
MB 240-521346/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-521346/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-164309-1 MS	93108-F-20220328-01	Total/NA	Water	7470A	
240-164309-1 MSD	93108-F-20220328-01	Total/NA	Water	7470A	

Analysis Batch: 521614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	7470A	521346
240-164309-2	94139-F-20220328-01	Total/NA	Water	7470A	521346

Metals (Continued)

Analysis Batch: 521614 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-3	93100-F-20220328-01	Total/NA	Water	7470A	521346
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	7470A	521346
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	7470A	521346
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	7470A	521346
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	7470A	521346
MB 240-521346/1-A	Method Blank	Total/NA	Water	7470A	521346
LCS 240-521346/2-A	Lab Control Sample	Total/NA	Water	7470A	521346
240-164309-1 MS	93108-F-20220328-01	Total/NA	Water	7470A	521346
240-164309-1 MSD	93108-F-20220328-01	Total/NA	Water	7470A	521346

General Chemistry

Analysis Batch: 521550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	300.0	
240-164309-1	93108-F-20220328-01	Total/NA	Water	300.0	
240-164309-2	94139-F-20220328-01	Total/NA	Water	300.0	
240-164309-2	94139-F-20220328-01	Total/NA	Water	300.0	
240-164309-3	93100-F-20220328-01	Total/NA	Water	300.0	
240-164309-3	93100-F-20220328-01	Total/NA	Water	300.0	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	300.0	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	300.0	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	300.0	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	300.0	
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	300.0	
MB 240-521550/3	Method Blank	Total/NA	Water	300.0	
LCS 240-521550/4	Lab Control Sample	Total/NA	Water	300.0	
240-164309-3 MS	93100-F-20220328-01	Total/NA	Water	300.0	
240-164309-3 MSD	93100-F-20220328-01	Total/NA	Water	300.0	

Analysis Batch: 521554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	SM 2540C	
240-164309-2	94139-F-20220328-01	Total/NA	Water	SM 2540C	
240-164309-3	93100-F-20220328-01	Total/NA	Water	SM 2540C	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	SM 2540C	
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	SM 2540C	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	SM 2540C	
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	SM 2540C	
MB 240-521554/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521554/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 522218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	2320B-1997	
240-164309-2	94139-F-20220328-01	Total/NA	Water	2320B-1997	
240-164309-3	93100-F-20220328-01	Total/NA	Water	2320B-1997	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	2320B-1997	
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	2320B-1997	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	2320B-1997	
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	2320B-1997	

General Chemistry (Continued)

Analysis Batch: 522218 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-522218/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-522218/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-164309-1 DU	93108-F-20220328-01	Total/NA	Water	2320B-1997	

Analysis Batch: 522943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	300.0	
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	300.0	
MB 240-522943/3	Method Blank	Total/NA	Water	300.0	
LCS 240-522943/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 558258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	PrecSep-21	
240-164309-2	94139-F-20220328-01	Total/NA	Water	PrecSep-21	
240-164309-3	93100-F-20220328-01	Total/NA	Water	PrecSep-21	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	PrecSep-21	
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	PrecSep-21	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	PrecSep-21	
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	PrecSep-21	
MB 160-558258/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-558258/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-558258/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 558261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164309-1	93108-F-20220328-01	Total/NA	Water	PrecSep_0	
240-164309-2	94139-F-20220328-01	Total/NA	Water	PrecSep_0	
240-164309-3	93100-F-20220328-01	Total/NA	Water	PrecSep_0	
240-164309-4	2016-03-F-20220328-01	Total/NA	Water	PrecSep_0	
240-164309-5	2016-04-F-20220328-01	Total/NA	Water	PrecSep_0	
240-164309-6	2016-06-F-20220328-01	Total/NA	Water	PrecSep_0	
240-164309-7	EB-001-F-20220328-01	Total/NA	Water	PrecSep_0	
MB 160-558261/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-558261/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-558261/2-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: 240-164309-1

Client Sample ID: 93108-F-20220328-01

Lab Sample ID: 240-164309-1

Date Collected: 03/28/22 09:39

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		2	350972	04/25/22 14:29	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 19:57	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 19:57	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		4	352697	05/10/22 15:26	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 14:52	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 10:14	JMR	TAL CAN
Total/NA	Analysis	300.0		5	521550	04/01/22 20:48	JMB	TAL CAN
Total/NA	Analysis	300.0		20	521550	04/01/22 21:48	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521554	04/01/22 13:12	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 10:40	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561955	04/25/22 12:22	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: 94139-F-20220328-01

Lab Sample ID: 240-164309-2

Date Collected: 03/28/22 10:32

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:23	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:00	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:00	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		4	352697	05/10/22 15:29	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 14:59	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 10:24	JMR	TAL CAN
Total/NA	Analysis	300.0		2	521550	04/01/22 22:08	JMB	TAL CAN
Total/NA	Analysis	300.0		10	521550	04/01/22 22:29	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521554	04/01/22 13:12	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 10:38	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:25	FLC	TAL SL

Lab Chronicle

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

Job ID: 240-164309-1

Client Sample ID: 94139-F-20220328-01

Lab Sample ID: 240-164309-2

Date Collected: 03/28/22 10:32

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: 93100-F-20220328-01

Lab Sample ID: 240-164309-3

Date Collected: 03/28/22 11:03

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		2	350972	04/25/22 14:31	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:04	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:04	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		10	353289	05/16/22 16:42	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:01	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 10:29	JMR	TAL CAN
Total/NA	Analysis	300.0		5	521550	04/01/22 22:49	JMB	TAL CAN
Total/NA	Analysis	300.0		20	521550	04/01/22 23:09	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521554	04/01/22 13:12	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 13:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:25	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: 2016-03-F-20220328-01

Lab Sample ID: 240-164309-4

Date Collected: 03/28/22 12:26

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:27	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:08	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:08	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		10	352849	05/11/22 18:23	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		4	352697	05/10/22 15:32	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:03	MRL	TAL CAN

Client Sample ID: 2016-03-F-20220328-01

Lab Sample ID: 240-164309-4

Date Collected: 03/28/22 12:26

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 10:34	JMR	TAL CAN
Total/NA	Analysis	300.0		2	521550	04/02/22 00:09	JMB	TAL CAN
Total/NA	Analysis	300.0		10	521550	04/02/22 00:29	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521554	04/01/22 13:12	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 13:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:25	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: 2016-04-F-20220328-01

Lab Sample ID: 240-164309-5

Date Collected: 03/28/22 13:26

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:29	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:12	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:12	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		10	352849	05/11/22 18:42	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		4	352697	05/10/22 15:36	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:05	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 10:39	JMR	TAL CAN
Total/NA	Analysis	300.0		2	522943	04/15/22 18:32	KMS	TAL CAN
Total/NA	Analysis	300.0		10	522943	04/15/22 18:52	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521554	04/01/22 13:12	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 13:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:25	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: 2016-06-F-20220328-01

Lab Sample ID: 240-164309-6

Date Collected: 03/28/22 14:53

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:31	CTB	TAL CF

Lab Chronicle

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

Job ID: 240-164309-1

Client Sample ID: 2016-06-F-20220328-01

Date Collected: 03/28/22 14:53
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:16	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:16	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		4	352697	05/10/22 15:39	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:08	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 10:44	JMR	TAL CAN
Total/NA	Analysis	300.0		2	521550	04/02/22 02:10	JMB	TAL CAN
Total/NA	Analysis	300.0		10	521550	04/02/22 02:30	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521554	04/01/22 13:12	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562034	04/26/22 10:36	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:26	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: EB-001-F-20220328-01

Date Collected: 03/28/22 15:10
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164309-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:38	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:24	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:24	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:14	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 10:47	JMR	TAL CAN
Total/NA	Analysis	300.0		1	521550	04/02/22 02:50	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521554	04/01/22 13:12	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562034	04/26/22 10:36	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:26	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	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
Job ID: 240-164309-1
Project/Site: Federal CCR Wells

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	04-20-22
Oregon	NELAP	4062	04-20-22
Pennsylvania	NELAP	68-00340	04-24-22
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
Job ID: 240-164309-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

0-8 | 10-6

Chain of Custody Record

Columbus
209

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Client Information	Sampler: Kenyon	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740.373.4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
93108-F-20220328-01	032822	0939	G	W			1	1	2	1		
94139-F-20220328-01	032822	1032	G	W			1	1	2	1		
93100-F-20220328-01	032822	1103	G	W			1	1	2	1		
2016-03-F-20220328-01	032822	1226	G	W			1	1	2	1		
2016-04-F-20220328-01	032822	1326	G	W			1	1	2	1		
2016-06-F-20220328-01	032822	1453	G	W			1	1	2	1		
EB-001-F-20220328-01	032822	1510	G	W			1	1	2	1		

240-164309 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiol

...e assessed if samples are retained longer than 1 month)
☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				3.30.22 800	EETNC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Page 43 of 52

5/17/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 164309
Canton Facility

Client Lightstorm Site Name _____ Cooler unpacked by: Matt

Cooler Received on 3-30-22 Opened on 3-30-22

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 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	1.1	0.9	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.3	0.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.5	0.3	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.0	0.8	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.4	0.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.7	0.5	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.8	0.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.6	1.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.4	1.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	8.4	8.2	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
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	

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
93108-F-20220328-01	240-164309-C-1	Plastic 500ml - with Nitric Acid	<2			
93108-F-20220328-01	240-164309-D-1	Plastic 1 liter - Nitric Acid	<2			
93108-F-20220328-01	240-164309-E-1	Plastic 1 liter - Nitric Acid	<2			
93108-F-20220328-01	240-164309-F-1	Plastic 250ml - with Nitric Acid	<2			
94139-F-20220328-01	240-164309-C-2	Plastic 500ml - with Nitric Acid	<2			
94139-F-20220328-01	240-164309-D-2	Plastic 1 liter - Nitric Acid	<2			
94139-F-20220328-01	240-164309-E-2	Plastic 1 liter - Nitric Acid	<2			
94139-F-20220328-01	240-164309-F-2	Plastic 250ml - with Nitric Acid	<2			
93100-F-20220328-01	240-164309-C-3	Plastic 500ml - with Nitric Acid	<2			
93100-F-20220328-01	240-164309-D-3	Plastic 1 liter - Nitric Acid	<2			
93100-F-20220328-01	240-164309-E-3	Plastic 1 liter - Nitric Acid	<2			
93100-F-20220328-01	240-164309-F-3	Plastic 250ml - with Nitric Acid	<2			
2016-03-F-20220328-01	240-164309-C-4	Plastic 500ml - with Nitric Acid	<2			
2016-03-F-20220328-01	240-164309-D-4	Plastic 1 liter - Nitric Acid	<2			
2016-03-F-20220328-01	240-164309-E-4	Plastic 1 liter - Nitric Acid	<2			
2016-03-F-20220328-01	240-164309-F-4	Plastic 250ml - with Nitric Acid	<2			
2016-04-F-20220328-01	240-164309-C-5	Plastic 500ml - with Nitric Acid	<2			
2016-04-F-20220328-01	240-164309-D-5	Plastic 1 liter - Nitric Acid	<2			
2016-04-F-20220328-01	240-164309-E-5	Plastic 1 liter - Nitric Acid	<2			
2016-04-F-20220328-01	240-164309-F-5	Plastic 250ml - with Nitric Acid	<2			
2016-06-F-20220328-01	240-164309-C-6	Plastic 500ml - with Nitric Acid	<2			
2016-06-F-20220328-01	240-164309-D-6	Plastic 1 liter - Nitric Acid	<2			
2016-06-F-20220328-01	240-164309-E-6	Plastic 1 liter - Nitric Acid	<2			
2016-06-F-20220328-01	240-164309-F-6	Plastic 250ml - with Nitric Acid	<2			
EB-001-F-20220328-01	240-164309-C-7	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220328-01	240-164309-D-7	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220328-01	240-164309-E-7	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220328-01	240-164309-F-7	Plastic 250ml - with Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150269.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-164309-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/12/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
93108-F-20220328-01 (240-164309-1)	3/28/22	09:39 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
94139-F-20220328-01 (240-164309-2)	3/28/22	10:32 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
93100-F-20220328-01 (240-164309-3)	3/28/22	11:03 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-03-F-20220328-01 (240-164309-4)	3/28/22	12:26 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-04-F-20220328-01 (240-164309-5)	3/28/22	13:26 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-06-F-20220328-01 (240-164309-6)	3/28/22	14:53 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220328-01 (240-164309-7)	3/28/22	15:10 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by: Date: Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	3-30-22 1356	ETA	FED EX		
2	Relinquished by: FED EX	Date/Time:	Company	Received by: [signature]	Date/Time: MAR 31 2022 0930	Company PVT STL
3	Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

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280-160270 Login
PM: Bieniulis, Dylan T
Company: TestAmerica Laboratories, In

CONDITION UPON RECEIPT FORM

Client: Denver

Initiated by: SW Date: 3/3/22 Time: 1235 Shipper: FE Package Quantity:

Completed by:

Sample must be received at < 6°C for Wet Chem and Mercury. If not, note temp below.
Metal soil samples must be refrigerated upon receipt.
If samples are from West Virginia, please fill out form ADMIN-0031.

Thermometer ID (°C): IR-2

Thermometer CF (°C): -0.2

	Shipping #(s)	Package Temp (°C)	Document #:
1.	5182 8150 5857	8.7	
2.	5846	7.9	
3.			
4.			
5.			
6.			
7.			

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	(Y) N	Are there custody seals present on the cooler?	8.	(Y) N	Are there custody seals present on bottles?
2.	Y (N) N/A	Do custody seals on cooler appear to be tampered with?	9.	Y (N) N/A	Do custody seals on bottles appear to be tampered with?
3.	(Y) N	Were contents of cooler frisked after opening, but before unpacking?	10.	(Y) N N/A	Was sample received with proper pH[1]? (If not, make note below) pH strip lot #: LRS-4801
4.	(Y) N	Sample received with Chain of Custody?	11.	(Y) N N/A	Containers for Rn-222, C-14, Cl-36, H-3 & I-129/131 marked with "Do Not Preserve" label?
5.	(Y) N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	(Y) N	Sample received in proper containers?
6.	Y (N)	Was sample received broken?	13.	Y N (N/A)	Headspace in VOA, or Rn-222 liquid samples? (>6mm) (If Yes, note sample ID's below)
7.	(Y) N	Is sample volume sufficient for analysis?	14.	Y N (N/A)	Soil containers for C-14, H-3,Tc-99 & I-129/131 marked with "Do Not Dry" label?

[1] For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, Rn-222 and soils.

Notes: lab notified

pH Adjustment (if needed)	Date/Time of Preservation:
Initial pH and pH strip lot#:	Preservative and lot#:
Final pH and pH strip lot#:	Amount of Preservative:

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240-164309 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client. EETA Canton			
City/State CITY Barberton		STATE OH	Project CCR
Receipt Information			
Date/Time Received	DATE 3/31/22	TIME 0930	Received By MRH

Delivery Type ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other.

Condition of Cooler/Containers			
Sample(s) received in Cooler?	☒ Yes ☐ No	*If yes* Cooler ID	
Multiple Coolers?	☐ Yes ☒ No	*If yes* Cooler # ____ of ____	
Cooler Custody Seals Present? No	☐ Yes ☒ No	*If yes* Cooler custody seals intact?	☐ Yes ☐ No
Sample Custody Seals Present? No	☐ Yes ☒ No	*If yes* Sample custody seals intact?	☐ Yes ☐ No
Trip Blank Present?	☐ Yes ☒ No	*If yes* Which VOA samples are in cooler? ↓	

Temperature Record

Coolant: ☒ ~~Wet ice~~ ☐ Blue ice ☐ Dry ice ☐ Other. ☒ NONE

Thermometer ID 7	Correction Factor (°C) -0.1
Temp Blank Temperature If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature	
Uncorrected Temp (°C) 13.4	Corrected Temp (°C) 13.3

Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used		
Uncorrected Temp (°C)		
Corrected Temp (°C)		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes.* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150290.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note):		Job #: 240-164309-1
Address: 3019 Venture Way	Due Date Requested: 4/12/2022			Preservation Codes:
City: Cedar Falls	TAT Requested (days):			A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Z other (specify) Other
State, Zip: IA, 50613				
Phone: 319-277-2401(Tel) 319-277-2425(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D/3005A_TOT (MOD) Boron	6020B/3005A_TOT 24 Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
93108-F-20220328-01 (240-164309-1)	3/28/22	09:39 Eastern		Water			X	X	1	
94139-F-20220328-01 (240-164309-2)	3/28/22	10:32 Eastern		Water			X	X	1	
93100-F-20220328-01 (240-164309-3)	3/28/22	11:03 Eastern		Water			X	X	1	
2016-03-F-20220328-01 (240-164309-4)	3/28/22	12:26 Eastern		Water			X	X	1	
2016-04-F-20220328-01 (240-164309-5)	3/28/22	13:26 Eastern		Water			X	X	1	
2016-06-F-20220328-01 (240-164309-6)	3/28/22	14:53 Eastern		Water			X	X	1	
EB-001-F-20220328-01 (240-164309-7)	3/28/22	15:10 Eastern		Water			X	X	1	

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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-30-22 1550	EDA			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 3 31-22 930	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/17/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164309-1

Login Number: 164309
List Number: 2
Creator: Kizer, Preston V

List Source: Eurofins Cedar Falls
List Creation: 03/31/22 12:36 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (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: 240-164309-1

Login Number: 164309
List Number: 3
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 03/31/22 03:27 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-164315-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
5/13/2022 1:48:57 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

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.

Table of Contents

Definitions/Glossary

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

Job ID: 240-164315-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	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: 240-164315-1

Job ID: 240-164315-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-164315-1

Comments
No additional comments.

Receipt
The samples were received on 3/30/2022 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 10 coolers at receipt time were 0.1º C, 0.2º C, 0.3º C, 0.5º C, 0.6º C, 0.8º C, 0.9º C, 1.2º C, 1.4º C and 8.2º C.

RAD
Method PrecSep-21: Radium-226 Prep Batch 160-558258: The following samples were prepared at a reduced aliquot due to Matrix: 9802-F-20220325-01 (240-164315-4) and 2018-01-F-20220325-01 (240-164315-5). 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 160-558261: The following samples were prepared at a reduced aliquot due to Matrix: 9802-F-20220325-01 (240-164315-4) and 2018-01-F-20220325-01 (240-164315-5). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Methods 9320: Radium 228 Batch 160-558261: 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. 2019-02-F-20220325-01 (240-164315-1), DUP-001-2019-02-F-20220325-01 (240-164315-2), 9801-F-20220325-01 (240-164315-3), 9802-F-20220325-01 (240-164315-4), 2018-01-F-20220325-01 (240-164315-5), EB-001-F-20220325-01 (240-164315-6), (LCS 160-558261/1-A), (LCSD 160-558261/2-A) and (MB 160-558261/23-A)

Methods 9315: Radium-226 prep batch 160-558258: 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. 2019-02-F-20220325-01 (240-164315-1), DUP-001-2019-02-F-20220325-01 (240-164315-2), 9801-F-20220325-01 (240-164315-3), 9802-F-20220325-01 (240-164315-4), 2018-01-F-20220325-01 (240-164315-5), EB-001-F-20220325-01 (240-164315-6), (LCS 160-558258/1-A), (LCSD 160-558258/2-A) and (MB 160-558258/23-A)

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

Metals
Method 3005A: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: 2019-02-F-20220325-01 (240-164315-1) and DUP-001-2019-02-F-20220325-01 (240-164315-2). The sample(s) was preserved to the appropriate pH in the laboratory.

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

General Chemistry
Method 300.0: The following sample was diluted due to the nature of the sample matrix: 9801-F-20220325-01 (240-164315-3). 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

Job ID: 240-164315-1

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: 240-164315-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-164315-1	2019-02-F-20220325-01	Water	03/25/22 10:23	03/30/22 09:50
240-164315-2	DUP-001-2019-02-F-20220325-01	Water	03/25/22 10:23	03/30/22 09:50
240-164315-3	9801-F-20220325-01	Water	03/25/22 11:48	03/30/22 09:50
240-164315-4	9802-F-20220325-01	Water	03/25/22 12:41	03/30/22 09:50
240-164315-5	2018-01-F-20220325-01	Water	03/25/22 14:57	03/30/22 09:50
240-164315-6	EB-001-F-20220325-01	Water	03/25/22 15:20	03/30/22 09:50

Detection Summary

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

Job ID: 240-164315-1

Client Sample ID: 2019-02-F-20220325-01 — Lab Sample ID: 240-164315-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1500		50	17	ug/L	1		6020B	Total/NA
Antimony	0.84	J	2.0	0.69	ug/L	1		6020B	Total/NA
Arsenic	5.2		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	630		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	260000		500	190	ug/L	1		6020B	Total/NA
Chromium	3.4	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.23	J	0.50	0.19	ug/L	1		6020B	Total/NA
Copper	6.3		5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.45	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	250		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	17	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	2.3	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	13000		500	150	ug/L	1		6020B	Total/NA
Silver	0.52	J	1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	490000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	2100		4.0	2.2	ug/L	4		6020B	Total/NA
Total Alkalinity	1400		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	69		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	150		5.0	1.4	mg/L	5		300.0	Total/NA
Fluoride	0.63		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	2.6		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	1800		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-001-2019-02-F-20220325-01 — Lab Sample ID: 240-164315-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1500		50	17	ug/L	1		6020B	Total/NA
Arsenic	5.2		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	650		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	260000		500	190	ug/L	1		6020B	Total/NA
Chromium	3.5	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.23	J	0.50	0.19	ug/L	1		6020B	Total/NA
Copper	6.4		5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.45	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	260		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	17	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	2.4	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	14000		500	150	ug/L	1		6020B	Total/NA
Sodium	500000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	2200		4.0	2.2	ug/L	4		6020B	Total/NA
Total Alkalinity	1400		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	69		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	160		5.0	1.4	mg/L	5		300.0	Total/NA
Fluoride	0.60		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	2.4		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	1800		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 9801-F-20220325-01 — Lab Sample ID: 240-164315-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	490	J	1400	390	ug/L	7		6010D	Total/NA
Arsenic	0.88	J	2.0	0.75	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 9801-F-20220325-01 (Continued)

Lab Sample ID: 240-164315-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	5100		20	8.8	ug/L	10		6020B	Total/NA
Calcium	210000		500	190	ug/L	1		6020B	Total/NA
Cobalt	1.1		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	98	J	100	36	ug/L	1		6020B	Total/NA
Magnesium	76000		500	150	ug/L	1		6020B	Total/NA
Manganese	580		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	4.1	B	2.0	1.2	ug/L	1		6020B	Total/NA
Potassium	12000		500	150	ug/L	1		6020B	Total/NA
Selenium	1.5	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	1300000		20000	12000	ug/L	20		6020B	Total/NA
Strontium	1300		20	11	ug/L	20		6020B	Total/NA
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	7700		50	14	mg/L	50		300.0	Total/NA
Fluoride	0.93		0.50	0.24	mg/L	10		300.0	Total/NA
Sulfate	3.7	J	10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	12000		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 9802-F-20220325-01

Lab Sample ID: 240-164315-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	180	J	200	56	ug/L	1		6010D	Total/NA
Aluminum	510		50	17	ug/L	1		6020B	Total/NA
Barium	76		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	36000		500	190	ug/L	1		6020B	Total/NA
Chromium	4.2	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	3.3		0.50	0.19	ug/L	1		6020B	Total/NA
Copper	2.1	J	5.0	1.8	ug/L	1		6020B	Total/NA
Iron	710		100	36	ug/L	1		6020B	Total/NA
Lead	0.31	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	14	J	40	10	ug/L	4		6020B	Total/NA
Magnesium	9500		500	150	ug/L	1		6020B	Total/NA
Manganese	88		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	2.8	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	3.2	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	1700		500	150	ug/L	1		6020B	Total/NA
Sodium	270000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	640		1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	580		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	580		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	32		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.87		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	57		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	780		10	7.8	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2018-01-F-20220325-01

Lab Sample ID: 240-164315-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	440	J	1200	340	ug/L	6		6010D	Total/NA
Aluminum	260		50	17	ug/L	1		6020B	Total/NA
Arsenic	130		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	750		2.0	0.88	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2018-01-F-20220325-01 (Continued)
Lab Sample ID: 240-164315-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	40000		500	190	ug/L	1		6020B	Total/NA
Chromium	3.8	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.39	J	0.50	0.19	ug/L	1		6020B	Total/NA
Iron	230		100	36	ug/L	1		6020B	Total/NA
Lithium	40	J	100	25	ug/L	10		6020B	Total/NA
Magnesium	830		500	150	ug/L	1		6020B	Total/NA
Manganese	5.4	J	10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	66	B	2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	17		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	4300		500	150	ug/L	1		6020B	Total/NA
Selenium	2.7	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	2600000		10000	6100	ug/L	10		6020B	Total/NA
Strontium	3900		10	5.6	ug/L	10		6020B	Total/NA
Total Alkalinity	210		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	90		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	120		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3200		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	2.8		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	38		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	5300		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220325-01
Lab Sample ID: 240-164315-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	4.1	J	5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.27	J	0.50	0.24	ug/L	1		6020B	Total/NA
Sodium	2400		1000	610	ug/L	1		6020B	Total/NA
Strontium	0.91	J	1.0	0.56	ug/L	1		6020B	Total/NA
Total Alkalinity	4.3	J	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	4.3	J	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Total Dissolved Solids	100		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2019-02-F-20220325-01
Lab Sample ID: 240-164315-1
Date Collected: 03/25/22 10:23
Matrix: Water
Date Received: 03/30/22 09:50

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/21/22 09:00	04/21/22 17:40	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**1500**		50	17	ug/L		04/21/22 09:00	05/09/22 20:44	1
Antimony	**0.84**	**J**	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:44	1
Arsenic	**5.2**		2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:44	1
Barium	**630**		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:44	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:44	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:44	1
Calcium	**260000**		500	190	ug/L		04/21/22 09:00	05/09/22 20:44	1
Chromium	**3.4**	**J**	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:44	1
Cobalt	**0.23**	**J**	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:44	1
Copper	**6.3**		5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:44	1
Iron	100	U	100	36	ug/L		04/21/22 09:00	05/09/22 20:44	1
Lead	**0.45**	**J**	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:44	1
Lithium	**250**		10	2.5	ug/L		04/21/22 09:00	05/09/22 20:44	1
Magnesium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 20:44	1
Manganese	10	U	10	3.6	ug/L		04/21/22 09:00	05/09/22 20:44	1
Molybdenum	**17**	**B**	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:44	1
Nickel	**2.3**	**J**	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:44	1
Potassium	**13000**		500	150	ug/L		04/21/22 09:00	05/09/22 20:44	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:44	1
Silver	**0.52**	**J**	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:44	1
Sodium	**490000**		4000	2400	ug/L		04/21/22 09:00	05/10/22 15:46	4
Strontium	**2100**		4.0	2.2	ug/L		04/21/22 09:00	05/10/22 15:46	4
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:44	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:44	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		03/31/22 09:00	04/01/22 15:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1400**		5.0	2.6	mg/L			04/07/22 19:50	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 19:50	1
Carbonate Alkalinity as CaCO3	**69**		5.0	2.6	mg/L			04/07/22 19:50	1
Chloride	**150**		5.0	1.4	mg/L			04/01/22 01:11	5
Fluoride	**0.63**		0.25	0.12	mg/L			04/01/22 01:11	5
Sulfate	**2.6**		1.0	0.35	mg/L			04/01/22 19:25	1
Total Dissolved Solids	**1800**		50	39	mg/L			03/31/22 11:05	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	**2.30**		0.430	0.477	1.00	0.319	pCi/L	04/01/22 11:12	04/26/22 12:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.4*		*40 - 110*	*04/01/22 11:12*	*04/26/22 12:14*	*1*

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

Job ID: 240-164315-1

Client Sample ID: 2019-02-F-20220325-01

Date Collected: 03/25/22 10:23
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-1

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.07		0.306	0.321	1.00	0.378	pCi/L	04/01/22 11:42	04/25/22 12:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.4*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:26*	*1*
Y Carrier	*86.0*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:26*	*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	3.36		0.528	0.575	5.00	0.378	pCi/L		04/26/22 17:31	1

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

Job ID: 240-164315-1

Client Sample ID: DUP-001-2019-02-F-20220325-01

Date Collected: 03/25/22 10:23
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-2

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/21/22 09:00	04/21/22 17:42	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**1500**		50	17	ug/L		04/21/22 09:00	05/09/22 20:48	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:48	1
Arsenic	**5.2**		2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:48	1
Barium	**650**		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:48	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:48	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:48	1
Calcium	**260000**		500	190	ug/L		04/21/22 09:00	05/09/22 20:48	1
Chromium	**3.5**	**J**	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:48	1
Cobalt	**0.23**	**J**	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:48	1
Copper	**6.4**		5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:48	1
Iron	100	U	100	36	ug/L		04/21/22 09:00	05/09/22 20:48	1
Lead	**0.45**	**J**	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:48	1
Lithium	**260**		10	2.5	ug/L		04/21/22 09:00	05/09/22 20:48	1
Magnesium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 20:48	1
Manganese	10	U	10	3.6	ug/L		04/21/22 09:00	05/09/22 20:48	1
Molybdenum	**17**	**B**	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:48	1
Nickel	**2.4**	**J**	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:48	1
Potassium	**14000**		500	150	ug/L		04/21/22 09:00	05/09/22 20:48	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:48	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:48	1
Sodium	**500000**		4000	2400	ug/L		04/21/22 09:00	05/10/22 15:49	4
Strontium	**2200**		4.0	2.2	ug/L		04/21/22 09:00	05/10/22 15:49	4
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:48	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:48	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		03/31/22 09:00	04/01/22 15:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1400**		5.0	2.6	mg/L			04/07/22 19:58	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 19:58	1
Carbonate Alkalinity as CaCO3	**69**		5.0	2.6	mg/L			04/07/22 19:58	1
Chloride	**160**		5.0	1.4	mg/L			04/01/22 01:52	5
Fluoride	**0.60**		0.25	0.12	mg/L			04/01/22 01:52	5
Sulfate	**2.4**		1.0	0.35	mg/L			04/01/22 19:47	1
Total Dissolved Solids	**1800**		50	39	mg/L			03/31/22 11:05	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	**2.05**		0.401	0.441	1.00	0.295	pCi/L	04/01/22 11:12	04/26/22 12:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.9*		*40 - 110*	*04/01/22 11:12*	*04/26/22 12:14*	*1*

Eurofins Canton

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

Job ID: 240-164315-1

Client Sample ID: DUP-001-2019-02-F-20220325-01

Date Collected: 03/25/22 10:23
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-2

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.887		0.293	0.304	1.00	0.391	pCi/L	04/01/22 11:42	04/25/22 12:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.9*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:27*	*1*
Y Carrier	*91.2*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:27*	*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	2.94		0.497	0.536	5.00	0.391	pCi/L		04/26/22 17:31	1

Client Sample ID: 9801-F-20220325-01

Date Collected: 03/25/22 11:48
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-3

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**490**	**J**	1400	390	ug/L		04/21/22 09:00	04/25/22 14:52	7

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/21/22 09:00	05/09/22 20:52	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:52	1
Arsenic	**0.88**	**J**	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:52	1
Barium	**5100**		20	8.8	ug/L		04/21/22 09:00	05/11/22 18:46	10
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:52	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:52	1
Calcium	**210000**		500	190	ug/L		04/21/22 09:00	05/09/22 20:52	1
Chromium	5.0	U	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:52	1
Cobalt	**1.1**		0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:52	1
Copper	5.0	U	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:52	1
Iron	**98**	**J**	100	36	ug/L		04/21/22 09:00	05/09/22 20:52	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:52	1
Lithium	200	U	200	50	ug/L		04/21/22 09:00	05/12/22 13:51	20
Magnesium	**76000**		500	150	ug/L		04/21/22 09:00	05/09/22 20:52	1
Manganese	**580**		10	3.6	ug/L		04/21/22 09:00	05/09/22 20:52	1
Molybdenum	**4.1**	**B**	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:52	1
Nickel	5.0	U	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:52	1
Potassium	**12000**		500	150	ug/L		04/21/22 09:00	05/09/22 20:52	1
Selenium	**1.5**	**J**	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:52	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:52	1
Sodium	**1300000**		20000	12000	ug/L		04/21/22 09:00	05/12/22 13:51	20
Strontium	**1300**		20	11	ug/L		04/21/22 09:00	05/12/22 13:51	20
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:52	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:52	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		03/31/22 09:00	04/01/22 15:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**140**		5.0	2.6	mg/L			04/07/22 20:02	1
Bicarbonate Alkalinity as CaCO3	**140**		5.0	2.6	mg/L			04/07/22 20:02	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 20:02	1
Chloride	**7700**		50	14	mg/L			04/01/22 02:52	50
Fluoride	**0.93**		0.50	0.24	mg/L			04/01/22 02:32	10
Sulfate	**3.7**	**J**	10	3.5	mg/L			04/01/22 02:32	10
Total Dissolved Solids	**12000**		1000	780	mg/L			03/31/22 11:05	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	**3.87**		0.540	0.643	1.00	0.219	pCi/L	04/01/22 11:12	04/26/22 12:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.7*		*40 - 110*	*04/01/22 11:12*	*04/26/22 12:15*	*1*

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

Job ID: 240-164315-1

Client Sample ID: 9801-F-20220325-01
Date Collected: 03/25/22 11:48
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-3
Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.82		0.550	0.706	1.00	0.481	pCi/L	04/01/22 11:42	04/25/22 12:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.7*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:27*	*1*
Y Carrier	*90.1*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:27*	*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	8.70		0.771	0.955	5.00	0.481	pCi/L		04/26/22 17:31	1

Client Sample ID: 9802-F-20220325-01
Lab Sample ID: 240-164315-4

Date Collected: 03/25/22 12:41
Matrix: Water
Date Received: 03/30/22 09:50

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**180**	**J**	200	56	ug/L		04/21/22 09:00	04/21/22 17:46	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**510**		50	17	ug/L		04/21/22 09:00	05/09/22 20:55	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:55	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:55	1
Barium	**76**		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:55	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:55	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:55	1
Calcium	**36000**		500	190	ug/L		04/21/22 09:00	05/09/22 20:55	1
Chromium	**4.2**	**J**	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:55	1
Cobalt	**3.3**		0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:55	1
Copper	**2.1**	**J**	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:55	1
Iron	**710**		100	36	ug/L		04/21/22 09:00	05/09/22 20:55	1
Lead	**0.31**	**J**	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:55	1
Lithium	**14**	**J**	40	10	ug/L		04/21/22 09:00	05/10/22 16:09	4
Magnesium	**9500**		500	150	ug/L		04/21/22 09:00	05/09/22 20:55	1
Manganese	**88**		10	3.6	ug/L		04/21/22 09:00	05/09/22 20:55	1
Molybdenum	**2.8**	**B**	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:55	1
Nickel	**3.2**	**J**	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:55	1
Potassium	**1700**		500	150	ug/L		04/21/22 09:00	05/09/22 20:55	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:55	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:55	1
Sodium	**270000**		4000	2400	ug/L		04/21/22 09:00	05/10/22 16:09	4
Strontium	**640**		1.0	0.56	ug/L		04/21/22 09:00	05/09/22 20:55	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:55	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:55	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		03/31/22 09:00	04/01/22 15:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**580**		5.0	2.6	mg/L			04/07/22 20:07	1
Bicarbonate Alkalinity as CaCO3	**580**		5.0	2.6	mg/L			04/07/22 20:07	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 20:07	1
Chloride	**32**		1.0	0.28	mg/L			04/01/22 03:52	1
Fluoride	**0.87**		0.050	0.024	mg/L			04/01/22 03:52	1
Sulfate	**57**		1.0	0.35	mg/L			04/01/22 03:52	1
Total Dissolved Solids	**780**		10	7.8	mg/L			03/31/22 11:05	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	0.366	U	0.306	0.308	1.00	0.468	pCi/L	04/01/22 11:12	04/26/22 13:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.2*		*40 - 110*	*04/01/22 11:12*	*04/26/22 13:11*	*1*

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

Job ID: 240-164315-1

Client Sample ID: 9802-F-20220325-01

Date Collected: 03/25/22 12:41
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-4

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.797		0.397	0.404	1.00	0.583	pCi/L	04/01/22 11:42	04/25/22 12:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.2*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:28*	*1*
Y Carrier	*89.3*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:28*	*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	1.16		0.501	0.508	5.00	0.583	pCi/L		04/26/22 17:31	1

Client Sample ID: 2018-01-F-20220325-01

Date Collected: 03/25/22 14:57
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-5

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**440**	**J**	1200	340	ug/L		04/21/22 09:00	04/25/22 14:35	6

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**260**		50	17	ug/L		04/21/22 09:00	05/09/22 20:59	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 20:59	1
Arsenic	**130**		2.0	0.75	ug/L		04/21/22 09:00	05/09/22 20:59	1
Barium	**750**		2.0	0.88	ug/L		04/21/22 09:00	05/09/22 20:59	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 20:59	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 20:59	1
Calcium	**40000**		500	190	ug/L		04/21/22 09:00	05/09/22 20:59	1
Chromium	**3.8**	**J**	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 20:59	1
Cobalt	**0.39**	**J**	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 20:59	1
Copper	5.0	U	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 20:59	1
Iron	**230**		100	36	ug/L		04/21/22 09:00	05/09/22 20:59	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 20:59	1
Lithium	**40**	**J**	100	25	ug/L		04/21/22 09:00	05/12/22 13:54	10
Magnesium	**830**		500	150	ug/L		04/21/22 09:00	05/09/22 20:59	1
Manganese	**5.4**	**J**	10	3.6	ug/L		04/21/22 09:00	05/09/22 20:59	1
Molybdenum	**66**	**B**	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 20:59	1
Nickel	**17**		5.0	1.9	ug/L		04/21/22 09:00	05/09/22 20:59	1
Potassium	**4300**		500	150	ug/L		04/21/22 09:00	05/09/22 20:59	1
Selenium	**2.7**	**J**	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 20:59	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 20:59	1
Sodium	**2600000**		10000	6100	ug/L		04/21/22 09:00	05/11/22 18:49	10
Strontium	**3900**		10	5.6	ug/L		04/21/22 09:00	05/11/22 18:49	10
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 20:59	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 20:59	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		03/31/22 09:00	04/01/22 15:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**210**		5.0	2.6	mg/L			04/07/22 20:12	1
Bicarbonate Alkalinity as CaCO3	**90**		5.0	2.6	mg/L			04/07/22 20:12	1
Carbonate Alkalinity as CaCO3	**120**		5.0	2.6	mg/L			04/07/22 20:12	1
Chloride	**3200**		25	7.1	mg/L			04/01/22 04:53	25
Fluoride	**2.8**		0.25	0.12	mg/L			04/01/22 04:32	5
Sulfate	**38**		5.0	1.7	mg/L			04/01/22 04:32	5
Total Dissolved Solids	**5300**		1000	780	mg/L			03/31/22 11:05	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	**1.46**		0.399	0.420	1.00	0.333	pCi/L	04/01/22 11:12	04/26/22 13:11	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.4*		*40 - 110*	*04/01/22 11:12*	*04/26/22 13:11*	*1*

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

Job ID: 240-164315-1

Client Sample ID: 2018-01-F-20220325-01

Date Collected: 03/25/22 14:57
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-5

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.01		0.441	0.479	1.00	0.485	pCi/L	04/01/22 11:42	04/25/22 12:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.4*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:28*	*1*
Y Carrier	*88.6*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:28*	*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	3.47		0.595	0.637	5.00	0.485	pCi/L		04/26/22 17:31	1

Client Sample ID: EB-001-F-20220325-01
Lab Sample ID: 240-164315-6

Date Collected: 03/25/22 15:20
Matrix: Water
Date Received: 03/30/22 09:50

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/21/22 09:00	04/21/22 17:50	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/21/22 09:00	05/09/22 21:03	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 21:03	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 21:03	1
Barium	2.0	U	2.0	0.88	ug/L		04/21/22 09:00	05/09/22 21:03	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 21:03	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 21:03	1
Calcium	500	U	500	190	ug/L		04/21/22 09:00	05/09/22 21:03	1
Chromium	5.0	U	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 21:03	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 21:03	1
Copper	**4.1**	**J**	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 21:03	1
Iron	100	U	100	36	ug/L		04/21/22 09:00	05/09/22 21:03	1
Lead	**0.27**	**J**	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 21:03	1
Lithium	10	U	10	2.5	ug/L		04/21/22 09:00	05/09/22 21:03	1
Magnesium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 21:03	1
Manganese	10	U	10	3.6	ug/L		04/21/22 09:00	05/09/22 21:03	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 21:03	1
Nickel	5.0	U	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 21:03	1
Potassium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 21:03	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 21:03	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 21:03	1
Sodium	**2400**		1000	610	ug/L		04/21/22 09:00	05/09/22 21:03	1
Strontium	**0.91**	**J**	1.0	0.56	ug/L		04/21/22 09:00	05/09/22 21:03	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 21:03	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 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		03/31/22 09:00	04/01/22 15:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**4.3**	**J**	5.0	2.6	mg/L			04/07/22 20:16	1
Bicarbonate Alkalinity as CaCO3	**4.3**	**J**	5.0	2.6	mg/L			04/07/22 20:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 20:16	1
Chloride	1.0	U	1.0	0.28	mg/L			04/15/22 19:12	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/15/22 19:12	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/15/22 19:12	1
Total Dissolved Solids	**100**		10	7.8	mg/L			03/31/22 11:05	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	0.00188	U	0.148	0.148	1.00	0.298	pCi/L	04/01/22 11:12	04/26/22 13:07	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.8*		*40 - 110*	*04/01/22 11:12*	*04/26/22 13:07*	*1*

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

Job ID: 240-164315-1

Client Sample ID: EB-001-F-20220325-01

Date Collected: 03/25/22 15:20
Date Received: 03/30/22 09:50

Lab Sample ID: 240-164315-6

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.208	U	0.234	0.235	1.00	0.385	pCi/L	04/01/22 11:42	04/25/22 12:29	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.8*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:29*	*1*
Y Carrier	*93.1*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:29*	*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	0.210	U	0.277	0.278	5.00	0.385	pCi/L		04/26/22 17:31	1

Tracer/Carrier Summary

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

Job ID: 240-164315-1

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)
240-164315-1	2019-02-F-20220325-01	87.4
240-164315-2	DUP-001-2019-02-F-20220325-01	89.9
240-164315-3	9801-F-20220325-01	83.7
240-164315-4	9802-F-20220325-01	82.2
240-164315-5	2018-01-F-20220325-01	87.4
240-164315-6	EB-001-F-20220325-01	79.8
LCS 160-558258/1-A	Lab Control Sample	94.1
LCSD 160-558258/2-A	Lab Control Sample Dup	94.3
MB 160-558258/23-A	Method Blank	89.6

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)
240-164315-1	2019-02-F-20220325-01	87.4	86.0
240-164315-2	DUP-001-2019-02-F-20220325-01	89.9	91.2
240-164315-3	9801-F-20220325-01	83.7	90.1
240-164315-4	9802-F-20220325-01	82.2	89.3
240-164315-5	2018-01-F-20220325-01	87.4	88.6
240-164315-6	EB-001-F-20220325-01	79.8	93.1
LCS 160-558261/1-A	Lab Control Sample	94.1	89.0
LCSD 160-558261/2-A	Lab Control Sample Dup	94.3	84.5
MB 160-558261/23-A	Method Blank	89.6	93.5

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-350546/1-A
Matrix: Water
Analysis Batch: 350890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 350546

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	200	U	200	56	ug/L		04/21/22 09:00	04/21/22 16:55	1

Lab Sample ID: LCS 310-350546/2-A
Matrix: Water
Analysis Batch: 350890

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350546

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2000	2040		ug/L		102	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-350549/1-A
Matrix: Water
Analysis Batch: 352527

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 350549

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	50	U	50	17	ug/L		04/21/22 09:00	05/09/22 19:02	1
Antimony	2.0	U	2.0	0.69	ug/L		04/21/22 09:00	05/09/22 19:02	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/21/22 09:00	05/09/22 19:02	1
Barium	2.0	U	2.0	0.88	ug/L		04/21/22 09:00	05/09/22 19:02	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/21/22 09:00	05/09/22 19:02	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/21/22 09:00	05/09/22 19:02	1
Calcium	500	U	500	190	ug/L		04/21/22 09:00	05/09/22 19:02	1
Chromium	5.0	U	5.0	1.1	ug/L		04/21/22 09:00	05/09/22 19:02	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/21/22 09:00	05/09/22 19:02	1
Copper	5.0	U	5.0	1.8	ug/L		04/21/22 09:00	05/09/22 19:02	1
Iron	100	U	100	36	ug/L		04/21/22 09:00	05/09/22 19:02	1
Lead	0.50	U	0.50	0.24	ug/L		04/21/22 09:00	05/09/22 19:02	1
Lithium	10	U	10	2.5	ug/L		04/21/22 09:00	05/09/22 19:02	1
Magnesium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 19:02	1
Manganese	10	U	10	3.6	ug/L		04/21/22 09:00	05/09/22 19:02	1
Molybdenum	1.62	J	2.0	1.2	ug/L		04/21/22 09:00	05/09/22 19:02	1
Nickel	5.0	U	5.0	1.9	ug/L		04/21/22 09:00	05/09/22 19:02	1
Potassium	500	U	500	150	ug/L		04/21/22 09:00	05/09/22 19:02	1
Selenium	5.0	U	5.0	0.96	ug/L		04/21/22 09:00	05/09/22 19:02	1
Silver	1.0	U	1.0	0.49	ug/L		04/21/22 09:00	05/09/22 19:02	1
Sodium	1000	U	1000	610	ug/L		04/21/22 09:00	05/09/22 19:02	1
Strontium	1.0	U	1.0	0.56	ug/L		04/21/22 09:00	05/09/22 19:02	1
Thallium	1.0	U	1.0	0.26	ug/L		04/21/22 09:00	05/09/22 19:02	1
Zinc	20	U	20	10	ug/L		04/21/22 09:00	05/09/22 19:02	1

Lab Sample ID: LCS 310-350549/2-A
Matrix: Water
Analysis Batch: 352527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350549

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	200	183		ug/L		91	80 - 120
Antimony	200	195		ug/L		98	80 - 120
Arsenic	200	179		ug/L		90	80 - 120

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

Lab Sample ID: LCS 310-350549/2-A
Matrix: Water
Analysis Batch: 352527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350549

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	100	99.5		ug/L		99	80 - 120
Beryllium	100	98.7		ug/L		99	80 - 120
Cadmium	100	95.8		ug/L		96	80 - 120
Calcium	2000	1810		ug/L		91	80 - 120
Chromium	100	103		ug/L		103	80 - 120
Cobalt	100	106		ug/L		106	80 - 120
Copper	200	196		ug/L		98	80 - 120
Iron	200	214		ug/L		107	80 - 120
Lead	200	211		ug/L		105	80 - 120
Lithium	200	203		ug/L		101	80 - 120
Magnesium	2000	1810		ug/L		90	80 - 120
Manganese	100	93.5		ug/L		93	80 - 120
Molybdenum	200	196		ug/L		98	80 - 120
Nickel	200	189		ug/L		95	80 - 120
Potassium	2000	1870		ug/L		93	80 - 120
Selenium	400	359		ug/L		90	80 - 120
Silver	100	96.3		ug/L		96	80 - 120
Sodium	2000	2180		ug/L		109	80 - 120
Strontium	200	192		ug/L		96	80 - 120
Thallium	200	210		ug/L		105	80 - 120
Zinc	200	181		ug/L		90	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-521346/1-A
Matrix: Water
Analysis Batch: 521614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		03/31/22 09:00	04/01/22 14:48	1

Lab Sample ID: LCS 240-521346/2-A
Matrix: Water
Analysis Batch: 521614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.26		ug/L		105	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-522121/30
Matrix: Water
Analysis Batch: 522121

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			04/07/22 18:39	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 18:39	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 18:39	1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-522121/4
Matrix: Water
Analysis Batch: 522121

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	2.75	J	5.0	2.6	mg/L			04/07/22 14:42	1
Bicarbonate Alkalinity as CaCO3	2.75	J	5.0	2.6	mg/L			04/07/22 14:42	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/07/22 14:42	1

Lab Sample ID: LCS 240-522121/29
Matrix: Water
Analysis Batch: 522121

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-521430/3
Matrix: Water
Analysis Batch: 521430

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			03/31/22 15:48	1
Fluoride	0.050	U	0.050	0.024	mg/L			03/31/22 15:48	1
Sulfate	1.0	U	1.0	0.35	mg/L			03/31/22 15:48	1

Lab Sample ID: LCS 240-521430/4
Matrix: Water
Analysis Batch: 521430

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.7		mg/L		99	90 - 110
Fluoride	2.50	2.53		mg/L		101	90 - 110
Sulfate	50.0	51.2		mg/L		102	90 - 110

Lab Sample ID: MB 240-521563/3
Matrix: Water
Analysis Batch: 521563

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			04/01/22 16:53	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/01/22 16:53	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/01/22 16:53	1

Lab Sample ID: LCS 240-521563/4
Matrix: Water
Analysis Batch: 521563

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	2.70		mg/L		108	90 - 110
Sulfate	50.0	52.1		mg/L		104	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-522943/3
Matrix: Water
Analysis Batch: 522943

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			04/15/22 13:59	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/15/22 13:59	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/15/22 13:59	1

Lab Sample ID: LCS 240-522943/4
Matrix: Water
Analysis Batch: 522943

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	2.52		mg/L		101	90 - 110
Sulfate	50.0	51.3		mg/L		103	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-521423/1
Matrix: Water
Analysis Batch: 521423

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			03/31/22 11:05	1

Lab Sample ID: LCS 240-521423/2
Matrix: Water
Analysis Batch: 521423

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	146		mg/L		97	80 - 120

Lab Sample ID: 240-164315-6 DU
Matrix: Water
Analysis Batch: 521423

Client Sample ID: EB-001-F-20220325-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	100		92.0		mg/L		8	20

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-558258/23-A
Matrix: Water
Analysis Batch: 562034

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558258

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.05627	U	0.117	0.117	1.00	0.266	pCi/L	04/01/22 11:12	04/26/22 13:09	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*04/01/22 11:12*	*04/26/22 13:09*	*1*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-558258/1-A
Matrix: Water
Analysis Batch: 562034

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558258

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.50		1.28	1.00	0.287	pCi/L	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.1*		*40 - 110*

Lab Sample ID: LCSD 160-558258/2-A
Matrix: Water
Analysis Batch: 562034

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558258

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	10.45		1.28	1.00	0.293	pCi/L	92	75 - 125	0.02	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*94.3*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-558261/23-A
Matrix: Water
Analysis Batch: 561956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 558261

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1310	U	0.211	0.211	1.00	0.357	pCi/L	04/01/22 11:42	04/25/22 12:24	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:24*	*1*
Y Carrier	*93.5*		*40 - 110*	*04/01/22 11:42*	*04/25/22 12:24*	*1*

Lab Sample ID: LCS 160-558261/1-A
Matrix: Water
Analysis Batch: 561955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 558261

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.68	10.38		1.18	1.00	0.338	pCi/L	120	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.1*		*40 - 110*
Y Carrier	*89.0*		*40 - 110*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-558261/2-A
Matrix: Water
Analysis Batch: 561955

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 558261

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.68	9.889		1.16	1.00	0.457	pCi/L	114	75 - 125	0.21	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*94.3*		*40 - 110*
Y Carrier	*84.5*		*40 - 110*

Metals

Prep Batch: 350546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	3005A	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	3005A	
240-164315-3	9801-F-20220325-01	Total/NA	Water	3005A	
240-164315-4	9802-F-20220325-01	Total/NA	Water	3005A	
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	3005A	
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	3005A	
MB 310-350546/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-350546/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 350549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	3005A	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	3005A	
240-164315-3	9801-F-20220325-01	Total/NA	Water	3005A	
240-164315-4	9802-F-20220325-01	Total/NA	Water	3005A	
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	3005A	
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	3005A	
MB 310-350549/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-350549/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 350890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	6010D	350546
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	6010D	350546
240-164315-4	9802-F-20220325-01	Total/NA	Water	6010D	350546
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	6010D	350546
MB 310-350546/1-A	Method Blank	Total/NA	Water	6010D	350546
LCS 310-350546/2-A	Lab Control Sample	Total/NA	Water	6010D	350546

Analysis Batch: 350972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-3	9801-F-20220325-01	Total/NA	Water	6010D	350546
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	6010D	350546

Analysis Batch: 352527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-3	9801-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-4	9802-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	6020B	350549
MB 310-350549/1-A	Method Blank	Total/NA	Water	6020B	350549
LCS 310-350549/2-A	Lab Control Sample	Total/NA	Water	6020B	350549

Analysis Batch: 352547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-3	9801-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-4	9802-F-20220325-01	Total/NA	Water	6020B	350549

Metals (Continued)

Analysis Batch: 352547 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	6020B	350549
MB 310-350549/1-A	Method Blank	Total/NA	Water	6020B	350549
LCS 310-350549/2-A	Lab Control Sample	Total/NA	Water	6020B	350549

Analysis Batch: 352697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-4	9802-F-20220325-01	Total/NA	Water	6020B	350549

Analysis Batch: 352849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-3	9801-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	6020B	350549

Analysis Batch: 352920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-3	9801-F-20220325-01	Total/NA	Water	6020B	350549
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	6020B	350549

Prep Batch: 521346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	7470A	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	7470A	
240-164315-3	9801-F-20220325-01	Total/NA	Water	7470A	
240-164315-4	9802-F-20220325-01	Total/NA	Water	7470A	
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	7470A	
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	7470A	
MB 240-521346/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-521346/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 521614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	7470A	521346
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	7470A	521346
240-164315-3	9801-F-20220325-01	Total/NA	Water	7470A	521346
240-164315-4	9802-F-20220325-01	Total/NA	Water	7470A	521346
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	7470A	521346
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	7470A	521346
MB 240-521346/1-A	Method Blank	Total/NA	Water	7470A	521346
LCS 240-521346/2-A	Lab Control Sample	Total/NA	Water	7470A	521346

General Chemistry

Analysis Batch: 521423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	SM 2540C	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	SM 2540C	
240-164315-3	9801-F-20220325-01	Total/NA	Water	SM 2540C	
240-164315-4	9802-F-20220325-01	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 521423 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	SM 2540C	
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	SM 2540C	
MB 240-521423/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521423/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-164315-6 DU	EB-001-F-20220325-01	Total/NA	Water	SM 2540C	

Analysis Batch: 521430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	300.0	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	300.0	
240-164315-3	9801-F-20220325-01	Total/NA	Water	300.0	
240-164315-3	9801-F-20220325-01	Total/NA	Water	300.0	
240-164315-4	9802-F-20220325-01	Total/NA	Water	300.0	
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	300.0	
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	300.0	
MB 240-521430/3	Method Blank	Total/NA	Water	300.0	
LCS 240-521430/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 521563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	300.0	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	300.0	
MB 240-521563/3	Method Blank	Total/NA	Water	300.0	
LCS 240-521563/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 522121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	2320B-1997	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	2320B-1997	
240-164315-3	9801-F-20220325-01	Total/NA	Water	2320B-1997	
240-164315-4	9802-F-20220325-01	Total/NA	Water	2320B-1997	
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	2320B-1997	
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	2320B-1997	
MB 240-522121/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-522121/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-522121/29	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 522943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	300.0	
MB 240-522943/3	Method Blank	Total/NA	Water	300.0	
LCS 240-522943/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 558258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	PrecSep-21	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	PrecSep-21	
240-164315-3	9801-F-20220325-01	Total/NA	Water	PrecSep-21	
240-164315-4	9802-F-20220325-01	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 558258 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	PrecSep-21	
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	PrecSep-21	
MB 160-558258/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-558258/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-558258/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 558261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164315-1	2019-02-F-20220325-01	Total/NA	Water	PrecSep_0	
240-164315-2	DUP-001-2019-02-F-20220325-01	Total/NA	Water	PrecSep_0	
240-164315-3	9801-F-20220325-01	Total/NA	Water	PrecSep_0	
240-164315-4	9802-F-20220325-01	Total/NA	Water	PrecSep_0	
240-164315-5	2018-01-F-20220325-01	Total/NA	Water	PrecSep_0	
240-164315-6	EB-001-F-20220325-01	Total/NA	Water	PrecSep_0	
MB 160-558261/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-558261/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-558261/2-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: 240-164315-1

Client Sample ID: 2019-02-F-20220325-01

Lab Sample ID: 240-164315-1

Date Collected: 03/25/22 10:23

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:40	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:44	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:44	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		4	352697	05/10/22 15:46	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:16	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 19:50	JMR	TAL CAN
Total/NA	Analysis	300.0		1	521563	04/01/22 19:25	JMB	TAL CAN
Total/NA	Analysis	300.0		5	521430	04/01/22 01:11	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521423	03/31/22 11:05	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 12:14	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:26	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: DUP-001-2019-02-F-20220325-01

Lab Sample ID: 240-164315-2

Date Collected: 03/25/22 10:23

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:42	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:48	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:48	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		4	352697	05/10/22 15:49	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:18	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 19:58	JMR	TAL CAN
Total/NA	Analysis	300.0		1	521563	04/01/22 19:47	JMB	TAL CAN
Total/NA	Analysis	300.0		5	521430	04/01/22 01:52	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521423	03/31/22 11:05	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 12:14	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:27	FLC	TAL SL

Lab Chronicle

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

Job ID: 240-164315-1

Client Sample ID: DUP-001-2019-02-F-20220325-01

Lab Sample ID: 240-164315-2
Date Collected: 03/25/22 10:23
Matrix: Water
Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: 9801-F-20220325-01

Lab Sample ID: 240-164315-3
Date Collected: 03/25/22 11:48
Matrix: Water
Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		7	350972	04/25/22 14:52	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:52	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:52	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		10	352849	05/11/22 18:46	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		20	352920	05/12/22 13:51	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:20	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 20:02	JMR	TAL CAN
Total/NA	Analysis	300.0		10	521430	04/01/22 02:32	MED	TAL CAN
Total/NA	Analysis	300.0		50	521430	04/01/22 02:52	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521423	03/31/22 11:05	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 12:15	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:27	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: 9802-F-20220325-01

Lab Sample ID: 240-164315-4
Date Collected: 03/25/22 12:41
Matrix: Water
Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:46	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:55	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:55	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		4	352697	05/10/22 16:09	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:22	MRL	TAL CAN

Client Sample ID: 9802-F-20220325-01

Lab Sample ID: 240-164315-4

Date Collected: 03/25/22 12:41

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 20:07	JMR	TAL CAN
Total/NA	Analysis	300.0		1	521430	04/01/22 03:52	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521423	03/31/22 11:05	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 13:11	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:28	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: 2018-01-F-20220325-01

Lab Sample ID: 240-164315-5

Date Collected: 03/25/22 14:57

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		6	350972	04/25/22 14:35	CTB	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 20:59	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 20:59	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		10	352849	05/11/22 18:49	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		10	352920	05/12/22 13:54	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:24	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 20:12	JMR	TAL CAN
Total/NA	Analysis	300.0		5	521430	04/01/22 04:32	MED	TAL CAN
Total/NA	Analysis	300.0		25	521430	04/01/22 04:53	MED	TAL CAN
Total/NA	Analysis	SM 2540C		1	521423	03/31/22 11:05	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562036	04/26/22 13:11	FLC	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:28	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	TAL SL

Client Sample ID: EB-001-F-20220325-01

Lab Sample ID: 240-164315-6

Date Collected: 03/25/22 15:20

Matrix: Water

Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350546	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6010D		1	350890	04/21/22 17:50	CTB	TAL CF

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164315-1
Project/Site: Federal CCR Wells

Client Sample ID: EB-001-F-20220325-01
Lab Sample ID: 240-164315-6

Date Collected: 03/25/22 15:20
Matrix: Water
Date Received: 03/30/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352527	05/09/22 21:03	SAP	TAL CF
Total/NA	Prep	3005A			350549	04/21/22 09:00	ACM2	TAL CF
Total/NA	Analysis	6020B		1	352547	05/09/22 21:03	SAP	TAL CF
Total/NA	Prep	7470A			521346	03/31/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521614	04/01/22 15:26	MRL	TAL CAN
Total/NA	Analysis	2320B-1997		1	522121	04/07/22 20:16	JMR	TAL CAN
Total/NA	Analysis	300.0		1	522943	04/15/22 19:12	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521423	03/31/22 11:05	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			558258	04/01/22 11:12	LPS	TAL SL
Total/NA	Analysis	9315		1	562035	04/26/22 13:07	SCB	TAL SL
Total/NA	Prep	PrecSep_0			558261	04/01/22 11:42	LPS	TAL SL
Total/NA	Analysis	9320		1	561960	04/25/22 12:29	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	562220	04/26/22 17:31	EMH	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
Job ID: 240-164315-1
Project/Site: Federal CCR Wells

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	04-20-22
Oregon	NELAP	4062	04-20-22
Pennsylvania	NELAP	68-00340	04-24-22
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
Job ID: 240-164315-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

0-8106

Chain of Custody Record

Columbus
209

eurofins

Client Information	Sampler: Kenyon	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740.373.4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
Preservation Code:							D	N	D	N		
2019-02-F-20220325-01	032522	1023	G	W			1	1	2	1		
Dup-001-2019-02-F-20220325-01	032522	1023	G	W			1	1	2	1		
9801-F-20220325-01	032522	1148	G	W			1	1	2	1		
9802-F-20220325-01	032522	1241	G	W			1	1	2	1		
9831-F-20220325-01	032522		G	W			1	1	2	1		NO SAMPLE
2018-01-F-20220325-01	032522	1457	G	W			1	1	2	1		
EB-001-F-20220325-01	032522	1520	G	W			1	1	2	1		

240-164315 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

(A fee may be assessed if samples are retained longer than 1 month)
☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
					3-30-22 800	EET NC
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Page 39 of 47

5/13/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 164315**
Canton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Matt

Cooler Received on 3-30-22 Opened on 3-30-22

FedEx: 1st Grd Exp UPS FAS (Clipper) Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 10 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 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? Yes (No)
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# 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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	1.1	0.9	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.3	0.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.5	0.3	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.0	0.8	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.4	0.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.7	0.5	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	0.8	0.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.6	1.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.4	1.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	8.4	8.2	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
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

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2019-02-F-20220325-01	240-164315-C-1	Plastic 500ml - with Nitric Acid	<2			
2019-02-F-20220325-01	240-164315-D-1	Plastic 1 liter - Nitric Acid	<2			
2019-02-F-20220325-01	240-164315-E-1	Plastic 1 liter - Nitric Acid	<2			
2019-02-F-20220325-01	240-164315-F-1	Plastic 250ml - with Nitric Acid	<2			
DUP-001-2019-02-F-20220325-01	240-164315-C-2	Plastic 500ml - with Nitric Acid	<2			
DUP-001-2019-02-F-20220325-01	240-164315-D-2	Plastic 1 liter - Nitric Acid	<2			
DUP-001-2019-02-F-20220325-01	240-164315-E-2	Plastic 1 liter - Nitric Acid	<2			
DUP-001-2019-02-F-20220325-01	240-164315-F-2	Plastic 250ml - with Nitric Acid	<2			
9801-F-20220325-01	240-164315-C-3	Plastic 500ml - with Nitric Acid	<2			
9801-F-20220325-01	240-164315-D-3	Plastic 1 liter - Nitric Acid	<2			
9801-F-20220325-01	240-164315-E-3	Plastic 1 liter - Nitric Acid	<2			
9801-F-20220325-01	240-164315-F-3	Plastic 250ml - with Nitric Acid	<2			
9802-F-20220325-01	240-164315-C-4	Plastic 500ml - with Nitric Acid	<2			
9802-F-20220325-01	240-164315-D-4	Plastic 1 liter - Nitric Acid	<2			
9802-F-20220325-01	240-164315-E-4	Plastic 1 liter - Nitric Acid	<2			
9802-F-20220325-01	240-164315-F-4	Plastic 250ml - with Nitric Acid	<2			
2018-01-F-20220325-01	240-164315-C-5	Plastic 500ml - with Nitric Acid	<2			
2018-01-F-20220325-01	240-164315-D-5	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220325-01	240-164315-E-5	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220325-01	240-164315-F-5	Plastic 250ml - with Nitric Acid	<2			
EB-001-F-20220325-01	240-164315-C-6	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220325-01	240-164315-D-6	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220325-01	240-164315-E-6	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220325-01	240-164315-F-6	Plastic 250ml - with Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150269.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-164315-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/12/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 24019633			
Project Name: Federal CCR Wells	SSOW#:			
Site:				

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2019-02-F-20220325-01 (240-164315-1)	3/25/22	10:23 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
DUP-001-2019-02-F-20220325-01 (240-164315-2)	3/25/22	10:23 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
9801-F-20220325-01 (240-164315-3)	3/25/22	11:48 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
9802-F-20220325-01 (240-164315-4)	3/25/22	12:41 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2018-01-F-20220325-01 (240-164315-5)	3/25/22	14:57 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220325-01 (240-164315-6)	3/25/22	15:20 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	3-30-22 1356	ETA			
Relinquished by: FED EX	Date/Time:	Company	Received by: FED EX	Date/Time: MAR 31 2022 0930	Company ETA STL
Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/13/2022

eurofins | Environment Testing America

240-164315 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client	EET) Canton		
City/State	CITY Barberton	STATE OH	Project CCR
Receipt Information			
Date/Time Received	DATE 3/31/22	TIME 0930	Received By MRH

Delivery Type ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other._____

Condition of Cooler/Containers			
Sample(s) received in Cooler?	☒ Yes ☐ No	*If yes* Cooler ID	
Multiple Coolers?	☐ Yes ☒ No	*If yes* Cooler # _____ of _____	
Cooler Custody Seals Present? No	☐ Yes ☒ No	*If yes* Cooler custody seals intact?	☐ Yes ☐
Sample Custody Seals Present? No	☐ Yes ☒ No	*If yes* Sample custody seals intact?	☐ Yes ☐
Trip Blank Present?	☐ Yes ☒ No	*If yes* Which VOA samples are in cooler? ↓	

Temperature Record				
Coolant:	☒ ~~Wet ice~~	☐ Blue ice	☐ Dry ice	☐ Other._____ ☒ NONE
Thermometer ID	?	Correction Factor (°C)	-0.1	
Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature				
Uncorrected Temp (°C)	1.4	Corrected Temp (°C)	1.3	

Sample Container Temperature		
	CONTAINER 1	CONTAINER 2
Container(s) used		
Uncorrected Temp (°C)		
Corrected Temp (°C)		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE. If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150290.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note):		Job #: 240-164315-1
Address: 3019 Venture Way	Due Date Requested: 4/12/2022			
City: Cedar Falls	TAT Requested (days):			
State, Zip: IA, 50613				
Phone: 319-277-2401(Tel) 319-277-2425(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wwater, Ssolid, Owaste/oil, BT=Tissue, A=Air)	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:
			Preservation Code:							
2019-02-F-20220325-01 (240-164315-1)	3/25/22	10:23 Eastern		Water			X	X	1	
DUP-001-2019-02-F-20220325-01 (240-164315-2)	3/25/22	10:23 Eastern		Water			X	X	1	
9801-F-20220325-01 (240-164315-3)	3/25/22	11:48 Eastern		Water			X	X	1	
9802-F-20220325-01 (240-164315-4)	3/25/22	12:41 Eastern		Water			X	X	1	
2018-01-F-20220325-01 (240-164315-5)	3/25/22	14:57 Eastern		Water			X	X	1	
EB-001-F-20220325-01 (240-164315-6)	3/25/22	15:20 Eastern		Water			X	X	1	

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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-30-22 1550	ETA			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 3 31-22 930	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164315-1

Login Number: 164315
List Number: 2
Creator: Kizer, Preston V

List Source: Eurofins Cedar Falls
List Creation: 03/31/22 12:36 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (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: 240-164315-1

Login Number: 164315
List Number: 3
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 03/31/22 03:27 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-164475-1
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:
5/25/2022 2:03:14 PM
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

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.

Table of Contents

Definitions/Glossary

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

Job ID: 240-164475-1

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.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
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
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-164475-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-164475-1

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 0.9º C, 1.0º C, 1.2º C, 1.4º C, 1.6º C and 2.1º C.

RAD
Method PrecSep_0: Radium-228 Prep Batch 160-559086

The following samples were prepared at a reduced aliquot due to Matrix: MW20-F-20220330-01 (240-164475-1), 96153R-F-20220330-01 (240-164475-2), 2016-09-F-20220330-01 (240-164475-3), 96154R-F-20220330-01 (240-164475-4) and 2016-10-F-20220330-01 (240-164475-5). 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: MW20-F-20220330-01 (240-164475-1), 96153R-F-20220330-01 (240-164475-2), 2016-09-F-20220330-01 (240-164475-3), 96154R-F-20220330-01 (240-164475-4) and 2016-10-F-20220330-01 (240-164475-5). 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
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.

MW20-F-20220330-01 (240-164475-1), 96153R-F-20220330-01 (240-164475-2), 2016-09-F-20220330-01 (240-164475-3), 96154R-F-20220330-01 (240-164475-4), 2016-10-F-20220330-01 (240-164475-5), EB-001-F-20220330-01 (240-164475-6), (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 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.

MW20-F-20220330-01 (240-164475-1), 96153R-F-20220330-01 (240-164475-2), 2016-09-F-20220330-01 (240-164475-3), 96154R-F-20220330-01 (240-164475-4), 2016-10-F-20220330-01 (240-164475-5), EB-001-F-20220330-01 (240-164475-6), (LCS 160-559084/1-A), (LCSD 160-559084/2-A) and (MB 160-559084/22-A)

Job ID: 240-164475-1 (Continued)

Laboratory: Eurofins Canton (Continued)

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

Metals

Method 3005A: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: 96154R-F-20220330-01 (240-164475-4). The sample(s) was preserved to the appropriate pH in the laboratory.

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

General Chemistry

Methods 300.0, 9056A: The following sample was diluted due to the nature of the sample matrix: 2016-10-F-20220330-01 (240-164475-5). 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

Job ID: 240-164475-1

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: 240-164475-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-164475-1	MW20-F-20220330-01	Water	03/30/22 09:40	04/02/22 08:00
240-164475-2	96153R-F-20220330-01	Water	03/30/22 10:13	04/02/22 08:00
240-164475-3	2016-09-F-20220330-01	Water	03/30/22 11:36	04/02/22 08:00
240-164475-4	96154R-F-20220330-01	Water	03/30/22 12:25	04/02/22 08:00
240-164475-5	2016-10-F-20220330-01	Water	03/30/22 14:00	04/02/22 08:00
240-164475-6	EB-001-F-20220330-01	Water	03/30/22 15:00	04/02/22 08:00

Detection Summary

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

Job ID: 240-164475-1

Client Sample ID: MW20-F-20220330-01 — Lab Sample ID: 240-164475-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	110	J	200	56	ug/L	1		6010D	Total/NA
Arsenic	1.8	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	17		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	510000		2000	760	ug/L	4		6020B	Total/NA
Cobalt	190		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	10000		400	140	ug/L	4		6020B	Total/NA
Lithium	180		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	100000		2000	600	ug/L	4		6020B	Total/NA
Manganese	16000		40	14	ug/L	4		6020B	Total/NA
Nickel	160		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	5900	B	2000	600	ug/L	4		6020B	Total/NA
Selenium	1.3	J	5.0	0.96	ug/L	1		6020B	Total/NA
Silver	2.6		1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	24000		1000	610	ug/L	1		6020B	Total/NA
Strontium	2400		4.0	2.2	ug/L	4		6020B	Total/NA
Thallium	0.28	J	1.0	0.26	ug/L	1		6020B	Total/NA
Zinc	150		20	10	ug/L	1		6020B	Total/NA
Total Alkalinity	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1.8		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	1.5		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	1500		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	2100		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96153R-F-20220330-01 — Lab Sample ID: 240-164475-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	580		200	56	ug/L	1		6010D	Total/NA
Aluminum	310	F1	50	17	ug/L	1		6020B	Total/NA
Antimony	0.71	J	2.0	0.69	ug/L	1		6020B	Total/NA
Barium	22		2.0	0.88	ug/L	1		6020B	Total/NA
Beryllium	0.31	J	1.0	0.27	ug/L	1		6020B	Total/NA
Calcium	59000		500	190	ug/L	1		6020B	Total/NA
Cobalt	1.3		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	870		400	140	ug/L	4		6020B	Total/NA
Lithium	36	J	40	10	ug/L	4		6020B	Total/NA
Magnesium	11000		500	150	ug/L	1		6020B	Total/NA
Manganese	130		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	12		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	1.9	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	3800	B	2000	600	ug/L	4		6020B	Total/NA
Sodium	510000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	1400		4.0	2.2	ug/L	4		6020B	Total/NA
Total Alkalinity	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	17		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.83		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	880		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	140		2.0	1.6	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 240-164475-1

Client Sample ID: 2016-09-F-20220330-01 — Lab Sample ID: 240-164475-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	180	J	400	110	ug/L	2		6010D	Total/NA
Aluminum	300		50	17	ug/L	1		6020B	Total/NA
Antimony	1.4	J	2.0	0.69	ug/L	1		6020B	Total/NA
Arsenic	12		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	280		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.066	J	0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	48000		500	190	ug/L	1		6020B	Total/NA
Chromium	9.7		5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.57		0.50	0.19	ug/L	1		6020B	Total/NA
Copper	7.7		5.0	1.8	ug/L	1		6020B	Total/NA
Lithium	120		40	10	ug/L	4		6020B	Total/NA
Molybdenum	140		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	3.4	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	9100	B	2000	600	ug/L	4		6020B	Total/NA
Selenium	3.1	J	5.0	0.96	ug/L	1		6020B	Total/NA
Silver	1.2		1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	1100000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	2400		4.0	2.2	ug/L	4		6020B	Total/NA
Thallium	0.49	J	1.0	0.26	ug/L	1		6020B	Total/NA
Mercury	0.15	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	1300		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	870		5.0	1.4	mg/L	5		300.0	Total/NA
Fluoride	1.1		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	43		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	2800		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96154R-F-20220330-01 — Lab Sample ID: 240-164475-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	610		200	56	ug/L	1		6010D	Total/NA
Aluminum	400		50	17	ug/L	1		6020B	Total/NA
Arsenic	2.3		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	160		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	11000		500	190	ug/L	1		6020B	Total/NA
Cobalt	0.20	J	0.50	0.19	ug/L	1		6020B	Total/NA
Iron	330	J	400	140	ug/L	4		6020B	Total/NA
Lead	0.45	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	36	J	40	10	ug/L	4		6020B	Total/NA
Magnesium	1300		500	150	ug/L	1		6020B	Total/NA
Manganese	4.6	J	10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	100		2.0	1.2	ug/L	1		6020B	Total/NA
Potassium	4000	B	2000	600	ug/L	4		6020B	Total/NA
Selenium	1.1	J	5.0	0.96	ug/L	1		6020B	Total/NA
Sodium	600000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	530		4.0	2.2	ug/L	4		6020B	Total/NA
Total Alkalinity	550		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	440		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	490		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	4.4		0.050	0.024	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 96154R-F-20220330-01 (Continued)
Lab Sample ID: 240-164475-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	42		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	1400		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2016-10-F-20220330-01
Lab Sample ID: 240-164475-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	780	J	2400	670	ug/L	12		6010D	Total/NA
Barium	510		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	650000		10000	3800	ug/L	20		6020B	Total/NA
Lithium	510		200	50	ug/L	20		6020B	Total/NA
Magnesium	260000		10000	3000	ug/L	20		6020B	Total/NA
Manganese	390		200	72	ug/L	20		6020B	Total/NA
Molybdenum	22		2.0	1.2	ug/L	1		6020B	Total/NA
Potassium	150000	B	10000	3000	ug/L	20		6020B	Total/NA
Silver	0.80	J	1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	8900000		20000	12000	ug/L	20		6020B	Total/NA
Strontium	48000		50	28	ug/L	50		6020B	Total/NA
Total Alkalinity	36		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	36		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	19000		100	28	mg/L	100		300.0	Total/NA
Sulfate	360		100	35	mg/L	100		300.0	Total/NA
Total Dissolved Solids	23000		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220330-01
Lab Sample ID: 240-164475-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	700		200	56	ug/L	1		6010D	Total/NA
Copper	2.5	J	5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.34	J	0.50	0.24	ug/L	1		6020B	Total/NA
Sodium	2300		1000	610	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.

Client Sample ID: MW20-F-20220330-01

Date Collected: 03/30/22 09:40
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-1

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**110**	**J**	200	56	ug/L		04/28/22 09:30	05/02/22 17:23	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	05/18/22 22:02	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 22:02	1
Arsenic	**1.8**	**J**	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 22:02	1
Barium	**17**		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 22:02	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 22:02	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 22:02	1
Calcium	**510000**		2000	760	ug/L		04/28/22 09:30	05/19/22 17:24	4
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 22:02	1
Cobalt	**190**		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 22:02	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 22:02	1
Iron	**10000**		400	140	ug/L		04/28/22 09:30	05/19/22 17:24	4
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 22:02	1
Lithium	**180**		10	2.5	ug/L		04/28/22 09:30	05/18/22 22:02	1
Magnesium	**100000**		2000	600	ug/L		04/28/22 09:30	05/19/22 17:24	4
Manganese	**16000**		40	14	ug/L		04/28/22 09:30	05/19/22 17:24	4
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 22:02	1
Nickel	**160**		5.0	1.9	ug/L		04/28/22 09:30	05/18/22 22:02	1
Potassium	**5900**	**B**	2000	600	ug/L		04/28/22 09:30	05/19/22 17:24	4
Selenium	**1.3**	**J**	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 22:02	1
Silver	**2.6**		1.0	0.49	ug/L		04/28/22 09:30	05/18/22 22:02	1
Sodium	**24000**		1000	610	ug/L		04/28/22 09:30	05/18/22 22:02	1
Strontium	**2400**		4.0	2.2	ug/L		04/28/22 09:30	05/19/22 17:24	4
Thallium	**0.28**	**J**	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 22:02	1
Zinc	**150**		20	10	ug/L		04/28/22 09:30	05/18/22 22:02	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 18:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**160**		5.0	2.6	mg/L			04/11/22 14:12	1
Bicarbonate Alkalinity as CaCO3	**160**		5.0	2.6	mg/L			04/11/22 14:12	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:12	1
Chloride	**1.8**		1.0	0.28	mg/L			04/23/22 16:45	1
Fluoride	**1.5**		0.050	0.024	mg/L			04/23/22 16:45	1
Sulfate	**1500**		10	3.5	mg/L			04/23/22 17:06	10
Total Dissolved Solids	**2100**		20	16	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	0.00138	U	0.123	0.123	1.00	0.243	pCi/L	04/07/22 09:35	05/03/22 10:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.9*		*40 - 110*	*04/07/22 09:35*	*05/03/22 10:09*	*1*

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

Job ID: 240-164475-1

Client Sample ID: MW20-F-20220330-01

Lab Sample ID: 240-164475-1

Date Collected: 03/30/22 09:40

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	0.617	U	0.441	0.445	1.00	0.691	pCi/L	04/07/22 10:01	04/29/22 17:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.9*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:31*	*1*
Y Carrier	*84.1*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:31*	*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	0.618	U	0.458	0.462	5.00	0.691	pCi/L		05/04/22 13:59	1

Client Sample ID: 96153R-F-20220330-01
Lab Sample ID: 240-164475-2

Date Collected: 03/30/22 10:13
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	**580**		200	56	ug/L		04/28/22 09:30	05/02/22 17:36	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**310**	**F1**	50	17	ug/L		04/28/22 09:30	05/18/22 22:06	1
Antimony	**0.71**	**J**	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 22:06	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 22:06	1
Barium	**22**		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 22:06	1
Beryllium	**0.31**	**J**	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 22:06	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 22:06	1
Calcium	**59000**		500	190	ug/L		04/28/22 09:30	05/18/22 22:06	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 22:06	1
Cobalt	**1.3**		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 22:06	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 22:06	1
Iron	**870**		400	140	ug/L		04/28/22 09:30	05/19/22 17:44	4
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 22:06	1
Lithium	**36**	**J**	40	10	ug/L		04/28/22 09:30	05/19/22 17:44	4
Magnesium	**11000**		500	150	ug/L		04/28/22 09:30	05/18/22 22:06	1
Manganese	**130**		10	3.6	ug/L		04/28/22 09:30	05/18/22 22:06	1
Molybdenum	**12**		2.0	1.2	ug/L		04/28/22 09:30	05/18/22 22:06	1
Nickel	**1.9**	**J**	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 22:06	1
Potassium	**3800**	**B**	2000	600	ug/L		04/28/22 09:30	05/19/22 17:44	4
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 22:06	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 22:06	1
Sodium	**510000**		4000	2400	ug/L		04/28/22 09:30	05/19/22 17:44	4
Strontium	**1400**		4.0	2.2	ug/L		04/28/22 09:30	05/19/22 17:44	4
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 22:06	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 22:06	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 18:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**250**		5.0	2.6	mg/L			04/11/22 14:19	1
Bicarbonate Alkalinity as CaCO3	**250**		5.0	2.6	mg/L			04/11/22 14:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:19	1
Chloride	**17**		1.0	0.28	mg/L			04/23/22 17:28	1
Fluoride	**0.83**		0.050	0.024	mg/L			04/23/22 17:28	1
Sulfate	**880**		10	3.5	mg/L			04/23/22 17:50	10
Total Dissolved Solids	**140**		2.0	1.6	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	0.100	U	0.166	0.166	1.00	0.288	pCi/L	04/07/22 09:35	05/03/22 10:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*65.2*		*40 - 110*	*04/07/22 09:35*	*05/03/22 10:09*	*1*

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

Job ID: 240-164475-1

Client Sample ID: 96153R-F-20220330-01

Date Collected: 03/30/22 10:13
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-2

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.180	U	0.420	0.421	1.00	0.728	pCi/L	04/07/22 10:01	04/29/22 17:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*65.2*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:32*	*1*
Y Carrier	*84.5*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:32*	*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	0.280	U	0.452	0.453	5.00	0.728	pCi/L		05/04/22 13:59	1

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

Job ID: 240-164475-1

Client Sample ID: 2016-09-F-20220330-01

Date Collected: 03/30/22 11:36
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-3

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	180	J	400	110	ug/L		04/28/22 09:30	05/04/22 10:57	2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	300		50	17	ug/L		04/28/22 09:30	05/18/22 22:37	1
Antimony	1.4	J	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 22:37	1
Arsenic	12		2.0	0.75	ug/L		04/28/22 09:30	05/18/22 22:37	1
Barium	280		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 22:37	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 22:37	1
Cadmium	0.066	J	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 22:37	1
Calcium	48000		500	190	ug/L		04/28/22 09:30	05/18/22 22:37	1
Chromium	9.7		5.0	1.1	ug/L		04/28/22 09:30	05/18/22 22:37	1
Cobalt	0.57		0.50	0.19	ug/L		04/28/22 09:30	05/18/22 22:37	1
Copper	7.7		5.0	1.8	ug/L		04/28/22 09:30	05/18/22 22:37	1
Iron	400	U	400	140	ug/L		04/28/22 09:30	05/19/22 17:55	4
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 22:37	1
Lithium	120		40	10	ug/L		04/28/22 09:30	05/19/22 17:55	4
Magnesium	500	U	500	150	ug/L		04/28/22 09:30	05/18/22 22:37	1
Manganese	10	U	10	3.6	ug/L		04/28/22 09:30	05/18/22 22:37	1
Molybdenum	140		2.0	1.2	ug/L		04/28/22 09:30	05/18/22 22:37	1
Nickel	3.4	J	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 22:37	1
Potassium	9100	B	2000	600	ug/L		04/28/22 09:30	05/19/22 17:55	4
Selenium	3.1	J	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 22:37	1
Silver	1.2		1.0	0.49	ug/L		04/28/22 09:30	05/18/22 22:37	1
Sodium	1100000		4000	2400	ug/L		04/28/22 09:30	05/19/22 17:55	4
Strontium	2400		4.0	2.2	ug/L		04/28/22 09:30	05/19/22 17:55	4
Thallium	0.49	J	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 22:37	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 22:37	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		04/04/22 09:00	04/04/22 18:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1300		5.0	2.6	mg/L			04/11/22 14:27	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:27	1
Carbonate Alkalinity as CaCO3	140		5.0	2.6	mg/L			04/11/22 14:27	1
Chloride	870		5.0	1.4	mg/L			04/23/22 18:12	5
Fluoride	1.1		0.25	0.12	mg/L			04/23/22 18:12	5
Sulfate	43		5.0	1.7	mg/L			04/23/22 18:12	5
Total Dissolved Solids	2800		50	39	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	0.295		0.194	0.196	1.00	0.273	pCi/L	04/07/22 09:35	05/03/22 13:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.4*		*40 - 110*	*04/07/22 09:35*	*05/03/22 13:43*	*1*

Client Sample ID: 2016-09-F-20220330-01
Lab Sample ID: 240-164475-3

Date Collected: 03/30/22 11:36
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	0.396	U	0.433	0.434	1.00	0.708	pCi/L	04/07/22 10:01	04/29/22 17:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.4*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:32*	*1*
Y Carrier	*82.6*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:32*	*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	0.691	U	0.474	0.476	5.00	0.708	pCi/L		05/04/22 13:59	1

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

Job ID: 240-164475-1

Client Sample ID: 96154R-F-20220330-01

Date Collected: 03/30/22 12:25
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-4

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	610		200	56	ug/L		04/28/22 09:30	05/02/22 17:40	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	400		50	17	ug/L		04/28/22 09:30	05/18/22 22:40	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 22:40	1
Arsenic	2.3		2.0	0.75	ug/L		04/28/22 09:30	05/18/22 22:40	1
Barium	160		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 22:40	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 22:40	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 22:40	1
Calcium	11000		500	190	ug/L		04/28/22 09:30	05/18/22 22:40	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 22:40	1
Cobalt	0.20	J	0.50	0.19	ug/L		04/28/22 09:30	05/18/22 22:40	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 22:40	1
Iron	330	J	400	140	ug/L		04/28/22 09:30	05/19/22 17:59	4
Lead	0.45	J	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 22:40	1
Lithium	36	J	40	10	ug/L		04/28/22 09:30	05/19/22 17:59	4
Magnesium	1300		500	150	ug/L		04/28/22 09:30	05/18/22 22:40	1
Manganese	4.6	J	10	3.6	ug/L		04/28/22 09:30	05/18/22 22:40	1
Molybdenum	100		2.0	1.2	ug/L		04/28/22 09:30	05/18/22 22:40	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 22:40	1
Potassium	4000	B	2000	600	ug/L		04/28/22 09:30	05/19/22 17:59	4
Selenium	1.1	J	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 22:40	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 22:40	1
Sodium	600000		4000	2400	ug/L		04/28/22 09:30	05/19/22 17:59	4
Strontium	530		4.0	2.2	ug/L		04/28/22 09:30	05/19/22 17:59	4
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 22:40	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 22:40	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 19:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	550		5.0	2.6	mg/L			04/11/22 14:31	1
Bicarbonate Alkalinity as CaCO3	440		5.0	2.6	mg/L			04/11/22 14:31	1
Carbonate Alkalinity as CaCO3	110		5.0	2.6	mg/L			04/11/22 14:31	1
Chloride	490		10	2.8	mg/L			04/23/22 20:00	10
Fluoride	4.4		0.050	0.024	mg/L			04/23/22 19:38	1
Sulfate	42		1.0	0.35	mg/L			04/23/22 19:38	1
Total Dissolved Solids	1400		20	16	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	0.296		0.157	0.159	1.00	0.187	pCi/L	04/07/22 09:35	05/03/22 13:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.6*		*40 - 110*	*04/07/22 09:35*	*05/03/22 13:44*	*1*

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

Job ID: 240-164475-1

Client Sample ID: 96154R-F-20220330-01

Date Collected: 03/30/22 12:25
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-4

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.260	U	0.309	0.310	1.00	0.510	pCi/L	04/07/22 10:01	04/29/22 17:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.6*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:32*	*1*
Y Carrier	*85.2*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:32*	*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	**0.557**		0.347	0.348	5.00	0.510	pCi/L		05/04/22 13:59	1

Client Sample ID: 2016-10-F-20220330-01
Lab Sample ID: 240-164475-5

Date Collected: 03/30/22 14:00
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	**780**	**J**	2400	670	ug/L		04/28/22 09:30	05/04/22 11:06	12

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1000	U	1000	340	ug/L		04/28/22 09:30	05/19/22 18:03	20
Antimony	40	U	40	14	ug/L		04/28/22 09:30	05/19/22 18:03	20
Arsenic	40	U	40	15	ug/L		04/28/22 09:30	05/19/22 18:03	20
Barium	**510**		2.0	0.88	ug/L		04/28/22 09:30	05/18/22 22:44	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 22:44	1
Cadmium	2.0	U	2.0	1.1	ug/L		04/28/22 09:30	05/19/22 18:03	20
Calcium	**650000**		10000	3800	ug/L		04/28/22 09:30	05/19/22 18:03	20
Chromium	100	U	100	22	ug/L		04/28/22 09:30	05/19/22 18:03	20
Cobalt	10	U	10	3.8	ug/L		04/28/22 09:30	05/19/22 18:03	20
Copper	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 18:03	20
Iron	2000	U	2000	720	ug/L		04/28/22 09:30	05/19/22 18:03	20
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 22:44	1
Lithium	**510**		200	50	ug/L		04/28/22 09:30	05/19/22 18:03	20
Magnesium	**260000**		10000	3000	ug/L		04/28/22 09:30	05/19/22 18:03	20
Manganese	**390**		200	72	ug/L		04/28/22 09:30	05/19/22 18:03	20
Molybdenum	**22**		2.0	1.2	ug/L		04/28/22 09:30	05/18/22 22:44	1
Nickel	100	U	100	38	ug/L		04/28/22 09:30	05/19/22 18:03	20
Potassium	**150000**	**B**	10000	3000	ug/L		04/28/22 09:30	05/19/22 18:03	20
Selenium	100	U	100	19	ug/L		04/28/22 09:30	05/19/22 18:03	20
Silver	**0.80**	**J**	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 22:44	1
Sodium	**8900000**		20000	12000	ug/L		04/28/22 09:30	05/19/22 18:03	20
Strontium	**48000**		50	28	ug/L		04/28/22 09:30	05/20/22 14:11	50
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 22:44	1
Zinc	400	U	400	200	ug/L		04/28/22 09:30	05/19/22 18:03	20

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 19:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**36**		5.0	2.6	mg/L			04/11/22 14:35	1
Bicarbonate Alkalinity as CaCO3	**36**		5.0	2.6	mg/L			04/11/22 14:35	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:35	1
Chloride	**19000**		100	28	mg/L			04/23/22 20:22	100
Fluoride	5.0	U	5.0	2.4	mg/L			04/23/22 20:22	100
Sulfate	**360**		100	35	mg/L			04/23/22 20:22	100
Total Dissolved Solids	**23000**		1000	780	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	**1.30**		0.270	0.294	1.00	0.185	pCi/L	04/07/22 09:35	05/03/22 13:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*40 - 110*	*04/07/22 09:35*	*05/03/22 13:44*	*1*

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

Job ID: 240-164475-1

Client Sample ID: 2016-10-F-20220330-01

Date Collected: 03/30/22 14:00
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-5

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.26		0.696	0.903	1.00	0.565	pCi/L	04/07/22 10:01	04/29/22 17:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:32*	*1*
Y Carrier	*84.1*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:32*	*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	7.56		0.747	0.950	5.00	0.565	pCi/L		05/04/22 13:59	1

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

Job ID: 240-164475-1

Client Sample ID: EB-001-F-20220330-01

Date Collected: 03/30/22 15:00
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-6

Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**700**		200	56	ug/L		04/28/22 09:30	05/02/22 17:44	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 22:48	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/18/22 22:48	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/18/22 22:48	1
Barium	2.0	U	2.0	0.88	ug/L		04/28/22 09:30	05/18/22 22:48	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/18/22 22:48	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/18/22 22:48	1
Calcium	500	U	500	190	ug/L		04/28/22 09:30	05/18/22 22:48	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/18/22 22:48	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/28/22 09:30	05/18/22 22:48	1
Copper	**2.5**	**J**	5.0	1.8	ug/L		04/28/22 09:30	05/18/22 22:48	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 18:07	1
Lead	**0.34**	**J**	0.50	0.24	ug/L		04/28/22 09:30	05/18/22 22:48	1
Lithium	10	U	10	2.5	ug/L		04/28/22 09:30	05/19/22 18:07	1
Magnesium	500	U	500	150	ug/L		04/28/22 09:30	05/18/22 22:48	1
Manganese	10	U	10	3.6	ug/L		04/28/22 09:30	05/18/22 22:48	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/18/22 22:48	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/18/22 22:48	1
Potassium	500	U	500	150	ug/L		04/28/22 09:30	05/19/22 18:07	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/18/22 22:48	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/18/22 22:48	1
Sodium	**2300**		1000	610	ug/L		04/28/22 09:30	05/18/22 22:48	1
Strontium	1.0	U	1.0	0.56	ug/L		04/28/22 09:30	05/19/22 18:07	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/18/22 22:48	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/18/22 22:48	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		04/04/22 09:00	04/04/22 19:04	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 14:39	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:39	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/11/22 14:39	1
Chloride	1.0	U	1.0	0.28	mg/L			04/23/22 23:16	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/23/22 23:16	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/23/22 23:16	1
Total Dissolved Solids	**96**		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	0.0221	U	0.0812	0.0812	1.00	0.162	pCi/L	04/07/22 09:35	05/03/22 13:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*62.2*		*40 - 110*	*04/07/22 09:35*	*05/03/22 13:45*	*1*

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

Job ID: 240-164475-1

Client Sample ID: EB-001-F-20220330-01

Date Collected: 03/30/22 15:00
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-6

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.155	U	0.325	0.325	1.00	0.560	pCi/L	04/07/22 10:01	04/29/22 17:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*62.2*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:34*	*1*
Y Carrier	*82.2*		*40 - 110*	*04/07/22 10:01*	*04/29/22 17:34*	*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	0.177	U	0.335	0.335	5.00	0.560	pCi/L		05/04/22 13:59	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164475-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water — **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
240-164475-1	MW20-F-20220330-01	79.9
240-164475-2	96153R-F-20220330-01	65.2
240-164475-3	2016-09-F-20220330-01	71.4
240-164475-4	96154R-F-20220330-01	81.6
240-164475-5	2016-10-F-20220330-01	99.3
240-164475-6	EB-001-F-20220330-01	62.2
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**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-164475-1	MW20-F-20220330-01	79.9	84.1
240-164475-2	96153R-F-20220330-01	65.2	84.5
240-164475-3	2016-09-F-20220330-01	71.4	82.6
240-164475-4	96154R-F-20220330-01	81.6	85.2
240-164475-5	2016-10-F-20220330-01	99.3	84.1
240-164475-6	EB-001-F-20220330-01	62.2	82.2
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

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: 240-164475-1 MS
Matrix: Water
Analysis Batch: 351803

Client Sample ID: MW20-F-20220330-01
Prep Type: Total/NA
Prep Batch: 351247

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	110	J	2000	2510		ug/L		120	75 - 125

Lab Sample ID: 240-164475-1 MSD
Matrix: Water
Analysis Batch: 351803

Client Sample ID: MW20-F-20220330-01
Prep Type: Total/NA
Prep Batch: 351247

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	110	J	2000	2550		ug/L		122	75 - 125	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

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

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
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

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: 240-164475-2 MS
Matrix: Water
Analysis Batch: 353614

Client Sample ID: 96153R-F-20220330-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	310	F1	200	548		ug/L		117	75 - 125
Antimony	0.71	J	200	229		ug/L		114	75 - 125
Arsenic	2.0	U	200	219		ug/L		109	75 - 125

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

Lab Sample ID: 240-164475-2 MS
Matrix: Water
Analysis Batch: 353614

Client Sample ID: 96153R-F-20220330-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	22		100	131		ug/L		109	75 - 125
Beryllium	0.31	J	100	103		ug/L		103	75 - 125
Cadmium	0.10	U	100	106		ug/L		106	75 - 125
Calcium	59000		2000	60300	4	ug/L		62	75 - 125
Chromium	5.0	U	100	104		ug/L		104	75 - 125
Cobalt	1.3		100	104		ug/L		103	75 - 125
Copper	5.0	U	200	204		ug/L		102	75 - 125
Iron	910	*+	200	1140	4	ug/L		115	75 - 125
Lead	0.50	U	200	215		ug/L		107	75 - 125
Magnesium	11000		2000	13400	4	ug/L		109	75 - 125
Manganese	130		100	235		ug/L		108	75 - 125
Molybdenum	12		200	220		ug/L		104	75 - 125
Nickel	1.9	J	200	207		ug/L		102	75 - 125
Potassium	4200	*+ B F1	2000	6450		ug/L		113	75 - 125
Selenium	5.0	U	400	426		ug/L		106	75 - 125
Silver	1.0	U	100	103		ug/L		103	75 - 125
Thallium	1.0	U	200	213		ug/L		107	75 - 125
Zinc	20	U	200	209		ug/L		104	75 - 125

Lab Sample ID: 240-164475-2 MS
Matrix: Water
Analysis Batch: 353783

Client Sample ID: 96153R-F-20220330-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	870		200	1110	4	ug/L		117	75 - 125
Lithium	36	J	200	250		ug/L		107	75 - 125
Potassium	3800	B	2000	6110		ug/L		115	75 - 125
Sodium	510000		2000	538000	4	ug/L		1190	75 - 125
Strontium	1400		200	1630	4	ug/L		129	75 - 125

Lab Sample ID: 240-164475-2 MSD
Matrix: Water
Analysis Batch: 353614

Client Sample ID: 96153R-F-20220330-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	310	F1	200	589	F1	ug/L		138	75 - 125	7	20
Antimony	0.71	J	200	239		ug/L		119	75 - 125	4	20
Arsenic	2.0	U	200	228		ug/L		114	75 - 125	4	20
Barium	22		100	138		ug/L		115	75 - 125	5	20
Beryllium	0.31	J	100	105		ug/L		105	75 - 125	2	20
Cadmium	0.10	U	100	111		ug/L		111	75 - 125	4	20
Calcium	59000		2000	61500	4	ug/L		124	75 - 125	2	20
Chromium	5.0	U	100	107		ug/L		107	75 - 125	4	20
Cobalt	1.3		100	108		ug/L		107	75 - 125	4	20
Copper	5.0	U	200	213		ug/L		106	75 - 125	4	20
Iron	910	*+	200	1200	4	ug/L		145	75 - 125	5	20
Lead	0.50	U	200	220		ug/L		110	75 - 125	3	20
Magnesium	11000		2000	13900	4	ug/L		137	75 - 125	4	20
Manganese	130		100	247		ug/L		119	75 - 125	5	20

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

Lab Sample ID: 240-164475-2 MSD
Matrix: Water
Analysis Batch: 353614

Client Sample ID: 96153R-F-20220330-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Molybdenum	12		200	228		ug/L		108	75 - 125	4	20
Nickel	1.9	J	200	215		ug/L		106	75 - 125	4	20
Potassium	4200	*+ B F1	2000	6800	F1	ug/L		131	75 - 125	5	20
Selenium	5.0	U	400	452	E	ug/L		113	75 - 125	6	20
Silver	1.0	U	100	105		ug/L		105	75 - 125	2	20
Thallium	1.0	U	200	215		ug/L		107	75 - 125	1	20
Zinc	20	U	200	218		ug/L		109	75 - 125	4	20

Lab Sample ID: 240-164475-2 MSD
Matrix: Water
Analysis Batch: 353783

Client Sample ID: 96153R-F-20220330-01
Prep Type: Total/NA
Prep Batch: 351248

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	870		200	1120	4	ug/L		123	75 - 125	1	20
Lithium	36	J	200	256		ug/L		110	75 - 125	2	20
Potassium	3800	B	2000	6030		ug/L		111	75 - 125	1	20
Sodium	510000		2000	529000	4	ug/L		758	75 - 125	2	20
Strontium	1400		200	1610	4	ug/L		123	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-521603/1-A
Matrix: Water
Analysis Batch: 521770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521603

Analyte	MB Result	MB 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 18:40	1

Lab Sample ID: LCS 240-521603/2-A
Matrix: Water
Analysis Batch: 521770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521603

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.88		ug/L		98	80 - 120

Lab Sample ID: 240-164475-1 MS
Matrix: Water
Analysis Batch: 521770

Client Sample ID: MW20-F-20220330-01
Prep Type: Total/NA
Prep Batch: 521603

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U	1.00	1.04		ug/L		104	80 - 120

Lab Sample ID: 240-164475-1 MSD
Matrix: Water
Analysis Batch: 521770

Client Sample ID: MW20-F-20220330-01
Prep Type: Total/NA
Prep Batch: 521603

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.20	U	1.00	0.955		ug/L		96	80 - 120	8	20

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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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: 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
Total Alkalinity	121	114		mg/L		95	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-523727/35
Matrix: Water
Analysis Batch: 523727

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			04/23/22 05:10	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/23/22 05:10	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/23/22 05:10	1

Lab Sample ID: MB 240-523727/79
Matrix: Water
Analysis Batch: 523727

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			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 240-523727/36
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
Chloride	50.0	50.1		mg/L		100	90 - 110
Fluoride	2.50	2.62		mg/L		105	90 - 110
Sulfate	50.0	51.3		mg/L		103	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

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		
Chloride			50.0	50.3		mg/L		101	90 - 110		
Fluoride			2.50	2.63		mg/L		105	90 - 110		
Sulfate			50.0	51.4		mg/L		103	90 - 110		

Lab Sample ID: 240-164475-6 MS
Matrix: Water
Analysis Batch: 523727

Client Sample ID: EB-001-F-20220330-01
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	51.0		mg/L		102	80 - 120		
Fluoride	0.050	U	2.50	2.65		mg/L		106	80 - 120		
Sulfate	1.0	U	50.0	51.4		mg/L		103	80 - 120		

Lab Sample ID: 240-164475-6 MSD
Matrix: Water
Analysis Batch: 523727

Client Sample ID: EB-001-F-20220330-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1.0	U	50.0	51.6		mg/L		103	80 - 120	1	15
Fluoride	0.050	U	2.50	2.69		mg/L		107	80 - 120	1	15
Sulfate	1.0	U	50.0	52.0		mg/L		104	80 - 120	1	15

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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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		
Total Dissolved Solids			150	146		mg/L		97	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*

Method: 9315 - Radium 226 by GFPC

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

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.0*		*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
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	*MB %Yield*	*MB Qualifier*	*Limits*	*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	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.8*		*40 - 110*
Y Carrier	*84.1*		*40 - 110*

Method: 9320 - Radium-228 (GFPC) (Continued)

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	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.0*		*40 - 110*
Y Carrier	*83.7*		*40 - 110*

Metals

Prep Batch: 351247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	3005A	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	3005A	
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	3005A	
240-164475-4	96154R-F-20220330-01	Total/NA	Water	3005A	
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	3005A	
240-164475-6	EB-001-F-20220330-01	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	
240-164475-1 MS	MW20-F-20220330-01	Total/NA	Water	3005A	
240-164475-1 MSD	MW20-F-20220330-01	Total/NA	Water	3005A	

Prep Batch: 351248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	3005A	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	3005A	
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	3005A	
240-164475-4	96154R-F-20220330-01	Total/NA	Water	3005A	
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	3005A	
240-164475-6	EB-001-F-20220330-01	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	
240-164475-2 MS	96153R-F-20220330-01	Total/NA	Water	3005A	
240-164475-2 MSD	96153R-F-20220330-01	Total/NA	Water	3005A	

Analysis Batch: 351803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	6010D	351247
240-164475-2	96153R-F-20220330-01	Total/NA	Water	6010D	351247
240-164475-4	96154R-F-20220330-01	Total/NA	Water	6010D	351247
240-164475-6	EB-001-F-20220330-01	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
240-164475-1 MS	MW20-F-20220330-01	Total/NA	Water	6010D	351247
240-164475-1 MSD	MW20-F-20220330-01	Total/NA	Water	6010D	351247

Analysis Batch: 351960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	6010D	351247
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	6010D	351247

Analysis Batch: 353614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-2	96153R-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-4	96154R-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-6	EB-001-F-20220330-01	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
240-164475-2 MS	96153R-F-20220330-01	Total/NA	Water	6020B	351248

Metals (Continued)

Analysis Batch: 353614 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-2 MSD	96153R-F-20220330-01	Total/NA	Water	6020B	351248

Analysis Batch: 353783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-2	96153R-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-4	96154R-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-6	EB-001-F-20220330-01	Total/NA	Water	6020B	351248
LCS 310-351248/2-A	Lab Control Sample	Total/NA	Water	6020B	351248
240-164475-2 MS	96153R-F-20220330-01	Total/NA	Water	6020B	351248
240-164475-2 MSD	96153R-F-20220330-01	Total/NA	Water	6020B	351248

Analysis Batch: 353852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	6020B	351248

Prep Batch: 521603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	7470A	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	7470A	
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	7470A	
240-164475-4	96154R-F-20220330-01	Total/NA	Water	7470A	
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	7470A	
240-164475-6	EB-001-F-20220330-01	Total/NA	Water	7470A	
MB 240-521603/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-521603/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-164475-1 MS	MW20-F-20220330-01	Total/NA	Water	7470A	
240-164475-1 MSD	MW20-F-20220330-01	Total/NA	Water	7470A	

Analysis Batch: 521770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	7470A	521603
240-164475-2	96153R-F-20220330-01	Total/NA	Water	7470A	521603
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	7470A	521603
240-164475-4	96154R-F-20220330-01	Total/NA	Water	7470A	521603
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	7470A	521603
240-164475-6	EB-001-F-20220330-01	Total/NA	Water	7470A	521603
MB 240-521603/1-A	Method Blank	Total/NA	Water	7470A	521603
LCS 240-521603/2-A	Lab Control Sample	Total/NA	Water	7470A	521603
240-164475-1 MS	MW20-F-20220330-01	Total/NA	Water	7470A	521603
240-164475-1 MSD	MW20-F-20220330-01	Total/NA	Water	7470A	521603

General Chemistry

Analysis Batch: 521756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	SM 2540C	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	SM 2540C	
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 521756 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-4	96154R-F-20220330-01	Total/NA	Water	SM 2540C	
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	SM 2540C	
240-164475-6	EB-001-F-20220330-01	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	

Analysis Batch: 522399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	2320B-1997	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	2320B-1997	
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	2320B-1997	
240-164475-4	96154R-F-20220330-01	Total/NA	Water	2320B-1997	
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	2320B-1997	
240-164475-6	EB-001-F-20220330-01	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	
LCS 240-522399/29	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 523727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	300.0	
240-164475-1	MW20-F-20220330-01	Total/NA	Water	300.0	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	300.0	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	300.0	
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	300.0	
240-164475-4	96154R-F-20220330-01	Total/NA	Water	300.0	
240-164475-4	96154R-F-20220330-01	Total/NA	Water	300.0	
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	300.0	
240-164475-6	EB-001-F-20220330-01	Total/NA	Water	300.0	
MB 240-523727/35	Method Blank	Total/NA	Water	300.0	
MB 240-523727/79	Method Blank	Total/NA	Water	300.0	
LCS 240-523727/36	Lab Control Sample	Total/NA	Water	300.0	
LCS 240-523727/80	Lab Control Sample	Total/NA	Water	300.0	
240-164475-6 MS	EB-001-F-20220330-01	Total/NA	Water	300.0	
240-164475-6 MSD	EB-001-F-20220330-01	Total/NA	Water	300.0	

Rad

Prep Batch: 559084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	PrecSep-21	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	PrecSep-21	
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	PrecSep-21	
240-164475-4	96154R-F-20220330-01	Total/NA	Water	PrecSep-21	
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	PrecSep-21	
240-164475-6	EB-001-F-20220330-01	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	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164475-1
Project/Site: Federal CCR Wells

Rad

Prep Batch: 559086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164475-1	MW20-F-20220330-01	Total/NA	Water	PrecSep_0	
240-164475-2	96153R-F-20220330-01	Total/NA	Water	PrecSep_0	
240-164475-3	2016-09-F-20220330-01	Total/NA	Water	PrecSep_0	
240-164475-4	96154R-F-20220330-01	Total/NA	Water	PrecSep_0	
240-164475-5	2016-10-F-20220330-01	Total/NA	Water	PrecSep_0	
240-164475-6	EB-001-F-20220330-01	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: 240-164475-1

Client Sample ID: MW20-F-20220330-01

Lab Sample ID: 240-164475-1

Date Collected: 03/30/22 09:40

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 17:23	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 22:02	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		4	353783	05/19/22 17:24	SAP	TAL CF
Total/NA	Prep	7470A			521603	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 18:49	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:12	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/23/22 16:45	KMS	TAL CAN
Total/NA	Analysis	300.0		10	523727	04/23/22 17:06	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 10:09	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:31	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Client Sample ID: 96153R-F-20220330-01

Lab Sample ID: 240-164475-2

Date Collected: 03/30/22 10:13

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 17:36	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 22:06	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		4	353783	05/19/22 17:44	SAP	TAL CF
Total/NA	Prep	7470A			521603	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 18:56	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:19	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/23/22 17:28	KMS	TAL CAN
Total/NA	Analysis	300.0		10	523727	04/23/22 17:50	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 10:09	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:32	SCB	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: 240-164475-1

Client Sample ID: 2016-09-F-20220330-01

Date Collected: 03/30/22 11:36
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-3

Matrix: Water

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		2	351960	05/04/22 10:57	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 22:37	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		4	353783	05/19/22 17:55	SAP	TAL CF
Total/NA	Prep	7470A			521603	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 18:58	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:27	JMR	TAL CAN
Total/NA	Analysis	300.0		5	523727	04/23/22 18:12	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	563486	05/03/22 13:43	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:32	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Client Sample ID: 96154R-F-20220330-01

Date Collected: 03/30/22 12:25
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164475-4

Matrix: Water

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 17:40	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 22:40	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		4	353783	05/19/22 17:59	SAP	TAL CF
Total/NA	Prep	7470A			521603	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 19:00	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:31	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/23/22 19:38	KMS	TAL CAN
Total/NA	Analysis	300.0		10	523727	04/23/22 20:00	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	563486	05/03/22 13:44	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:32	SCB	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: 240-164475-1

Client Sample ID: 2016-10-F-20220330-01

Lab Sample ID: 240-164475-5

Date Collected: 03/30/22 14:00

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		12	351960	05/04/22 11:06	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 22:44	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		20	353783	05/19/22 18:03	SAP	TAL CF
Total/NA	Prep	3005A			351248	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		50	353852	05/20/22 14:11	SAP	TAL CF
Total/NA	Prep	7470A			521603	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 19:02	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:35	JMR	TAL CAN
Total/NA	Analysis	300.0		100	523727	04/23/22 20:22	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	563486	05/03/22 13:44	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559086	04/07/22 10:01	BMP	TAL SL
Total/NA	Analysis	9320		1	562966	04/29/22 17:32	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563691	05/04/22 13:59	SCB	TAL SL

Client Sample ID: EB-001-F-20220330-01

Lab Sample ID: 240-164475-6

Date Collected: 03/30/22 15:00

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 17:44	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 22:48	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 18:07	SAP	TAL CF
Total/NA	Prep	7470A			521603	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 19:04	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522399	04/11/22 14:39	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/23/22 23:16	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	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 17:34	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: 240-164475-1

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
Job ID: 240-164475-1
Project/Site: Federal CCR Wells

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	04-24-22
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
Job ID: 240-164475-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

Columbus
209

eurofins

Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW20-F-20220330-01	033022	0940	G	W			1	1	2	1		
9615BR-F-20220330-01	033022	1013	G	W			1	1	2	1		
2016-09-F-20220330-01	033022	1136	G	W			1	1	2	1		
9615MR-F-20220330-01	033022	1225	G	W			1	1	2	1		
2016-10-F-20220330-01	033022	1400	G	W			1	1	2	1		
EB-001-F-20220330-01	033022	1500	G	W			1	1	2	1		

240-164475 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		04/01/22 0830			4-1-22 1050	ET
2		4-1-22 1200	ET		4-2-22 0800	ETNC
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Page 42 of 51

5/25/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 164475**
Canton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Adam Young

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 # 7A 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 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y(N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# 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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login # : 164475

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	1.6	1.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.2	1.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.8	1.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	2.3	2.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.4	1.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-14 IR-15	1.1	0.9	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
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

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW20-F-20220330-01	240-164475-C-1	Plastic 500ml - with Nitric Acid	<2			
MW20-F-20220330-01	240-164475-D-1	Plastic 1 liter - Nitric Acid	<2			
MW20-F-20220330-01	240-164475-E-1	Plastic 1 liter - Nitric Acid	<2			
MW20-F-20220330-01	240-164475-F-1	Plastic 250ml - with Nitric Acid	<2			
96153R-F-20220330-01	240-164475-C-2	Plastic 500ml - with Nitric Acid	<2			
96153R-F-20220330-01	240-164475-D-2	Plastic 1 liter - Nitric Acid	<2			
96153R-F-20220330-01	240-164475-E-2	Plastic 1 liter - Nitric Acid	<2			
96153R-F-20220330-01	240-164475-F-2	Plastic 250ml - with Nitric Acid	<2			
2016-09-F-20220330-01	240-164475-C-3	Plastic 500ml - with Nitric Acid	<2			
2016-09-F-20220330-01	240-164475-D-3	Plastic 1 liter - Nitric Acid	<2			
2016-09-F-20220330-01	240-164475-E-3	Plastic 1 liter - Nitric Acid	<2			
2016-09-F-20220330-01	240-164475-F-3	Plastic 250ml - with Nitric Acid	<2			
96154-F-20220330-01	240-164475-C-4	Plastic 500ml - with Nitric Acid	<2			
96154-F-20220330-01	240-164475-D-4	Plastic 1 liter - Nitric Acid	<2			
96154-F-20220330-01	240-164475-E-4	Plastic 1 liter - Nitric Acid	<2			
96154-F-20220330-01	240-164475-F-4	Plastic 250ml - with Nitric Acid	<2			
2016-10-F-20220330-01	240-164475-C-5	Plastic 500ml - with Nitric Acid	<2			
2016-10-F-20220330-01	240-164475-D-5	Plastic 1 liter - Nitric Acid	<2			
2016-10-F-20220330-01	240-164475-E-5	Plastic 1 liter - Nitric Acid	<2			
2016-10-F-20220330-01	240-164475-F-5	Plastic 250ml - with Nitric Acid	<2			
EB-001-F-20220330-01	240-164475-C-6	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220330-01	240-164475-D-6	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220330-01	240-164475-E-6	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220330-01	240-164475-F-6	Plastic 250ml - with Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150379.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-164475-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/17/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW20-F-20220330-01 (240-164475-1)	3/30/22	09:40 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96153R-F-20220330-01 (240-164475-2)	3/30/22	10:13 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-09-F-20220330-01 (240-164475-3)	3/30/22	11:36 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96154-F-20220330-01 (240-164475-4)	3/30/22	12:25 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-10-F-20220330-01 (240-164475-5)	3/30/22	14:00 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220330-01 (240-164475-6)	3/30/22	15:00 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature] FED EX	4-4-2022 9:30	eetnc	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by: [signature]	Date/Time: APR 05 2022 0905	Company: EA STL
Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/25/2022

eurofins | Environment Testing America

240-164475 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: Canton			
City/State: CITY Barberton	STATE OH	Project:	
Receipt Information			
Date/Time Received: DATE 4/5/22	TIME 0945	Received By: N	
Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other.			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No	*If yes* Cooler ID		
Multiple Coolers? ☒ Yes ☐ No	*If yes* Cooler # 1 of 2		
Cooler Custody Seals Present? ☐ Yes ☒ No	*If yes* Cooler custody seals intact? ☐ Yes ☐ No		
Sample Custody Seals Present? ☐ Yes ☒ No	*If yes* Sample custody seals intact? ☐ Yes ☐ No		
Trip Blank Present? ☐ Yes ☒ No	*If yes* Which VOA samples are in cooler? ↓		
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other.	☒ NONE		
Thermometer ID: P	Correction Factor (°C): -0.1		
• **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: PLSDO Nitric →	CONTAINER 2	
Uncorrected Temp (°C)	11.9	11.1	
Corrected Temp (°C)	11.8	11.0	
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No			
a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

479/482/477/497
494/495/476

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Canton

City/State: CITY Barberton | STATE OH | Project

Receipt Information

Date/Time Received: DATE 4/5/22 | TIME 0945 | Received By: M

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes* Cooler ID
Multiple Coolers?	☒ Yes	☐ No	*If yes* Cooler # 2 of 2
Cooler Custody Seals Present? No	☐ Yes	☒ No	*If yes* Cooler custody seals intact? ☐ Yes ☐
Sample Custody Seals Present? No	☐ Yes	☒ No	*If yes* Sample custody seals intact? ☐ Yes ☐
Trip Blank Present?	☐ Yes	☒ No	*If yes* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☐ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other._____ ☒ 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 1	CONTAINER 2
Container(s) used	PL 500 Nitric	PL 500 Nitric
Uncorrected Temp (°C)	11.9	12.9
Corrected Temp (°C)	11.8	12.8

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Eurofins Canton
180 S Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150382.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note):		Job #: 240-164475-1
Address: 3019 Venture Way,	Due Date Requested: 5/4/2022			
City: Cedar Falls	TAT Requested (days):			
State, Zip: IA, 50613				
Phone: 319-277-2401(Tel) 319-277-2425(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D/3005A_TOT (MOD) Boron	6020B/3005A_TOT 24 Metals	Total Number of containers	Special Instructions/Note:
		Preservation Code:								
MW20-F-20220330-01 (240-164475-1)	3/30/22	09:40 Eastern		Water			X	X	1	
96153R-F-20220330-01 (240-164475-2)	3/30/22	10:13 Eastern		Water			X	X	1	
2016-09-F-20220330-01 (240-164475-3)	3/30/22	11:36 Eastern		Water			X	X	1	
96154R-F-20220330-01 (240-164475-4)	3/30/22	12:25 Eastern		Water			X	X	1	
2016-10-F-20220330-01 (240-164475-5)	3/30/22	14:00 Eastern		Water			X	X	1	
EB-001-F-20220330-01 (240-164475-6)	3/30/22	15:00 Eastern		Water			X	X	1	

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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mandy Black	4-4-22 14:05	eurC			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 4-5-22 945	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

5/25/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164475-1

Login Number: 164475
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 </= 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 <6mm (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: 240-164475-1

Login Number: 164475
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	

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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
Opal.Johnson@et.eurofinsus.com

Designee for

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

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.

Table of Contents

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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-164476-1

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 0.9º C, 1.0º C, 1.2º C, 1.4º C, 1.6º C and 2.1º 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

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

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.

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

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.

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.

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.

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*

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

Job ID: 240-164476-1

Client Sample ID: 96152-F-20220331-01

Date Collected: 03/31/22 09:08
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-1

Matrix: Water

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 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*

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

Job ID: 240-164476-1

Client Sample ID: MW-F-20220331-01

Date Collected: 03/31/22 10:43
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-2

Matrix: Water

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 10:43
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-3

Matrix: Water

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 10:43
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-3

Matrix: Water

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 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*

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 11:37
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-4

Matrix: Water

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 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*

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 12:09
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-5

Matrix: Water

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 12:59
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-6

Matrix: Water

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 12:59
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-6

Matrix: Water

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 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*

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 13:51
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-7

Matrix: Water

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 14:54
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-8

Matrix: Water

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 14:54
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-8

Matrix: Water

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 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*

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 15:32
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-9

Matrix: Water

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 15:45
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-10

Matrix: Water

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

Job ID: 240-164476-1

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

Date Collected: 03/31/22 15:45
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164476-10

Matrix: Water

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

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)
240-164476-1	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**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	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

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

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	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

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	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	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	%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	%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	%Rec Limits	RPD	RPD Limit
Mercury	0.15	J B F1	1.00	1.33		ug/L		117	80 - 120	6	20

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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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		
Total Alkalinity			121	114		mg/L		95	86 - 123		

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		
Total Alkalinity			121	116		mg/L		96	86 - 123		

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 Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
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

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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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
Chloride	50.0	50.3		mg/L		101	90 - 110
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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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
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

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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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
Total Dissolved Solids	150	146		mg/L		97	80 - 120

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	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

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 %Yield	LCSD Qualifier	Limits
Ba Carrier	96.0		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
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	MB %Yield	MB Qualifier	Limits	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	LCS %Yield	LCS Qualifier	Limits
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	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	96.0		40 - 110
Y Carrier	83.7		40 - 110

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

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

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	

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	

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

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

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

Columbus
209

eurofins
Environment Testing America

Client Information	Sampler: Kemron	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740.373.4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List) D	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) N	9315_Ra226, 9320_Ra228 D	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity) N	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
96152-F-20220331-01	033122	0908	G	W			1	1	2	1		
MW1-F-20220331-01	033122	1043	G	W			1	1	2	1		
Dupe-003-MW1-F-20220331-01	033122	1043	G	W			1	1	2	1		
BAC-01-F-20220331-01	033122	1137	G	W			1	1	2	1		
MW-6-F-20220331-01	033122	1209	G	W			1	1	2	1		
BAC-07-F-20220331-01	033122	1259	G	W			1	1	2	1		
B-0903-F-20220331-01	033122	1351	G	W			1	1	2	1		
BAC-06-F-20220331-01	033122	1454	G	W			1	1	2	1		
BAC-02-F-20220331-01	033122	1532	G	W			1	1	2	1		
EB-001-F-20220331-01	033122	1545	G	W			1	1	2	1		

240-164476 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		04/01/22 0830			4-1-22 1050	ETA
2	Relinquished by:	Date/Time: 4-1-22 1700	Company ETA	Received by:	Date/Time: 4-2-22 0800	Company ETAC
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Page 53 of 85
5/23/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Adam Garrett

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 # 14 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 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# 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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	1.6	1.4	**Wet Ice** Blue Ice Dry Ice Water None
TA Client Box Other	**IR-14** IR-15	1.2	1.4	**Wet Ice** Blue Ice Dry Ice Water None
TA Client Box Other	**IR-14** IR-15	1.8	1.6	**Wet Ice** Blue Ice Dry Ice Water None
TA Client Box Other	**IR-14** IR-15	2.3	2.1	**Wet Ice** Blue Ice Dry Ice Water None
TA Client Box Other	**IR-14** IR-15	1.4	1.2	**Wet Ice** Blue Ice Dry Ice Water None
TA Client Box Other	**IR-14** IR-15	1.1	0.9	**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
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

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
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			

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
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			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150379.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-164476-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/17/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
96152-F-20220331-01 (240-164476-1)	3/31/22	09:08 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
MW-F-20220331-01 (240-164476-2)	3/31/22	10:43 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
DUPE-003-MW1-F-20220331-01 (240-164476-3)	3/31/22	10:43 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
BAC-01-F-20220331-01 (240-164476-4)	3/31/22	11:37 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
MW-6-F-20220331-01 (240-164476-5)	3/31/22	12:09 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
BAC-07-F-20220331-01 (240-164476-6)	3/31/22	12:59 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
B-0903-F-20220331-01 (240-164476-7)	3/31/22	13:51 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
BAC-06-F-20220331-01 (240-164476-8)	3/31/22	14:54 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
BAC-02-F-20220331-01 (240-164476-9)	3/31/22	15:32 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	4-4-22 9:30	Eetx	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by: [signature]	Date/Time: APR 05 2022 0925	Company ETA STL
Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/23/2022

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150379.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-164476-1
Address: 13715 Rider Trail North,	Due Date Requested: 4/17/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
EB-001-F-20220331-01 (240-164476-10)	3/31/22	15:45 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Mandy Blue	4-4-2022 9:30	eem	FED EX		
2	FED EX					
3				Autumn R. Johnson	APR 05 2022 0935	E-TAL STL

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/23/2022

eurofins | Environment Testing America

240-164476 Chain of Custody

1476
1 4T

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Canton

City/State: CITY Barberton | STATE OH | Project:

Receipt Information

Date/Time Received: DATE 4/5/22 | TIME 0945 | Received By: N

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other._____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes* Cooler ID

Multiple Coolers? ☒ Yes ☐ No *If yes* Cooler # 1 of 2

Cooler Custody Seals Present? ☐ Yes ☒ No *If yes* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No *If yes.* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other._____ ☒ NONE

Thermometer ID: P | Correction Factor (°C): -0.1

• **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 1	CONTAINER 2
Container(s) used	PLASTIC →	→
Uncorrected Temp (°C)	11.9	11.1
Corrected Temp (°C)	11.8	11.0

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

479/482/497/497
494/475/476

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Canton

City/State: CITY Barberton STATE OH | Project:

Receipt Information

Date/Time Received: DATE 4/5/22 TIME 0945 | Received By: M

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other._____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes* Cooler ID
Multiple Coolers?	☒ Yes	☒ No	*If yes* Cooler # 2 of 2
Cooler Custody Seals Present? No	☐ Yes	☒ No	*If yes.* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present? No	☐ Yes	☒ No	*If yes* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☒ No	*If yes* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☐ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other._____ ☒ 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 1	CONTAINER 2
Container(s) used	PL 500 Nitric	PL 500 Nitric
Uncorrected Temp (°C)	11.9	12.9
Corrected Temp (°C)	11.8	12.8

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150382.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 2
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note):		Job #: 240-164476-1
Address: 3019 Venture Way,	Due Date Requested: 5/4/2022			
City: Cedar Falls	TAT Requested (days):			
State, Zip: IA, 50613				
Phone: 319-277-2401(Tel) 319-277-2425(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D/3005A_TOT (MOD) Boron	6020B/3005A_TOT 24 Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
96152-F-20220331-01 (240-164476-1)	3/31/22	09:08 Eastern		Water			X	X	1	
MW-F-20220331-01 (240-164476-2)	3/31/22	10:43 Eastern		Water			X	X	1	
DUPE-003-MW1-F-20220331-01 (240-164476-3)	3/31/22	10:43 Eastern		Water			X	X	1	
BAC-01-F-20220331-01 (240-164476-4)	3/31/22	11:37 Eastern		Water			X	X	1	
MW-6-F-20220331-01 (240-164476-5)	3/31/22	12:09 Eastern		Water			X	X	1	
BAC-07-F-20220331-01 (240-164476-6)	3/31/22	12:59 Eastern		Water			X	X	1	
B-0903-F-20220331-01 (240-164476-7)	3/31/22	13:51 Eastern		Water			X	X	1	
BAC-06-F-20220331-01 (240-164476-8)	3/31/22	14:54 Eastern		Water			X	X	1	
BAC-02-F-20220331-01 (240-164476-9)	3/31/22	15:32 Eastern		Water			X	X	1	

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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Mandy Bleck	4-4-22 14:05	eurofins			
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by: PK	Date/Time: 4-5-22 945	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150382.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 2 of 2
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note):		Job #: 240-164476-1
Address: 3019 Venture Way	Due Date Requested: 5/4/2022			
City: Cedar Falls	TAT Requested (days):			
State, Zip: IA, 50613				
Phone: 319-277-2401(Tel) 319-277-2425(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D/3005A_TOT (MOD) Boron	6020B/3005A_TOT 24 Metals	Total Number of Containers	Special Instructions/Note:
			Preservation Code:							
EB-001-F-20220331-01 (240-164476-10)	3/31/22	15:45 Eastern		Water			X	X	1	

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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I, II, III, IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mandy Black	4-4-22 1405	eofnc			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				4-5-22 945	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	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 </= 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 <6mm (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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-164477-1
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:
5/25/2022 2:05:48 PM
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

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.

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164477-1
Project/Site: Federal CCR Wells

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-164477-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-164477-1

Comments
No additional comments.

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 0.9º C, 1.0º C, 1.2º C, 1.4º C, 1.6º C and 2.1º 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.

2016-08-F-20220329-01 (240-164477-1), 2016-08-F-20220329-01 (240-164477-1[MS]), 2016-08-F-20220329-01 (240-164477-1[MSD]), 2016-07-F-20220329-01 (240-164477-2), 96158-F-20220329-01 (240-164477-3), DUPE-001-96158-F-20220329-01 (240-164477-4), 96157-F-20220329-01 (240-164477-5), EB-001-20220329-01 (240-164477-6), (LCS 160-559089/1-A) and (MB 160-559089/15-A)

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.

2016-08-F-20220329-01 (240-164477-1), 2016-08-F-20220329-01 (240-164477-1[MS]), 2016-08-F-20220329-01 (240-164477-1[MSD]), 2016-07-F-20220329-01 (240-164477-2), 96158-F-20220329-01 (240-164477-3), DUPE-001-96158-F-20220329-01 (240-164477-4), 96157-F-20220329-01 (240-164477-5), EB-001-20220329-01 (240-164477-6), (LCS 160-559087/1-A) and (MB 160-559087/15-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
Method 300.0: The following sample was diluted due to the nature of the sample matrix: 2016-08-F-20220329-01 (240-164477-1). 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

Job ID: 240-164477-1

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: 240-164477-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-164477-1	2016-08-F-20220329-01	Water	03/29/22 10:30	04/02/22 08:00
240-164477-2	2016-07-F-20220329-01	Water	03/29/22 12:39	04/02/22 08:00
240-164477-3	96158-F-20220329-01	Water	03/29/22 14:13	04/02/22 08:00
240-164477-4	DUPE-001-96158-F-20220329-01	Water	03/29/22 14:13	04/02/22 08:00
240-164477-5	96157-F-20220329-01	Water	03/29/22 15:08	04/02/22 08:00
240-164477-6	EB-001-20220329-01	Water	03/29/22 15:30	04/02/22 08:00

Detection Summary

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

Job ID: 240-164477-1

Client Sample ID: 2016-08-F-20220329-01 — Lab Sample ID: 240-164477-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	170		50	17	ug/L	1		6020B	Total/NA
Arsenic	1.2	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	1500		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	660000		5000	1900	ug/L	10		6020B	Total/NA
Chromium	2.4	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.39	J	0.50	0.19	ug/L	1		6020B	Total/NA
Copper	6.6		5.0	1.8	ug/L	1		6020B	Total/NA
Lead	0.79		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	420		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	8.8		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	5.4		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	28000		500	150	ug/L	1		6020B	Total/NA
Selenium	1.2	J	5.0	0.96	ug/L	1		6020B	Total/NA
Silver	0.73	J	1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	210000		1000	610	ug/L	1		6020B	Total/NA
Strontium	11000		10	5.6	ug/L	10		6020B	Total/NA
Total Alkalinity	1900		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	83		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	110		5.0	1.4	mg/L	5		300.0	Total/NA
Fluoride	0.51		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	4.9	J	5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	2100		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2016-07-F-20220329-01 — Lab Sample ID: 240-164477-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	500		400	110	ug/L	2		6010D	Total/NA
Aluminum	2400		50	17	ug/L	1		6020B	Total/NA
Antimony	0.71	J	2.0	0.69	ug/L	1		6020B	Total/NA
Arsenic	2.9		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	580		2.0	0.88	ug/L	1		6020B	Total/NA
Beryllium	0.34	J	1.0	0.27	ug/L	1		6020B	Total/NA
Cadmium	0.15		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	23000		500	190	ug/L	1		6020B	Total/NA
Chromium	5.8		5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	2.8		0.50	0.19	ug/L	1		6020B	Total/NA
Copper	11		5.0	1.8	ug/L	1		6020B	Total/NA
Iron	3800		100	36	ug/L	1		6020B	Total/NA
Lead	3.8		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	46		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	5200		500	150	ug/L	1		6020B	Total/NA
Manganese	77		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	77		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	15		5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	3500		500	150	ug/L	1		6020B	Total/NA
Selenium	1.6	J	5.0	0.96	ug/L	1		6020B	Total/NA
Silver	1.5		1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	950000		10000	6100	ug/L	10		6020B	Total/NA
Strontium	1300		1.0	0.56	ug/L	1		6020B	Total/NA
Thallium	0.43	J	1.0	0.26	ug/L	1		6020B	Total/NA
Zinc	21		20	10	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 2016-07-F-20220329-01 (Continued) — Lab Sample ID: 240-164477-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.15	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	310		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
Carbonate Alkalinity as CaCO3	82		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1100		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	3.0		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	21		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	2200		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96158-F-20220329-01 — Lab Sample ID: 240-164477-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	400		400	110	ug/L	2		6010D	Total/NA
Aluminum	1400		50	17	ug/L	1		6020B	Total/NA
Antimony	0.89	J	2.0	0.69	ug/L	1		6020B	Total/NA
Arsenic	1.1	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	420		2.0	0.88	ug/L	1		6020B	Total/NA
Cadmium	0.075	J	0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	66000		500	190	ug/L	1		6020B	Total/NA
Chromium	5.9		5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	2.9		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	3600		100	36	ug/L	1		6020B	Total/NA
Lead	1.8		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	37		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	13000		500	150	ug/L	1		6020B	Total/NA
Manganese	170		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	5.1		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	4.6	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	3300		500	150	ug/L	1		6020B	Total/NA
Silver	0.62	J	1.0	0.49	ug/L	1		6020B	Total/NA
Sodium	830000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	2500		4.0	2.2	ug/L	4		6020B	Total/NA
Mercury	0.19	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	320		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	320		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1000		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	1.3		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	16		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	2000		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUPE-001-96158-F-20220329-01 — Lab Sample ID: 240-164477-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	390	J	400	110	ug/L	2		6010D	Total/NA
Aluminum	1500		50	17	ug/L	1		6020B	Total/NA
Arsenic	1.1	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	430		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	67000		500	190	ug/L	1		6020B	Total/NA
Chromium	5.6		5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	2.9		0.50	0.19	ug/L	1		6020B	Total/NA
Copper	2.6	J	5.0	1.8	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: DUPE-001-96158-F-20220329-01 (Continued) — Lab Sample ID: 240-164477-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	3600		100	36	ug/L	1		6020B	Total/NA
Lead	1.8		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	39		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	14000		500	150	ug/L	1		6020B	Total/NA
Manganese	180		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	5.0		2.0	1.2	ug/L	1		6020B	Total/NA
Nickel	4.8	J	5.0	1.9	ug/L	1		6020B	Total/NA
Potassium	3500		500	150	ug/L	1		6020B	Total/NA
Sodium	750000		4000	2400	ug/L	4		6020B	Total/NA
Strontium	2200		4.0	2.2	ug/L	4		6020B	Total/NA
Mercury	0.17	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	320		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	320		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1000		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	1.2		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	15		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	2000		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96157-F-20220329-01 — Lab Sample ID: 240-164477-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	160	J	200	56	ug/L	1		6010D	Total/NA
Aluminum	120		50	17	ug/L	1		6020B	Total/NA
Arsenic	30		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	420		2.0	0.88	ug/L	1		6020B	Total/NA
Calcium	61000		500	190	ug/L	1		6020B	Total/NA
Chromium	1.4	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.54		0.50	0.19	ug/L	1		6020B	Total/NA
Iron	2900		100	36	ug/L	1		6020B	Total/NA
Lead	0.53		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	5.1	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	12000		500	150	ug/L	1		6020B	Total/NA
Manganese	160		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	6.4		2.0	1.2	ug/L	1		6020B	Total/NA
Potassium	1500		500	150	ug/L	1		6020B	Total/NA
Sodium	250000		1000	610	ug/L	1		6020B	Total/NA
Strontium	840		1.0	0.56	ug/L	1		6020B	Total/NA
Mercury	0.15	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	340		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	340		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	290		5.0	1.4	mg/L	5		300.0	Total/NA
Fluoride	0.88		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	2.0		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	800		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-20220329-01 — Lab Sample ID: 240-164477-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	660		200	56	ug/L	1		6010D	Total/NA
Mercury	0.14	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Chloride	0.29	J	1.0	0.28	mg/L	1		300.0	Total/NA
Total Dissolved Solids	88		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2016-08-F-20220329-01
Lab Sample ID: 240-164477-1

Date Collected: 03/29/22 10:30
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 18:29	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**170**		50	17	ug/L		04/28/22 09:30	05/19/22 19:49	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 19:49	1
Arsenic	**1.2**	**J**	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 19:49	1
Barium	**1500**		2.0	0.88	ug/L		04/28/22 09:30	05/19/22 19:49	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 19:49	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 19:49	1
Calcium	**660000**		5000	1900	ug/L		04/28/22 09:30	05/20/22 17:00	10
Chromium	**2.4**	**J**	5.0	1.1	ug/L		04/28/22 09:30	05/19/22 19:49	1
Cobalt	**0.39**	**J**	0.50	0.19	ug/L		04/28/22 09:30	05/19/22 19:49	1
Copper	**6.6**		5.0	1.8	ug/L		04/28/22 09:30	05/19/22 19:49	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 19:49	1
Lead	**0.79**		0.50	0.24	ug/L		04/28/22 09:30	05/19/22 19:49	1
Lithium	**420**		10	2.5	ug/L		04/28/22 09:30	05/19/22 19:49	1
Magnesium	500	U	500	150	ug/L		04/28/22 09:30	05/19/22 19:49	1
Manganese	10	U	10	3.6	ug/L		04/28/22 09:30	05/19/22 19:49	1
Molybdenum	**8.8**		2.0	1.2	ug/L		04/28/22 09:30	05/19/22 19:49	1
Nickel	**5.4**		5.0	1.9	ug/L		04/28/22 09:30	05/19/22 19:49	1
Potassium	**28000**		500	150	ug/L		04/28/22 09:30	05/19/22 19:49	1
Selenium	**1.2**	**J**	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 19:49	1
Silver	**0.73**	**J**	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 19:49	1
Sodium	**210000**		1000	610	ug/L		04/28/22 09:30	05/19/22 19:49	1
Strontium	**11000**		10	5.6	ug/L		04/28/22 09:30	05/20/22 17:00	10
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 19:49	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 19:49	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		04/04/22 09:00	04/04/22 16:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1900**		5.0	2.6	mg/L			04/08/22 12:56	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 12:56	1
Carbonate Alkalinity as CaCO3	**83**		5.0	2.6	mg/L			04/08/22 12:56	1
Chloride	**110**		5.0	1.4	mg/L			04/23/22 11:19	5
Fluoride	**0.51**		0.25	0.12	mg/L			04/23/22 11:19	5
Sulfate	**4.9**	**J**	5.0	1.7	mg/L			04/26/22 14:39	5
Total Dissolved Solids	**2100**		50	39	mg/L			04/04/22 12:41	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	**7.91**		0.695	0.995	1.00	0.209	pCi/L	04/07/22 10:04	05/02/22 16:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.3*		*40 - 110*	*04/07/22 10:04*	*05/02/22 16:25*	*1*

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

Job ID: 240-164477-1

Client Sample ID: 2016-08-F-20220329-01

Date Collected: 03/29/22 10:30
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-1

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.49		0.579	0.662	1.00	0.601	pCi/L	04/07/22 10:23	04/29/22 17:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.3*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:22*	*1*
Y Carrier	*83.0*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:22*	*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	11.4		0.905	1.20	5.00	0.601	pCi/L		05/04/22 14:04	1

Client Sample ID: 2016-07-F-20220329-01
Lab Sample ID: 240-164477-2

Date Collected: 03/29/22 12:39
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	500		400	110	ug/L		04/28/22 09:30	05/04/22 10:46	2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2400		50	17	ug/L		04/28/22 09:30	05/19/22 20:08	1
Antimony	0.71	J	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 20:08	1
Arsenic	2.9		2.0	0.75	ug/L		04/28/22 09:30	05/19/22 20:08	1
Barium	580		2.0	0.88	ug/L		04/28/22 09:30	05/19/22 20:08	1
Beryllium	0.34	J	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 20:08	1
Cadmium	0.15		0.10	0.055	ug/L		04/28/22 09:30	05/19/22 20:08	1
Calcium	23000		500	190	ug/L		04/28/22 09:30	05/19/22 20:08	1
Chromium	5.8		5.0	1.1	ug/L		04/28/22 09:30	05/19/22 20:08	1
Cobalt	2.8		0.50	0.19	ug/L		04/28/22 09:30	05/19/22 20:08	1
Copper	11		5.0	1.8	ug/L		04/28/22 09:30	05/19/22 20:08	1
Iron	3800		100	36	ug/L		04/28/22 09:30	05/19/22 20:08	1
Lead	3.8		0.50	0.24	ug/L		04/28/22 09:30	05/19/22 20:08	1
Lithium	46		10	2.5	ug/L		04/28/22 09:30	05/19/22 20:08	1
Magnesium	5200		500	150	ug/L		04/28/22 09:30	05/19/22 20:08	1
Manganese	77		10	3.6	ug/L		04/28/22 09:30	05/19/22 20:08	1
Molybdenum	77		2.0	1.2	ug/L		04/28/22 09:30	05/19/22 20:08	1
Nickel	15		5.0	1.9	ug/L		04/28/22 09:30	05/19/22 20:08	1
Potassium	3500		500	150	ug/L		04/28/22 09:30	05/19/22 20:08	1
Selenium	1.6	J	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 20:08	1
Silver	1.5		1.0	0.49	ug/L		04/28/22 09:30	05/19/22 20:08	1
Sodium	950000		10000	6100	ug/L		04/28/22 09:30	05/20/22 17:12	10
Strontium	1300		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 20:08	1
Thallium	0.43	J	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 20:08	1
Zinc	21		20	10	ug/L		04/28/22 09:30	05/19/22 20:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.15	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	310		5.0	2.6	mg/L			04/08/22 13:15	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			04/08/22 13:15	1
Carbonate Alkalinity as CaCO3	82		5.0	2.6	mg/L			04/08/22 13:15	1
Chloride	1100		10	2.8	mg/L			04/23/22 13:07	10
Fluoride	3.0		0.10	0.048	mg/L			04/23/22 12:46	2
Sulfate	21		2.0	0.70	mg/L			04/23/22 12:46	2
Total Dissolved Solids	2200		40	31	mg/L			04/04/22 12:41	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	1.17		0.392	0.406	1.00	0.412	pCi/L	04/07/22 10:04	05/02/22 16:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.7*		*40 - 110*	*04/07/22 10:04*	*05/02/22 16:26*	*1*

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

Job ID: 240-164477-1

Client Sample ID: 2016-07-F-20220329-01

Date Collected: 03/29/22 12:39
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-2

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.16		0.628	0.637	1.00	0.936	pCi/L	04/07/22 10:23	04/29/22 17:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.7*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:23*	*1*
Y Carrier	*80.4*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:23*	*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	2.33		0.740	0.755	5.00	0.936	pCi/L		05/04/22 14:04	1

Client Sample ID: 96158-F-20220329-01
Lab Sample ID: 240-164477-3
Date Collected: 03/29/22 14:13
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	400		400	110	ug/L		04/28/22 09:30	05/04/22 10:52	2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1400		50	17	ug/L		04/28/22 09:30	05/19/22 20:28	1
Antimony	0.89	J	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 20:28	1
Arsenic	1.1	J	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 20:28	1
Barium	420		2.0	0.88	ug/L		04/28/22 09:30	05/19/22 20:28	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 20:28	1
Cadmium	0.075	J	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 20:28	1
Calcium	66000		500	190	ug/L		04/28/22 09:30	05/19/22 20:28	1
Chromium	5.9		5.0	1.1	ug/L		04/28/22 09:30	05/19/22 20:28	1
Cobalt	2.9		0.50	0.19	ug/L		04/28/22 09:30	05/19/22 20:28	1
Copper	2.5	J	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 20:28	1
Iron	3600		100	36	ug/L		04/28/22 09:30	05/19/22 20:28	1
Lead	1.8		0.50	0.24	ug/L		04/28/22 09:30	05/19/22 20:28	1
Lithium	37		10	2.5	ug/L		04/28/22 09:30	05/19/22 20:28	1
Magnesium	13000		500	150	ug/L		04/28/22 09:30	05/19/22 20:28	1
Manganese	170		10	3.6	ug/L		04/28/22 09:30	05/19/22 20:28	1
Molybdenum	5.1		2.0	1.2	ug/L		04/28/22 09:30	05/19/22 20:28	1
Nickel	4.6	J	5.0	1.9	ug/L		04/28/22 09:30	05/19/22 20:28	1
Potassium	3300		500	150	ug/L		04/28/22 09:30	05/19/22 20:28	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 20:28	1
Silver	0.62	J	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 20:28	1
Sodium	830000		4000	2400	ug/L		04/28/22 09:30	05/20/22 17:16	4
Strontium	2500		4.0	2.2	ug/L		04/28/22 09:30	05/20/22 17:16	4
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 20:28	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 20:28	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.19	J B	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	320		5.0	2.6	mg/L			04/08/22 13:19	1
Bicarbonate Alkalinity as CaCO3	320		5.0	2.6	mg/L			04/08/22 13:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 13:19	1
Chloride	1000		10	2.8	mg/L			04/23/22 13:51	10
Fluoride	1.3		0.10	0.048	mg/L			04/23/22 13:29	2
Sulfate	16		2.0	0.70	mg/L			04/23/22 13:29	2
Total Dissolved Solids	2000		40	31	mg/L			04/04/22 12:41	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	1.09		0.316	0.331	1.00	0.335	pCi/L	04/07/22 10:04	05/02/22 16:26	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.4*		*40 - 110*	*04/07/22 10:04*	*05/02/22 16:26*	*1*

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

Job ID: 240-164477-1

Client Sample ID: 96158-F-20220329-01

Date Collected: 03/29/22 14:13
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-3

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.43		0.565	0.607	1.00	0.684	pCi/L	04/07/22 10:23	04/29/22 17:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.4*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:23*	*1*
Y Carrier	*80.7*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:23*	*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	3.52		0.647	0.691	5.00	0.684	pCi/L		05/04/22 14:04	1

Client Sample ID: DUPE-001-96158-F-20220329-01
Lab Sample ID: 240-164477-4

Date Collected: 03/29/22 14:13
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	**390**	**J**	400	110	ug/L		04/28/22 09:30	05/04/22 10:54	2

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**1500**		50	17	ug/L		04/28/22 09:30	05/19/22 20:32	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 20:32	1
Arsenic	**1.1**	**J**	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 20:32	1
Barium	**430**		2.0	0.88	ug/L		04/28/22 09:30	05/19/22 20:32	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 20:32	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 20:32	1
Calcium	**67000**		500	190	ug/L		04/28/22 09:30	05/19/22 20:32	1
Chromium	**5.6**		5.0	1.1	ug/L		04/28/22 09:30	05/19/22 20:32	1
Cobalt	**2.9**		0.50	0.19	ug/L		04/28/22 09:30	05/19/22 20:32	1
Copper	**2.6**	**J**	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 20:32	1
Iron	**3600**		100	36	ug/L		04/28/22 09:30	05/19/22 20:32	1
Lead	**1.8**		0.50	0.24	ug/L		04/28/22 09:30	05/19/22 20:32	1
Lithium	**39**		10	2.5	ug/L		04/28/22 09:30	05/19/22 20:32	1
Magnesium	**14000**		500	150	ug/L		04/28/22 09:30	05/19/22 20:32	1
Manganese	**180**		10	3.6	ug/L		04/28/22 09:30	05/19/22 20:32	1
Molybdenum	**5.0**		2.0	1.2	ug/L		04/28/22 09:30	05/19/22 20:32	1
Nickel	**4.8**	**J**	5.0	1.9	ug/L		04/28/22 09:30	05/19/22 20:32	1
Potassium	**3500**		500	150	ug/L		04/28/22 09:30	05/19/22 20:32	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 20:32	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 20:32	1
Sodium	**750000**		4000	2400	ug/L		04/28/22 09:30	05/20/22 17:20	4
Strontium	**2200**		4.0	2.2	ug/L		04/28/22 09:30	05/20/22 17:20	4
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 20:32	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 20:32	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.17**	**J B**	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**320**		5.0	2.6	mg/L			04/08/22 13:24	1
Bicarbonate Alkalinity as CaCO3	**320**		5.0	2.6	mg/L			04/08/22 13:24	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 13:24	1
Chloride	**1000**		10	2.8	mg/L			04/23/22 15:18	10
Fluoride	**1.2**		0.10	0.048	mg/L			04/23/22 14:13	2
Sulfate	**15**		2.0	0.70	mg/L			04/23/22 14:13	2
Total Dissolved Solids	**2000**		40	31	mg/L			04/04/22 12:41	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	**0.821**		0.255	0.266	1.00	0.253	pCi/L	04/07/22 10:04	05/02/22 16:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.6*		*40 - 110*	*04/07/22 10:04*	*05/02/22 16:27*	*1*

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

Job ID: 240-164477-1

Client Sample ID: DUPE-001-96158-F-20220329-01

Date Collected: 03/29/22 14:13
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-4

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.75		0.532	0.589	1.00	0.583	pCi/L	04/07/22 10:23	04/29/22 17:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.6*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:23*	*1*
Y Carrier	*82.6*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:23*	*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	3.57		0.590	0.646	5.00	0.583	pCi/L		05/04/22 14:04	1

Client Sample ID: 96157-F-20220329-01
Lab Sample ID: 240-164477-5
Date Collected: 03/29/22 15:08
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	**160**	**J**	200	56	ug/L		04/28/22 09:30	05/02/22 18:48	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**120**		50	17	ug/L		04/28/22 09:30	05/19/22 20:36	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 20:36	1
Arsenic	**30**		2.0	0.75	ug/L		04/28/22 09:30	05/19/22 20:36	1
Barium	**420**		2.0	0.88	ug/L		04/28/22 09:30	05/19/22 20:36	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 20:36	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 20:36	1
Calcium	**61000**		500	190	ug/L		04/28/22 09:30	05/19/22 20:36	1
Chromium	**1.4**	**J**	5.0	1.1	ug/L		04/28/22 09:30	05/19/22 20:36	1
Cobalt	**0.54**		0.50	0.19	ug/L		04/28/22 09:30	05/19/22 20:36	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 20:36	1
Iron	**2900**		100	36	ug/L		04/28/22 09:30	05/19/22 20:36	1
Lead	**0.53**		0.50	0.24	ug/L		04/28/22 09:30	05/19/22 20:36	1
Lithium	**5.1**	**J**	10	2.5	ug/L		04/28/22 09:30	05/19/22 20:36	1
Magnesium	**12000**		500	150	ug/L		04/28/22 09:30	05/19/22 20:36	1
Manganese	**160**		10	3.6	ug/L		04/28/22 09:30	05/19/22 20:36	1
Molybdenum	**6.4**		2.0	1.2	ug/L		04/28/22 09:30	05/19/22 20:36	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/19/22 20:36	1
Potassium	**1500**		500	150	ug/L		04/28/22 09:30	05/19/22 20:36	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 20:36	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 20:36	1
Sodium	**250000**		1000	610	ug/L		04/28/22 09:30	05/19/22 20:36	1
Strontium	**840**		1.0	0.56	ug/L		04/28/22 09:30	05/19/22 20:36	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 20:36	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 20:36	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.15**	**J B**	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**340**		5.0	2.6	mg/L			04/08/22 13:29	1
Bicarbonate Alkalinity as CaCO3	**340**		5.0	2.6	mg/L			04/08/22 13:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 13:29	1
Chloride	**290**		5.0	1.4	mg/L			04/23/22 16:01	5
Fluoride	**0.88**		0.050	0.024	mg/L			04/23/22 15:40	1
Sulfate	**2.0**		1.0	0.35	mg/L			04/23/22 15:40	1
Total Dissolved Solids	**800**		20	16	mg/L			04/04/22 12:41	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	**0.518**		0.206	0.211	1.00	0.223	pCi/L	04/07/22 10:04	05/02/22 16:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.6*		*40 - 110*	*04/07/22 10:04*	*05/02/22 16:27*	*1*

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

Job ID: 240-164477-1

Client Sample ID: 96157-F-20220329-01

Date Collected: 03/29/22 15:08
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-5

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.974		0.405	0.415	1.00	0.573	pCi/L	04/07/22 10:23	04/29/22 17:23	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.6*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:23*	*1*
Y Carrier	*80.0*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:23*	*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	1.49		0.454	0.466	5.00	0.573	pCi/L		05/04/22 14:04	1

Client Sample ID: EB-001-20220329-01
Date Collected: 03/29/22 15:30
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-6
Matrix: Water

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**660**		200	56	ug/L		04/28/22 09:30	05/02/22 18:50	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 20:40	1
Antimony	2.0	U	2.0	0.69	ug/L		04/28/22 09:30	05/19/22 20:40	1
Arsenic	2.0	U	2.0	0.75	ug/L		04/28/22 09:30	05/19/22 20:40	1
Barium	2.0	U	2.0	0.88	ug/L		04/28/22 09:30	05/19/22 20:40	1
Beryllium	1.0	U	1.0	0.27	ug/L		04/28/22 09:30	05/19/22 20:40	1
Cadmium	0.10	U	0.10	0.055	ug/L		04/28/22 09:30	05/19/22 20:40	1
Calcium	500	U	500	190	ug/L		04/28/22 09:30	05/19/22 20:40	1
Chromium	5.0	U	5.0	1.1	ug/L		04/28/22 09:30	05/19/22 20:40	1
Cobalt	0.50	U	0.50	0.19	ug/L		04/28/22 09:30	05/19/22 20:40	1
Copper	5.0	U	5.0	1.8	ug/L		04/28/22 09:30	05/19/22 20:40	1
Iron	100	U	100	36	ug/L		04/28/22 09:30	05/19/22 20:40	1
Lead	0.50	U	0.50	0.24	ug/L		04/28/22 09:30	05/19/22 20:40	1
Lithium	10	U	10	2.5	ug/L		04/28/22 09:30	05/19/22 20:40	1
Magnesium	500	U	500	150	ug/L		04/28/22 09:30	05/19/22 20:40	1
Manganese	10	U	10	3.6	ug/L		04/28/22 09:30	05/19/22 20:40	1
Molybdenum	2.0	U	2.0	1.2	ug/L		04/28/22 09:30	05/19/22 20:40	1
Nickel	5.0	U	5.0	1.9	ug/L		04/28/22 09:30	05/19/22 20:40	1
Potassium	500	U	500	150	ug/L		04/28/22 09:30	05/19/22 20:40	1
Selenium	5.0	U	5.0	0.96	ug/L		04/28/22 09:30	05/19/22 20:40	1
Silver	1.0	U	1.0	0.49	ug/L		04/28/22 09:30	05/19/22 20:40	1
Sodium	1000	U	1000	610	ug/L		04/28/22 09:30	05/19/22 20:40	1
Strontium	1.0	U	1.0	0.56	ug/L		04/28/22 09:30	05/19/22 20:40	1
Thallium	1.0	U	1.0	0.26	ug/L		04/28/22 09:30	05/19/22 20:40	1
Zinc	20	U	20	10	ug/L		04/28/22 09:30	05/19/22 20:40	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.14**	**J B**	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:31	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			04/08/22 13:33	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 13:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 13:33	1
Chloride	**0.29**	**J**	1.0	0.28	mg/L			04/23/22 16:23	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/23/22 16:23	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/23/22 16:23	1
Total Dissolved Solids	**88**		10	7.8	mg/L			04/04/22 12:41	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	-0.0697	U	0.124	0.124	1.00	0.290	pCi/L	04/07/22 10:04	05/02/22 16:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*67.7*		*40 - 110*	*04/07/22 10:04*	*05/02/22 16:27*	*1*

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

Job ID: 240-164477-1

Client Sample ID: EB-001-20220329-01

Date Collected: 03/29/22 15:30
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-6

Matrix: Water

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0129	U	0.473	0.473	1.00	0.841	pCi/L	04/07/22 10:23	04/29/22 17:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*67.7*		*40 - 110*	*04/07/22 10:23*	*04/29/22 17:25*	*1*
Y Carrier	*82.6*		*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	-0.0568	U	0.489	0.489	5.00	0.841	pCi/L		05/04/22 14:04	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164477-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
240-164477-1	2016-08-F-20220329-01	93.3
240-164477-1 MS	2016-08-F-20220329-01	95.3
240-164477-1 MSD	2016-08-F-20220329-01	80.0
240-164477-2	2016-07-F-20220329-01	86.7
240-164477-3	96158-F-20220329-01	87.4
240-164477-4	DUPE-001-96158-F-20220329-01	91.6
240-164477-5	96157-F-20220329-01	96.6
240-164477-6	EB-001-20220329-01	67.7
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)
240-164477-1	2016-08-F-20220329-01	93.3	83.0
240-164477-1 MS	2016-08-F-20220329-01	95.3	81.1
240-164477-1 MSD	2016-08-F-20220329-01	80.0	81.1
240-164477-2	2016-07-F-20220329-01	86.7	80.4
240-164477-3	96158-F-20220329-01	87.4	80.7
240-164477-4	DUPE-001-96158-F-20220329-01	91.6	82.6
240-164477-5	96157-F-20220329-01	96.6	80.0
240-164477-6	EB-001-20220329-01	67.7	82.6
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

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: 240-164477-1 MS
Matrix: Water
Analysis Batch: 351805

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 351279

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	200	U	2000	2410		ug/L		120	75 - 125

Lab Sample ID: 240-164477-1 MSD
Matrix: Water
Analysis Batch: 351805

Client Sample ID: 2016-08-F-20220329-01
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	200	U	2000	2420		ug/L		121	75 - 125	1	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

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 Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
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
Aluminum	200	207		ug/L		104	80 - 120
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: 240-164477-1 MS
Matrix: Water
Analysis Batch: 353783

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 351280

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	170		200	354		ug/L		94	75 - 125
Antimony	2.0	U	200	210		ug/L		105	75 - 125
Arsenic	1.2	J	200	200		ug/L		99	75 - 125
Barium	1500		100	1600	4	ug/L		96	75 - 125
Beryllium	1.0	U	100	93.6		ug/L		94	75 - 125
Cadmium	0.10	U	100	96.3		ug/L		96	75 - 125
Chromium	2.4	J	100	105		ug/L		102	75 - 125
Cobalt	0.39	J	100	102		ug/L		102	75 - 125
Copper	6.6		200	213		ug/L		103	75 - 125

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

Lab Sample ID: 240-164477-1 MS
Matrix: Water
Analysis Batch: 353783

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 351280

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	100	U	200	211		ug/L		105	75 - 125
Lead	0.79		200	197		ug/L		98	75 - 125
Lithium	420		200	621		ug/L		100	75 - 125
Magnesium	500	U	2000	2020		ug/L		101	75 - 125
Manganese	10	U	100	104		ug/L		104	75 - 125
Molybdenum	8.8		200	209		ug/L		100	75 - 125
Nickel	5.4		200	207		ug/L		101	75 - 125
Potassium	28000		2000	30100	4	ug/L		114	75 - 125
Selenium	1.2	J	400	391		ug/L		97	75 - 125
Silver	0.73	J	100	103		ug/L		102	75 - 125
Sodium	210000		2000	220000	4	ug/L		426	75 - 125
Thallium	1.0	U	200	191		ug/L		96	75 - 125
Zinc	20	U	200	184		ug/L		92	75 - 125

Lab Sample ID: 240-164477-1 MS
Matrix: Water
Analysis Batch: 353878

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 351280

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	660000		2000	669000	4	ug/L		608	75 - 125
Strontium	11000		200	12000	4	ug/L		309	75 - 125

Lab Sample ID: 240-164477-1 MSD
Matrix: Water
Analysis Batch: 353783

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 351280

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aluminum	170		200	355		ug/L		95	75 - 125	0	20
Antimony	2.0	U	200	211		ug/L		106	75 - 125	1	20
Arsenic	1.2	J	200	201		ug/L		100	75 - 125	1	20
Barium	1500		100	1620	4	ug/L		112	75 - 125	1	20
Beryllium	1.0	U	100	92.7		ug/L		93	75 - 125	1	20
Cadmium	0.10	U	100	98.4		ug/L		98	75 - 125	2	20
Chromium	2.4	J	100	104		ug/L		102	75 - 125	0	20
Cobalt	0.39	J	100	102		ug/L		102	75 - 125	0	20
Copper	6.6		200	213		ug/L		103	75 - 125	0	20
Iron	100	U	200	208		ug/L		104	75 - 125	1	20
Lead	0.79		200	199		ug/L		99	75 - 125	1	20
Lithium	420		200	619		ug/L		99	75 - 125	0	20
Magnesium	500	U	2000	2060		ug/L		103	75 - 125	2	20
Manganese	10	U	100	107		ug/L		107	75 - 125	2	20
Molybdenum	8.8		200	213		ug/L		102	75 - 125	2	20
Nickel	5.4		200	207		ug/L		101	75 - 125	0	20
Potassium	28000		2000	30600	4	ug/L		137	75 - 125	2	20
Selenium	1.2	J	400	393		ug/L		98	75 - 125	1	20
Silver	0.73	J	100	103		ug/L		102	75 - 125	0	20
Sodium	210000		2000	224000	4	ug/L		611	75 - 125	2	20
Thallium	1.0	U	200	192		ug/L		96	75 - 125	0	20
Zinc	20	U	200	189		ug/L		94	75 - 125	2	20

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

Lab Sample ID: 240-164477-1 MSD — **Client Sample ID: 2016-08-F-20220329-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 353878 — **Prep Batch: 351280**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	660000		2000	804000	4	ug/L		7376	75 - 125	18	20
Strontium	11000		200	14100	4	ug/L		1340	75 - 125	16	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-521599/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 521770 — **Prep Batch: 521599**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.136	J	0.20	0.13	ug/L		04/04/22 09:00	04/04/22 16:06	1

Lab Sample ID: LCS 240-521599/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 521770 — **Prep Batch: 521599**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.21		ug/L		104	80 - 120

Lab Sample ID: 240-164477-1 MS — **Client Sample ID: 2016-08-F-20220329-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 521770 — **Prep Batch: 521599**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U	1.00	1.14		ug/L		114	80 - 120

Lab Sample ID: 240-164477-1 MSD — **Client Sample ID: 2016-08-F-20220329-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 521770 — **Prep Batch: 521599**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.20	U	1.00	1.09		ug/L		109	80 - 120	5	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-522218/30 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 522218

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			04/08/22 11:55	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 11:55	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 11:55	1

Lab Sample ID: MB 240-522218/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 522218

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	5.0	U	5.0	2.6	mg/L			04/08/22 10:09	1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-522218/4
Matrix: Water
Analysis Batch: 522218

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:09	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/08/22 10:09	1

Lab Sample ID: LCS 240-522218/29
Matrix: Water
Analysis Batch: 522218

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	115		mg/L		95	86 - 123

Lab Sample ID: 240-164477-1 DU
Matrix: Water
Analysis Batch: 522218

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	1900		1860		mg/L		0.8	20
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20
Carbonate Alkalinity as CaCO3	83		52.5	F3	mg/L		45	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-523727/35
Matrix: Water
Analysis Batch: 523727

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			04/23/22 05:10	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/23/22 05:10	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/23/22 05:10	1

Lab Sample ID: LCS 240-523727/36
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
Chloride	50.0	50.1		mg/L		100	90 - 110
Fluoride	2.50	2.62		mg/L		105	90 - 110
Sulfate	50.0	51.3		mg/L		103	90 - 110

Lab Sample ID: 240-164477-1 MS
Matrix: Water
Analysis Batch: 523727

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	110		250	351		mg/L		96	80 - 120
Fluoride	0.51		12.5	13.2		mg/L		101	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-164477-1 MSD
Matrix: Water
Analysis Batch: 523727

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	110		250	351		mg/L		95	80 - 120	0	15
Fluoride	0.51		12.5	13.2		mg/L		101	80 - 120	0	15

Lab Sample ID: MB 240-524052/3
Matrix: Water
Analysis Batch: 524052

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			04/26/22 11:58	1
Fluoride	0.050	U	0.050	0.024	mg/L			04/26/22 11:58	1
Sulfate	1.0	U	1.0	0.35	mg/L			04/26/22 11:58	1

Lab Sample ID: LCS 240-524052/4
Matrix: Water
Analysis Batch: 524052

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	49.4		mg/L		99	90 - 110
Fluoride	2.50	2.52		mg/L		101	90 - 110
Sulfate	50.0	51.3		mg/L		103	90 - 110

Lab Sample ID: 240-164477-1 MS
Matrix: Water
Analysis Batch: 524052

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	4.9	J	250	242		mg/L		95	80 - 120

Lab Sample ID: 240-164477-1 MSD
Matrix: Water
Analysis Batch: 524052

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	4.9	J	250	242		mg/L		95	80 - 120	0	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-521673/1
Matrix: Water
Analysis Batch: 521673

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			04/04/22 12:41	1

Lab Sample ID: LCS 240-521673/2
Matrix: Water
Analysis Batch: 521673

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	139		mg/L		93	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 240-164477-1 DU
Matrix: Water
Analysis Batch: 521673

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2100		2010		mg/L		3	20

Lab Sample ID: 240-164477-6 DU
Matrix: Water
Analysis Batch: 521673

Client Sample ID: EB-001-20220329-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	88		89.0		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

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*

Lab Sample ID: 240-164477-1 MS
Matrix: Water
Analysis Batch: 563273

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 559087

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	7.91		15.0	18.73		2.01	1.00	0.275	pCi/L	72	60 - 140

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*95.3*		*40 - 110*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: 240-164477-1 MSD
Matrix: Water
Analysis Batch: 563273

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 559087

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	7.91		15.0	19.57		2.10	1.00	0.258	pCi/L	78	60 - 140	0.20	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*80.0*		*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*

Lab Sample ID: 240-164477-1 MS
Matrix: Water
Analysis Batch: 562835

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 559089

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	3.49		11.5	14.45		1.66	1.00	0.522	pCi/L	95	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*95.3*		*40 - 110*
Y Carrier	*81.1*		*40 - 110*

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

Job ID: 240-164477-1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 240-164477-1 MSD
Matrix: Water
Analysis Batch: 562835

Client Sample ID: 2016-08-F-20220329-01
Prep Type: Total/NA
Prep Batch: 559089

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	3.49		11.5	15.19		1.80	1.00	0.637	pCi/L	102	60 - 140	0.21	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*80.0*		*40 - 110*
Y Carrier	*81.1*		*40 - 110*

Metals

Prep Batch: 351279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	3005A	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	3005A	
240-164477-3	96158-F-20220329-01	Total/NA	Water	3005A	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	3005A	
240-164477-5	96157-F-20220329-01	Total/NA	Water	3005A	
240-164477-6	EB-001-20220329-01	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	
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	3005A	
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	3005A	

Prep Batch: 351280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	3005A	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	3005A	
240-164477-3	96158-F-20220329-01	Total/NA	Water	3005A	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	3005A	
240-164477-5	96157-F-20220329-01	Total/NA	Water	3005A	
240-164477-6	EB-001-20220329-01	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	
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	3005A	
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	3005A	

Analysis Batch: 351805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	6010D	351279
240-164477-5	96157-F-20220329-01	Total/NA	Water	6010D	351279
240-164477-6	EB-001-20220329-01	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
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	6010D	351279
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	6010D	351279

Analysis Batch: 351960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	6010D	351279
240-164477-3	96158-F-20220329-01	Total/NA	Water	6010D	351279
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	6010D	351279

Analysis Batch: 353783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-3	96158-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-5	96157-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-6	EB-001-20220329-01	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
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	6020B	351280

Metals (Continued)

Analysis Batch: 353783 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	6020B	351280

Analysis Batch: 353878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-3	96158-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	6020B	351280
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	6020B	351280

Prep Batch: 521599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	7470A	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	7470A	
240-164477-3	96158-F-20220329-01	Total/NA	Water	7470A	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	7470A	
240-164477-5	96157-F-20220329-01	Total/NA	Water	7470A	
240-164477-6	EB-001-20220329-01	Total/NA	Water	7470A	
MB 240-521599/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-521599/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	7470A	
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	7470A	

Analysis Batch: 521770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	7470A	521599
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	7470A	521599
240-164477-3	96158-F-20220329-01	Total/NA	Water	7470A	521599
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	7470A	521599
240-164477-5	96157-F-20220329-01	Total/NA	Water	7470A	521599
240-164477-6	EB-001-20220329-01	Total/NA	Water	7470A	521599
MB 240-521599/1-A	Method Blank	Total/NA	Water	7470A	521599
LCS 240-521599/2-A	Lab Control Sample	Total/NA	Water	7470A	521599
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	7470A	521599
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	7470A	521599

General Chemistry

Analysis Batch: 521673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	SM 2540C	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	SM 2540C	
240-164477-3	96158-F-20220329-01	Total/NA	Water	SM 2540C	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	SM 2540C	
240-164477-5	96157-F-20220329-01	Total/NA	Water	SM 2540C	
240-164477-6	EB-001-20220329-01	Total/NA	Water	SM 2540C	
MB 240-521673/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-521673/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-164477-1 DU	2016-08-F-20220329-01	Total/NA	Water	SM 2540C	
240-164477-6 DU	EB-001-20220329-01	Total/NA	Water	SM 2540C	

General Chemistry

Analysis Batch: 522218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	2320B-1997	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	2320B-1997	
240-164477-3	96158-F-20220329-01	Total/NA	Water	2320B-1997	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	2320B-1997	
240-164477-5	96157-F-20220329-01	Total/NA	Water	2320B-1997	
240-164477-6	EB-001-20220329-01	Total/NA	Water	2320B-1997	
MB 240-522218/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-522218/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-522218/29	Lab Control Sample	Total/NA	Water	2320B-1997	
240-164477-1 DU	2016-08-F-20220329-01	Total/NA	Water	2320B-1997	

Analysis Batch: 523727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	300.0	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	300.0	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	300.0	
240-164477-3	96158-F-20220329-01	Total/NA	Water	300.0	
240-164477-3	96158-F-20220329-01	Total/NA	Water	300.0	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	300.0	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	300.0	
240-164477-5	96157-F-20220329-01	Total/NA	Water	300.0	
240-164477-5	96157-F-20220329-01	Total/NA	Water	300.0	
240-164477-6	EB-001-20220329-01	Total/NA	Water	300.0	
MB 240-523727/35	Method Blank	Total/NA	Water	300.0	
LCS 240-523727/36	Lab Control Sample	Total/NA	Water	300.0	
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	300.0	
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	300.0	

Analysis Batch: 524052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	300.0	
MB 240-524052/3	Method Blank	Total/NA	Water	300.0	
LCS 240-524052/4	Lab Control Sample	Total/NA	Water	300.0	
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	300.0	
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	300.0	

Rad

Prep Batch: 559087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	PrecSep-21	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	PrecSep-21	
240-164477-3	96158-F-20220329-01	Total/NA	Water	PrecSep-21	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	PrecSep-21	
240-164477-5	96157-F-20220329-01	Total/NA	Water	PrecSep-21	
240-164477-6	EB-001-20220329-01	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	
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	PrecSep-21	
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	PrecSep-21	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-164477-1
Project/Site: Federal CCR Wells

Rad

Prep Batch: 559089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-164477-1	2016-08-F-20220329-01	Total/NA	Water	PrecSep_0	
240-164477-2	2016-07-F-20220329-01	Total/NA	Water	PrecSep_0	
240-164477-3	96158-F-20220329-01	Total/NA	Water	PrecSep_0	
240-164477-4	DUPE-001-96158-F-20220329-01	Total/NA	Water	PrecSep_0	
240-164477-5	96157-F-20220329-01	Total/NA	Water	PrecSep_0	
240-164477-6	EB-001-20220329-01	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	
240-164477-1 MS	2016-08-F-20220329-01	Total/NA	Water	PrecSep_0	
240-164477-1 MSD	2016-08-F-20220329-01	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 240-164477-1

Client Sample ID: 2016-08-F-20220329-01

Lab Sample ID: 240-164477-1

Date Collected: 03/29/22 10:30

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			351279	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351805	05/02/22 18:29	CTB	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 19:49	SAP	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		10	353878	05/20/22 17:00	SAP	TAL CF
Total/NA	Prep	7470A			521599	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:10	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 12:56	JMR	TAL CAN
Total/NA	Analysis	300.0		5	523727	04/23/22 11:19	KMS	TAL CAN
Total/NA	Analysis	300.0		5	524052	04/26/22 14:39	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	521673	04/04/22 12:41	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			559087	04/07/22 10:04	BMP	TAL SL
Total/NA	Analysis	9315		1	563273	05/02/22 16:25	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559089	04/07/22 10:23	BMP	TAL SL
Total/NA	Analysis	9320		1	562835	04/29/22 17:22	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563693	05/04/22 14:04	SCB	TAL SL

Client Sample ID: 2016-07-F-20220329-01

Lab Sample ID: 240-164477-2

Date Collected: 03/29/22 12:39

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			351279	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		2	351960	05/04/22 10:46	CTB	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 20:08	SAP	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		10	353878	05/20/22 17:12	SAP	TAL CF
Total/NA	Prep	7470A			521599	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:17	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 13:15	JMR	TAL CAN
Total/NA	Analysis	300.0		2	523727	04/23/22 12:46	KMS	TAL CAN
Total/NA	Analysis	300.0		10	523727	04/23/22 13:07	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521673	04/04/22 12:41	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			559087	04/07/22 10:04	BMP	TAL SL
Total/NA	Analysis	9315		1	563273	05/02/22 16:26	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559089	04/07/22 10:23	BMP	TAL SL
Total/NA	Analysis	9320		1	562835	04/29/22 17:23	CLP	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: 240-164477-1

Client Sample ID: 96158-F-20220329-01

Lab Sample ID: 240-164477-3

Date Collected: 03/29/22 14:13

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			351279	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		2	351960	05/04/22 10:52	CTB	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 20:28	SAP	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		4	353878	05/20/22 17:16	SAP	TAL CF
Total/NA	Prep	7470A			521599	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:25	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 13:19	JMR	TAL CAN
Total/NA	Analysis	300.0		2	523727	04/23/22 13:29	KMS	TAL CAN
Total/NA	Analysis	300.0		10	523727	04/23/22 13:51	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521673	04/04/22 12:41	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			559087	04/07/22 10:04	BMP	TAL SL
Total/NA	Analysis	9315		1	563273	05/02/22 16:26	CLP	TAL SL
Total/NA	Prep	PrecSep_0			559089	04/07/22 10:23	BMP	TAL SL
Total/NA	Analysis	9320		1	562835	04/29/22 17:23	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563693	05/04/22 14:04	SCB	TAL SL

Client Sample ID: DUPE-001-96158-F-20220329-01

Lab Sample ID: 240-164477-4

Date Collected: 03/29/22 14:13

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			351279	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6010D		2	351960	05/04/22 10:54	CTB	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 20:32	SAP	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		4	353878	05/20/22 17:20	SAP	TAL CF
Total/NA	Prep	7470A			521599	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:27	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 13:24	JMR	TAL CAN
Total/NA	Analysis	300.0		2	523727	04/23/22 14:13	KMS	TAL CAN
Total/NA	Analysis	300.0		10	523727	04/23/22 15:18	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521673	04/04/22 12:41	KMS	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	562835	04/29/22 17:23	CLP	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: 240-164477-1

Client Sample ID: 96157-F-20220329-01

Date Collected: 03/29/22 15:08
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-5

Matrix: Water

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	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351805	05/02/22 18:48	CTB	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 20:36	SAP	TAL CF
Total/NA	Prep	7470A			521599	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:29	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 13:29	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/23/22 15:40	KMS	TAL CAN
Total/NA	Analysis	300.0		5	523727	04/23/22 16:01	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521673	04/04/22 12:41	KMS	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	562835	04/29/22 17:23	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	563693	05/04/22 14:04	SCB	TAL SL

Client Sample ID: EB-001-20220329-01

Date Collected: 03/29/22 15:30
Date Received: 04/02/22 08:00

Lab Sample ID: 240-164477-6

Matrix: Water

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	ACM2	TAL CF
Total/NA	Analysis	6010D		1	351805	05/02/22 18:50	CTB	TAL CF
Total/NA	Prep	3005A			351280	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020B		1	353783	05/19/22 20:40	SAP	TAL CF
Total/NA	Prep	7470A			521599	04/04/22 09:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	521770	04/04/22 16:31	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	522218	04/08/22 13:33	JMR	TAL CAN
Total/NA	Analysis	300.0		1	523727	04/23/22 16:23	KMS	TAL CAN
Total/NA	Analysis	SM 2540C		1	521673	04/04/22 12:41	KMS	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

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
Job ID: 240-164477-1
Project/Site: Federal CCR Wells

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	07-31-22
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	05-02-22
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
Job ID: 240-164477-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

Columbus
209

eurofins | Environment Testing America

Client Information	Sampler: Kemron	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740.373.4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List) D	6010B, 7470, 6020(See Metals List) N	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) D	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) N	9315_Ra226, 9320_Ra228 D	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity) N	Total Number of containers	Special Instructions/Note:
			Preservation Code:											
2016-08-F-20220329-01	032922	1030	G	W		Y	1	1	2	1				
2016-08-F-20220329-MS	03 29 22	1030	G	W			1	1	2	1				
2016-08-F-20220329-MSD	032922	1030	G	W			1	1	2	1				
2016-07-F-20220329-01	03 29 22	1234	G	W			1	1	2	1				
96158-F-20220329-01	032922	1413	G	W			1	1	2	1				
Dupe-001-96158-F-20220329-01	032922	1413	G	W			1	1	2	1				
96157-F-20220329-01	032922	1508	G	W			1	1	2	1				
EB-001-20220329-01	032922	1530	G	W			1	1	2	1				

240-164477 Chain of Custody

Page 41 of 50

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		04/01/22 0830			4-1-22 1050	ETA
2		4-1-22 1700	ETA		4-2-22 0800	ETA
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/25/2022

Ver: 01/16/2019

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 164477**
Canton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Adam Gaussy

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 # 14 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 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? Yes (No)
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# 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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login # : 164477

Eurofins TestAmerica Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA (circled)	IR-14 (circled)	1.6	1.4	Wet Ice (circled)
TA (circled)	IR-14 (circled)	1.2	1.4	Wet Ice (circled)
TA (circled)	IR-14 (circled)	1.8	1.6	Wet Ice (circled)
TA (circled)	IR-14 (circled)	2.3	2.1	Wet Ice (circled)
TA (circled)	IR-14 (circled)	1.4	1.2	Wet Ice (circled)
TA (circled)	IR-14 (circled)	1.1	0.9	Wet Ice (circled)
TA Client Box Other	IR-14 IR-15			Wet Ice (circled)
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
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	

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2016-08-F-20220329-01	240-164477-G-1	Plastic 500ml - with Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-H-1	Plastic 500ml - with Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-I-1	Plastic 500ml - with Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-J-1	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-K-1	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-L-1	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-M-1	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-N-1	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-O-1	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-P-1	Plastic 250ml - with Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-Q-1	Plastic 250ml - with Nitric Acid	<2			
2016-08-F-20220329-01	240-164477-R-1	Plastic 250ml - with Nitric Acid	<2			
2016-07-F-20220329-01	240-164477-C-2	Plastic 500ml - with Nitric Acid	<2			
2016-07-F-20220329-01	240-164477-D-2	Plastic 1 liter - Nitric Acid	<2			
2016-07-F-20220329-01	240-164477-E-2	Plastic 1 liter - Nitric Acid	<2			
2016-07-F-20220329-01	240-164477-F-2	Plastic 250ml - with Nitric Acid	<2			
96158-F-20220329-01	240-164477-C-3	Plastic 500ml - with Nitric Acid	<2			
96158-F-20220329-01	240-164477-D-3	Plastic 1 liter - Nitric Acid	<2			
96158-F-20220329-01	240-164477-E-3	Plastic 1 liter - Nitric Acid	<2			
96158-F-20220329-01	240-164477-F-3	Plastic 250ml - with Nitric Acid	<2			
DUPE-001-96158-F-20220329-01	240-164477-C-4	Plastic 500ml - with Nitric Acid	<2			
DUPE-001-96158-F-20220329-01	240-164477-D-4	Plastic 1 liter - Nitric Acid	<2			
DUPE-001-96158-F-20220329-01	240-164477-E-4	Plastic 1 liter - Nitric Acid	<2			
DUPE-001-96158-F-20220329-01	240-164477-F-4	Plastic 250ml - with Nitric Acid	<2			
96157-F-20220329-01	240-164477-C-5	Plastic 500ml - with Nitric Acid	<2			
96157-F-20220329-01	240-164477-D-5	Plastic 1 liter - Nitric Acid	<2			
96157-F-20220329-01	240-164477-E-5	Plastic 1 liter - Nitric Acid	<2			
96157-F-20220329-01	240-164477-F-5	Plastic 250ml - with Nitric Acid	<2			
EB-001-20220329-01	240-164477-C-6	Plastic 500ml - with Nitric Acid	<2			
EB-001-20220329-01	240-164477-D-6	Plastic 1 liter - Nitric Acid	<2			
EB-001-20220329-01	240-164477-E-6	Plastic 1 liter - Nitric Acid	<2			
EB-001-20220329-01	240-164477-F-6	Plastic 250ml - with Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150379.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-164477-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 4/17/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2016-08-F-20220329-01 (240-164477-1)	3/29/22	10:30 Eastern		Water			X	X	X	6	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-08-F-20220329-01 (240-164477-1MS)	3/29/22	10:30 Eastern	MS	Water			X	X	X	1	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-08-F-20220329-01 (240-164477-1MSD)	3/29/22	10:30 Eastern	MSD	Water			X	X	X	1	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-07-F-20220329-01 (240-164477-2)	3/29/22	12:39 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96158-F-20220329-01 (240-164477-3)	3/29/22	14:13 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
DUPE-001-96158-F-20220329-01 (240-164477-4)	3/29/22	14:13 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96157-F-20220329-01 (240-164477-5)	3/29/22	15:08 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-20220329-01 (240-164477-6)	3/29/22	15:30 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

479/497/476
5/4T

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240-164477 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Canton

City/State: CITY Barberton | STATE OH | Project:

Receipt Information

Date/Time Received: DATE 4/5/22 | TIME 0945 | Received By: N

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other.

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes ☐ No	*If yes* Cooler ID	
Multiple Coolers?	☒ Yes ☐ No	*If yes* Cooler # 1 of 2	
Cooler Custody Seals Present? No	☐ Yes ☒ No	*If yes* Cooler custody seals intact? ☐ Yes ☐ No	
Sample Custody Seals Present? No	☐ Yes ☒ No	*If yes* Sample custody seals intact? ☐ Yes ☐ No	
Trip Blank Present?	☐ Yes ☒ No	*If yes* Which VOA samples are in cooler? ↓	

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other. ☒ NONE

Thermometer ID: P | Correction Factor (°C): -0.1

• **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 1	CONTAINER 2
Container(s) used	PLSDONithe →	→
Uncorrected Temp (°C)	11.9	11.1
Corrected Temp (°C)	11.8	11.0

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

479/482/497/497
494/475/476

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Linton

City/State: CITY Barberton STATE OH | Project:

Receipt Information

Date/Time Received: DATE 4/5/22 TIME 0945 | Received By: M

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other.

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes*	Cooler ID
Multiple Coolers?	☒ Yes	☐ No	*If yes*	Cooler # 2 of 2
Cooler Custody Seals Present? No	☐ Yes	☒ No	*If yes*	Cooler custody seals intact? ☐ Yes ☐
Sample Custody Seals Present? No	☐ Yes	☒ No	*If yes*	Sample custody seals intact? ☐ Yes ☐
Trip Blank Present?	☐ Yes	☒ No	*If yes*	Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☐ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other. ☒ NONE

Thermometer ID | Correction Factor (°C)

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Unoorrected Temp (°C) | Corrected Temp (°C)

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used	PL 500 Nitric	PL 500 Nitric
Uncorrected Temp (°C)	11.9	12.9
Corrected Temp (°C)	11.8	12.8

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes* Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Eurofins Canton
180 S Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins Environment Testing Ame ca

Client Information (Sub Contract Lab)	Sampler	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-150382.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin: Ohio	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note):		Job #: 240-164477 1
Address: 3019 Venture Way	Due Date Requested: 5/4/2022			
City: Cedar Falls	TAT Requested (days):			
State, Zip: IA, 50613				
Phone: 319-277-2401(Tel) 319-277-2425(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells	Project #: 24019633			
Site:	SSOW#:			

Preservation Codes:

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D/3005A_TOT (MOD) Boron	6020B/3005A_TOT 24 Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
2016-08-F-20220329-01 (240-164477 1)	3/29/22	10:30 Eastern		Water			X	X	3	
2016-08-F-20220329-01 (240-164477 1MS)	3/29/22	10:30 Eastern	MS	Water			X	X	1	
2016-08-F-20220329-01 (240-164477 1MSD)	3/29/22	10:30 Eastern	MSD	Water			X	X	1	
2016-07-F-20220329-01 (240-164477-2)	3/29/22	12:39 Eastern		Water			X	X	1	
96158-F-20220329-01 (240-164477-3)	3/29/22	14:13 Eastern		Water			X	X	1	
DUPE-001-96158-F-20220329-01 (240-164477-4)	3/29/22	14:13 Eastern		Water			X	X	1	
96157-F-20220329-01 (240-164477-5)	3/29/22	15:08 Eastern		Water			X	X	1	
EB-001-20220329-01 (240-164477-6)	3/29/22	15:30 Eastern		Water			X	X	1	

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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mandaly Black	4-4-22 1405	eotrc			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				4-5-22 945	

Custody Seals Intact:	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:
☐ Yes ☐ No		

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-164477-1

Login Number: 164477
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 </= 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 <6mm (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: 240-164477-1

Login Number: 164477
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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-165355-1
Client Project/Site: Gavin CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
4/27/2022 2:03:34 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

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.

Table of Contents

Definitions/Glossary

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

Job ID: 240-165355-1

Qualifiers

Metals

Qualifier	Qualifier Description
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.
¤	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 Wells

Job ID: 240-165355-1

Job ID: 240-165355-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-165355-1

Comments
No additional comments.

Receipt
The samples were received on 4/22/2022 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 2 coolers at receipt time were 2.0º C and 2.1º C.

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 Wells

Job ID: 240-165355-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL 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:

TAL 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: Gavin CCR Wells

Job ID: 240-165355-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-165355-1	2018-02	Water	04/20/22 13:45	04/22/22 08:00
240-165355-2	2018-03	Water	04/20/22 13:25	04/22/22 08:00
240-165355-3	2018-04	Water	04/20/22 12:45	04/22/22 08:00

Detection Summary

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

Job ID: 240-165355-1

Client Sample ID: 2018-02 — Lab Sample ID: 240-165355-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	390		100	57	ug/L	1		6010B	Total Recoverable
Calcium	61000		1000	580	ug/L	1		6020	Total Recoverable
Magnesium	18000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	5100		1000	220	ug/L	1		6020	Total Recoverable
Sodium	2300000		1000	330	ug/L	1		6020	Total Recoverable
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
Chloride	4600		50	14	mg/L	50		300.0	Total/NA
Fluoride	1.5		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	74		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	7100		100	78	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2018-03 — Lab Sample ID: 240-165355-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	330		100	57	ug/L	1		6010B	Total Recoverable
Calcium	210000		1000	580	ug/L	1		6020	Total Recoverable
Magnesium	48000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	4200		1000	220	ug/L	1		6020	Total Recoverable
Sodium	460000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	370		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	370		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	630		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	0.44		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	700		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	2200		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2018-04 — Lab Sample ID: 240-165355-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	270		100	57	ug/L	1		6010B	Total Recoverable
Calcium	61000		1000	580	ug/L	1		6020	Total Recoverable
Magnesium	17000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	4300		1000	220	ug/L	1		6020	Total Recoverable
Sodium	350000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	380		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	380		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	48		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.69		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	530		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	1300		20	16	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
Job ID: 240-165355-1
Project/Site: Gavin CCR Wells

Client Sample ID: 2018-02
Lab Sample ID: 240-165355-1
Date Collected: 04/20/22 13:45
Matrix: Water
Date Received: 04/22/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	390		100	57	ug/L		04/25/22 12:00	04/26/22 11:41	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	61000		1000	580	ug/L		04/25/22 12:00	04/26/22 16:44	1
Magnesium	18000		1000	200	ug/L		04/25/22 12:00	04/26/22 16:44	1
Potassium	5100		1000	220	ug/L		04/25/22 12:00	04/26/22 16:44	1
Sodium	2300000		1000	330	ug/L		04/25/22 12:00	04/26/22 16:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	270		5.0	2.6	mg/L			04/25/22 15:56	1
Bicarbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L			04/25/22 15:56	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/25/22 15:56	1
Chloride	4600		50	14	mg/L			04/26/22 02:54	50
Fluoride	1.5		0.25	0.12	mg/L			04/26/22 01:54	5
Sulfate	74		5.0	1.7	mg/L			04/26/22 01:54	5
Total Dissolved Solids	7100		100	78	mg/L			04/25/22 07:50	1

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-165355-1
Project/Site: Gavin CCR Wells

Client Sample ID: 2018-03
Lab Sample ID: 240-165355-2
Date Collected: 04/20/22 13:25
Matrix: Water
Date Received: 04/22/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	330		100	57	ug/L		04/25/22 12:00	04/26/22 11:45	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	210000		1000	580	ug/L		04/25/22 12:00	04/26/22 16:46	1
Magnesium	48000		1000	200	ug/L		04/25/22 12:00	04/26/22 16:46	1
Potassium	4200		1000	220	ug/L		04/25/22 12:00	04/26/22 16:46	1
Sodium	460000		1000	330	ug/L		04/25/22 12:00	04/26/22 16:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	370		5.0	2.6	mg/L			04/25/22 16:01	1
Bicarbonate Alkalinity as CaCO3	370		5.0	2.6	mg/L			04/25/22 16:01	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/25/22 16:01	1
Chloride	630		10	2.8	mg/L			04/26/22 03:34	10
Fluoride	0.44		0.10	0.048	mg/L			04/26/22 03:14	2
Sulfate	700		10	3.5	mg/L			04/26/22 03:34	10
Total Dissolved Solids	2200		40	31	mg/L			04/25/22 07:50	1

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-165355-1
Project/Site: Gavin CCR Wells

Client Sample ID: 2018-04
Lab Sample ID: 240-165355-3
Date Collected: 04/20/22 12:45
Matrix: Water
Date Received: 04/22/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	270		100	57	ug/L		04/25/22 12:00	04/26/22 11:50	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	61000		1000	580	ug/L		04/25/22 12:00	04/26/22 16:49	1
Magnesium	17000		1000	200	ug/L		04/25/22 12:00	04/26/22 16:49	1
Potassium	4300		1000	220	ug/L		04/25/22 12:00	04/26/22 16:49	1
Sodium	350000		1000	330	ug/L		04/25/22 12:00	04/26/22 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	380		5.0	2.6	mg/L			04/25/22 16:05	1
Bicarbonate Alkalinity as CaCO3	380		5.0	2.6	mg/L			04/25/22 16:05	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/25/22 16:05	1
Chloride	48		1.0	0.28	mg/L			04/26/22 03:54	1
Fluoride	0.69		0.050	0.024	mg/L			04/26/22 03:54	1
Sulfate	530		5.0	1.7	mg/L			04/26/22 04:15	5
Total Dissolved Solids	1300		20	16	mg/L			04/25/22 07:50	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-523877/1-A
Matrix: Water
Analysis Batch: 524135

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 523877

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		04/25/22 12:00	04/26/22 10:51	1

Lab Sample ID: LCS 240-523877/2-A
Matrix: Water
Analysis Batch: 524135

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 523877

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1090		ug/L		109	80 - 120

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-523877/1-A
Matrix: Water
Analysis Batch: 524142

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 523877

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		04/25/22 12:00	04/26/22 16:05	1
Magnesium	1000	U	1000	200	ug/L		04/25/22 12:00	04/26/22 16:05	1
Potassium	1000	U	1000	220	ug/L		04/25/22 12:00	04/26/22 16:05	1
Sodium	1000	U	1000	330	ug/L		04/25/22 12:00	04/26/22 16:05	1

Lab Sample ID: LCS 240-523877/3-A
Matrix: Water
Analysis Batch: 524142

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 523877

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	25000		ug/L		100	80 - 120
Magnesium	25000	25100		ug/L		100	80 - 120
Potassium	25000	25300		ug/L		101	80 - 120
Sodium	25000	24800		ug/L		99	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-523958/4
Matrix: Water
Analysis Batch: 523958

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			04/25/22 14:42	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/25/22 14:42	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			04/25/22 14:42	1

Lab Sample ID: LCS 240-523958/3
Matrix: Water
Analysis Batch: 523958

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 - Anions, Ion Chromatography

Lab Sample ID: MB 240-523895/3
Matrix: Water
Analysis Batch: 523895

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			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
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

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-523795/1
Matrix: Water
Analysis Batch: 523795

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			04/25/22 07:50	1

Lab Sample ID: LCS 240-523795/2
Matrix: Water
Analysis Batch: 523795

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	482	462		mg/L		96	80 - 120

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-165355-1
Project/Site: Gavin CCR Wells

Metals

Prep Batch: 523877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165355-1	2018-02	Total Recoverable	Water	3005A	
240-165355-2	2018-03	Total Recoverable	Water	3005A	
240-165355-3	2018-04	Total Recoverable	Water	3005A	
MB 240-523877/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-523877/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-523877/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 524135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165355-1	2018-02	Total Recoverable	Water	6010B	523877
240-165355-2	2018-03	Total Recoverable	Water	6010B	523877
240-165355-3	2018-04	Total Recoverable	Water	6010B	523877
MB 240-523877/1-A	Method Blank	Total Recoverable	Water	6010B	523877
LCS 240-523877/2-A	Lab Control Sample	Total Recoverable	Water	6010B	523877

Analysis Batch: 524142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165355-1	2018-02	Total Recoverable	Water	6020	523877
240-165355-2	2018-03	Total Recoverable	Water	6020	523877
240-165355-3	2018-04	Total Recoverable	Water	6020	523877
MB 240-523877/1-A	Method Blank	Total Recoverable	Water	6020	523877
LCS 240-523877/3-A	Lab Control Sample	Total Recoverable	Water	6020	523877

General Chemistry

Analysis Batch: 523795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165355-1	2018-02	Total/NA	Water	SM 2540C	
240-165355-2	2018-03	Total/NA	Water	SM 2540C	
240-165355-3	2018-04	Total/NA	Water	SM 2540C	
MB 240-523795/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-523795/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 523895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165355-1	2018-02	Total/NA	Water	300.0	
240-165355-1	2018-02	Total/NA	Water	300.0	
240-165355-2	2018-03	Total/NA	Water	300.0	
240-165355-2	2018-03	Total/NA	Water	300.0	
240-165355-3	2018-04	Total/NA	Water	300.0	
240-165355-3	2018-04	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	

Analysis Batch: 523958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165355-1	2018-02	Total/NA	Water	2320B-1997	
240-165355-2	2018-03	Total/NA	Water	2320B-1997	
240-165355-3	2018-04	Total/NA	Water	2320B-1997	
MB 240-523958/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-523958/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Lab Chronicle

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

Job ID: 240-165355-1

Client Sample ID: 2018-02

Date Collected: 04/20/22 13:45
Date Received: 04/22/22 08:00

Lab Sample ID: 240-165355-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			523877	04/25/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	524135	04/26/22 11:41	KLC	TAL CAN
Total Recoverable	Prep	3005A			523877	04/25/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	524142	04/26/22 16:44	RKT	TAL CAN
Total/NA	Analysis	2320B-1997		1	523958	04/25/22 15:56	BLW	TAL CAN
Total/NA	Analysis	300.0		5	523895	04/26/22 01:54	JMB	TAL CAN
Total/NA	Analysis	300.0		50	523895	04/26/22 02:54	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	523795	04/25/22 07:50	AJ	TAL CAN

Client Sample ID: 2018-03

Date Collected: 04/20/22 13:25
Date Received: 04/22/22 08:00

Lab Sample ID: 240-165355-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			523877	04/25/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	524135	04/26/22 11:45	KLC	TAL CAN
Total Recoverable	Prep	3005A			523877	04/25/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	524142	04/26/22 16:46	RKT	TAL CAN
Total/NA	Analysis	2320B-1997		1	523958	04/25/22 16:01	BLW	TAL CAN
Total/NA	Analysis	300.0		2	523895	04/26/22 03:14	JMB	TAL CAN
Total/NA	Analysis	300.0		10	523895	04/26/22 03:34	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	523795	04/25/22 07:50	AJ	TAL CAN

Client Sample ID: 2018-04

Date Collected: 04/20/22 12:45
Date Received: 04/22/22 08:00

Lab Sample ID: 240-165355-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			523877	04/25/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	524135	04/26/22 11:50	KLC	TAL CAN
Total Recoverable	Prep	3005A			523877	04/25/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	524142	04/26/22 16:49	RKT	TAL CAN
Total/NA	Analysis	2320B-1997		1	523958	04/25/22 16:05	BLW	TAL CAN
Total/NA	Analysis	300.0		1	523895	04/26/22 03:54	JMB	TAL CAN
Total/NA	Analysis	300.0		5	523895	04/26/22 04:15	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	523795	04/25/22 07:50	AJ	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-165355-1
Project/Site: Gavin CCR Wells

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	07-31-22
Iowa	State	421	06-01-23
Kansas	NELAP	E-10336	04-30-22
Kentucky (UST)	State	112225	02-23-22 *
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	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica Columbus 209

Client Information	Sampler: MM / CS	Lab PM: McFadden, John	Carrier Tracking No(s):	COC No: 107
Client Contact: Taylor Huffman	Phone: 740-925-3171	E-Mail: john.mcfadden@testamericainc.com		Page: Page of
Company: Lightstone Generation Gavin Power LLC				Job #:

Analysis Requested

Address: 7397 OH-7	Due Date Requested:	
City: Cheshire	TAT Requested (days):	
State, Zip: OH, 45620		
Phone: 740-925-3171(Tel)	PO #: 2911431	
Email: Taylor.Huffman@lightstonegen.com	WO #:	
Project Name: CCR WELLS	Project #: 24019633	
Site: GAVIN LLC	SSOW#:	

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other, Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B,6020(Calcium, Magnesium, Sodium, Potassium)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers
			Preservation Code:				D	N	N	
2018-02	4/20/22	13:45	G	W	N		-	-	-	3
2018-03	↓	13:25	↓	↓	N		-	-	-	3
2018-04	↓	12:45	↓	↓	N		-	-	-	3

240-165355 Chain of Custody

Possible Hazard Identification
[X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown [ ] Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] Return To Client [X] Disposal By Lab [ ] Archive for ____ Months

Deliverable Requested: I, II, III, IV, Other (specify

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 4-21-22 0827	Company: GAVIN	Received by:	Date/Time: 4-21-22 1130	Company: ETA
Relinquished by:	Date/Time: 4-21-22 1700	Company: ETA	Received by:	Date/Time: 4-22-22 0800	Company: ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

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4/27/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 165355**
Canton Facility

Client Light+Stone Generation Site Name _____ Cooler unpacked by: Justin H

Cooler Received on 4-22-22 Opened on 4-22-22

FedEx: 1st Grd Exp UPS FAS (Clipped) 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 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# **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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	2.0	2.0	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	2.1	2.1	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

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-172916-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
9/20/2022 4:43:42 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-172916-1

Qualifiers

Metals

Qualifier	Qualifier Description
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.
¤	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: 240-172916-1

Job ID: 240-172916-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-172916-1

Comments
No additional comments.

Receipt
The samples were received on 9/13/2022 1:10 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.6º C.

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: Federal CCR Wells

Job ID: 240-172916-1

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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAN
7470A	Preparation, Mercury	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

Job ID: 240-172916-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-172916-1	2016-03-F-20220912-01	Water	09/12/22 11:00	09/13/22 13:10
240-172916-2	2016-04-F-20220912-01	Water	09/12/22 11:54	09/13/22 13:10

Detection Summary

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

Job ID: 240-172916-1

Client Sample ID: 2016-03-F-20220912-01 — Lab Sample ID: 240-172916-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2800		100	57	ug/L	1		6010D	Total Recoverable
Calcium	490000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	110000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	7100		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	96000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	290		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	290		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	0.13		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	1700		10	3.5	mg/L	10		300.0	Total/NA

Client Sample ID: 2016-04-F-20220912-01 — Lab Sample ID: 240-172916-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3000		100	57	ug/L	1		6010D	Total Recoverable
Calcium	460000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	90000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	7000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	57000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	290		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	290		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	0.13		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	1700		10	3.5	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

Job ID: 240-172916-1

Client Sample ID: 2016-03-F-20220912-01

Date Collected: 09/12/22 11:00
Date Received: 09/13/22 13:10

Lab Sample ID: 240-172916-1

Matrix: Water

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2800**		100	57	ug/L		09/15/22 12:00	09/16/22 22:48	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**490000**		1000	580	ug/L		09/15/22 12:00	09/16/22 16:42	1
Magnesium	**110000**		1000	200	ug/L		09/15/22 12:00	09/16/22 16:42	1
Potassium	**7100**		1000	220	ug/L		09/15/22 12:00	09/16/22 16:42	1
Sodium	**96000**		1000	330	ug/L		09/15/22 12:00	09/16/22 16:42	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		09/14/22 12:00	09/15/22 19:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**290**		5.0	2.6	mg/L			09/15/22 15:26	1
Bicarbonate Alkalinity as CaCO3	**290**		5.0	2.6	mg/L			09/15/22 15:26	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/15/22 15:26	1
Chloride	**26**		1.0	0.28	mg/L			09/20/22 05:19	1
Fluoride	**0.13**		0.050	0.024	mg/L			09/20/22 05:19	1
Sulfate	**1700**		10	3.5	mg/L			09/20/22 05:39	10

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-172916-1
Project/Site: Federal CCR Wells

Client Sample ID: 2016-04-F-20220912-01
Lab Sample ID: 240-172916-2

Date Collected: 09/12/22 11:54
Matrix: Water
Date Received: 09/13/22 13:10

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3000**		100	57	ug/L		09/15/22 12:00	09/16/22 22:52	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**460000**		1000	580	ug/L		09/15/22 12:00	09/16/22 16:45	1
Magnesium	**90000**		1000	200	ug/L		09/15/22 12:00	09/16/22 16:45	1
Potassium	**7000**		1000	220	ug/L		09/15/22 12:00	09/16/22 16:45	1
Sodium	**57000**		1000	330	ug/L		09/15/22 12:00	09/16/22 16:45	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		09/14/22 12:00	09/15/22 19:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**290**		5.0	2.6	mg/L			09/15/22 15:30	1
Bicarbonate Alkalinity as CaCO3	**290**		5.0	2.6	mg/L			09/15/22 15:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/15/22 15:30	1
Chloride	**26**		1.0	0.28	mg/L			09/20/22 05:59	1
Fluoride	**0.13**		0.050	0.024	mg/L			09/20/22 05:59	1
Sulfate	**1700**		10	3.5	mg/L			09/20/22 06:59	10

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-542898/1-A
Matrix: Water
Analysis Batch: 543093

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 542898

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/15/22 12:00	09/16/22 13:24	1

Lab Sample ID: LCS 240-542898/2-A
Matrix: Water
Analysis Batch: 543093

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 542898

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1050		ug/L		105	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-542898/1-A
Matrix: Water
Analysis Batch: 543094

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 542898

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/15/22 12:00	09/16/22 15:00	1
Magnesium	1000	U	1000	200	ug/L		09/15/22 12:00	09/16/22 15:00	1
Potassium	1000	U	1000	220	ug/L		09/15/22 12:00	09/16/22 15:00	1
Sodium	1000	U	1000	330	ug/L		09/15/22 12:00	09/16/22 15:00	1

Lab Sample ID: LCS 240-542898/3-A
Matrix: Water
Analysis Batch: 543094

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 542898

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	25900		ug/L		103	80 - 120
Magnesium	25000	25400		ug/L		102	80 - 120
Potassium	25000	25000		ug/L		100	80 - 120
Sodium	25000	25700		ug/L		103	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-542682/1-A
Matrix: Water
Analysis Batch: 543027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 542682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/14/22 12:00	09/15/22 18:22	1

Lab Sample ID: LCS 240-542682/2-A
Matrix: Water
Analysis Batch: 543027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 542682

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.60		ug/L		92	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-543035/30
Matrix: Water
Analysis Batch: 543035

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			09/15/22 12:43	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/15/22 12:43	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/15/22 12:43	1

Lab Sample ID: MB 240-543035/56
Matrix: Water
Analysis Batch: 543035

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			09/15/22 14:25	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/15/22 14:25	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/15/22 14:25	1

Lab Sample ID: LCS 240-543035/55
Matrix: Water
Analysis Batch: 543035

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	115		mg/L		95	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-543321/3
Matrix: Water
Analysis Batch: 543321

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			09/19/22 22:56	1
Fluoride	0.050	U	0.050	0.024	mg/L			09/19/22 22:56	1
Sulfate	1.0	U	1.0	0.35	mg/L			09/19/22 22:56	1

Lab Sample ID: LCS 240-543321/4
Matrix: Water
Analysis Batch: 543321

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.7		mg/L		97	90 - 110
Fluoride	2.50	2.45		mg/L		98	90 - 110
Sulfate	50.0	49.1		mg/L		98	90 - 110

Metals

Prep Batch: 542682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172916-1	2016-03-F-20220912-01	Total/NA	Water	7470A	
240-172916-2	2016-04-F-20220912-01	Total/NA	Water	7470A	
MB 240-542682/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-542682/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 542898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172916-1	2016-03-F-20220912-01	Total Recoverable	Water	3005A	
240-172916-2	2016-04-F-20220912-01	Total Recoverable	Water	3005A	
MB 240-542898/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-542898/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-542898/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 543027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172916-1	2016-03-F-20220912-01	Total/NA	Water	7470A	542682
240-172916-2	2016-04-F-20220912-01	Total/NA	Water	7470A	542682
MB 240-542682/1-A	Method Blank	Total/NA	Water	7470A	542682
LCS 240-542682/2-A	Lab Control Sample	Total/NA	Water	7470A	542682

Analysis Batch: 543093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172916-1	2016-03-F-20220912-01	Total Recoverable	Water	6010D	542898
240-172916-2	2016-04-F-20220912-01	Total Recoverable	Water	6010D	542898
MB 240-542898/1-A	Method Blank	Total Recoverable	Water	6010D	542898
LCS 240-542898/2-A	Lab Control Sample	Total Recoverable	Water	6010D	542898

Analysis Batch: 543094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172916-1	2016-03-F-20220912-01	Total Recoverable	Water	6020B	542898
240-172916-2	2016-04-F-20220912-01	Total Recoverable	Water	6020B	542898
MB 240-542898/1-A	Method Blank	Total Recoverable	Water	6020B	542898
LCS 240-542898/3-A	Lab Control Sample	Total Recoverable	Water	6020B	542898

General Chemistry

Analysis Batch: 543035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172916-1	2016-03-F-20220912-01	Total/NA	Water	2320B-1997	
240-172916-2	2016-04-F-20220912-01	Total/NA	Water	2320B-1997	
MB 240-543035/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-543035/56	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-543035/55	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 543321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172916-1	2016-03-F-20220912-01	Total/NA	Water	300.0	
240-172916-1	2016-03-F-20220912-01	Total/NA	Water	300.0	
240-172916-2	2016-04-F-20220912-01	Total/NA	Water	300.0	
240-172916-2	2016-04-F-20220912-01	Total/NA	Water	300.0	
MB 240-543321/3	Method Blank	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 543321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-543321/4	Lab Control Sample	Total/NA	Water	300.0	

Lab Chronicle

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

Job ID: 240-172916-1

Client Sample ID: 2016-03-F-20220912-01

Lab Sample ID: 240-172916-1

Date Collected: 09/12/22 11:00

Matrix: Water

Date Received: 09/13/22 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			542898	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6010D		1	543093	KLC	EET CAN	09/16/22 22:48
Total Recoverable	Prep	3005A			542898	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6020B		1	543094	RKT	EET CAN	09/16/22 16:42
Total/NA	Prep	7470A			542682	SHB	EET CAN	09/14/22 12:00
Total/NA	Analysis	7470A		1	543027	MRL	EET CAN	09/15/22 19:15
Total/NA	Analysis	2320B-1997		1	543035	AJ	EET CAN	09/15/22 15:26
Total/NA	Analysis	300.0		1	543321	JMB	EET CAN	09/20/22 05:19
Total/NA	Analysis	300.0		10	543321	JMB	EET CAN	09/20/22 05:39

Client Sample ID: 2016-04-F-20220912-01

Lab Sample ID: 240-172916-2

Date Collected: 09/12/22 11:54

Matrix: Water

Date Received: 09/13/22 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			542898	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6010D		1	543093	KLC	EET CAN	09/16/22 22:52
Total Recoverable	Prep	3005A			542898	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6020B		1	543094	RKT	EET CAN	09/16/22 16:45
Total/NA	Prep	7470A			542682	SHB	EET CAN	09/14/22 12:00
Total/NA	Analysis	7470A		1	543027	MRL	EET CAN	09/15/22 19:17
Total/NA	Analysis	2320B-1997		1	543035	AJ	EET CAN	09/15/22 15:30
Total/NA	Analysis	300.0		1	543321	JMB	EET CAN	09/20/22 05:59
Total/NA	Analysis	300.0		10	543321	JMB	EET CAN	09/20/22 06:59

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
Job ID: 240-172916-1
Project/Site: Federal CCR Wells

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	02-23-23
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 TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

2.6/26

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Costo	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226; 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
2016-03-F-20220912-01	9-12-22	1100	G	W	N		1	1	2	1		
2016-04-F-20220912-01	9-12-22	1154	G	W	N		1	1	2	1		

240-172916 Chain of Custody

BC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9-13-22/0840	KEMRON	Auto Options/Tom Edwards	9-13-22 0950 hrs	Auto Options
Relinquished by: Tom Edwards	Date/Time: 9-13-22/1310	Company Auto Options	Received by: [signature]	Date/Time: 9-13-22 1310	Company HA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

9/20/2022

Eurofins - Canton Sample Receipt Form/Narrative Login # :_____
Barberton Facility

Client Lightstone Site Name_____ Cooler unpacked by: Tammy Boyer

Cooler Received on 9-13-22 Opened on 9-13-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other_____

Receipt After-hours: Drop-off Date/Time_____ Storage Location_____

Eurofins Cooler # 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 +0.7 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp 2.6 °C Corrected Cooler Temp 2.6 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-157153.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-172916-1
Address: 13715 Rider Trail North,	Due Date Requested: 9/26/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
Preservation Code:											
2016-03-F-20220912-01 (240-172916-1)	9/12/22	11:00 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-04-F-20220912-01 (240-172916-2)	9/12/22	11:54 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet

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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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
FED EX	9-13-22 15:30	EETNC	FED EX		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: SEP 13 2022 0900	Company EQASTL
Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time:	Company

Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:

9/20/2022

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-172921-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
10/18/2022 9:11:23 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-172921-1

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
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-172921-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-172921-1

Receipt
The samples were received on 9/13/2022 1:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.6°C

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

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

Gas Flow Proportional Counter
Method 9315_Ra226: Radium-226 Prep Batch 160-582201The following samples were prepared at a reduced aliquot due to Matrix: 96157-F-20220912-01 (240-172921-1), 96158-F-20220912-01 (240-172921-2) and 2016-06-F-20220912-01 (240-172921-3). 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 582201Any 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.96157-F-20220912-01 (240-172921-1), 96158-F-20220912-01 (240-172921-2), 2016-06-F-20220912-01 (240-172921-3), EB-001-F-20220912-01 (240-172921-4), (LCS 160-582201/2-A), (LCSD 160-582201/3-A) and (MB 160-582201/1-A)

Method 9315_Ra226: Radium-226 batch 582201The LCS recovered at (65%). 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 (62-125%) per method requirements. The LCS passes, no further action is required (LCS 160-582201/2-A)

Method 9320_Ra228: Radium-228 batch 582207The method blank (MB) has activity above the MDC and RL. The following associated samples are below the reporting limit for the contaminant therefore, re-analysis is not required. The data have been reported. (MB 160-582207/1-A)

Method 9320_Ra228: Radium-228 batch 582207Any 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. 96157-F-20220912-01 (240-172921-1), (LCS 160-582207/2-A), (LCSD 160-582207/3-A) and (MB 160-582207/1-A)

Method 9320_Ra228: Radium 228 Batch 160-585515: 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. 96158-F-20220912-01 (240-172921-2), 2016-06-F-20220912-01 (240-172921-3), EB-001-F-20220912-01 (240-172921-4), (LCS 160-585515/2-A), (LCSD 160-585515/3-A) and (MB 160-585515/1-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.

Method Summary

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

Job ID: 240-172921-1

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
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: 240-172921-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-172921-1	96157-F-20220912-01	Water	09/12/22 13:29	09/13/22 13:10
240-172921-2	96158-F-20220912-01	Water	09/12/22 14:06	09/13/22 13:10
240-172921-3	2016-06-F-20220912-01	Water	09/12/22 15:16	09/13/22 13:10
240-172921-4	EB-001-F-20220912-01	Water	09/12/22 16:00	09/13/22 13:10

Detection Summary

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

Job ID: 240-172921-1

Client Sample ID: 96157-F-20220912-01 — Lab Sample ID: 240-172921-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	120		100	57	ug/L	1		6010D	Total Recoverable
Calcium	51000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	210000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	380		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	380		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	210		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	0.86		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	3.4		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: 96158-F-20220912-01 — Lab Sample ID: 240-172921-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	380		100	57	ug/L	1		6010D	Total Recoverable
Calcium	64000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	14000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	730000		5000	1600	ug/L	5		6020B	Total Recoverable
Total Alkalinity	340		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	340		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1100		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	1.2		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	21		5.0	1.7	mg/L	5		300.0	Total/NA

Client Sample ID: 2016-06-F-20220912-01 — Lab Sample ID: 240-172921-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	470		100	57	ug/L	1		6010D	Total Recoverable
Calcium	4800		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	1500		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	4800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	700000		5000	1600	ug/L	5		6020B	Total Recoverable
Total Alkalinity	530		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	490		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	43		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	630		20	5.7	mg/L	20		300.0	Total/NA
Fluoride	5.7		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	100		2.0	0.70	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 240-172921-1

Client Sample ID: EB-001-F-20220912-01 — Lab Sample ID: 240-172921-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	360	J	1000	330	ug/L	1		6020B	Total Recoverable
Chloride	0.51	J	1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.024	J	0.050	0.024	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

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

Job ID: 240-172921-1

Client Sample ID: 96157-F-20220912-01

Date Collected: 09/12/22 13:29
Date Received: 09/13/22 13:10

Lab Sample ID: 240-172921-1

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	120		100	57	ug/L		09/15/22 12:00	09/20/22 18:34	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	51000		1000	580	ug/L		09/15/22 12:00	09/19/22 18:14	1
Magnesium	12000		1000	200	ug/L		09/15/22 12:00	09/19/22 18:14	1
Potassium	1600		1000	220	ug/L		09/15/22 12:00	09/19/22 18:14	1
Sodium	210000		1000	330	ug/L		09/15/22 12:00	09/19/22 18:14	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		09/14/22 12:00	09/15/22 19:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	380		5.0	2.6	mg/L			09/20/22 20:41	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	380		5.0	2.6	mg/L			09/20/22 20:41	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/20/22 20:41	1
Chloride (MCAWW 300.0)	210		10	2.8	mg/L			10/04/22 01:11	10
Fluoride (MCAWW 300.0)	0.86		0.050	0.024	mg/L			10/04/22 00:49	1
Sulfate (MCAWW 300.0)	3.4		1.0	0.35	mg/L			10/04/22 00:49	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	0.818		0.327	0.336	1.00	0.323	pCi/L	09/15/22 09:10	10/10/22 21:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*09/15/22 09:10*	*10/10/22 21:38*	*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	0.724		0.425	0.431	1.00	0.618	pCi/L	09/15/22 09:44	10/10/22 12:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.1*		*40 - 110*	*09/15/22 09:44*	*10/10/22 12:18*	*1*
Y Carrier	*87.9*		*40 - 110*	*09/15/22 09:44*	*10/10/22 12:18*	*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	1.54		0.536	0.546	5.00	0.618	pCi/L		10/17/22 16:58	1

Client Sample ID: 96158-F-20220912-01
Lab Sample ID: 240-172921-2

Date Collected: 09/12/22 14:06
Matrix: Water
Date Received: 09/13/22 13:10

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	380		100	57	ug/L		09/15/22 12:00	09/20/22 18:38	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	64000		1000	580	ug/L		09/15/22 12:00	09/19/22 18:16	1
Magnesium	14000		1000	200	ug/L		09/15/22 12:00	09/19/22 18:16	1
Potassium	3300		1000	220	ug/L		09/15/22 12:00	09/19/22 18:16	1
Sodium	730000		5000	1600	ug/L		09/15/22 12:00	09/20/22 18:14	5

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		09/14/22 12:00	09/15/22 19:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	340		5.0	2.6	mg/L			09/20/22 20:46	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	340		5.0	2.6	mg/L			09/20/22 20:46	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/20/22 20:46	1
Chloride (MCAWW 300.0)	1100		25	7.1	mg/L			10/04/22 03:00	25
Fluoride (MCAWW 300.0)	1.2		0.25	0.12	mg/L			10/04/22 02:38	5
Sulfate (MCAWW 300.0)	21		5.0	1.7	mg/L			10/04/22 02:38	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.920		0.344	0.354	1.00	0.331	pCi/L	09/15/22 09:10	10/10/22 21:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*09/15/22 09:10*	*10/10/22 21:38*	*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	1.76		0.445	0.474	1.00	0.464	pCi/L	10/11/22 15:41	10/14/22 12:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.6*		*40 - 110*	*10/11/22 15:41*	*10/14/22 12:31*	*1*
Y Carrier	*87.1*		*40 - 110*	*10/11/22 15:41*	*10/14/22 12:31*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.68		0.562	0.592	5.00	0.464	pCi/L		10/17/22 16:58	1

Client Sample ID: 2016-06-F-20220912-01
Lab Sample ID: 240-172921-3

Date Collected: 09/12/22 15:16
Matrix: Water
Date Received: 09/13/22 13:10

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	470		100	57	ug/L		09/15/22 12:00	09/20/22 18:43	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	4800		1000	580	ug/L		09/15/22 12:00	09/19/22 18:19	1
Magnesium	1500		1000	200	ug/L		09/15/22 12:00	09/19/22 18:19	1
Potassium	4800		1000	220	ug/L		09/15/22 12:00	09/19/22 18:19	1
Sodium	700000		5000	1600	ug/L		09/15/22 12:00	09/20/22 18:16	5

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		09/14/22 12:00	09/15/22 19:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	530		5.0	2.6	mg/L			09/20/22 21:06	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	490		5.0	2.6	mg/L			09/20/22 21:06	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	43		5.0	2.6	mg/L			09/20/22 21:06	1
Chloride (MCAWW 300.0)	630		20	5.7	mg/L			10/04/22 03:43	20
Fluoride (MCAWW 300.0)	5.7		0.10	0.048	mg/L			10/04/22 03:21	2
Sulfate (MCAWW 300.0)	100		2.0	0.70	mg/L			10/04/22 03:21	2

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	0.278		0.199	0.200	1.00	0.273	pCi/L	09/15/22 09:10	10/11/22 18:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*40 - 110*	*09/15/22 09:10*	*10/11/22 18:03*	*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	0.437	U	0.314	0.316	1.00	0.473	pCi/L	10/11/22 15:41	10/14/22 12:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.9*		*40 - 110*	*10/11/22 15:41*	*10/14/22 12:31*	*1*
Y Carrier	*85.6*		*40 - 110*	*10/11/22 15:41*	*10/14/22 12:31*	*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	0.716		0.372	0.374	5.00	0.473	pCi/L		10/17/22 16:58	1

Client Sample ID: EB-001-F-20220912-01

Date Collected: 09/12/22 16:00
Date Received: 09/13/22 13:10

Lab Sample ID: 240-172921-4

Matrix: Water

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		09/15/22 12:00	09/20/22 18:47	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		09/15/22 12:00	09/19/22 18:21	1
Magnesium	1000	U	1000	200	ug/L		09/15/22 12:00	09/19/22 18:21	1
Potassium	1000	U	1000	220	ug/L		09/15/22 12:00	09/19/22 18:21	1
Sodium	**360**	**J**	1000	330	ug/L		09/15/22 12:00	09/19/22 18:21	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		09/14/22 12:00	09/15/22 19:13	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			09/20/22 21:10	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/20/22 21:10	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/20/22 21:10	1
Chloride (MCAWW 300.0)	**0.51**	**J**	1.0	0.28	mg/L			10/04/22 01:33	1
Fluoride (MCAWW 300.0)	**0.024**	**J**	0.050	0.024	mg/L			10/04/22 01:33	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			10/04/22 01:33	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	0.338	U	0.248	0.249	1.00	0.361	pCi/L	09/15/22 09:10	10/10/22 21:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.1*		*40 - 110*	*09/15/22 09:10*	*10/10/22 21:57*	*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	0.368	U	0.278	0.280	1.00	0.423	pCi/L	10/11/22 15:41	10/14/22 12:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.6*		*40 - 110*	*10/11/22 15:41*	*10/14/22 12:32*	*1*
Y Carrier	*88.6*		*40 - 110*	*10/11/22 15:41*	*10/14/22 12:32*	*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	**0.707**		0.373	0.375	5.00	0.423	pCi/L		10/17/22 16:58	1

Tracer/Carrier Summary

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

Job ID: 240-172921-1

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)
240-172921-1	96157-F-20220912-01	97.1
240-172921-2	96158-F-20220912-01	101
240-172921-3	2016-06-F-20220912-01	94.3
240-172921-4	EB-001-F-20220912-01	93.1
LCS 160-582201/2-A	Lab Control Sample	81.8
LCSD 160-582201/3-A	Lab Control Sample Dup	90.2
MB 160-582201/1-A	Method Blank	86.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-172921-1	96157-F-20220912-01	97.1	87.9
240-172921-2	96158-F-20220912-01	94.6	87.1
240-172921-3	2016-06-F-20220912-01	90.9	85.6
240-172921-4	EB-001-F-20220912-01	95.6	88.6
LCS 160-582207/2-A	Lab Control Sample	81.8	86.7
LCS 160-585515/2-A	Lab Control Sample	96.1	87.9
LCSD 160-582207/3-A	Lab Control Sample Dup	90.2	86.4
LCSD 160-585515/3-A	Lab Control Sample Dup	103	87.1
MB 160-582207/1-A	Method Blank	86.2	86.4
MB 160-585515/1-A	Method Blank	94.9	87.5

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-542889/1-A
Matrix: Water
Analysis Batch: 543587

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 542889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/15/22 12:00	09/20/22 15:57	1

Lab Sample ID: LCS 240-542889/2-A
Matrix: Water
Analysis Batch: 543587

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 542889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	995		ug/L		100	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-542889/1-A
Matrix: Water
Analysis Batch: 543302

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 542889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/15/22 12:00	09/19/22 16:47	1
Magnesium	1000	U	1000	200	ug/L		09/15/22 12:00	09/19/22 16:47	1
Potassium	1000	U	1000	220	ug/L		09/15/22 12:00	09/19/22 16:47	1
Sodium	1000	U	1000	330	ug/L		09/15/22 12:00	09/19/22 16:47	1

Lab Sample ID: LCS 240-542889/3-A
Matrix: Water
Analysis Batch: 543302

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 542889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24600		ug/L		98	80 - 120
Magnesium	25000	24800		ug/L		99	80 - 120
Potassium	25000	23700		ug/L		95	80 - 120
Sodium	25000	25000		ug/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-542682/1-A
Matrix: Water
Analysis Batch: 543027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 542682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/14/22 12:00	09/15/22 18:22	1

Lab Sample ID: LCS 240-542682/2-A
Matrix: Water
Analysis Batch: 543027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 542682

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.60		ug/L		92	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-543730/30
Matrix: Water
Analysis Batch: 543730

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			09/20/22 18:57	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/20/22 18:57	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/20/22 18:57	1

Lab Sample ID: MB 240-543730/4
Matrix: Water
Analysis Batch: 543730

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			09/20/22 17:01	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/20/22 17:01	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/20/22 17:01	1

Lab Sample ID: MB 240-543730/56
Matrix: Water
Analysis Batch: 543730

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			09/20/22 20:54	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/20/22 20:54	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/20/22 20:54	1

Lab Sample ID: LCS 240-543730/29
Matrix: Water
Analysis Batch: 543730

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	123		mg/L		101	86 - 123		

Lab Sample ID: LCS 240-543730/55
Matrix: Water
Analysis Batch: 543730

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		

Lab Sample ID: 240-172921-3 DU
Matrix: Water
Analysis Batch: 543730

Client Sample ID: 2016-06-F-20220912-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	530			518		mg/L				3	20
Bicarbonate Alkalinity as CaCO3	490			474		mg/L				3	20
Carbonate Alkalinity as CaCO3	43			43.6		mg/L				1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-545375/3
Matrix: Water
Analysis Batch: 545375

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			10/03/22 18:19	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/03/22 18:19	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/03/22 18:19	1

Lab Sample ID: LCS 240-545375/4
Matrix: Water
Analysis Batch: 545375

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	51.5		mg/L		103	90 - 110
Fluoride	2.50	2.64		mg/L		105	90 - 110
Sulfate	50.0	53.7		mg/L		107	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-582201/1-A
Matrix: Water
Analysis Batch: 585373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 582201

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.4277		0.269	0.271	1.00	0.362	pCi/L	09/15/22 09:10	10/10/22 17:51	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.2*		*40 - 110*	*09/15/22 09:10*	*10/10/22 17:51*	*1*

Lab Sample ID: LCS 160-582201/2-A
Matrix: Water
Analysis Batch: 585373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 582201

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	7.413		1.10	1.00	0.327	pCi/L	65	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*81.8*		*40 - 110*

Lab Sample ID: LCSD 160-582201/3-A
Matrix: Water
Analysis Batch: 585375

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 582201

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	11.3	9.158		1.25	1.00	0.326	pCi/L	81	75 - 125	0.74	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*90.2*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-582207/1-A
Matrix: Water
Analysis Batch: 585373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 582207

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.687		0.460	0.485	1.00	0.495	pCi/L	09/15/22 09:44	10/10/22 12:13	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.2*		*40 - 110*	*09/15/22 09:44*	*10/10/22 12:13*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/15/22 09:44*	*10/10/22 12:13*	*1*

Lab Sample ID: LCS 160-582207/2-A
Matrix: Water
Analysis Batch: 585373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 582207

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.21	7.162		1.08	1.00	0.537	pCi/L	87	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*81.8*		*40 - 110*
Y Carrier	*86.7*		*40 - 110*

Lab Sample ID: LCSD 160-582207/3-A
Matrix: Water
Analysis Batch: 585373

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 582207

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.21	8.941		1.22	1.00	0.485	pCi/L	109	75 - 125	0.77	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*90.2*		*40 - 110*
Y Carrier	*86.4*		*40 - 110*

Lab Sample ID: MB 160-585515/1-A
Matrix: Water
Analysis Batch: 585946

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 585515

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1578	U	0.277	0.277	1.00	0.475	pCi/L	10/11/22 15:41	10/14/22 12:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.9*		*40 - 110*	*10/11/22 15:41*	*10/14/22 12:30*	*1*
Y Carrier	*87.5*		*40 - 110*	*10/11/22 15:41*	*10/14/22 12:30*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-585515/2-A
Matrix: Water
Analysis Batch: 585946

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 585515

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.53	8.946		1.18	1.00	0.396	pCi/L	105	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*96.1*		*40 - 110*
Y Carrier	*87.9*		*40 - 110*

Lab Sample ID: LCSD 160-585515/3-A
Matrix: Water
Analysis Batch: 585946

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 585515

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.53	7.790		1.05	1.00	0.383	pCi/L	91	75 - 125	0.52	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*
Y Carrier	*87.1*		*40 - 110*

Metals

Prep Batch: 542682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total/NA	Water	7470A	
240-172921-2	96158-F-20220912-01	Total/NA	Water	7470A	
240-172921-3	2016-06-F-20220912-01	Total/NA	Water	7470A	
240-172921-4	EB-001-F-20220912-01	Total/NA	Water	7470A	
MB 240-542682/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-542682/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 542889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total Recoverable	Water	3005A	
240-172921-2	96158-F-20220912-01	Total Recoverable	Water	3005A	
240-172921-3	2016-06-F-20220912-01	Total Recoverable	Water	3005A	
240-172921-4	EB-001-F-20220912-01	Total Recoverable	Water	3005A	
MB 240-542889/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-542889/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-542889/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 543027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total/NA	Water	7470A	542682
240-172921-2	96158-F-20220912-01	Total/NA	Water	7470A	542682
240-172921-3	2016-06-F-20220912-01	Total/NA	Water	7470A	542682
240-172921-4	EB-001-F-20220912-01	Total/NA	Water	7470A	542682
MB 240-542682/1-A	Method Blank	Total/NA	Water	7470A	542682
LCS 240-542682/2-A	Lab Control Sample	Total/NA	Water	7470A	542682

Analysis Batch: 543302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total Recoverable	Water	6020B	542889
240-172921-2	96158-F-20220912-01	Total Recoverable	Water	6020B	542889
240-172921-3	2016-06-F-20220912-01	Total Recoverable	Water	6020B	542889
240-172921-4	EB-001-F-20220912-01	Total Recoverable	Water	6020B	542889
MB 240-542889/1-A	Method Blank	Total Recoverable	Water	6020B	542889
LCS 240-542889/3-A	Lab Control Sample	Total Recoverable	Water	6020B	542889

Analysis Batch: 543587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total Recoverable	Water	6010D	542889
240-172921-2	96158-F-20220912-01	Total Recoverable	Water	6010D	542889
240-172921-3	2016-06-F-20220912-01	Total Recoverable	Water	6010D	542889
240-172921-4	EB-001-F-20220912-01	Total Recoverable	Water	6010D	542889
MB 240-542889/1-A	Method Blank	Total Recoverable	Water	6010D	542889
LCS 240-542889/2-A	Lab Control Sample	Total Recoverable	Water	6010D	542889

Analysis Batch: 543609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-2	96158-F-20220912-01	Total Recoverable	Water	6020B	542889
240-172921-3	2016-06-F-20220912-01	Total Recoverable	Water	6020B	542889

General Chemistry

Analysis Batch: 543730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total/NA	Water	2320B-1997	
240-172921-2	96158-F-20220912-01	Total/NA	Water	2320B-1997	
240-172921-3	2016-06-F-20220912-01	Total/NA	Water	2320B-1997	
240-172921-4	EB-001-F-20220912-01	Total/NA	Water	2320B-1997	
MB 240-543730/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-543730/4	Method Blank	Total/NA	Water	2320B-1997	
MB 240-543730/56	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-543730/29	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-543730/55	Lab Control Sample	Total/NA	Water	2320B-1997	
240-172921-3 DU	2016-06-F-20220912-01	Total/NA	Water	2320B-1997	

Analysis Batch: 545375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total/NA	Water	300.0	
240-172921-1	96157-F-20220912-01	Total/NA	Water	300.0	
240-172921-2	96158-F-20220912-01	Total/NA	Water	300.0	
240-172921-2	96158-F-20220912-01	Total/NA	Water	300.0	
240-172921-3	2016-06-F-20220912-01	Total/NA	Water	300.0	
240-172921-3	2016-06-F-20220912-01	Total/NA	Water	300.0	
240-172921-4	EB-001-F-20220912-01	Total/NA	Water	300.0	
MB 240-545375/3	Method Blank	Total/NA	Water	300.0	
LCS 240-545375/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 582201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total/NA	Water	PrecSep-21	
240-172921-2	96158-F-20220912-01	Total/NA	Water	PrecSep-21	
240-172921-3	2016-06-F-20220912-01	Total/NA	Water	PrecSep-21	
240-172921-4	EB-001-F-20220912-01	Total/NA	Water	PrecSep-21	
MB 160-582201/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-582201/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-582201/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 582207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-1	96157-F-20220912-01	Total/NA	Water	PrecSep_0	
MB 160-582207/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-582207/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-582207/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 585515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-172921-2	96158-F-20220912-01	Total/NA	Water	PrecSep_0	
240-172921-3	2016-06-F-20220912-01	Total/NA	Water	PrecSep_0	
240-172921-4	EB-001-F-20220912-01	Total/NA	Water	PrecSep_0	
MB 160-585515/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-585515/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-585515/3-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: 240-172921-1

Client Sample ID: 96157-F-20220912-01

Lab Sample ID: 240-172921-1

Date Collected: 09/12/22 13:29

Matrix: Water

Date Received: 09/13/22 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6010D		1	543587	KLC	EET CAN	09/20/22 18:34
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6020B		1	543302	RKT	EET CAN	09/19/22 18:14
Total/NA	Prep	7470A			542682	SHB	EET CAN	09/14/22 12:00
Total/NA	Analysis	7470A		1	543027	MRL	EET CAN	09/15/22 19:07
Total/NA	Analysis	2320B-1997		1	543730	JMB	EET CAN	09/20/22 20:41
Total/NA	Analysis	300.0		1	545375	JWW	EET CAN	10/04/22 00:49
Total/NA	Analysis	300.0		10	545375	JWW	EET CAN	10/04/22 01:11
Total/NA	Prep	PrecSep-21			582201	TJ	EET SL	09/15/22 09:10
Total/NA	Analysis	9315		1	585373	SCB	EET SL	10/10/22 21:38
Total/NA	Prep	PrecSep_0			582207	TJ	EET SL	09/15/22 09:44
Total/NA	Analysis	9320		1	585217	SCB	EET SL	10/10/22 12:18
Total/NA	Analysis	Ra226_Ra228		1	586271	CAH	EET SL	10/17/22 16:58

Client Sample ID: 96158-F-20220912-01

Lab Sample ID: 240-172921-2

Date Collected: 09/12/22 14:06

Matrix: Water

Date Received: 09/13/22 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6010D		1	543587	KLC	EET CAN	09/20/22 18:38
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6020B		1	543302	RKT	EET CAN	09/19/22 18:16
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6020B		5	543609	RKT	EET CAN	09/20/22 18:14
Total/NA	Prep	7470A			542682	SHB	EET CAN	09/14/22 12:00
Total/NA	Analysis	7470A		1	543027	MRL	EET CAN	09/15/22 19:09
Total/NA	Analysis	2320B-1997		1	543730	JMB	EET CAN	09/20/22 20:46
Total/NA	Analysis	300.0		5	545375	JWW	EET CAN	10/04/22 02:38
Total/NA	Analysis	300.0		25	545375	JWW	EET CAN	10/04/22 03:00
Total/NA	Prep	PrecSep-21			582201	TJ	EET SL	09/15/22 09:10
Total/NA	Analysis	9315		1	585373	SCB	EET SL	10/10/22 21:38
Total/NA	Prep	PrecSep_0			585515	BMP	EET SL	10/11/22 15:41
Total/NA	Analysis	9320		1	585946	CLP	EET SL	10/14/22 12:31
Total/NA	Analysis	Ra226_Ra228		1	586271	CAH	EET SL	10/17/22 16:58

Client Sample ID: 2016-06-F-20220912-01

Lab Sample ID: 240-172921-3

Date Collected: 09/12/22 15:16

Matrix: Water

Date Received: 09/13/22 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6010D		1	543587	KLC	EET CAN	09/20/22 18:43

Lab Chronicle

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

Job ID: 240-172921-1

Client Sample ID: 2016-06-F-20220912-01

Date Collected: 09/12/22 15:16
Date Received: 09/13/22 13:10

Lab Sample ID: 240-172921-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6020B		1	543302	RKT	EET CAN	09/19/22 18:19
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6020B		5	543609	RKT	EET CAN	09/20/22 18:16
Total/NA	Prep	7470A			542682	SHB	EET CAN	09/14/22 12:00
Total/NA	Analysis	7470A		1	543027	MRL	EET CAN	09/15/22 19:11
Total/NA	Analysis	2320B-1997		1	543730	JMB	EET CAN	09/20/22 21:06
Total/NA	Analysis	300.0		2	545375	JWW	EET CAN	10/04/22 03:21
Total/NA	Analysis	300.0		20	545375	JWW	EET CAN	10/04/22 03:43
Total/NA	Prep	PrecSep-21			582201	TJ	EET SL	09/15/22 09:10
Total/NA	Analysis	9315		1	585417	FLC	EET SL	10/11/22 18:03
Total/NA	Prep	PrecSep_0			585515	BMP	EET SL	10/11/22 15:41
Total/NA	Analysis	9320		1	585946	CLP	EET SL	10/14/22 12:31
Total/NA	Analysis	Ra226_Ra228		1	586271	CAH	EET SL	10/17/22 16:58

Client Sample ID: EB-001-F-20220912-01

Date Collected: 09/12/22 16:00
Date Received: 09/13/22 13:10

Lab Sample ID: 240-172921-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6010D		1	543587	KLC	EET CAN	09/20/22 18:47
Total Recoverable	Prep	3005A			542889	SHB	EET CAN	09/15/22 12:00
Total Recoverable	Analysis	6020B		1	543302	RKT	EET CAN	09/19/22 18:21
Total/NA	Prep	7470A			542682	SHB	EET CAN	09/14/22 12:00
Total/NA	Analysis	7470A		1	543027	MRL	EET CAN	09/15/22 19:13
Total/NA	Analysis	2320B-1997		1	543730	JMB	EET CAN	09/20/22 21:10
Total/NA	Analysis	300.0		1	545375	JWW	EET CAN	10/04/22 01:33
Total/NA	Prep	PrecSep-21			582201	TJ	EET SL	09/15/22 09:10
Total/NA	Analysis	9315		1	585375	SCB	EET SL	10/10/22 21:57
Total/NA	Prep	PrecSep_0			585515	BMP	EET SL	10/11/22 15:41
Total/NA	Analysis	9320		1	585946	CLP	EET SL	10/14/22 12:32
Total/NA	Analysis	Ra226_Ra228		1	586271	CAH	EET SL	10/17/22 16:58

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
Job ID: 240-172921-1
Project/Site: Federal CCR Wells

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	10-10-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	10-12-22
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	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	11-30-23
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.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-172921-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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	06-30-22 *
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	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins

Client Information	Sampler: Bobby Cate	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
96157-F-20220912-01	9-12-22	1329	G	W	N		1	1	2	1	5	
96158-F-20220912-01	9-12-22	1406	G	W	N		1	1	2	1	5	
2016-06-F-20220912-01	9-12-22	1516	G	W	N		1	1	2	1	5	
EB-001-F-20220912-01	9-12-22	1600	G	W	N		1	1	2	1	5	

ABC

240-172921 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Bobby Cate	9-13-22/0840	KEMRON	Auto Options/Tom Edwards	9-13-22 0950 hrs	Auto Options
Relinquished by: Tom Edwards	Date/Time: 9-13-22/1210 hrs	Company Auto Options	Received by:	Date/Time: 9-13-22 1310	Company TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins - Canton Sample Receipt Form/Narrative Login # :_____
Barberton Facility

Client Lightstone Site Name_____ Cooler unpacked by: Nancy Boyer

Cooler Received on 9-13-22 Opened on 9-13-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 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 +0.7 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp 2.6 °C Corrected Cooler Temp 2.6 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? Yes (No)
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# 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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
96157-F-20220912-01	240-172921-C-1	Plastic 500ml - with Nitric Acid	<2			
96157-F-20220912-01	240-172921-D-1	Plastic 1 liter - Nitric Acid	<2			
96157-F-20220912-01	240-172921-E-1	Plastic 1 liter - Nitric Acid	<2			
96157-F-20220912-01	240-172921-F-1	Plastic 250ml - with Nitric Acid	<2			
96158-F-20220912-01	240-172921-C-2	Plastic 500ml - with Nitric Acid	<2			
96158-F-20220912-01	240-172921-D-2	Plastic 1 liter - Nitric Acid	<2			
96158-F-20220912-01	240-172921-E-2	Plastic 1 liter - Nitric Acid	<2			
96158-F-20220912-01	240-172921-F-2	Plastic 250ml - with Nitric Acid	<2			
2016-06-F-20220912-01	240-172921-C-3	Plastic 500ml - with Nitric Acid	<2			
2016-06-F-20220912-01	240-172921-D-3	Plastic 1 liter - Nitric Acid	<2			
2016-06-F-20220912-01	240-172921-E-3	Plastic 1 liter - Nitric Acid	<2			
2016-06-F-20220912-01	240-172921-F-3	Plastic 250ml - with Nitric Acid	<2			
EB-001-F-20220912-01	240-172921-C-4	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220912-01	240-172921-D-4	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220912-01	240-172921-E-4	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220912-01	240-172921-F-4	Plastic 250ml - with Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-157153.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-172921-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/26/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 24019633			
Project Name: Gavin CCR	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-228 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
96127-F-20220912-01 (240-172921-1)	9/12/22	13:29 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96128-F-20220912-01 (240-172921-2)	9/12/22	14:06 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
20106-F-20220912-01 (240-172921-3)	9/12/22	15:16 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220912-01 (240-172921-4)	9/12/22	16:00 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet

Page 28 of 28
9/18/2022

ote: 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 oratory 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 creditation 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 complicance to Eurofins Environment Testing North Central, LLC.

ossible Hazard Identification
nconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

eliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

mpty Kit Relinquished by: Date: Time:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
FED EX	9-13-22 1530	EET INC	FED EX		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	SEP 13 2022 0900	EA STL
				Date/Time:	Company

Method of Shipment:

ustody Seals Intact: Δ Yes Δ No Custody Seal No.:

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-172921-1

Login Number: 172921
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 09/14/22 10:59 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-173131-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
10/13/2022 1:19:00 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-173131-1

Qualifiers

Metals

Qualifier	Qualifier Description
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-173131-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-173131-1

Comments
The Radium analysis was performed at Eurofins St. Louis Laboratory.

Receipt
The samples were received on 9/16/2022 12:55 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 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 300.0_28D: The following sample was diluted due to the nature of the sample matrix: 2019-07-F-20220915-01 (240-173131-1). Elevated reporting limits (RLs) are provided.

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

Gas Flow Proportional Counter
Method 9315_Ra226: Radium-226 Prep Batch 160-582623The following sample was prepared at a reduced aliquot due to Matrix: 2019-07-F-20220915-01 (240-173131-1). 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 582623Any 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.2019-07-F-20220915-01 (240-173131-1), EB-001-F-20220915-01 (240-173131-2), (LCS 160-582623/2-A), (LCSD 160-582623/3-A) and (MB 160-582623/1-A)

Method 9320_Ra228: Radium-228 Prep Batch 160-582627The following sample was prepared at a reduced aliquot due to Matrix: 2019-07-F-20220915-01 (240-173131-1). 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 582627The LCS recovered at (134%). 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 (LCSD 160-582627/3-A)

Method 9320_Ra228: Radium-228 batch 582627The detection goal was not met for the following sample(s). Sample was prepped at a reduced volume due to the presence of matrix interferences: 2019-07-F-20220915-01 (240-173131-1). Analytical results are reported with the detection limit achieved.

Method 9320_Ra228: Radium-228 batch 582627Any 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.2019-07-F-20220915-01 (240-173131-1), EB-001-F-20220915-01 (240-173131-2), (LCS 160-582627/2-A), (LCSD 160-582627/3-A) and (MB 160-582627/1-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.

Method Summary

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

Job ID: 240-173131-1

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: 240-173131-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-173131-1	2019-07-F-20220915-01	Water	09/15/22 15:24	09/16/22 12:55
240-173131-2	EB-001-F-20220915-01	Water	09/15/22 17:00	09/16/22 12:55

Detection Summary

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

Job ID: 240-173131-1

Client Sample ID: 2019-07-F-20220915-01 — Lab Sample ID: 240-173131-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	550		100	57	ug/L	1		6010D	Total Recoverable
Calcium	780000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	250000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	40000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	8900000		50000	16000	ug/L	50		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	18000		500	140	mg/L	500		300.0	Total/NA
Sulfate	490		50	17	mg/L	50		300.0	Total/NA
Total Dissolved Solids	8200		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220915-01 — Lab Sample ID: 240-173131-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	0.66	J	1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.15		0.050	0.024	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2019-07-F-20220915-01
Lab Sample ID: 240-173131-1

Date Collected: 09/15/22 15:24
Matrix: Water
Date Received: 09/16/22 12:55

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	550		100	57	ug/L		09/19/22 12:00	09/21/22 00:51	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	780000		1000	580	ug/L		09/19/22 12:00	09/21/22 01:07	1
Magnesium	250000		1000	200	ug/L		09/19/22 12:00	09/21/22 01:07	1
Potassium	40000		1000	220	ug/L		09/19/22 12:00	09/21/22 01:07	1
Sodium	8900000		50000	16000	ug/L		09/19/22 12:00	09/30/22 22:05	50

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		09/19/22 12:00	09/21/22 11:13	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			09/23/22 16:46	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	210		5.0	2.6	mg/L			09/23/22 16:46	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 16:46	1
Chloride (MCAWW 300.0)	18000		500	140	mg/L			10/08/22 22:54	500
Fluoride (MCAWW 300.0)	2.5	U	2.5	1.2	mg/L			10/08/22 22:34	50
Sulfate (MCAWW 300.0)	490		50	17	mg/L			10/08/22 22:34	50
Total Dissolved Solids (SM 2540C)	8200		1000	780	mg/L			09/22/22 09:17	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	13.0		1.32	1.77	1.00	0.479	pCi/L	09/19/22 09:29	10/11/22 09:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.7*		*40 - 110*	*09/19/22 09:29*	*10/11/22 09:38*	*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	19.9	G	3.13	3.63	1.00	2.37	pCi/L	09/19/22 10:14	09/27/22 13:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.7*		*40 - 110*	*09/19/22 10:14*	*09/27/22 13:08*	*1*
Y Carrier	*88.6*		*40 - 110*	*09/19/22 10:14*	*09/27/22 13:08*	*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	33.0		3.40	4.04	5.00	2.37	pCi/L		10/11/22 15:45	1

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

Job ID: 240-173131-1

Client Sample ID: EB-001-F-20220915-01

Date Collected: 09/15/22 17:00
Date Received: 09/16/22 12:55

Lab Sample ID: 240-173131-2

Matrix: Water

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		09/19/22 12:00	09/21/22 00:30	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		09/19/22 12:00	09/21/22 01:05	1
Magnesium	1000	U	1000	200	ug/L		09/19/22 12:00	09/21/22 01:05	1
Potassium	1000	U	1000	220	ug/L		09/19/22 12:00	09/21/22 01:05	1
Sodium	1000	U	1000	330	ug/L		09/19/22 12:00	09/21/22 01:05	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		09/19/22 12:00	09/20/22 17:17	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			09/23/22 16:49	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 16:49	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 16:49	1
Chloride (MCAWW 300.0)	**0.66**	**J**	1.0	0.28	mg/L			10/08/22 23:15	1
Fluoride (MCAWW 300.0)	**0.15**		0.050	0.024	mg/L			10/08/22 23:15	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			10/08/22 23:15	1
Total Dissolved Solids (SM 2540C)	10	U	10	7.8	mg/L			09/22/22 09:17	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	0.00620	U	0.0742	0.0742	1.00	0.146	pCi/L	09/19/22 09:29	10/11/22 09:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.0*		*40 - 110*	*09/19/22 09:29*	*10/11/22 09:38*	*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	**0.863**		0.462	0.469	1.00	0.665	pCi/L	09/19/22 10:14	09/27/22 13:08	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*73.0*		*40 - 110*	*09/19/22 10:14*	*09/27/22 13:08*	*1*
Y Carrier	*90.5*		*40 - 110*	*09/19/22 10:14*	*09/27/22 13:08*	*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	**0.870**		0.468	0.475	5.00	0.665	pCi/L		10/11/22 15:45	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173131-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
240-173131-1	2019-07-F-20220915-01	71.7
240-173131-2	EB-001-F-20220915-01	73.0
LCS 160-582623/2-A	Lab Control Sample	95.6
LCSD 160-582623/3-A	Lab Control Sample Dup	87.5
MB 160-582623/1-A	Method Blank	96.3

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-173131-1	2019-07-F-20220915-01	71.7	88.6
240-173131-2	EB-001-F-20220915-01	73.0	90.5
LCS 160-582627/2-A	Lab Control Sample	95.6	81.9
LCSD 160-582627/3-A	Lab Control Sample Dup	87.5	82.6
MB 160-582627/1-A	Method Blank	96.3	82.2

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-543266/1-A
Matrix: Water
Analysis Batch: 543503

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 543266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/19/22 12:00	09/21/22 00:14	1

Lab Sample ID: LCS 240-543266/2-A
Matrix: Water
Analysis Batch: 543503

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 543266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1040		ug/L		104	80 - 120

Lab Sample ID: 240-173131-2 MS
Matrix: Water
Analysis Batch: 543503

Client Sample ID: EB-001-F-20220915-01
Prep Type: Total Recoverable
Prep Batch: 543266

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: 240-173131-2 MSD
Matrix: Water
Analysis Batch: 543503

Client Sample ID: EB-001-F-20220915-01
Prep Type: Total Recoverable
Prep Batch: 543266

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	100	U	1000	1080		ug/L		108	75 - 125	1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-543266/1-A
Matrix: Water
Analysis Batch: 543609

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 543266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/19/22 12:00	09/21/22 01:00	1
Magnesium	1000	U	1000	200	ug/L		09/19/22 12:00	09/21/22 01:00	1
Potassium	1000	U	1000	220	ug/L		09/19/22 12:00	09/21/22 01:00	1
Sodium	1000	U	1000	330	ug/L		09/19/22 12:00	09/21/22 01:00	1

Lab Sample ID: LCS 240-543266/3-A
Matrix: Water
Analysis Batch: 543609

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 543266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	21600		ug/L		87	80 - 120
Magnesium	25000	21400		ug/L		85	80 - 120
Potassium	25000	20900		ug/L		84	80 - 120
Sodium	25000	21300		ug/L		85	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-543294/1-A
Matrix: Water
Analysis Batch: 543475

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 543294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/19/22 12:00	09/20/22 17:13	1

Lab Sample ID: LCS 240-543294/2-A
Matrix: Water
Analysis Batch: 543475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 543294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.78		ug/L		96	80 - 120

Lab Sample ID: 240-173131-2 MS
Matrix: Water
Analysis Batch: 543475

Client Sample ID: EB-001-F-20220915-01
Prep Type: Total/NA
Prep Batch: 543294

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U	1.00	0.969		ug/L		97	80 - 120

Lab Sample ID: 240-173131-2 MSD
Matrix: Water
Analysis Batch: 543475

Client Sample ID: EB-001-F-20220915-01
Prep Type: Total/NA
Prep Batch: 543294

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.20	U	1.00	0.863		ug/L		86	80 - 120	12	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-544358/30
Matrix: Water
Analysis Batch: 544358

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			09/23/22 16:19	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 16:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 16:19	1

Lab Sample ID: MB 240-544358/4
Matrix: Water
Analysis Batch: 544358

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			09/23/22 14:27	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 14:27	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 14:27	1

Lab Sample ID: LCS 240-544358/29
Matrix: Water
Analysis Batch: 544358

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	123		mg/L		102	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-546196/3
Matrix: Water
Analysis Batch: 546196

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			10/08/22 17:12	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/08/22 17:12	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/08/22 17:12	1

Lab Sample ID: LCS 240-546196/4
Matrix: Water
Analysis Batch: 546196

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	49.8		mg/L		100	90 - 110
Fluoride	2.50	2.62		mg/L		105	90 - 110
Sulfate	50.0	51.4		mg/L		103	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-543824/1
Matrix: Water
Analysis Batch: 543824

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			09/22/22 09:17	1

Lab Sample ID: LCS 240-543824/2
Matrix: Water
Analysis Batch: 543824

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	422		mg/L		86	80 - 120

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-582623/1-A
Matrix: Water
Analysis Batch: 585417

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 582623

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01862	U	0.0454	0.0454	1.00	0.0866	pCi/L	09/19/22 09:29	10/11/22 09:27	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.3*		*40 - 110*	*09/19/22 09:29*	*10/11/22 09:27*	*1*

Lab Sample ID: LCS 160-582623/2-A
Matrix: Water
Analysis Batch: 585417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 582623

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.53		1.08	1.00	0.0791	pCi/L	93	75 - 125

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-582623/2-A
Matrix: Water
Analysis Batch: 585417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 582623

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	95.6		40 - 110

Lab Sample ID: LCSD 160-582623/3-A
Matrix: Water
Analysis Batch: 585417

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 582623

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	9.057		0.956	1.00	0.0844	pCi/L	80	75 - 125	0.72	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	87.5		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-582627/1-A
Matrix: Water
Analysis Batch: 583742

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 582627

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7494		0.351	0.358	1.00	0.472	pCi/L	09/19/22 10:14	09/27/22 13:00	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110	09/19/22 10:14	09/27/22 13:00	1
Y Carrier	82.2		40 - 110	09/19/22 10:14	09/27/22 13:00	1

Lab Sample ID: LCS 160-582627/2-A
Matrix: Water
Analysis Batch: 583742

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 582627

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.24	9.994		1.31	1.00	0.450	pCi/L	121	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	95.6		40 - 110
Y Carrier	81.9		40 - 110

Lab Sample ID: LCSD 160-582627/3-A
Matrix: Water
Analysis Batch: 583742

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 582627

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.24	11.01		1.45	1.00	0.537	pCi/L	134	75 - 125	0.37	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-582627/3-A
Matrix: Water
Analysis Batch: 583742

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 582627

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	87.5		40 - 110
Y Carrier	82.6		40 - 110

Metals

Prep Batch: 543266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total Recoverable	Water	3005A	
240-173131-2	EB-001-F-20220915-01	Total Recoverable	Water	3005A	
MB 240-543266/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-543266/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-543266/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-173131-2 MS	EB-001-F-20220915-01	Total Recoverable	Water	3005A	
240-173131-2 MSD	EB-001-F-20220915-01	Total Recoverable	Water	3005A	

Prep Batch: 543294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total/NA	Water	7470A	
240-173131-2	EB-001-F-20220915-01	Total/NA	Water	7470A	
MB 240-543294/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-543294/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-173131-2 MS	EB-001-F-20220915-01	Total/NA	Water	7470A	
240-173131-2 MSD	EB-001-F-20220915-01	Total/NA	Water	7470A	

Analysis Batch: 543475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-2	EB-001-F-20220915-01	Total/NA	Water	7470A	543294
MB 240-543294/1-A	Method Blank	Total/NA	Water	7470A	543294
LCS 240-543294/2-A	Lab Control Sample	Total/NA	Water	7470A	543294
240-173131-2 MS	EB-001-F-20220915-01	Total/NA	Water	7470A	543294
240-173131-2 MSD	EB-001-F-20220915-01	Total/NA	Water	7470A	543294

Analysis Batch: 543503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total Recoverable	Water	6010D	543266
240-173131-2	EB-001-F-20220915-01	Total Recoverable	Water	6010D	543266
MB 240-543266/1-A	Method Blank	Total Recoverable	Water	6010D	543266
LCS 240-543266/2-A	Lab Control Sample	Total Recoverable	Water	6010D	543266
240-173131-2 MS	EB-001-F-20220915-01	Total Recoverable	Water	6010D	543266
240-173131-2 MSD	EB-001-F-20220915-01	Total Recoverable	Water	6010D	543266

Analysis Batch: 543609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total Recoverable	Water	6020B	543266
240-173131-2	EB-001-F-20220915-01	Total Recoverable	Water	6020B	543266
MB 240-543266/1-A	Method Blank	Total Recoverable	Water	6020B	543266
LCS 240-543266/3-A	Lab Control Sample	Total Recoverable	Water	6020B	543266

Analysis Batch: 543844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total/NA	Water	7470A	543294

Analysis Batch: 545256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total Recoverable	Water	6020B	543266

QC Association Summary

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

Job ID: 240-173131-1

General Chemistry

Analysis Batch: 543824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total/NA	Water	SM 2540C	
240-173131-2	EB-001-F-20220915-01	Total/NA	Water	SM 2540C	
MB 240-543824/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-543824/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 544358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total/NA	Water	2320B-1997	
240-173131-2	EB-001-F-20220915-01	Total/NA	Water	2320B-1997	
MB 240-544358/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-544358/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-544358/29	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 546196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total/NA	Water	300.0	
240-173131-1	2019-07-F-20220915-01	Total/NA	Water	300.0	
240-173131-2	EB-001-F-20220915-01	Total/NA	Water	300.0	
MB 240-546196/3	Method Blank	Total/NA	Water	300.0	
LCS 240-546196/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 582623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total/NA	Water	PrecSep-21	
240-173131-2	EB-001-F-20220915-01	Total/NA	Water	PrecSep-21	
MB 160-582623/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-582623/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-582623/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 582627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173131-1	2019-07-F-20220915-01	Total/NA	Water	PrecSep_0	
240-173131-2	EB-001-F-20220915-01	Total/NA	Water	PrecSep_0	
MB 160-582627/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-582627/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-582627/3-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: 240-173131-1

Client Sample ID: 2019-07-F-20220915-01

Date Collected: 09/15/22 15:24
Date Received: 09/16/22 12:55

Lab Sample ID: 240-173131-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543266	SHB	EET CAN	09/19/22 12:00
Total Recoverable	Analysis	6010D		1	543503	RKT	EET CAN	09/21/22 00:51
Total Recoverable	Prep	3005A			543266	SHB	EET CAN	09/19/22 12:00
Total Recoverable	Analysis	6020B		1	543609	RKT	EET CAN	09/21/22 01:07
Total Recoverable	Prep	3005A			543266	SHB	EET CAN	09/19/22 12:00
Total Recoverable	Analysis	6020B		50	545256	AJC	EET CAN	09/30/22 22:05
Total/NA	Prep	7470A			543294	SHB	EET CAN	09/19/22 12:00
Total/NA	Analysis	7470A		1	543844	MRL	EET CAN	09/21/22 11:13
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 16:46
Total/NA	Analysis	300.0		50	546196	JWW	EET CAN	10/08/22 22:34
Total/NA	Analysis	300.0		500	546196	JWW	EET CAN	10/08/22 22:54
Total/NA	Analysis	SM 2540C		1	543824	MED	EET CAN	09/22/22 09:17
Total/NA	Prep	PrecSep-21			582623	TJ	EET SL	09/19/22 09:29
Total/NA	Analysis	9315		1	585419	FLC	EET SL	10/11/22 09:38
Total/NA	Prep	PrecSep_0			582627	TJ	EET SL	09/19/22 10:14
Total/NA	Analysis	9320		1	583744	FLC	EET SL	09/27/22 13:08
Total/NA	Analysis	Ra226_Ra228		1	585516	CAH	EET SL	10/11/22 15:45

Client Sample ID: EB-001-F-20220915-01

Date Collected: 09/15/22 17:00
Date Received: 09/16/22 12:55

Lab Sample ID: 240-173131-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543266	SHB	EET CAN	09/19/22 12:00
Total Recoverable	Analysis	6010D		1	543503	RKT	EET CAN	09/21/22 00:30
Total Recoverable	Prep	3005A			543266	SHB	EET CAN	09/19/22 12:00
Total Recoverable	Analysis	6020B		1	543609	RKT	EET CAN	09/21/22 01:05
Total/NA	Prep	7470A			543294	SHB	EET CAN	09/19/22 12:00
Total/NA	Analysis	7470A		1	543475	MRL	EET CAN	09/20/22 17:17
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 16:49
Total/NA	Analysis	300.0		1	546196	JWW	EET CAN	10/08/22 23:15
Total/NA	Analysis	SM 2540C		1	543824	MED	EET CAN	09/22/22 09:17
Total/NA	Prep	PrecSep-21			582623	TJ	EET SL	09/19/22 09:29
Total/NA	Analysis	9315		1	585419	FLC	EET SL	10/11/22 09:38
Total/NA	Prep	PrecSep_0			582627	TJ	EET SL	09/19/22 10:14
Total/NA	Analysis	9320		1	583744	FLC	EET SL	09/27/22 13:08
Total/NA	Analysis	Ra226_Ra228		1	585516	CAH	EET SL	10/11/22 15:45

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
Job ID: 240-173131-1
Project/Site: Federal CCR Wells

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	02-23-23
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	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	11-30-23
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.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173131-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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	06-30-22 *
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	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

1.2/1.3

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Costo	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:	Analysis Requested		Job #:
Address: 7397 OH-7	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
2019-07-F-20220915-01	9-15-22	1524	G	W	N		1	1	2	1		
FB-001-F-20220915-01	9-15-22	1700	G	W	N		1	1	2	1		

240-173131 Chain of Custody

Page 21 of 24

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Bobby Costo	9-16-22/0630	KEMRON	Walter Chestnut	09/16/22 0630	Kemron
Relinquished by: Walter Chestnut	Date/Time: 09/16/22/1255	Company Kemron	Received by: [illegible]	Date/Time: 9-16-22 1255	Company XT
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

10/13/2022

Ver: 01/16/2019

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Brandon

Cooler Received on 9-16-22 Opened on 9-16-22

FedEx: 1st Grd (Exp) UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 14 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. 0.4 °C Corrected Cooler Temp. _____ °C

IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 1.2 °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)?	(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# 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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-157353.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-173131-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/29/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
Preservation Code:											
2019-07-F-20220915-01 (240-173131-1)	9/15/22	15:24 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220915-01 (240-173131-2)	9/15/22	17:00 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: FED EX	Date/Time: 9-16-22 15:16	Company EESTL	Received by: FED EX	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: SEP 17 2022 0838	Company EVASTL
Relinquished by:	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time:	Company
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: 240-173131-1

Login Number: 173131
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 09/17/22 09:31 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-173245-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
10/19/2022 5:51:53 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-173245-1

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
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-173245-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-173245-1

Receipt
The samples were received on 9/19/2022 2:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

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

General Chemistry
Method 300.0_28D: Sample result over the highest point of the curve, but is being reported for in hold results. In hold and out of hold data will be available.2019-09-F20220916-01 (240-173245-1) and 2019-06-F20220916-01 (240-173245-2)

Method 300.0_28D: 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. 2019-09-F20220916-01 (240-173245-1), 2019-06-F20220916-01 (240-173245-2), 93100-F-20220916-01 (240-173245-3), DUP-002-93100-F-20220916-01 (240-173245-4), 94139-F-20220916-01 (240-173245-5) and EB-001-F-20220916-01 (240-173245-6)

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-226/228 Prep Batch 160-583473/583474The following samples were prepared at a reduced aliquot due to Matrix: 2019-06-F20220916-01 (240-173245-2), 93100-F-20220916-01 (240-173245-3), DUP-002-93100-F-20220916-01 (240-173245-4), 94139-F-20220916-01 (240-173245-5) and EB-001-F-20220916-01 (240-173245-6). 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-226/228 Prep Batch 160-583473/583474Insufficient sample volume was available to perform a sample duplicate for the following samples: 2019-06-F20220916-01 (240-173245-2), 93100-F-20220916-01 (240-173245-3), DUP-002-93100-F-20220916-01 (240-173245-4), 94139-F-20220916-01 (240-173245-5) and EB-001-F-20220916-01 (240-173245-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method 9315_Ra226: Radium 226 Batch 160-583473: 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. 2019-06-F20220916-01 (240-173245-2), 93100-F-20220916-01 (240-173245-3), DUP-002-93100-F-20220916-01 (240-173245-4), 94139-F-20220916-01 (240-173245-5), EB-001-F-20220916-01 (240-173245-6), (LCS 160-583473/2-A), (MB 160-583473/1-A), (500-222492-C-1-A) and (500-222492-C-1-B DU)

Method 9320_Ra228: Radium-226/228 Prep Batch 160-583473/583474The following samples were prepared at a reduced aliquot due to Matrix: 2019-06-F20220916-01 (240-173245-2), 93100-F-20220916-01 (240-173245-3), DUP-002-93100-F-20220916-01 (240-173245-4), 94139-F-20220916-01 (240-173245-5) and EB-001-F-20220916-01 (240-173245-6). 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-226/228 Prep Batch 160-583473/583474Insufficient sample volume was available to perform a sample duplicate for the following samples: 2019-06-F20220916-01 (240-173245-2), 93100-F-20220916-01 (240-173245-3), DUP-002-93100-F-20220916-01 (240-173245-4), 94139-F-20220916-01 (240-173245-5) and EB-001-F-20220916-01 (240-173245-6). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method 9320_Ra228: Radium-228 batch 583474The detection goal was not met for the following sample. Sample was prepped at a reduced volume due to the presence of matrix interferences: 2019-06-F20220916-01 (240-173245-2). Analytical results are reported with the detection limit achieved.

Method 9320_Ra228: Radium-228 batch 583474Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking

Job ID: 240-173245-1 (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.2019-06-F20220916-01 (240-173245-2), 93100-F-20220916-01 (240-173245-3), DUP-002-93100-F-20220916-01 (240-173245-4), 94139-F-20220916-01 (240-173245-5), EB-001-F-20220916-01 (240-173245-6), (LCS 160-583474/2-A), (MB 160-583474/1-A), (500-222492-C-1-C) and (500-222492-C-1-E DU)

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

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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: 240-173245-1

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: 240-173245-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-173245-1	2019-09-F20220916-01	Water	09/16/22 09:31	09/19/22 14:00
240-173245-2	2019-06-F20220916-01	Water	09/16/22 10:40	09/19/22 14:00
240-173245-3	93100-F-20220916-01	Water	09/16/22 12:39	09/19/22 14:00
240-173245-4	DUP-002-93100-F-20220916-01	Water	09/16/22 12:39	09/19/22 14:00
240-173245-5	94139-F-20220916-01	Water	09/16/22 13:25	09/19/22 14:00
240-173245-6	EB-001-F-20220916-01	Water	09/16/22 13:50	09/19/22 14:00

Detection Summary

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

Job ID: 240-173245-1

Client Sample ID: 2019-09-F20220916-01 — Lab Sample ID: 240-173245-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	300		100	57	ug/L	1		6010D	Total Recoverable
Calcium	620000		10000	5800	ug/L	10		6020B	Total Recoverable
Magnesium	280000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	82000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	5500000		20000	6600	ug/L	20		6020B	Total Recoverable
Mercury	0.54		0.20	0.13	ug/L	1		7470A	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	16000	E	1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	1.0		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	2.1		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	17000		1000	780	mg/L	1		SM 2540C	Total/NA
Chloride - RA	18000	H	500	140	mg/L	500		300.0	Total/NA

Client Sample ID: 2019-06-F20220916-01 — Lab Sample ID: 240-173245-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	240		100	57	ug/L	1		6010D	Total Recoverable
Calcium	230000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	84000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	17000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	5200000		20000	6600	ug/L	20		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	8800	E	1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.90		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	310	H	25	8.7	mg/L	25		300.0	Total/NA
Total Dissolved Solids	3200		1000	780	mg/L	1		SM 2540C	Total/NA
Chloride - RA	9400	H	100	28	mg/L	100		300.0	Total/NA

Client Sample ID: 93100-F-20220916-01 — Lab Sample ID: 240-173245-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450		100	57	ug/L	1		6010D	Total Recoverable
Calcium	17000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	5200		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	2700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	1400000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Total Dissolved Solids	460		50	39	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 93100-F-20220916-01 (Continued) — Lab Sample ID: 240-173245-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride - RA	2200	H	25	7.1	mg/L	25		300.0	Total/NA
Fluoride - RA	2.6	H	0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate - RA	13	H	1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: DUP-002-93100-F-20220916-01 — Lab Sample ID: 240-173245-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	440		100	57	ug/L	1		6010D	Total Recoverable
Calcium	16000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	5100		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	2600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	1300000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	320		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	320		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Total Dissolved Solids	3900		50	39	mg/L	1		SM 2540C	Total/NA
Chloride - RA	2100	H	25	7.1	mg/L	25		300.0	Total/NA
Fluoride - RA	2.6	H	0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate - RA	13	H	1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: 94139-F-20220916-01 — Lab Sample ID: 240-173245-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	520		100	57	ug/L	1		6010D	Total Recoverable
Calcium	7300		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	2400		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	550000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	490		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	460		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	26		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	520	H	10	2.8	mg/L	10		300.0	Total/NA
Fluoride	4.9	H	0.50	0.24	mg/L	10		300.0	Total/NA
Sulfate	63	H	10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	950		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220916-01 — Lab Sample ID: 240-173245-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	950	J	1000	330	ug/L	1		6020B	Total Recoverable
Mercury	0.13	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Dissolved Solids	15		10	7.8	mg/L	1		SM 2540C	Total/NA
Chloride - RA	0.85	J H	1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride - RA	0.38	H	0.050	0.024	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173245-1
Project/Site: Federal CCR Wells

Client Sample ID: 2019-09-F20220916-01
Lab Sample ID: 240-173245-1

Date Collected: 09/16/22 09:31
Matrix: Water
Date Received: 09/19/22 14:00

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	300		100	57	ug/L		09/21/22 14:00	09/22/22 23:01	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	620000		10000	5800	ug/L		09/21/22 14:00	09/23/22 15:10	10
Magnesium	280000		1000	200	ug/L		09/21/22 14:00	09/23/22 15:08	1
Potassium	82000		1000	220	ug/L		09/21/22 14:00	09/23/22 15:08	1
Sodium	5500000		20000	6600	ug/L		09/21/22 14:00	09/28/22 14:28	20

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.54		0.20	0.13	ug/L		09/21/22 14:00	09/26/22 14:57	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			09/23/22 17:20	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	180		5.0	2.6	mg/L			09/23/22 17:20	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:20	1
Chloride (MCAWW 300.0)	16000	E	1.0	0.28	mg/L			10/11/22 15:58	1
Fluoride (MCAWW 300.0)	1.0		0.050	0.024	mg/L			10/11/22 15:58	1
Sulfate (MCAWW 300.0)	2.1		1.0	0.35	mg/L			10/11/22 15:58	1
Total Dissolved Solids (SM 2540C)	17000		1000	780	mg/L			09/23/22 09:49	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (MCAWW 300.0)	18000	H	500	140	mg/L			10/16/22 17:35	500

Client Sample ID: 2019-06-F20220916-01
Lab Sample ID: 240-173245-2

Date Collected: 09/16/22 10:40
Matrix: Water
Date Received: 09/19/22 14:00

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**240**		100	57	ug/L		09/21/22 14:00	09/22/22 23:05	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**230000**		1000	580	ug/L		09/21/22 14:00	09/23/22 15:20	1
Magnesium	**84000**		1000	200	ug/L		09/21/22 14:00	09/23/22 15:20	1
Potassium	**17000**		1000	220	ug/L		09/21/22 14:00	09/23/22 15:20	1
Sodium	**5200000**		20000	6600	ug/L		09/21/22 14:00	09/28/22 14:31	20

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		09/21/22 14:00	09/22/22 18:57	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			09/23/22 17:12	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	**170**		5.0	2.6	mg/L			09/23/22 17:12	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:12	1
Chloride (MCAWW 300.0)	**8800**	**E**	1.0	0.28	mg/L			10/11/22 16:19	1
Fluoride (MCAWW 300.0)	**0.90**		0.050	0.024	mg/L			10/11/22 16:19	1
Sulfate (MCAWW 300.0)	**310**	**H**	25	8.7	mg/L			10/16/22 17:55	25
Total Dissolved Solids (SM 2540C)	**3200**		1000	780	mg/L			09/23/22 09:49	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (MCAWW 300.0)	**9400**	**H**	100	28	mg/L			10/16/22 18:15	100

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**5.21**		0.664	0.813	1.00	0.294	pCi/L	09/26/22 09:56	10/19/22 07:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.5*		*40 - 110*	*09/26/22 09:56*	*10/19/22 07:58*	*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	**10.4**	**G**	1.64	1.90	1.00	1.23	pCi/L	09/26/22 10:02	10/12/22 16:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.5*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:43*	*1*
Y Carrier	*84.9*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:43*	*1*

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

Job ID: 240-173245-1

Client Sample ID: 2019-06-F20220916-01
Date Collected: 09/16/22 10:40
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-2
Matrix: Water

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	15.7		1.77	2.07	5.00	1.23	pCi/L		10/19/22 16:31	1

Client Sample ID: 93100-F-20220916-01

Date Collected: 09/16/22 12:39
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-3

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	450		100	57	ug/L		09/21/22 14:00	09/22/22 23:10	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	17000		1000	580	ug/L		09/21/22 14:00	09/23/22 15:23	1
Magnesium	5200		1000	200	ug/L		09/21/22 14:00	09/23/22 15:23	1
Potassium	2700		1000	220	ug/L		09/21/22 14:00	09/23/22 15:23	1
Sodium	1400000		10000	3300	ug/L		09/21/22 14:00	09/28/22 14:33	10

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		09/21/22 14:00	09/22/22 18:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	330		5.0	2.6	mg/L			09/23/22 17:26	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	330		5.0	2.6	mg/L			09/23/22 17:26	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:26	1
Total Dissolved Solids (SM 2540C)	460		50	39	mg/L			09/23/22 09:49	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (MCAWW 300.0)	2200	H	25	7.1	mg/L			10/16/22 20:16	25
Fluoride (MCAWW 300.0)	2.6	H	0.050	0.024	mg/L			10/16/22 19:36	1
Sulfate (MCAWW 300.0)	13	H	1.0	0.35	mg/L			10/16/22 19:36	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	0.394		0.154	0.158	1.00	0.159	pCi/L	09/26/22 09:56	10/19/22 07:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.2*		*40 - 110*	*09/26/22 09:56*	*10/19/22 07:58*	*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	0.687	U	0.589	0.592	1.00	0.929	pCi/L	09/26/22 10:02	10/12/22 16:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.2*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:43*	*1*
Y Carrier	*69.2*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:43*	*1*

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

Job ID: 240-173245-1

Client Sample ID: 93100-F-20220916-01
Date Collected: 09/16/22 12:39
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-3
Matrix: Water

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.08		0.609	0.613	5.00	0.929	pCi/L		10/19/22 16:31	1

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

Job ID: 240-173245-1

Client Sample ID: DUP-002-93100-F-20220916-01

Date Collected: 09/16/22 12:39
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-4

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	440		100	57	ug/L		09/21/22 14:00	09/22/22 23:14	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	16000		1000	580	ug/L		09/21/22 14:00	09/23/22 15:25	1
Magnesium	5100		1000	200	ug/L		09/21/22 14:00	09/23/22 15:25	1
Potassium	2600		1000	220	ug/L		09/21/22 14:00	09/23/22 15:25	1
Sodium	1300000		10000	3300	ug/L		09/21/22 14:00	09/28/22 14:36	10

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		09/21/22 14:00	09/22/22 19:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	320		5.0	2.6	mg/L			09/23/22 17:32	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	320		5.0	2.6	mg/L			09/23/22 17:32	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:32	1
Total Dissolved Solids (SM 2540C)	3900		50	39	mg/L			09/23/22 09:49	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (MCAWW 300.0)	2100	H	25	7.1	mg/L			10/16/22 21:16	25
Fluoride (MCAWW 300.0)	2.6	H	0.050	0.024	mg/L			10/16/22 20:36	1
Sulfate (MCAWW 300.0)	13	H	1.0	0.35	mg/L			10/16/22 20:36	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	0.382		0.148	0.152	1.00	0.156	pCi/L	09/26/22 09:56	10/19/22 07:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.9*		*40 - 110*	*09/26/22 09:56*	*10/19/22 07:58*	*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	2.06		0.646	0.673	1.00	0.814	pCi/L	09/26/22 10:02	10/12/22 16:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.9*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:43*	*1*
Y Carrier	*88.6*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:43*	*1*

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

Job ID: 240-173245-1

Client Sample ID: DUP-002-93100-F-20220916-01
Date Collected: 09/16/22 12:39
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-4
Matrix: Water

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	2.44		0.663	0.690	5.00	0.814	pCi/L		10/19/22 16:31	1

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

Job ID: 240-173245-1

Client Sample ID: 94139-F-20220916-01

Date Collected: 09/16/22 13:25
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-5

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	520		100	57	ug/L		09/21/22 14:00	09/22/22 23:19	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	7300		1000	580	ug/L		09/21/22 14:00	09/23/22 15:28	1
Magnesium	2400		1000	200	ug/L		09/21/22 14:00	09/23/22 15:28	1
Potassium	1600		1000	220	ug/L		09/21/22 14:00	09/23/22 15:28	1
Sodium	550000		10000	3300	ug/L		09/21/22 14:00	09/28/22 14:38	10

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		09/21/22 14:00	09/22/22 19:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	490		5.0	2.6	mg/L			09/23/22 17:37	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	460		5.0	2.6	mg/L			09/23/22 17:37	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	26		5.0	2.6	mg/L			09/23/22 17:37	1
Chloride (MCAWW 300.0)	520	H	10	2.8	mg/L			10/16/22 18:35	10
Fluoride (MCAWW 300.0)	4.9	H	0.50	0.24	mg/L			10/16/22 18:35	10
Sulfate (MCAWW 300.0)	63	H	10	3.5	mg/L			10/16/22 18:35	10
Total Dissolved Solids (SM 2540C)	950		40	31	mg/L			09/23/22 09:49	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	0.464		0.196	0.200	1.00	0.227	pCi/L	09/26/22 09:56	10/19/22 07:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*77.4*		*40 - 110*	*09/26/22 09:56*	*10/19/22 07:58*	*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	0.902	U	0.605	0.611	1.00	0.916	pCi/L	09/26/22 10:02	10/12/22 16:43	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*77.4*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:43*	*1*
Y Carrier	*85.2*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:43*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.37		0.636	0.643	5.00	0.916	pCi/L		10/19/22 16:31	1

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

Job ID: 240-173245-1

Client Sample ID: EB-001-F-20220916-01

Date Collected: 09/16/22 13:50
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-6

Matrix: Water

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		09/21/22 14:00	09/22/22 23:31	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		09/21/22 14:00	09/23/22 15:30	1
Magnesium	1000	U	1000	200	ug/L		09/21/22 14:00	09/23/22 15:30	1
Potassium	1000	U	1000	220	ug/L		09/21/22 14:00	09/23/22 15:30	1
Sodium	**950**	**J**	1000	330	ug/L		09/21/22 14:00	09/23/22 15:30	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		09/21/22 14:00	09/22/22 19:05	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			09/23/22 17:40	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:40	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:40	1
Total Dissolved Solids (SM 2540C)	**15**		10	7.8	mg/L			09/23/22 09:49	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (MCAWW 300.0)	**0.85**	**J H**	1.0	0.28	mg/L			10/16/22 21:36	1
Fluoride (MCAWW 300.0)	**0.38**	**H**	0.050	0.024	mg/L			10/16/22 21:36	1
Sulfate (MCAWW 300.0)	1.0	U H	1.0	0.35	mg/L			10/16/22 21:36	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	-0.0200	U	0.0474	0.0474	1.00	0.117	pCi/L	09/26/22 09:56	10/19/22 07:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.6*		*40 - 110*	*09/26/22 09:56*	*10/19/22 07:58*	*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	**0.665**		0.408	0.412	1.00	0.583	pCi/L	09/26/22 10:02	10/12/22 17:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.6*		*40 - 110*	*09/26/22 10:02*	*10/12/22 17:00*	*1*
Y Carrier	*75.1*		*40 - 110*	*09/26/22 10:02*	*10/12/22 17:00*	*1*

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

Job ID: 240-173245-1

Client Sample ID: EB-001-F-20220916-01
Date Collected: 09/16/22 13:50
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-6
Matrix: Water

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	0.645		0.411	0.415	5.00	0.583	pCi/L		10/19/22 16:31	1

Tracer/Carrier Summary

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

Job ID: 240-173245-1

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)
240-173245-2	2019-06-F20220916-01	71.5
240-173245-3	93100-F-20220916-01	88.2
240-173245-4	DUP-002-93100-F-20220916-01	93.9
240-173245-5	94139-F-20220916-01	77.4
240-173245-6	EB-001-F-20220916-01	79.6
LCS 160-583473/2-A	Lab Control Sample	92.1
MB 160-583473/1-A	Method Blank	88.2

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-173245-2	2019-06-F20220916-01	71.5	84.9
240-173245-3	93100-F-20220916-01	88.2	69.2
240-173245-4	DUP-002-93100-F-20220916-01	93.9	88.6
240-173245-5	94139-F-20220916-01	77.4	85.2
240-173245-6	EB-001-F-20220916-01	79.6	75.1
LCS 160-583474/2-A	Lab Control Sample	92.1	79.3
MB 160-583474/1-A	Method Blank	88.2	82.6

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-543717/1-A
Matrix: Water
Analysis Batch: 544017

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/21/22 14:00	09/22/22 21:48	1

Lab Sample ID: LCS 240-543717/2-A
Matrix: Water
Analysis Batch: 544017

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1050		ug/L		105	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-543717/1-A
Matrix: Water
Analysis Batch: 544222

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/21/22 14:00	09/23/22 14:22	1
Magnesium	1000	U	1000	200	ug/L		09/21/22 14:00	09/23/22 14:22	1
Potassium	1000	U	1000	220	ug/L		09/21/22 14:00	09/23/22 14:22	1
Sodium	1000	U	1000	330	ug/L		09/21/22 14:00	09/23/22 14:22	1

Lab Sample ID: LCS 240-543717/3-A
Matrix: Water
Analysis Batch: 544222

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24100		ug/L		96	80 - 120
Magnesium	25000	24000		ug/L		96	80 - 120
Potassium	25000	24000		ug/L		96	80 - 120
Sodium	25000	23900		ug/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-543719/1-A
Matrix: Water
Analysis Batch: 543918

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 543719

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/21/22 14:00	09/22/22 18:17	1

Lab Sample ID: LCS 240-543719/2-A
Matrix: Water
Analysis Batch: 543918

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 543719

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.69		ug/L		94	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-544358/30
Matrix: Water
Analysis Batch: 544358

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			09/23/22 16:19	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 16:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 16:19	1

Lab Sample ID: MB 240-544358/4
Matrix: Water
Analysis Batch: 544358

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			09/23/22 14:27	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 14:27	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 14:27	1

Lab Sample ID: LCS 240-544358/29
Matrix: Water
Analysis Batch: 544358

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	123		mg/L		102	86 - 123		

Lab Sample ID: 240-173245-2 DU
Matrix: Water
Analysis Batch: 544358

Client Sample ID: 2019-06-F20220916-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	170			169		mg/L				0.4	20
Bicarbonate Alkalinity as CaCO3	170			169		mg/L				0.4	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 240-546301/51
Matrix: Water
Analysis Batch: 546301

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			10/11/22 05:15	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/11/22 05:15	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/11/22 05:15	1

Lab Sample ID: LCS 240-546301/52
Matrix: Water
Analysis Batch: 546301

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	52.5		mg/L		105	90 - 110		
Fluoride			2.50	2.70		mg/L		108	90 - 110		
Sulfate			50.0	53.9		mg/L		108	90 - 110		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-547248/3
Matrix: Water
Analysis Batch: 547248

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			10/16/22 15:34	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/16/22 15:34	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/16/22 15:34	1

Lab Sample ID: LCS 240-547248/4
Matrix: Water
Analysis Batch: 547248

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.1		mg/L		100	90 - 110
Fluoride	2.50	2.67		mg/L		107	90 - 110
Sulfate	50.0	51.6		mg/L		103	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-544065/1
Matrix: Water
Analysis Batch: 544065

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			09/23/22 09:49	1

Lab Sample ID: LCS 240-544065/2
Matrix: Water
Analysis Batch: 544065

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	449		mg/L		91	80 - 120

Lab Sample ID: 240-173245-6 DU
Matrix: Water
Analysis Batch: 544065

Client Sample ID: EB-001-F-20220916-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	15		15.0		mg/L		0	20

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-583473/1-A
Matrix: Water
Analysis Batch: 586476

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 583473

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05716	U	0.0669	0.0671	1.00	0.108	pCi/L	09/26/22 09:56	10/19/22 07:47	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.2*		*40 - 110*	*09/26/22 09:56*	*10/19/22 07:47*	*1*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-583473/2-A
Matrix: Water
Analysis Batch: 586476

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 583473

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.20		1.09	1.00	0.125	pCi/L	90	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.1*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-583474/1-A
Matrix: Water
Analysis Batch: 585725

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 583474

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08994	U	0.259	0.259	1.00	0.466	pCi/L	09/26/22 10:02	10/12/22 16:40	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.2*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:40*	*1*
Y Carrier	*82.6*		*40 - 110*	*09/26/22 10:02*	*10/12/22 16:40*	*1*

Lab Sample ID: LCS 160-583474/2-A
Matrix: Water
Analysis Batch: 585725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 583474

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.20	9.181		1.26	1.00	0.504	pCi/L	112	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.1*		*40 - 110*
Y Carrier	*79.3*		*40 - 110*

Metals

Prep Batch: 543717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total Recoverable	Water	3005A	
240-173245-2	2019-06-F20220916-01	Total Recoverable	Water	3005A	
240-173245-3	93100-F-20220916-01	Total Recoverable	Water	3005A	
240-173245-4	DUP-002-93100-F-20220916-01	Total Recoverable	Water	3005A	
240-173245-5	94139-F-20220916-01	Total Recoverable	Water	3005A	
240-173245-6	EB-001-F-20220916-01	Total Recoverable	Water	3005A	
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-543717/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-543717/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 543719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total/NA	Water	7470A	
240-173245-2	2019-06-F20220916-01	Total/NA	Water	7470A	
240-173245-3	93100-F-20220916-01	Total/NA	Water	7470A	
240-173245-4	DUP-002-93100-F-20220916-01	Total/NA	Water	7470A	
240-173245-5	94139-F-20220916-01	Total/NA	Water	7470A	
240-173245-6	EB-001-F-20220916-01	Total/NA	Water	7470A	
MB 240-543719/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-543719/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 543918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-2	2019-06-F20220916-01	Total/NA	Water	7470A	543719
240-173245-3	93100-F-20220916-01	Total/NA	Water	7470A	543719
240-173245-4	DUP-002-93100-F-20220916-01	Total/NA	Water	7470A	543719
240-173245-5	94139-F-20220916-01	Total/NA	Water	7470A	543719
240-173245-6	EB-001-F-20220916-01	Total/NA	Water	7470A	543719
MB 240-543719/1-A	Method Blank	Total/NA	Water	7470A	543719
LCS 240-543719/2-A	Lab Control Sample	Total/NA	Water	7470A	543719

Analysis Batch: 544017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total Recoverable	Water	6010D	543717
240-173245-2	2019-06-F20220916-01	Total Recoverable	Water	6010D	543717
240-173245-3	93100-F-20220916-01	Total Recoverable	Water	6010D	543717
240-173245-4	DUP-002-93100-F-20220916-01	Total Recoverable	Water	6010D	543717
240-173245-5	94139-F-20220916-01	Total Recoverable	Water	6010D	543717
240-173245-6	EB-001-F-20220916-01	Total Recoverable	Water	6010D	543717
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	6010D	543717
LCS 240-543717/2-A	Lab Control Sample	Total Recoverable	Water	6010D	543717

Analysis Batch: 544222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total Recoverable	Water	6020B	543717
240-173245-1	2019-09-F20220916-01	Total Recoverable	Water	6020B	543717
240-173245-2	2019-06-F20220916-01	Total Recoverable	Water	6020B	543717
240-173245-3	93100-F-20220916-01	Total Recoverable	Water	6020B	543717
240-173245-4	DUP-002-93100-F-20220916-01	Total Recoverable	Water	6020B	543717
240-173245-5	94139-F-20220916-01	Total Recoverable	Water	6020B	543717
240-173245-6	EB-001-F-20220916-01	Total Recoverable	Water	6020B	543717

Metals (Continued)

Analysis Batch: 544222 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	6020B	543717
LCS 240-543717/3-A	Lab Control Sample	Total Recoverable	Water	6020B	543717

Analysis Batch: 544360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total/NA	Water	7470A	543719

Analysis Batch: 544865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total Recoverable	Water	6020B	543717
240-173245-2	2019-06-F20220916-01	Total Recoverable	Water	6020B	543717
240-173245-3	93100-F-20220916-01	Total Recoverable	Water	6020B	543717
240-173245-4	DUP-002-93100-F-20220916-01	Total Recoverable	Water	6020B	543717
240-173245-5	94139-F-20220916-01	Total Recoverable	Water	6020B	543717

General Chemistry

Analysis Batch: 544065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total/NA	Water	SM 2540C	
240-173245-2	2019-06-F20220916-01	Total/NA	Water	SM 2540C	
240-173245-3	93100-F-20220916-01	Total/NA	Water	SM 2540C	
240-173245-4	DUP-002-93100-F-20220916-01	Total/NA	Water	SM 2540C	
240-173245-5	94139-F-20220916-01	Total/NA	Water	SM 2540C	
240-173245-6	EB-001-F-20220916-01	Total/NA	Water	SM 2540C	
MB 240-544065/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-544065/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-173245-6 DU	EB-001-F-20220916-01	Total/NA	Water	SM 2540C	

Analysis Batch: 544358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total/NA	Water	2320B-1997	
240-173245-2	2019-06-F20220916-01	Total/NA	Water	2320B-1997	
240-173245-3	93100-F-20220916-01	Total/NA	Water	2320B-1997	
240-173245-4	DUP-002-93100-F-20220916-01	Total/NA	Water	2320B-1997	
240-173245-5	94139-F-20220916-01	Total/NA	Water	2320B-1997	
240-173245-6	EB-001-F-20220916-01	Total/NA	Water	2320B-1997	
MB 240-544358/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-544358/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-544358/29	Lab Control Sample	Total/NA	Water	2320B-1997	
240-173245-2 DU	2019-06-F20220916-01	Total/NA	Water	2320B-1997	

Analysis Batch: 546301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1	2019-09-F20220916-01	Total/NA	Water	300.0	
240-173245-2	2019-06-F20220916-01	Total/NA	Water	300.0	
MB 240-546301/51	Method Blank	Total/NA	Water	300.0	
LCS 240-546301/52	Lab Control Sample	Total/NA	Water	300.0	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173245-1
Project/Site: Federal CCR Wells

General Chemistry

Analysis Batch: 547248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-1 - RA	2019-09-F20220916-01	Total/NA	Water	300.0	
240-173245-2	2019-06-F20220916-01	Total/NA	Water	300.0	
240-173245-2 - RA	2019-06-F20220916-01	Total/NA	Water	300.0	
240-173245-3 - RA	93100-F-20220916-01	Total/NA	Water	300.0	
240-173245-3 - RA	93100-F-20220916-01	Total/NA	Water	300.0	
240-173245-4 - RA	DUP-002-93100-F-20220916-01	Total/NA	Water	300.0	
240-173245-4 - RA	DUP-002-93100-F-20220916-01	Total/NA	Water	300.0	
240-173245-5	94139-F-20220916-01	Total/NA	Water	300.0	
240-173245-6 - RA	EB-001-F-20220916-01	Total/NA	Water	300.0	
MB 240-547248/3	Method Blank	Total/NA	Water	300.0	
LCS 240-547248/4	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 583473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-2	2019-06-F20220916-01	Total/NA	Water	PrecSep-21	
240-173245-3	93100-F-20220916-01	Total/NA	Water	PrecSep-21	
240-173245-4	DUP-002-93100-F-20220916-01	Total/NA	Water	PrecSep-21	
240-173245-5	94139-F-20220916-01	Total/NA	Water	PrecSep-21	
240-173245-6	EB-001-F-20220916-01	Total/NA	Water	PrecSep-21	
MB 160-583473/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-583473/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 583474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173245-2	2019-06-F20220916-01	Total/NA	Water	PrecSep_0	
240-173245-3	93100-F-20220916-01	Total/NA	Water	PrecSep_0	
240-173245-4	DUP-002-93100-F-20220916-01	Total/NA	Water	PrecSep_0	
240-173245-5	94139-F-20220916-01	Total/NA	Water	PrecSep_0	
240-173245-6	EB-001-F-20220916-01	Total/NA	Water	PrecSep_0	
MB 160-583474/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-583474/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 240-173245-1

Client Sample ID: 2019-09-F20220916-01

Lab Sample ID: 240-173245-1

Date Collected: 09/16/22 09:31

Matrix: Water

Date Received: 09/19/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 23:01
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:08
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		10	544222	AJC	EET CAN	09/23/22 15:10
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		20	544865	AJC	EET CAN	09/28/22 14:28
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 14:57
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:20
Total/NA	Analysis	300.0		1	546301	JMB	EET CAN	10/11/22 15:58
Total/NA	Analysis	300.0	RA	500	547248	JWW	EET CAN	10/16/22 17:35
Total/NA	Analysis	SM 2540C		1	544065	MED	EET CAN	09/23/22 09:49

Client Sample ID: 2019-06-F20220916-01

Lab Sample ID: 240-173245-2

Date Collected: 09/16/22 10:40

Matrix: Water

Date Received: 09/19/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 23:05
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:20
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		20	544865	AJC	EET CAN	09/28/22 14:31
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:57
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:12
Total/NA	Analysis	300.0		1	546301	JMB	EET CAN	10/11/22 16:19
Total/NA	Analysis	300.0		25	547248	JWW	EET CAN	10/16/22 17:55
Total/NA	Analysis	300.0	RA	100	547248	JWW	EET CAN	10/16/22 18:15
Total/NA	Analysis	SM 2540C		1	544065	MED	EET CAN	09/23/22 09:49
Total/NA	Prep	PrecSep-21			583473	ASG	EET SL	09/26/22 09:56
Total/NA	Analysis	9315		1	586479	CLP	EET SL	10/19/22 07:58
Total/NA	Prep	PrecSep_0			583474	ASG	EET SL	09/26/22 10:02
Total/NA	Analysis	9320		1	585550	FLC	EET SL	10/12/22 16:43
Total/NA	Analysis	Ra226_Ra228		1	586596	CAH	EET SL	10/19/22 16:31

Lab Chronicle

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

Job ID: 240-173245-1

Client Sample ID: 93100-F-20220916-01

Lab Sample ID: 240-173245-3

Date Collected: 09/16/22 12:39

Matrix: Water

Date Received: 09/19/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 23:10
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:23
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		10	544865	AJC	EET CAN	09/28/22 14:33
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:59
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:26
Total/NA	Analysis	300.0	RA	1	547248	JWW	EET CAN	10/16/22 19:36
Total/NA	Analysis	300.0	RA	25	547248	JWW	EET CAN	10/16/22 20:16
Total/NA	Analysis	SM 2540C		1	544065	MED	EET CAN	09/23/22 09:49
Total/NA	Prep	PrecSep-21			583473	ASG	EET SL	09/26/22 09:56
Total/NA	Analysis	9315		1	586479	CLP	EET SL	10/19/22 07:58
Total/NA	Prep	PrecSep_0			583474	ASG	EET SL	09/26/22 10:02
Total/NA	Analysis	9320		1	585550	FLC	EET SL	10/12/22 16:43
Total/NA	Analysis	Ra226_Ra228		1	586596	CAH	EET SL	10/19/22 16:31

Client Sample ID: DUP-002-93100-F-20220916-01

Lab Sample ID: 240-173245-4

Date Collected: 09/16/22 12:39

Matrix: Water

Date Received: 09/19/22 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 23:14
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:25
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		10	544865	AJC	EET CAN	09/28/22 14:36
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 19:01
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:32
Total/NA	Analysis	300.0	RA	1	547248	JWW	EET CAN	10/16/22 20:36
Total/NA	Analysis	300.0	RA	25	547248	JWW	EET CAN	10/16/22 21:16
Total/NA	Analysis	SM 2540C		1	544065	MED	EET CAN	09/23/22 09:49
Total/NA	Prep	PrecSep-21			583473	ASG	EET SL	09/26/22 09:56
Total/NA	Analysis	9315		1	586479	CLP	EET SL	10/19/22 07:58
Total/NA	Prep	PrecSep_0			583474	ASG	EET SL	09/26/22 10:02
Total/NA	Analysis	9320		1	585550	FLC	EET SL	10/12/22 16:43
Total/NA	Analysis	Ra226_Ra228		1	586596	CAH	EET SL	10/19/22 16:31

Lab Chronicle

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

Job ID: 240-173245-1

Client Sample ID: 94139-F-20220916-01

Date Collected: 09/16/22 13:25
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 23:19
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:28
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		10	544865	AJC	EET CAN	09/28/22 14:38
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 19:03
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:37
Total/NA	Analysis	300.0		10	547248	JWW	EET CAN	10/16/22 18:35
Total/NA	Analysis	SM 2540C		1	544065	MED	EET CAN	09/23/22 09:49
Total/NA	Prep	PrecSep-21			583473	ASG	EET SL	09/26/22 09:56
Total/NA	Analysis	9315		1	586479	CLP	EET SL	10/19/22 07:58
Total/NA	Prep	PrecSep_0			583474	ASG	EET SL	09/26/22 10:02
Total/NA	Analysis	9320		1	585550	FLC	EET SL	10/12/22 16:43
Total/NA	Analysis	Ra226_Ra228		1	586596	CAH	EET SL	10/19/22 16:31

Client Sample ID: EB-001-F-20220916-01

Date Collected: 09/16/22 13:50
Date Received: 09/19/22 14:00

Lab Sample ID: 240-173245-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 23:31
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:30
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 19:05
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:40
Total/NA	Analysis	300.0	RA	1	547248	JWW	EET CAN	10/16/22 21:36
Total/NA	Analysis	SM 2540C		1	544065	MED	EET CAN	09/23/22 09:49
Total/NA	Prep	PrecSep-21			583473	ASG	EET SL	09/26/22 09:56
Total/NA	Analysis	9315		1	586479	CLP	EET SL	10/19/22 07:58
Total/NA	Prep	PrecSep_0			583474	ASG	EET SL	09/26/22 10:02
Total/NA	Analysis	9320		1	585550	FLC	EET SL	10/12/22 17:00
Total/NA	Analysis	Ra226_Ra228		1	586596	CAH	EET SL	10/19/22 16:31

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
Job ID: 240-173245-1
Project/Site: Federal CCR Wells

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	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	11-30-23
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.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173245-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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	06-30-22 *
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	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Castle	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
2019-09-F-20220916-01	9-16-22	0931	G	W	N		1	1		1	3	
2019-06-F-20220916-01	9-16-22	1040	G	W	N		1	1	1	1	4	* 1 Ra Bottle
93100-F-20220916-01	9-16-22	1239	G	W	N		1	1	2	1	5	
DUP-002-93100-F-20220916-01	9-16-22	1239	G	W	N		1	1	2	1	5	
94139-F-20220916-01	9-16-22	1325	G	W	N		1	1	2	1	5	
EB-001-F-20220916-01	9-16-22	1350	G	W	N		1	1	2	1	5	

240-173245 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be ass
☐ Return To Client ☐ Disposal By Lab

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Bobby Castle	9-19-22 / 0850	KEARL	Tom Edwards	9-19-22 10:15 hrs	Auto Options
Relinquished by: Tom Edwards	Date/Time: 9-19-22 13:30 hrs	Company: Auto Options	Received by:	Date/Time: 9-19-22 1330	Company: EFNC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 9-19-22 14:00	Company: EETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

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10/19/2022

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative Login # : 173245
Barberton Facility

Client LightStone Site Name _____ Cooler unpacked by: Chantek

Cooler Received on 9-19-22 Opened on 9-19-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 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 +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp. 3.2 °C Corrected Cooler Temp. 3.2 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	2.3	2.3	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	3.1	3.1	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

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2019-09-F20220916-01	240-173245-C-1	Plastic 500ml - with Nitric Acid	<2			
2019-06-F20220916-01	240-173245-C-2	Plastic 500ml - with Nitric Acid	<2			
2019-06-F20220916-01	240-173245-D-2	Plastic 1 liter - Nitric Acid	<2			
93100-F20220916-01	240-173245-C-3	Plastic 500ml - with Nitric Acid	<2			
93100-F20220916-01	240-173245-D-3	Plastic 1 liter - Nitric Acid	<2			
93100-F20220916-01	240-173245-E-3	Plastic 1 liter - Nitric Acid	<2			
DUP-002-93100-F-20220916-01	240-173245-C-4	Plastic 500ml - with Nitric Acid	<2			
DUP-002-93100-F-20220916-01	240-173245-D-4	Plastic 1 liter - Nitric Acid	<2			
DUP-002-93100-F-20220916-01	240-173245-E-4	Plastic 1 liter - Nitric Acid	<2			
94139-F-20220916-01	240-173245-C-5	Plastic 500ml - with Nitric Acid	<2			
94139-F-20220916-01	240-173245-D-5	Plastic 1 liter - Nitric Acid	<2			
94139-F-20220916-01	240-173245-E-5	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220916-01	240-173245-C-6	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220916-01	240-173245-D-6	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220916-01	240-173245-E-6	Plastic 1 liter - Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-157416.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-173245-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 10/3/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2019-06-F20220916-01 (240-173245-2)	9/16/22	10:40 Eastern		Water			X	X	X	1	Recount of TAR after 21 day ingrowth if > action limit; save planchet
93100-F20220916-01 (240-173245-3)	9/16/22	12:39 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
DUP-002-93100-F-20220916-01 (240-173245-4)	9/16/22	12:39 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
94139-F-20220916-01 (240-173245-5)	9/16/22	13:25 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220916-01 (240-173245-6)	9/16/22	13:50 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		9/20/22 1110	ETNL	FED EX		
2	FED EX			Jena Worthington	SEP 21 2022 0850	ETNSL
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

10/19/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-173245-1

Login Number: 173245
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 09/21/22 11:07 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 | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-173270-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
10/20/2022 5:10:27 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-173270-1

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

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-173270-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-173270-1

Receipt
The samples were received on 9/19/2022 4:17 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 9 coolers at receipt time were 4.2°C, 4.6°C, 5.0°C, 6.1°C, 6.3°C, 6.8°C, 6.9°C, 7.0°C and 22.3°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 following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: 2016-07-F-20220913-01 (240-173270-1), 96153R-F-20220913-01 (240-173270-2) and EB-001-F-20220913-01 (240-173270-5).

Method 2540C_Calcd: The sample duplicate (DUP) precision for analytical batch 240-543647 was outside control limits. Sample non-homogeneity is suspected.

Method 2540C_Calcd: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW20-F-20220913-01 (240-173270-3) and DUP-001-MW-20-F-20220913-01 (240-173270-4).

Method 300.0_28D: The following sample was diluted due to the nature of the sample matrix: 2016-10-F-20220914-01 (240-173270-9). Elevated reporting limits (RLs) are provided.

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

Gas Flow Proportional Counter
Method 9315_Ra226: Radium 226 Batch 160-583475: 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. 2016-07-F-20220913-01 (240-173270-1), 96153R-F-20220913-01 (240-173270-2), 96153R-F-20220913-01 (240-173270-2[MS]), 96153R-F-20220913-01 (240-173270-2[MSD]), MW20-F-20220913-01 (240-173270-3), DUP-001-MW-20-F-20220913-01 (240-173270-4), EB-001-F-20220913-01 (240-173270-5), 96152-F-20220914-01 (240-173270-7), 96154R-F-20220914-01 (240-173270-8), 2016-10-F-20220914-01 (240-173270-9), EB-001-F-20220914-01 (240-173270-10), (LCS 160-583475/2-A) and (MB 160-583475/1-A)

Method 9320_Ra228: Radium-228 batch 583476Any 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.2016-07-F-20220913-01 (240-173270-1), 96153R-F-20220913-01 (240-173270-2), 96153R-F-20220913-01 (240-173270-2[MS]), 96153R-F-20220913-01 (240-173270-2[MSD]), MW20-F-20220913-01 (240-173270-3), DUP-001-MW-20-F-20220913-01 (240-173270-4), EB-001-F-20220913-01 (240-173270-5), 96152-F-20220914-01 (240-173270-7), 2016-10-F-20220914-01 (240-173270-9), EB-001-F-20220914-01 (240-173270-10), (LCS 160-583476/2-A) and (MB 160-583476/1-A)

Method 9320_Ra228: Radium-228 batch 583476The detection goal was not met for the following sample(s). Sample was prepped at a reduced volume due to the presence of matrix interferences: 96154R-F-20220914-01 (240-173270-8). Analytical results are reported with the detection limit achieved.

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

Rad

Job ID: 240-173270-1 (Continued)

Laboratory: Eurofins Canton (Continued)

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: 240-173270-1

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: 240-173270-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-173270-1	2016-07-F-20220913-01	Water	09/13/22 10:48	09/19/22 16:17
240-173270-2	96153R-F-20220913-01	Water	09/13/22 13:44	09/19/22 16:17
240-173270-3	MW20-F-20220913-01	Water	09/13/22 15:00	09/19/22 16:17
240-173270-4	DUP-001-MW-20-F-20220913-01	Water	09/13/22 15:00	09/19/22 16:17
240-173270-5	EB-001-F-20220913-01	Water	09/13/22 15:30	09/19/22 16:17
240-173270-6	9910-F-20220914-01	Water	09/14/22 09:20	09/19/22 16:17
240-173270-7	96152-F-20220914-01	Water	09/14/22 11:01	09/19/22 16:17
240-173270-8	96154R-F-20220914-01	Water	09/14/22 12:04	09/19/22 16:17
240-173270-9	2016-10-F-20220914-01	Water	09/14/22 14:41	09/19/22 16:17
240-173270-10	EB-001-F-20220914-01	Water	09/14/22 16:00	09/19/22 16:17

Detection Summary

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

Job ID: 240-173270-1

Client Sample ID: 2016-07-F-20220913-01 — Lab Sample ID: 240-173270-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	460		100	57	ug/L	1		6010D	Total Recoverable
Calcium	29000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	5800		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	4700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	920000		5000	1600	ug/L	5		6020B	Total Recoverable
Total Alkalinity	310		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	290		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	16		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1300		20	5.7	mg/L	20		300.0	Total/NA
Fluoride	2.9		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	27		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	2500	H	50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96153R-F-20220913-01 — Lab Sample ID: 240-173270-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	550		100	57	ug/L	1		6010D	Total Recoverable
Calcium	120000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	23000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	5800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	310000		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
Chloride	10		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.75		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	930		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	1300	H	20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW20-F-20220913-01 — Lab Sample ID: 240-173270-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	120		100	57	ug/L	1		6010D	Total Recoverable
Calcium	440000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	100000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	5300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	23000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1.8		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	1.4		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	1700		10	3.5	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 240-173270-1

Client Sample ID: MW20-F-20220913-01 (Continued) — Lab Sample ID: 240-173270-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	2000	H	20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-001-MW-20-F-20220913-01 — Lab Sample ID: 240-173270-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	120		100	57	ug/L	1		6010D	Total Recoverable
Calcium	450000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	100000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	5400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	23000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1.8		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	1.4		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	1700		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	2100	H	20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220913-01 — Lab Sample ID: 240-173270-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	0.53	J	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

Client Sample ID: 9910-F-20220914-01 — Lab Sample ID: 240-173270-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1100		20	5.7	mg/L	20		300.0	Total/NA
Fluoride	1.9		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	120		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	2500		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96152-F-20220914-01 — Lab Sample ID: 240-173270-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	480		100	57	ug/L	1		6010D	Total Recoverable
Calcium	46000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	15000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	8200		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2100000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	500		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	500		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3200		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	0.78		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	49		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	4500		50	39	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 240-173270-1

Client Sample ID: 96154R-F-20220914-01 — Lab Sample ID: 240-173270-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	480		100	57	ug/L	1		6010D	Total Recoverable
Calcium	35000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	14000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	500000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	520		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	460		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	57		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	430		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	4.2		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	72		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	1200		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2016-10-F-20220914-01 — Lab Sample ID: 240-173270-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	390		100	57	ug/L	1		6010D	Total Recoverable
Calcium	550000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	200000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	140000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	8400000		20000	6600	ug/L	20		6020B	Total Recoverable
Total Alkalinity	18		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	18		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	15000		500	140	mg/L	500		300.0	Total/NA
Sulfate	230		50	17	mg/L	50		300.0	Total/NA
Total Dissolved Solids	18000		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220914-01 — Lab Sample ID: 240-173270-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	2500		1000	330	ug/L	1		6020B	Total Recoverable
Chloride	1.2		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

This Detection Summary does not include radiochemical test results.

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

Job ID: 240-173270-1

Client Sample ID: 2016-07-F-20220913-01

Date Collected: 09/13/22 10:48
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-1

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	460		100	57	ug/L		09/21/22 14:00	09/22/22 22:17	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	29000		1000	580	ug/L		09/21/22 14:00	09/23/22 14:43	1
Magnesium	5800		1000	200	ug/L		09/21/22 14:00	09/23/22 14:43	1
Potassium	4700		1000	220	ug/L		09/21/22 14:00	09/23/22 14:43	1
Sodium	920000		5000	1600	ug/L		09/21/22 14:00	09/28/22 14:16	5

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		09/21/22 14:00	09/22/22 18:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	310		5.0	2.6	mg/L			09/23/22 17:45	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	290		5.0	2.6	mg/L			09/23/22 17:45	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	16		5.0	2.6	mg/L			09/23/22 17:45	1
Chloride (MCAWW 300.0)	1300		20	5.7	mg/L			10/09/22 17:36	20
Fluoride (MCAWW 300.0)	2.9		0.10	0.048	mg/L			10/09/22 17:15	2
Sulfate (MCAWW 300.0)	27		2.0	0.70	mg/L			10/09/22 17:15	2
Total Dissolved Solids (SM 2540C)	2500	H	50	39	mg/L			09/21/22 09:23	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	1.01		0.194	0.214	1.00	0.136	pCi/L	09/26/22 10:03	10/20/22 07:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:27*	*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	0.803		0.353	0.361	1.00	0.468	pCi/L	09/26/22 10:06	10/13/22 11:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:52*	*1*
Y Carrier	*83.7*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:52*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.81		0.403	0.420	5.00	0.468	pCi/L		10/20/22 16:47	1

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

Job ID: 240-173270-1

Client Sample ID: 96153R-F-20220913-01

Date Collected: 09/13/22 13:44
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-2

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	550		100	57	ug/L		09/21/22 14:00	09/22/22 21:56	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		09/21/22 14:00	09/23/22 14:26	1
Magnesium	23000		1000	200	ug/L		09/21/22 14:00	09/23/22 14:26	1
Potassium	5800		1000	220	ug/L		09/21/22 14:00	09/23/22 14:26	1
Sodium	310000		1000	330	ug/L		09/21/22 14:00	09/23/22 14:26	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		09/21/22 14:00	09/22/22 18:22	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			09/23/22 17:49	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	260		5.0	2.6	mg/L			09/23/22 17:49	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:49	1
Chloride (MCAWW 300.0)	10		1.0	0.28	mg/L			10/09/22 17:58	1
Fluoride (MCAWW 300.0)	0.75		0.050	0.024	mg/L			10/09/22 17:58	1
Sulfate (MCAWW 300.0)	930		10	3.5	mg/L			10/09/22 19:03	10
Total Dissolved Solids (SM 2540C)	1300	H	20	16	mg/L			09/21/22 09:23	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	0.279		0.151	0.153	1.00	0.199	pCi/L	09/26/22 10:03	10/20/22 07:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.7*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:27*	*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	0.845		0.491	0.497	1.00	0.713	pCi/L	09/26/22 10:06	10/13/22 11:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.7*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:52*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:52*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.12		0.514	0.520	5.00	0.713	pCi/L		10/20/22 16:47	1

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

Job ID: 240-173270-1

Client Sample ID: MW20-F-20220913-01

Date Collected: 09/13/22 15:00
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-3

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	120		100	57	ug/L		09/21/22 14:00	09/22/22 22:22	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	440000		1000	580	ug/L		09/21/22 14:00	09/23/22 14:50	1
Magnesium	100000		1000	200	ug/L		09/21/22 14:00	09/23/22 14:50	1
Potassium	5300		1000	220	ug/L		09/21/22 14:00	09/23/22 14:50	1
Sodium	23000		1000	330	ug/L		09/21/22 14:00	09/23/22 14:50	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		09/21/22 14:00	09/22/22 18:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	160		5.0	2.6	mg/L			09/23/22 17:53	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	160		5.0	2.6	mg/L			09/23/22 17:53	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:53	1
Chloride (MCAWW 300.0)	1.8		1.0	0.28	mg/L			10/09/22 20:08	1
Fluoride (MCAWW 300.0)	1.4		0.050	0.024	mg/L			10/09/22 20:08	1
Sulfate (MCAWW 300.0)	1700		10	3.5	mg/L			10/09/22 21:13	10
Total Dissolved Solids (SM 2540C)	2000	H	20	16	mg/L			09/21/22 09:40	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	0.0352	U	0.0600	0.0601	1.00	0.105	pCi/L	09/26/22 10:03	10/20/22 07:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:28*	*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	0.406		0.266	0.269	1.00	0.390	pCi/L	09/26/22 10:06	10/13/22 11:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:52*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:52*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.442		0.273	0.276	5.00	0.390	pCi/L		10/20/22 16:47	1

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

Job ID: 240-173270-1

Client Sample ID: DUP-001-MW-20-F-20220913-01

Date Collected: 09/13/22 15:00
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-4

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	120		100	57	ug/L		09/21/22 14:00	09/22/22 22:26	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	450000		1000	580	ug/L		09/21/22 14:00	09/23/22 14:53	1
Magnesium	100000		1000	200	ug/L		09/21/22 14:00	09/23/22 14:53	1
Potassium	5400		1000	220	ug/L		09/21/22 14:00	09/23/22 14:53	1
Sodium	23000		1000	330	ug/L		09/21/22 14:00	09/23/22 14:53	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		09/21/22 14:00	09/22/22 18:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	160		5.0	2.6	mg/L			09/23/22 17:56	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	160		5.0	2.6	mg/L			09/23/22 17:56	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 17:56	1
Chloride (MCAWW 300.0)	1.8		1.0	0.28	mg/L			10/09/22 21:35	1
Fluoride (MCAWW 300.0)	1.4		0.050	0.024	mg/L			10/09/22 21:35	1
Sulfate (MCAWW 300.0)	1700		10	3.5	mg/L			10/09/22 21:57	10
Total Dissolved Solids (SM 2540C)	2100	H	20	16	mg/L			09/21/22 09:40	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0656	U	0.0685	0.0688	1.00	0.108	pCi/L	09/26/22 10:03	10/20/22 07:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:28*	*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	0.472		0.295	0.298	1.00	0.433	pCi/L	09/26/22 10:06	10/13/22 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*
Y Carrier	*86.0*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.538		0.303	0.306	5.00	0.433	pCi/L		10/20/22 16:47	1

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

Job ID: 240-173270-1

Client Sample ID: EB-001-F-20220913-01

Date Collected: 09/13/22 15:30
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-5

Matrix: Water

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		09/21/22 14:00	09/22/22 22:39	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		09/21/22 14:00	09/23/22 14:55	1
Magnesium	1000	U	1000	200	ug/L		09/21/22 14:00	09/23/22 14:55	1
Potassium	1000	U	1000	220	ug/L		09/21/22 14:00	09/23/22 14:55	1
Sodium	1000	U	1000	330	ug/L		09/21/22 14:00	09/23/22 14:55	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		09/21/22 14:00	09/22/22 18:40	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			09/23/22 18:10	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 18:10	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 18:10	1
Chloride (MCAWW 300.0)	**0.53**	**J**	1.0	0.28	mg/L			10/09/22 22:18	1
Fluoride (MCAWW 300.0)	**0.12**		0.050	0.024	mg/L			10/09/22 22:18	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			10/09/22 22:18	1
Total Dissolved Solids (SM 2540C)	10	U H	10	7.8	mg/L			09/21/22 09:23	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	0.0138	U	0.0552	0.0553	1.00	0.107	pCi/L	09/26/22 10:03	10/20/22 07:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:28*	*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	0.156	U	0.253	0.254	1.00	0.433	pCi/L	09/26/22 10:06	10/13/22 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*
Y Carrier	*87.5*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.170	U	0.259	0.260	5.00	0.433	pCi/L		10/20/22 16:47	1

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173270-1
Project/Site: Federal CCR Wells

Client Sample ID: 9910-F-20220914-01
Lab Sample ID: 240-173270-6
Date Collected: 09/14/22 09:20
Matrix: Water
Date Received: 09/19/22 16:17

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (MCAWW 300.0)	1100		20	5.7	mg/L			10/09/22 23:02	20
Fluoride (MCAWW 300.0)	1.9		0.10	0.048	mg/L			10/09/22 22:40	2
Sulfate (MCAWW 300.0)	120		2.0	0.70	mg/L			10/09/22 22:40	2
Total Dissolved Solids (SM 2540C)	2500		50	39	mg/L			09/21/22 09:23	1

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

Job ID: 240-173270-1

Client Sample ID: 96152-F-20220914-01

Date Collected: 09/14/22 11:01
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-7

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	480		100	57	ug/L		09/21/22 14:00	09/22/22 22:43	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	46000		1000	580	ug/L		09/21/22 14:00	09/23/22 14:58	1
Magnesium	15000		1000	200	ug/L		09/21/22 14:00	09/23/22 14:58	1
Potassium	8200		1000	220	ug/L		09/21/22 14:00	09/23/22 14:58	1
Sodium	2100000		10000	3300	ug/L		09/21/22 14:00	09/28/22 14:18	10

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		09/21/22 14:00	09/22/22 18:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	500		5.0	2.6	mg/L			09/23/22 18:18	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	500		5.0	2.6	mg/L			09/23/22 18:18	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 18:18	1
Chloride (MCAWW 300.0)	3200		25	7.1	mg/L			10/09/22 23:45	25
Fluoride (MCAWW 300.0)	0.78		0.25	0.12	mg/L			10/09/22 23:24	5
Sulfate (MCAWW 300.0)	49		5.0	1.7	mg/L			10/09/22 23:24	5
Total Dissolved Solids (SM 2540C)	4500		50	39	mg/L			09/21/22 09:23	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	1.92		0.236	0.292	1.00	0.102	pCi/L	09/26/22 10:03	10/20/22 07:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*110*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:28*	*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	2.32		0.452	0.500	1.00	0.405	pCi/L	09/26/22 10:06	10/13/22 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*110*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*
Y Carrier	*84.5*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.24		0.510	0.579	5.00	0.405	pCi/L		10/20/22 16:47	1

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

Job ID: 240-173270-1

Client Sample ID: 96154R-F-20220914-01

Date Collected: 09/14/22 12:04
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-8

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	480		100	57	ug/L		09/21/22 14:00	09/22/22 22:48	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	35000		1000	580	ug/L		09/21/22 14:00	09/23/22 15:00	1
Magnesium	12000		1000	200	ug/L		09/21/22 14:00	09/23/22 15:00	1
Potassium	14000		1000	220	ug/L		09/21/22 14:00	09/23/22 15:00	1
Sodium	500000		1000	330	ug/L		09/21/22 14:00	09/23/22 15:00	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		09/21/22 14:00	09/22/22 18:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	520		5.0	2.6	mg/L			09/23/22 18:24	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	460		5.0	2.6	mg/L			09/23/22 18:24	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	57		5.0	2.6	mg/L			09/23/22 18:24	1
Chloride (MCAWW 300.0)	430		10	2.8	mg/L			10/10/22 00:29	10
Fluoride (MCAWW 300.0)	4.2		0.050	0.024	mg/L			10/10/22 00:07	1
Sulfate (MCAWW 300.0)	72		1.0	0.35	mg/L			10/10/22 00:07	1
Total Dissolved Solids (SM 2540C)	1200		20	16	mg/L			09/21/22 09:23	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	1.39		0.326	0.349	1.00	0.221	pCi/L	09/26/22 10:03	10/20/22 07:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.0*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:28*	*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	1.14	G	0.694	0.701	1.00	1.01	pCi/L	09/26/22 10:06	10/13/22 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.0*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*
Y Carrier	*84.1*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.53		0.767	0.783	5.00	1.01	pCi/L		10/20/22 16:47	1

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

Job ID: 240-173270-1

Client Sample ID: 2016-10-F-20220914-01

Date Collected: 09/14/22 14:41
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-9

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	390		100	57	ug/L		09/21/22 14:00	09/22/22 22:52	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	550000		1000	580	ug/L		09/21/22 14:00	09/23/22 15:03	1
Magnesium	200000		1000	200	ug/L		09/21/22 14:00	09/23/22 15:03	1
Potassium	140000		1000	220	ug/L		09/21/22 14:00	09/23/22 15:03	1
Sodium	8400000		20000	6600	ug/L		09/21/22 14:00	09/28/22 14:26	20

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		09/21/22 14:00	09/22/22 18:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	18		5.0	2.6	mg/L			09/23/22 18:28	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	18		5.0	2.6	mg/L			09/23/22 18:28	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 18:28	1
Chloride (MCAWW 300.0)	15000		500	140	mg/L			10/10/22 01:56	500
Fluoride (MCAWW 300.0)	2.5	U	2.5	1.2	mg/L			10/10/22 01:34	50
Sulfate (MCAWW 300.0)	230		50	17	mg/L			10/10/22 01:34	50
Total Dissolved Solids (SM 2540C)	18000		1000	780	mg/L			09/21/22 09:23	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	2.18		0.257	0.324	1.00	0.121	pCi/L	09/26/22 10:03	10/20/22 07:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:28*	*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	9.92		0.839	1.24	1.00	0.375	pCi/L	09/26/22 10:06	10/13/22 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	12.1		0.877	1.28	5.00	0.375	pCi/L		10/20/22 16:47	1

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

Job ID: 240-173270-1

Client Sample ID: EB-001-F-20220914-01

Date Collected: 09/14/22 16:00
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-10

Matrix: Water

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		09/21/22 14:00	09/22/22 22:56	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		09/21/22 14:00	09/23/22 15:05	1
Magnesium	1000	U	1000	200	ug/L		09/21/22 14:00	09/23/22 15:05	1
Potassium	1000	U	1000	220	ug/L		09/21/22 14:00	09/23/22 15:05	1
Sodium	**2500**		1000	330	ug/L		09/21/22 14:00	09/23/22 15:05	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		09/21/22 14:00	09/22/22 18:48	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			09/23/22 18:31	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 18:31	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 18:31	1
Chloride (MCAWW 300.0)	**1.2**		1.0	0.28	mg/L			10/10/22 02:17	1
Fluoride (MCAWW 300.0)	**0.19**		0.050	0.024	mg/L			10/10/22 02:17	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			10/10/22 02:17	1
Total Dissolved Solids (SM 2540C)	10	U	10	7.8	mg/L			09/21/22 09:23	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	**0.122**		0.0776	0.0784	1.00	0.103	pCi/L	09/26/22 10:03	10/20/22 09:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*09/26/22 10:03*	*10/20/22 09:17*	*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	**0.551**		0.272	0.276	1.00	0.364	pCi/L	09/26/22 10:06	10/13/22 11:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*
Y Carrier	*87.5*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:53*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.673**		0.283	0.287	5.00	0.364	pCi/L		10/20/22 16:47	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173270-1
Project/Site: Federal CCR Wells

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)
240-173270-1	2016-07-F-20220913-01	95.3
240-173270-2	96153R-F-20220913-01	89.7
240-173270-2 MS	96153R-F-20220913-01	108
240-173270-2 MSD	96153R-F-20220913-01	106
240-173270-3	MW20-F-20220913-01	104
240-173270-4	DUP-001-MW-20-F-20220913-01	102
240-173270-5	EB-001-F-20220913-01	101
240-173270-7	96152-F-20220914-01	110
240-173270-8	96154R-F-20220914-01	86.0
240-173270-9	2016-10-F-20220914-01	109
240-173270-10	EB-001-F-20220914-01	104
LCS 160-583475/2-A	Lab Control Sample	108
MB 160-583475/1-A	Method Blank	98.3

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)
240-173270-1	2016-07-F-20220913-01	95.3	83.7
240-173270-2	96153R-F-20220913-01	89.7	86.4
240-173270-2 MS	96153R-F-20220913-01	108	86.0
240-173270-2 MSD	96153R-F-20220913-01	106	84.1
240-173270-3	MW20-F-20220913-01	104	86.4
240-173270-4	DUP-001-MW-20-F-20220913-01	102	86.0
240-173270-5	EB-001-F-20220913-01	101	87.5
240-173270-7	96152-F-20220914-01	110	84.5
240-173270-8	96154R-F-20220914-01	86.0	84.1
240-173270-9	2016-10-F-20220914-01	109	86.4
240-173270-10	EB-001-F-20220914-01	104	87.5
LCS 160-583476/2-A	Lab Control Sample	108	86.0
MB 160-583476/1-A	Method Blank	98.3	85.6

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-543717/1-A
Matrix: Water
Analysis Batch: 544017

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/21/22 14:00	09/22/22 21:48	1

Lab Sample ID: LCS 240-543717/2-A
Matrix: Water
Analysis Batch: 544017

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1050		ug/L		105	80 - 120

Lab Sample ID: 240-173270-2 MS
Matrix: Water
Analysis Batch: 544017

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	550		1000	1640		ug/L		108	75 - 125

Lab Sample ID: 240-173270-2 MSD
Matrix: Water
Analysis Batch: 544017

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	550		1000	1700		ug/L		114	75 - 125	4	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-543717/1-A
Matrix: Water
Analysis Batch: 544222

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/21/22 14:00	09/23/22 14:22	1
Magnesium	1000	U	1000	200	ug/L		09/21/22 14:00	09/23/22 14:22	1
Potassium	1000	U	1000	220	ug/L		09/21/22 14:00	09/23/22 14:22	1
Sodium	1000	U	1000	330	ug/L		09/21/22 14:00	09/23/22 14:22	1

Lab Sample ID: LCS 240-543717/3-A
Matrix: Water
Analysis Batch: 544222

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24100		ug/L		96	80 - 120
Magnesium	25000	24000		ug/L		96	80 - 120
Potassium	25000	24000		ug/L		96	80 - 120
Sodium	25000	23900		ug/L		96	80 - 120

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

Lab Sample ID: 240-173270-2 MS
Matrix: Water
Analysis Batch: 544222

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	120000		25000	146000	4	ug/L		101	80 - 120
Magnesium	23000		25000	47300		ug/L		95	80 - 120
Potassium	5800		25000	30100		ug/L		97	80 - 120
Sodium	310000		25000	334000	4	ug/L		76	80 - 120

Lab Sample ID: 240-173270-2 MSD
Matrix: Water
Analysis Batch: 544222

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	120000		25000	142000	4	ug/L		86	80 - 120	3	20
Magnesium	23000		25000	46000		ug/L		90	80 - 120	3	20
Potassium	5800		25000	29600		ug/L		95	80 - 120	2	20
Sodium	310000		25000	329000	4	ug/L		59	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-543719/1-A
Matrix: Water
Analysis Batch: 543918

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 543719

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/21/22 14:00	09/22/22 18:17	1

Lab Sample ID: LCS 240-543719/2-A
Matrix: Water
Analysis Batch: 543918

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 543719

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.69		ug/L		94	80 - 120

Lab Sample ID: 240-173270-2 MS
Matrix: Water
Analysis Batch: 543918

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA
Prep Batch: 543719

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U	1.00	0.935		ug/L		93	80 - 120

Lab Sample ID: 240-173270-2 MSD
Matrix: Water
Analysis Batch: 543918

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA
Prep Batch: 543719

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.20	U	1.00	1.06		ug/L		106	80 - 120	12	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-544358/30
Matrix: Water
Analysis Batch: 544358

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			09/23/22 16:19	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 16:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 16:19	1

Lab Sample ID: MB 240-544358/4
Matrix: Water
Analysis Batch: 544358

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			09/23/22 14:27	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 14:27	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 14:27	1

Lab Sample ID: MB 240-544358/56
Matrix: Water
Analysis Batch: 544358

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			09/23/22 18:04	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 18:04	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 18:04	1

Lab Sample ID: LCS 240-544358/29
Matrix: Water
Analysis Batch: 544358

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	123		mg/L		102	86 - 123		

Lab Sample ID: LCS 240-544358/55
Matrix: Water
Analysis Batch: 544358

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	119		mg/L		99	86 - 123		

Lab Sample ID: 240-173270-5 DU
Matrix: Water
Analysis Batch: 544358

Client Sample ID: EB-001-F-20220913-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
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
Carbonate Alkalinity as CaCO3	5.0	U		5.0	U	mg/L				NC	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-546203/3
Matrix: Water
Analysis Batch: 546203

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			10/09/22 12:32	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/09/22 12:32	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/09/22 12:32	1

Lab Sample ID: LCS 240-546203/4
Matrix: Water
Analysis Batch: 546203

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	51.5		mg/L		103	90 - 110
Fluoride	2.50	2.60		mg/L		104	90 - 110
Sulfate	50.0	53.7		mg/L		107	90 - 110

Lab Sample ID: 240-173270-2 MS
Matrix: Water
Analysis Batch: 546203

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10		50.0	63.4		mg/L		107	80 - 120
Fluoride	0.75		2.50	3.48		mg/L		109	80 - 120

Lab Sample ID: 240-173270-2 MS
Matrix: Water
Analysis Batch: 546203

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	930		500	1380		mg/L		90	80 - 120

Lab Sample ID: 240-173270-2 MSD
Matrix: Water
Analysis Batch: 546203

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	10		50.0	63.6		mg/L		107	80 - 120	0	15
Fluoride	0.75		2.50	3.51		mg/L		110	80 - 120	1	15

Lab Sample ID: 240-173270-2 MSD
Matrix: Water
Analysis Batch: 546203

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	930		500	1360		mg/L		86	80 - 120	2	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-543647/1
Matrix: Water
Analysis Batch: 543647

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			09/21/22 09:23	1

Lab Sample ID: LCS 240-543647/2
Matrix: Water
Analysis Batch: 543647

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	460		mg/L		93	80 - 120

Lab Sample ID: 240-173270-1 DU
Matrix: Water
Analysis Batch: 543647

Client Sample ID: 2016-07-F-20220913-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2500	H	2400		mg/L		6	20

Lab Sample ID: 240-173270-7 DU
Matrix: Water
Analysis Batch: 543647

Client Sample ID: 96152-F-20220914-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	4500		3580	F3	mg/L		23	20

Lab Sample ID: MB 240-543651/1
Matrix: Water
Analysis Batch: 543651

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			09/21/22 09:40	1

Lab Sample ID: LCS 240-543651/2
Matrix: Water
Analysis Batch: 543651

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	453		mg/L		92	80 - 120

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-583475/1-A
Matrix: Water
Analysis Batch: 586651

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 583475

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05225	U	0.0682	0.0684	1.00	0.114	pCi/L	09/26/22 10:03	10/20/22 07:27	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.3*		*40 - 110*	*09/26/22 10:03*	*10/20/22 07:27*	*1*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-583475/2-A
Matrix: Water
Analysis Batch: 586651

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 583475

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.47		1.09	1.00	0.114	pCi/L	92	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*

Lab Sample ID: 240-173270-2 MS
Matrix: Water
Analysis Batch: 586651

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA
Prep Batch: 583475

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.279		15.5	13.83		1.45	1.00	0.168	pCi/L	87	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*

Lab Sample ID: 240-173270-2 MSD
Matrix: Water
Analysis Batch: 586651

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA
Prep Batch: 583475

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.279		15.6	14.38		1.50	1.00	0.126	pCi/L	90	60 - 140	0.19	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-583476/1-A
Matrix: Water
Analysis Batch: 585765

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 583476

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3008	U	0.288	0.290	1.00	0.462	pCi/L	09/26/22 10:06	10/13/22 11:52	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*98.3*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:52*	*1*
Y Carrier	*85.6*		*40 - 110*	*09/26/22 10:06*	*10/13/22 11:52*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-583476/2-A
Matrix: Water
Analysis Batch: 585765

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 583476

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.20	7.618		1.02	1.00	0.363	pCi/L	93	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*
Y Carrier	*86.0*		*40 - 110*

Lab Sample ID: 240-173270-2 MS
Matrix: Water
Analysis Batch: 585765

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA
Prep Batch: 583476

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.845		11.2	11.21		1.48	1.00	0.569	pCi/L	92	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*
Y Carrier	*86.0*		*40 - 110*

Lab Sample ID: 240-173270-2 MSD
Matrix: Water
Analysis Batch: 585765

Client Sample ID: 96153R-F-20220913-01
Prep Type: Total/NA
Prep Batch: 583476

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.845		11.3	10.78		1.46	1.00	0.592	pCi/L	88	60 - 140	0.15	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*106*		*40 - 110*
Y Carrier	*84.1*		*40 - 110*

Metals

Prep Batch: 543717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total Recoverable	Water	3005A	
240-173270-2	96153R-F-20220913-01	Total Recoverable	Water	3005A	
240-173270-3	MW20-F-20220913-01	Total Recoverable	Water	3005A	
240-173270-4	DUP-001-MW-20-F-20220913-01	Total Recoverable	Water	3005A	
240-173270-5	EB-001-F-20220913-01	Total Recoverable	Water	3005A	
240-173270-7	96152-F-20220914-01	Total Recoverable	Water	3005A	
240-173270-8	96154R-F-20220914-01	Total Recoverable	Water	3005A	
240-173270-9	2016-10-F-20220914-01	Total Recoverable	Water	3005A	
240-173270-10	EB-001-F-20220914-01	Total Recoverable	Water	3005A	
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-543717/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-543717/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-173270-2 MS	96153R-F-20220913-01	Total Recoverable	Water	3005A	
240-173270-2 MS	96153R-F-20220913-01	Total Recoverable	Water	3005A	
240-173270-2 MSD	96153R-F-20220913-01	Total Recoverable	Water	3005A	
240-173270-2 MSD	96153R-F-20220913-01	Total Recoverable	Water	3005A	

Prep Batch: 543719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total/NA	Water	7470A	
240-173270-2	96153R-F-20220913-01	Total/NA	Water	7470A	
240-173270-3	MW20-F-20220913-01	Total/NA	Water	7470A	
240-173270-4	DUP-001-MW-20-F-20220913-01	Total/NA	Water	7470A	
240-173270-5	EB-001-F-20220913-01	Total/NA	Water	7470A	
240-173270-7	96152-F-20220914-01	Total/NA	Water	7470A	
240-173270-8	96154R-F-20220914-01	Total/NA	Water	7470A	
240-173270-9	2016-10-F-20220914-01	Total/NA	Water	7470A	
240-173270-10	EB-001-F-20220914-01	Total/NA	Water	7470A	
MB 240-543719/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-543719/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-173270-2 MS	96153R-F-20220913-01	Total/NA	Water	7470A	
240-173270-2 MSD	96153R-F-20220913-01	Total/NA	Water	7470A	

Analysis Batch: 543918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total/NA	Water	7470A	543719
240-173270-2	96153R-F-20220913-01	Total/NA	Water	7470A	543719
240-173270-3	MW20-F-20220913-01	Total/NA	Water	7470A	543719
240-173270-4	DUP-001-MW-20-F-20220913-01	Total/NA	Water	7470A	543719
240-173270-5	EB-001-F-20220913-01	Total/NA	Water	7470A	543719
240-173270-7	96152-F-20220914-01	Total/NA	Water	7470A	543719
240-173270-8	96154R-F-20220914-01	Total/NA	Water	7470A	543719
240-173270-9	2016-10-F-20220914-01	Total/NA	Water	7470A	543719
240-173270-10	EB-001-F-20220914-01	Total/NA	Water	7470A	543719
MB 240-543719/1-A	Method Blank	Total/NA	Water	7470A	543719
LCS 240-543719/2-A	Lab Control Sample	Total/NA	Water	7470A	543719
240-173270-2 MS	96153R-F-20220913-01	Total/NA	Water	7470A	543719
240-173270-2 MSD	96153R-F-20220913-01	Total/NA	Water	7470A	543719

Metals

Analysis Batch: 544017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total Recoverable	Water	6010D	543717
240-173270-2	96153R-F-20220913-01	Total Recoverable	Water	6010D	543717
240-173270-3	MW20-F-20220913-01	Total Recoverable	Water	6010D	543717
240-173270-4	DUP-001-MW-20-F-20220913-01	Total Recoverable	Water	6010D	543717
240-173270-5	EB-001-F-20220913-01	Total Recoverable	Water	6010D	543717
240-173270-7	96152-F-20220914-01	Total Recoverable	Water	6010D	543717
240-173270-8	96154R-F-20220914-01	Total Recoverable	Water	6010D	543717
240-173270-9	2016-10-F-20220914-01	Total Recoverable	Water	6010D	543717
240-173270-10	EB-001-F-20220914-01	Total Recoverable	Water	6010D	543717
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	6010D	543717
LCS 240-543717/2-A	Lab Control Sample	Total Recoverable	Water	6010D	543717
240-173270-2 MS	96153R-F-20220913-01	Total Recoverable	Water	6010D	543717
240-173270-2 MSD	96153R-F-20220913-01	Total Recoverable	Water	6010D	543717

Analysis Batch: 544222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total Recoverable	Water	6020B	543717
240-173270-2	96153R-F-20220913-01	Total Recoverable	Water	6020B	543717
240-173270-3	MW20-F-20220913-01	Total Recoverable	Water	6020B	543717
240-173270-4	DUP-001-MW-20-F-20220913-01	Total Recoverable	Water	6020B	543717
240-173270-5	EB-001-F-20220913-01	Total Recoverable	Water	6020B	543717
240-173270-7	96152-F-20220914-01	Total Recoverable	Water	6020B	543717
240-173270-8	96154R-F-20220914-01	Total Recoverable	Water	6020B	543717
240-173270-9	2016-10-F-20220914-01	Total Recoverable	Water	6020B	543717
240-173270-10	EB-001-F-20220914-01	Total Recoverable	Water	6020B	543717
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	6020B	543717
LCS 240-543717/3-A	Lab Control Sample	Total Recoverable	Water	6020B	543717
240-173270-2 MS	96153R-F-20220913-01	Total Recoverable	Water	6020B	543717
240-173270-2 MSD	96153R-F-20220913-01	Total Recoverable	Water	6020B	543717

Analysis Batch: 544865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total Recoverable	Water	6020B	543717
240-173270-7	96152-F-20220914-01	Total Recoverable	Water	6020B	543717
240-173270-9	2016-10-F-20220914-01	Total Recoverable	Water	6020B	543717

General Chemistry

Analysis Batch: 543647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total/NA	Water	SM 2540C	
240-173270-2	96153R-F-20220913-01	Total/NA	Water	SM 2540C	
240-173270-5	EB-001-F-20220913-01	Total/NA	Water	SM 2540C	
240-173270-6	9910-F-20220914-01	Total/NA	Water	SM 2540C	
240-173270-7	96152-F-20220914-01	Total/NA	Water	SM 2540C	
240-173270-8	96154R-F-20220914-01	Total/NA	Water	SM 2540C	
240-173270-9	2016-10-F-20220914-01	Total/NA	Water	SM 2540C	
240-173270-10	EB-001-F-20220914-01	Total/NA	Water	SM 2540C	
MB 240-543647/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-543647/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-173270-1 DU	2016-07-F-20220913-01	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 543647 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-7 DU	96152-F-20220914-01	Total/NA	Water	SM 2540C	

Analysis Batch: 543651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-3	MW20-F-20220913-01	Total/NA	Water	SM 2540C	
240-173270-4	DUP-001-MW-20-F-20220913-01	Total/NA	Water	SM 2540C	
MB 240-543651/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-543651/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 544358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total/NA	Water	2320B-1997	
240-173270-2	96153R-F-20220913-01	Total/NA	Water	2320B-1997	
240-173270-3	MW20-F-20220913-01	Total/NA	Water	2320B-1997	
240-173270-4	DUP-001-MW-20-F-20220913-01	Total/NA	Water	2320B-1997	
240-173270-5	EB-001-F-20220913-01	Total/NA	Water	2320B-1997	
240-173270-7	96152-F-20220914-01	Total/NA	Water	2320B-1997	
240-173270-8	96154R-F-20220914-01	Total/NA	Water	2320B-1997	
240-173270-9	2016-10-F-20220914-01	Total/NA	Water	2320B-1997	
240-173270-10	EB-001-F-20220914-01	Total/NA	Water	2320B-1997	
MB 240-544358/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-544358/4	Method Blank	Total/NA	Water	2320B-1997	
MB 240-544358/56	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-544358/29	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-544358/55	Lab Control Sample	Total/NA	Water	2320B-1997	
240-173270-5 DU	EB-001-F-20220913-01	Total/NA	Water	2320B-1997	

Analysis Batch: 546203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total/NA	Water	300.0	
240-173270-1	2016-07-F-20220913-01	Total/NA	Water	300.0	
240-173270-2	96153R-F-20220913-01	Total/NA	Water	300.0	
240-173270-2	96153R-F-20220913-01	Total/NA	Water	300.0	
240-173270-3	MW20-F-20220913-01	Total/NA	Water	300.0	
240-173270-3	MW20-F-20220913-01	Total/NA	Water	300.0	
240-173270-4	DUP-001-MW-20-F-20220913-01	Total/NA	Water	300.0	
240-173270-4	DUP-001-MW-20-F-20220913-01	Total/NA	Water	300.0	
240-173270-5	EB-001-F-20220913-01	Total/NA	Water	300.0	
240-173270-6	9910-F-20220914-01	Total/NA	Water	300.0	
240-173270-6	9910-F-20220914-01	Total/NA	Water	300.0	
240-173270-7	96152-F-20220914-01	Total/NA	Water	300.0	
240-173270-7	96152-F-20220914-01	Total/NA	Water	300.0	
240-173270-8	96154R-F-20220914-01	Total/NA	Water	300.0	
240-173270-8	96154R-F-20220914-01	Total/NA	Water	300.0	
240-173270-9	2016-10-F-20220914-01	Total/NA	Water	300.0	
240-173270-9	2016-10-F-20220914-01	Total/NA	Water	300.0	
240-173270-10	EB-001-F-20220914-01	Total/NA	Water	300.0	
MB 240-546203/3	Method Blank	Total/NA	Water	300.0	
LCS 240-546203/4	Lab Control Sample	Total/NA	Water	300.0	
240-173270-2 MS	96153R-F-20220913-01	Total/NA	Water	300.0	
240-173270-2 MS	96153R-F-20220913-01	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 546203 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-2 MSD	96153R-F-20220913-01	Total/NA	Water	300.0	
240-173270-2 MSD	96153R-F-20220913-01	Total/NA	Water	300.0	

Rad

Prep Batch: 583475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total/NA	Water	PrecSep-21	
240-173270-2	96153R-F-20220913-01	Total/NA	Water	PrecSep-21	
240-173270-3	MW20-F-20220913-01	Total/NA	Water	PrecSep-21	
240-173270-4	DUP-001-MW-20-F-20220913-01	Total/NA	Water	PrecSep-21	
240-173270-5	EB-001-F-20220913-01	Total/NA	Water	PrecSep-21	
240-173270-7	96152-F-20220914-01	Total/NA	Water	PrecSep-21	
240-173270-8	96154R-F-20220914-01	Total/NA	Water	PrecSep-21	
240-173270-9	2016-10-F-20220914-01	Total/NA	Water	PrecSep-21	
240-173270-10	EB-001-F-20220914-01	Total/NA	Water	PrecSep-21	
MB 160-583475/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-583475/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-173270-2 MS	96153R-F-20220913-01	Total/NA	Water	PrecSep-21	
240-173270-2 MSD	96153R-F-20220913-01	Total/NA	Water	PrecSep-21	

Prep Batch: 583476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173270-1	2016-07-F-20220913-01	Total/NA	Water	PrecSep_0	
240-173270-2	96153R-F-20220913-01	Total/NA	Water	PrecSep_0	
240-173270-3	MW20-F-20220913-01	Total/NA	Water	PrecSep_0	
240-173270-4	DUP-001-MW-20-F-20220913-01	Total/NA	Water	PrecSep_0	
240-173270-5	EB-001-F-20220913-01	Total/NA	Water	PrecSep_0	
240-173270-7	96152-F-20220914-01	Total/NA	Water	PrecSep_0	
240-173270-8	96154R-F-20220914-01	Total/NA	Water	PrecSep_0	
240-173270-9	2016-10-F-20220914-01	Total/NA	Water	PrecSep_0	
240-173270-10	EB-001-F-20220914-01	Total/NA	Water	PrecSep_0	
MB 160-583476/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-583476/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-173270-2 MS	96153R-F-20220913-01	Total/NA	Water	PrecSep_0	
240-173270-2 MSD	96153R-F-20220913-01	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 240-173270-1

Client Sample ID: 2016-07-F-20220913-01

Lab Sample ID: 240-173270-1

Date Collected: 09/13/22 10:48

Matrix: Water

Date Received: 09/19/22 16:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 22:17
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 14:43
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		5	544865	AJC	EET CAN	09/28/22 14:16
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:34
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:45
Total/NA	Analysis	300.0		2	546203	JWW	EET CAN	10/09/22 17:15
Total/NA	Analysis	300.0		20	546203	JWW	EET CAN	10/09/22 17:36
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 07:27
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:52
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

Client Sample ID: 96153R-F-20220913-01

Lab Sample ID: 240-173270-2

Date Collected: 09/13/22 13:44

Matrix: Water

Date Received: 09/19/22 16:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 21:56
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 14:26
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:22
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:49
Total/NA	Analysis	300.0		1	546203	JWW	EET CAN	10/09/22 17:58
Total/NA	Analysis	300.0		10	546203	JWW	EET CAN	10/09/22 19:03
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 07:27
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:52
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

Lab Chronicle

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

Job ID: 240-173270-1

Client Sample ID: MW20-F-20220913-01

Lab Sample ID: 240-173270-3

Date Collected: 09/13/22 15:00
Matrix: Water
Date Received: 09/19/22 16:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 22:22
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 14:50
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:36
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:53
Total/NA	Analysis	300.0		1	546203	JWW	EET CAN	10/09/22 20:08
Total/NA	Analysis	300.0		10	546203	JWW	EET CAN	10/09/22 21:13
Total/NA	Analysis	SM 2540C		1	543651	AJ	EET CAN	09/21/22 09:40
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 07:28
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:52
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

Client Sample ID: DUP-001-MW-20-F-20220913-01

Lab Sample ID: 240-173270-4

Date Collected: 09/13/22 15:00
Matrix: Water
Date Received: 09/19/22 16:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 22:26
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 14:53
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:38
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 17:56
Total/NA	Analysis	300.0		1	546203	JWW	EET CAN	10/09/22 21:35
Total/NA	Analysis	300.0		10	546203	JWW	EET CAN	10/09/22 21:57
Total/NA	Analysis	SM 2540C		1	543651	AJ	EET CAN	09/21/22 09:40
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 07:28
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:53
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

Client Sample ID: EB-001-F-20220913-01

Lab Sample ID: 240-173270-5

Date Collected: 09/13/22 15:30
Matrix: Water
Date Received: 09/19/22 16:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 22:39

Client Sample ID: EB-001-F-20220913-01

Lab Sample ID: 240-173270-5

Date Collected: 09/13/22 15:30

Matrix: Water

Date Received: 09/19/22 16:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 14:55
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:40
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 18:10
Total/NA	Analysis	300.0		1	546203	JWW	EET CAN	10/09/22 22:18
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 07:28
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:53
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

Client Sample ID: 9910-F-20220914-01

Lab Sample ID: 240-173270-6

Date Collected: 09/14/22 09:20

Matrix: Water

Date Received: 09/19/22 16:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		2	546203	JWW	EET CAN	10/09/22 22:40
Total/NA	Analysis	300.0		20	546203	JWW	EET CAN	10/09/22 23:02
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23

Client Sample ID: 96152-F-20220914-01

Lab Sample ID: 240-173270-7

Date Collected: 09/14/22 11:01

Matrix: Water

Date Received: 09/19/22 16:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 22:43
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 14:58
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		10	544865	AJC	EET CAN	09/28/22 14:18
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:42
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 18:18
Total/NA	Analysis	300.0		5	546203	JWW	EET CAN	10/09/22 23:24
Total/NA	Analysis	300.0		25	546203	JWW	EET CAN	10/09/22 23:45
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 07:28
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:53
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

Lab Chronicle

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

Job ID: 240-173270-1

Client Sample ID: 96154R-F-20220914-01

Lab Sample ID: 240-173270-8

Date Collected: 09/14/22 12:04
Date Received: 09/19/22 16:17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 22:48
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:00
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:44
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 18:24
Total/NA	Analysis	300.0		1	546203	JWW	EET CAN	10/10/22 00:07
Total/NA	Analysis	300.0		10	546203	JWW	EET CAN	10/10/22 00:29
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 07:28
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:53
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

Client Sample ID: 2016-10-F-20220914-01

Lab Sample ID: 240-173270-9

Date Collected: 09/14/22 14:41
Date Received: 09/19/22 16:17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 22:52
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:03
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		20	544865	AJC	EET CAN	09/28/22 14:26
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:46
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 18:28
Total/NA	Analysis	300.0		50	546203	JWW	EET CAN	10/10/22 01:34
Total/NA	Analysis	300.0		500	546203	JWW	EET CAN	10/10/22 01:56
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 07:28
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:53
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

Lab Chronicle

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

Job ID: 240-173270-1

Client Sample ID: EB-001-F-20220914-01

Date Collected: 09/14/22 16:00
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173270-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 22:56
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:05
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 18:48
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 18:31
Total/NA	Analysis	300.0		1	546203	JWW	EET CAN	10/10/22 02:17
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23
Total/NA	Prep	PrecSep-21			583475	ASG	EET SL	09/26/22 10:03
Total/NA	Analysis	9315		1	586651	CLP	EET SL	10/20/22 09:17
Total/NA	Prep	PrecSep_0			583476	ASG	EET SL	09/26/22 10:06
Total/NA	Analysis	9320		1	585765	CLP	EET SL	10/13/22 11:53
Total/NA	Analysis	Ra226_Ra228		1	586672	CAH	EET SL	10/20/22 16:47

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
Job ID: 240-173270-1
Project/Site: Federal CCR Wells

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	10-10-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	10-12-22
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	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	11-30-23
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.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173270-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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	06-30-22 *
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	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

21.1 / 21.1

Chain of Custody Record

Columbus
209

eurofins

Client Information	Sampler: Bobby Caste	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 2
Company: Lightstone Generation Gavin Power LLC	PWSID:	Analysis Requested		Job #:
Address: 7397 OH-7	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

240-173270 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List) D	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) N	9315_Ra226, 9320_Ra228 D	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity) N	Total Number	Special Instructions/Note:
			Preservation Code:									
2016-07-F-20220913-01	9-13-22	1048	G	W	N		1	1	2	1	5	
96153R-F-20220913-01	9-13-22	1344	G	W	N		1	1	2	1	5	
96153R-F-20220913-MS	9-13-22	1344	G	W	N	Y	1	1	2	1	5	
96153R-F-20220913-MSD	9-13-22	1344	G	W	N	Y	1	1	2	1	5	
MW-20-F-20220913-01	9-13-22	1506	G	W	N		1	1	2	1	5	
~~DUP-001-MW-20-F-20220913~~												
DUP-001-MW-20-F-20220913-01	9-13-22	1500	G	W	N		1	1	2	1	5	
EB-001-F-20220913-01	9-13-22	1530	G	W	N		1	1	2	1	5	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Bobby Caste	9-15-22 / 0835	KEMPER		9-15-22 1057	ETA
2		9-15-22 1700	ETA		9-18-22 1617	EETNC
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

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10/20/2022

Ver: 01/16/2019

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

21.1/21.1

Chain of Custody Record

Columbus
209

eurofins | environment Testing America

Client Information	Sampler: Bobby Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 2 of 2
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
9910-F-20220914-01	9-14-22	0920	G	W	N			1			1	
96152-F-20220914-01	9-14-22	1101	G	W	N		1	1	2	1	5	
96154R-F-20220914-01	9-14-22	1204	G	W	N		1	1	2	1	5	
2016-10-F-20220914-01	9-14-22	1441	G	W	N		1	1	2	1	5	
EB-001-F-20220914-01	9-14-22	1600	G	W	N		1	1	2	1	5	
		PC										

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9-15-22 0835	[illegible]	[signature]	9-15-22 1057	EEA
Relinquished by: [signature]	Date/Time: 9-15-22 1700	Company EEA	Received by: [signature]	Date/Time: 9-18-22 1617	Company EET NC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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10/20/2022

Eurofins - Canton Sample Receipt Form/Narrative Login # :_____
Barberton Facility

Client Lightstone Site Name_____ Cooler unpacked by: Nancy Boyle

Cooler Received on 9-19-20 Opened on 9-20-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other_____

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 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 +0.7 °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 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
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	22.3	22.3	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	6.8	6.8	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	6.1	6.1	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	4.6	4.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	4.7	4.7	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	6.9	6.9	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	5.0	5.0	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	7.0	7.0	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	6.3	6.3	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

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-157460.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-173270-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 10/3/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
Preservation Code:											
2016-07-F-20220913-01 (240-173270-1)	9/13/22	10:48 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96153R-F-20220913-01 (240-173270-2)	9/13/22	13:44 Eastern		Water			X	X	X	6	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96153R-F-20220913-01 (240-173270-2MS)	9/13/22	13:44 Eastern	MS	Water			X	X	X	1	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96153R-F-20220913-01 (240-173270-2MSD)	9/13/22	13:44 Eastern	MSD	Water			X	X	X	1	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
MW20-F-20220913-01 (240-173270-3)	9/13/22	15:00 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
DUP-001-MW-20-F-20220913-01 (240-173270-4)	9/13/22	15:00 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220913-01 (240-173270-5)	9/13/22	15:30 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96152-F-20220914-01 (240-173270-7)	9/14/22	11:01 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
96154R-F-20220914-01 (240-173270-8)	9/14/22	12:04 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		9/20/22 1800		FED EX		
	Relinquished by: FED EX	Date/Time:	Company	Received by: Sierra Worthington	Date/Time: SEP 21 2022 0850	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

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10/20/2022

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-157460.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-173270-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 10/3/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 24019633			
Project Name: Gavin CCR	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2016-10-F-20220914-01 (240-173270-9)	9/14/22	14:41 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220914-01 (240-173270-10)	9/14/22	16:00 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				FED EX		
	Relinquished by: FED EX	Date/Time:	Company	Received by: Sierra Worthington	Date/Time: SEP 21 2022 0850	Company EDBR
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

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10/20/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-173270-1

Login Number: 173270
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 09/21/22 11:07 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-173275-1
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:
10/3/2022 3:04:08 PM
Michael DelMonico, Project Manager I
(330)497-9396
Michael.DelMonico@et.eurofinsus.com

Designee for

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-173275-1

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
H	Sample was prepped or analyzed beyond the specified holding time
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-173275-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-173275-1

Comments
No additional comments.

Receipt
The samples were received on 9/19/2022 4:17 PM. 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 4.6º C, 5.0º C, 6.1º C, 6.3º C, 6.8º C, 6.9º C, 7.0º C and 22.3º C.

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

General Chemistry
Method SM 2540C: The following sample was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: 2018-03-F-20220913-01 (240-173275-1).

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: 240-173275-1

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
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAN
7470A	Preparation, Mercury	SW846	EET CAN

Protocol References:

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

Job ID: 240-173275-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-173275-1	2018-03-F-20220913-01	Water	09/13/22 13:15	09/19/22 16:17

Detection Summary

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

Job ID: 240-173275-1

Client Sample ID: 2018-03-F-20220913-01

Lab Sample ID: 240-173275-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	340		100	57	ug/L	1		6010D	Total Recoverable
Calcium	220000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	54000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	4700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	450000		1000	330	ug/L	1		6020B	Total Recoverable
Mercury	0.14	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Total Dissolved Solids	1600	H	40	31	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

Job ID: 240-173275-1

Client Sample ID: 2018-03-F-20220913-01

Date Collected: 09/13/22 13:15
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173275-1

Matrix: Water

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	340		100	57	ug/L		09/21/22 14:00	09/22/22 23:36	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	220000		1000	580	ug/L		09/21/22 14:00	09/23/22 15:35	1
Magnesium	54000		1000	200	ug/L		09/21/22 14:00	09/23/22 15:35	1
Potassium	4700		1000	220	ug/L		09/21/22 14:00	09/23/22 15:35	1
Sodium	450000		1000	330	ug/L		09/21/22 14:00	09/23/22 15:35	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		09/21/22 14:00	09/22/22 19:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	330		5.0	2.6	mg/L			09/22/22 16:12	1
Bicarbonate Alkalinity as CaCO3	330		5.0	2.6	mg/L			09/22/22 16:12	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/22/22 16:12	1
Total Dissolved Solids	1600	H	40	31	mg/L			09/21/22 09:23	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-543717/1-A
Matrix: Water
Analysis Batch: 544017

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/21/22 14:00	09/22/22 21:48	1

Lab Sample ID: LCS 240-543717/2-A
Matrix: Water
Analysis Batch: 544017

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1050		ug/L		105	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-543717/1-A
Matrix: Water
Analysis Batch: 544222

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/21/22 14:00	09/23/22 14:22	1
Magnesium	1000	U	1000	200	ug/L		09/21/22 14:00	09/23/22 14:22	1
Potassium	1000	U	1000	220	ug/L		09/21/22 14:00	09/23/22 14:22	1
Sodium	1000	U	1000	330	ug/L		09/21/22 14:00	09/23/22 14:22	1

Lab Sample ID: LCS 240-543717/3-A
Matrix: Water
Analysis Batch: 544222

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 543717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24100		ug/L		96	80 - 120
Magnesium	25000	24000		ug/L		96	80 - 120
Potassium	25000	24000		ug/L		96	80 - 120
Sodium	25000	23900		ug/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-543719/1-A
Matrix: Water
Analysis Batch: 543918

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 543719

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/21/22 14:00	09/22/22 18:17	1

Lab Sample ID: LCS 240-543719/2-A
Matrix: Water
Analysis Batch: 543918

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 543719

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.69		ug/L		94	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-544057/34
Matrix: Water
Analysis Batch: 544057

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			09/22/22 15:39	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/22/22 15:39	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/22/22 15:39	1

Lab Sample ID: LCS 240-544057/33
Matrix: Water
Analysis Batch: 544057

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	123		mg/L		102	86 - 123

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-543647/1
Matrix: Water
Analysis Batch: 543647

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			09/21/22 09:23	1

Lab Sample ID: LCS 240-543647/2
Matrix: Water
Analysis Batch: 543647

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	460		mg/L		93	80 - 120

QC Association Summary

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

Job ID: 240-173275-1

Metals

Prep Batch: 543717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173275-1	2018-03-F-20220913-01	Total Recoverable	Water	3005A	
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-543717/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-543717/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 543719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173275-1	2018-03-F-20220913-01	Total/NA	Water	7470A	
MB 240-543719/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-543719/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 543918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173275-1	2018-03-F-20220913-01	Total/NA	Water	7470A	543719
MB 240-543719/1-A	Method Blank	Total/NA	Water	7470A	543719
LCS 240-543719/2-A	Lab Control Sample	Total/NA	Water	7470A	543719

Analysis Batch: 544017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173275-1	2018-03-F-20220913-01	Total Recoverable	Water	6010D	543717
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	6010D	543717
LCS 240-543717/2-A	Lab Control Sample	Total Recoverable	Water	6010D	543717

Analysis Batch: 544222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173275-1	2018-03-F-20220913-01	Total Recoverable	Water	6020B	543717
MB 240-543717/1-A	Method Blank	Total Recoverable	Water	6020B	543717
LCS 240-543717/3-A	Lab Control Sample	Total Recoverable	Water	6020B	543717

General Chemistry

Analysis Batch: 543647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173275-1	2018-03-F-20220913-01	Total/NA	Water	SM 2540C	
MB 240-543647/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-543647/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 544057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173275-1	2018-03-F-20220913-01	Total/NA	Water	2320B-1997	
MB 240-544057/34	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-544057/33	Lab Control Sample	Total/NA	Water	2320B-1997	

Lab Chronicle

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

Job ID: 240-173275-1

Client Sample ID: 2018-03-F-20220913-01

Date Collected: 09/13/22 13:15
Date Received: 09/19/22 16:17

Lab Sample ID: 240-173275-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6010D		1	544017	RKT	EET CAN	09/22/22 23:36
Total Recoverable	Prep	3005A			543717	MRL	EET CAN	09/21/22 14:00
Total Recoverable	Analysis	6020B		1	544222	AJC	EET CAN	09/23/22 15:35
Total/NA	Prep	7470A			543719	MRL	EET CAN	09/21/22 14:00
Total/NA	Analysis	7470A		1	543918	MRL	EET CAN	09/22/22 19:07
Total/NA	Analysis	2320B-1997		1	544057	KMS	EET CAN	09/22/22 16:12
Total/NA	Analysis	SM 2540C		1	543647	AJ	EET CAN	09/21/22 09:23

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
Job ID: 240-173275-1
Project/Site: Federal CCR Wells

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	02-23-23
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 TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

262

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Client Information	Sampler: Shawn/McCauley	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
2018-03-F-20220913-01	9/13/22	1315	G	W			1	1		1	3	

240-173275 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	9/15/22 0900	Gavin	[signature]	9-15-22	ETA
2	[signature]	9-15-22 1700	ETA	[signature]	9-19-22 1617	FEDEX
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative Login # : 177325
Barberton Facility

Client Light Stone Site Name

Cooler Received on 9-19-22 Opened on 9-20-22 Cooler unpacked by: Nancy Boyle

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins 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 +0.7 °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	
-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	TR
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	

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.
Sample(s) ____ were received in a broken container.
Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.
Time preserved: ____ Preservative(s) added/Lot number(s): ____

VOA Sample Preservation - Date/Time VOAs Frozen: ____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2018-03-F-20220913-01	240-173275-C-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-173372-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
10/24/2022 12:06:14 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-173372-1

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.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

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

Job ID: 240-173372-1

Job ID: 240-173372-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-173372-1

Comments
The Radium analysis was performed at Eurofins St. Louis Laboratory.

Receipt
The samples were received on 9/22/2022 12:00 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 0.4°C, 0.7°C, 1.1°C, 1.6°C and 2.1°C

Receipt Exceptions
The container listed was received with only 350mL. There is still sufficient volume to run the requested analysis. MW17-F-20220919-01 (240-173372-1), 9802-F-20220919-01 (240-173372-2), 9801-F-20220919-01 (240-173372-3), 93108-F-20220919-01 (240-173372-4), EB-001-F-20220919-01 (240-173372-5), 9806-F-20220920-01 (240-173372-6), 2003-F-20220920-01 (240-173372-7), 2000-F-20220920-01 (240-173372-8) and EB-001-F-20220920-01 (240-173372-9)

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 batch 584028Any 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.MW17-F-20220919-01 (240-173372-1), 9802-F-20220919-01 (240-173372-2), 9801-F-20220919-01 (240-173372-3), 93108-F-20220919-01 (240-173372-4), EB-001-F-20220919-01 (240-173372-5), 9806-F-20220920-01 (240-173372-6), 2003-F-20220920-01 (240-173372-7), 2000-F-20220920-01 (240-173372-8), EB-001-F-20220920-01 (240-173372-9), (LCS 160-584028/2-A), (MB 160-584028/1-A)

Method 9320_Ra228: Radium-228 batch 584072Any 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.MW17-F-20220919-01 (240-173372-1), 9802-F-20220919-01 (240-173372-2), 9801-F-20220919-01 (240-173372-3), 93108-F-20220919-01 (240-173372-4), EB-001-F-20220919-01 (240-173372-5), 9806-F-20220920-01 (240-173372-6), 2000-F-20220920-01 (240-173372-8), EB-001-F-20220920-01 (240-173372-9), (LCS 160-584072/2-A), (MB 160-584072/1-A)

Method 9320_Ra228: Radium-228 batch 584072The detection goal was not met for the following sample(s). Sample was prepped at a reduced volume due to the presence of matrix interferences: 2003-F-20220920-01 (240-173372-7). Analytical results are reported with the detection limit achieved.

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

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

Method Summary

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

Job ID: 240-173372-1

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: 240-173372-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-173372-1	MW17-F-20220919-01	Water	09/19/22 11:01	09/22/22 12:00
240-173372-2	9802-F-20220919-01	Water	09/19/22 12:41	09/22/22 12:00
240-173372-3	9801-F-20220919-01	Water	09/19/22 13:23	09/22/22 12:00
240-173372-4	93108-F-20220919-01	Water	09/19/22 14:48	09/22/22 12:00
240-173372-5	EB-001-F-20220919-01	Water	09/19/22 15:30	09/22/22 12:00
240-173372-6	9806-F-20220920-01	Water	09/20/22 10:21	09/22/22 12:00
240-173372-7	2003-F-20220920-01	Water	09/20/22 12:27	09/22/22 12:00
240-173372-8	2000-F-20220920-01	Water	09/20/22 14:39	09/22/22 12:00
240-173372-9	EB-001-F-20220920-01	Water	09/20/22 17:10	09/22/22 12:00

Detection Summary

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

Job ID: 240-173372-1

Client Sample ID: MW17-F-20220919-01 — Lab Sample ID: 240-173372-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450		100	57	ug/L	1		6010D	Total Recoverable
Calcium	78000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	15000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	5000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2700000	B	10000	3300	ug/L	10		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	4200		50	14	mg/L	50		300.0	Total/NA
Fluoride	1.7		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	17		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	5700		100	78	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 9802-F-20220919-01 — Lab Sample ID: 240-173372-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	190		100	57	ug/L	1		6010D	Total Recoverable
Calcium	30000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	8800		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	270000	B	1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	580		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	580		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	37		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.99		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	64		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	340		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 9801-F-20220919-01 — Lab Sample ID: 240-173372-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	440		100	57	ug/L	1		6010D	Total Recoverable
Calcium	180000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	58000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	8500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	5200000	B	50000	16000	ug/L	50		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	7600		50	14	mg/L	50		300.0	Total/NA
Fluoride	0.92		0.50	0.24	mg/L	10		300.0	Total/NA
Total Dissolved Solids	11000		100	78	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 240-173372-1

Client Sample ID: 93108-F-20220919-01 — Lab Sample ID: 240-173372-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450		100	57	ug/L	1		6010D	Total Recoverable
Calcium	14000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	4300		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1900		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	1300000	B	10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	470		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	470		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1600		20	5.7	mg/L	20		300.0	Total/NA
Fluoride	3.1		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	27		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	3200		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220919-01 — Lab Sample ID: 240-173372-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	1300	B	1000	330	ug/L	1		6020B	Total Recoverable
Chloride	1.5		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	1.3		0.050	0.024	mg/L	1		300.0	Total/NA

Client Sample ID: 9806-F-20220920-01 — Lab Sample ID: 240-173372-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	290		100	57	ug/L	1		6010D	Total Recoverable
Calcium	3000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	800	J	1000	200	ug/L	1		6020B	Total Recoverable
Potassium	750	J	1000	220	ug/L	1		6020B	Total Recoverable
Sodium	290000	B	1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	330		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	290		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	37		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	200		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	1.4		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	750		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2003-F-20220920-01 — Lab Sample ID: 240-173372-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450		100	57	ug/L	1		6010D	Total Recoverable
Calcium	23000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	18000		1000	200	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2003-F-20220920-01 (Continued) — Lab Sample ID: 240-173372-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	18000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	660000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	780		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	770		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	8.8		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	430		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	3.0		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	66		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	2700		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2000-F-20220920-01 — Lab Sample ID: 240-173372-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	350		100	57	ug/L	1		6010D	Total Recoverable
Calcium	2400		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	710	J	1000	200	ug/L	1		6020B	Total Recoverable
Potassium	830	J	1000	220	ug/L	1		6020B	Total Recoverable
Sodium	460000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	380		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	320		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	54		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	110		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	2.4		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	530		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	1200		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220920-01 — Lab Sample ID: 240-173372-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	1500		1000	330	ug/L	1		6020B	Total Recoverable
Chloride	3.3		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	3.5		0.050	0.024	mg/L	1		300.0	Total/NA
Total Dissolved Solids	12		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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

Job ID: 240-173372-1

Client Sample ID: MW17-F-20220919-01

Date Collected: 09/19/22 11:01
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-1

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	450		100	57	ug/L		09/23/22 12:00	09/27/22 18:35	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		09/23/22 12:00	09/26/22 17:29	1
Magnesium	15000		1000	200	ug/L		09/23/22 12:00	09/26/22 17:29	1
Potassium	5000		1000	220	ug/L		09/23/22 12:00	09/26/22 17:29	1
Sodium	2700000	B	10000	3300	ug/L		09/23/22 12:00	09/28/22 20:17	10

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		09/23/22 12:00	09/26/22 19:33	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			09/23/22 19:07	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	230		5.0	2.6	mg/L			09/23/22 19:07	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 19:07	1
Chloride (MCAWW 300.0)	4200		50	14	mg/L			10/16/22 02:09	50
Fluoride (MCAWW 300.0)	1.7		0.25	0.12	mg/L			10/16/22 01:49	5
Sulfate (MCAWW 300.0)	17		5.0	1.7	mg/L			10/16/22 01:49	5
Total Dissolved Solids (SM 2540C)	5700		100	78	mg/L			09/23/22 08:55	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.79		0.283	0.379	1.00	0.115	pCi/L	09/29/22 13:16	10/21/22 10:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:27*	*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	3.79		0.590	0.686	1.00	0.534	pCi/L	09/29/22 13:16	10/13/22 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:00*	*1*
Y Carrier	*85.6*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:00*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.59		0.654	0.784	5.00	0.534	pCi/L		10/24/22 10:15	1

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

Job ID: 240-173372-1

Client Sample ID: 9802-F-20220919-01

Date Collected: 09/19/22 12:41
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-2

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	190		100	57	ug/L		09/23/22 12:00	09/27/22 18:56	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	30000		1000	580	ug/L		09/23/22 12:00	09/26/22 17:41	1
Magnesium	8800		1000	200	ug/L		09/23/22 12:00	09/26/22 17:41	1
Potassium	1500		1000	220	ug/L		09/23/22 12:00	09/26/22 17:41	1
Sodium	270000	B	1000	330	ug/L		09/23/22 12:00	09/26/22 17:41	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		09/23/22 12:00	09/26/22 19:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	580		5.0	2.6	mg/L			09/23/22 19:13	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	580		5.0	2.6	mg/L			09/23/22 19:13	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 19:13	1
Chloride (MCAWW 300.0)	37		1.0	0.28	mg/L			10/16/22 02:29	1
Fluoride (MCAWW 300.0)	0.99		0.050	0.024	mg/L			10/16/22 02:29	1
Sulfate (MCAWW 300.0)	64		1.0	0.35	mg/L			10/16/22 02:29	1
Total Dissolved Solids (SM 2540C)	340		40	31	mg/L			09/23/22 08:55	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.124		0.0720	0.0728	1.00	0.0883	pCi/L	09/29/22 13:16	10/21/22 10:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:27*	*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	0.498	U	0.334	0.337	1.00	0.506	pCi/L	09/29/22 13:16	10/13/22 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:00*	*1*
Y Carrier	*84.5*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:00*	*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	0.622		0.342	0.345	5.00	0.506	pCi/L		10/24/22 10:15	1

Client Sample ID: 9801-F-20220919-01

Date Collected: 09/19/22 13:23
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-3

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	440		100	57	ug/L		09/23/22 12:00	09/27/22 19:01	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	180000		1000	580	ug/L		09/23/22 12:00	09/26/22 17:43	1
Magnesium	58000		1000	200	ug/L		09/23/22 12:00	09/26/22 17:43	1
Potassium	8500		1000	220	ug/L		09/23/22 12:00	09/26/22 17:43	1
Sodium	5200000	B	50000	16000	ug/L		09/23/22 12:00	09/28/22 20:30	50

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		09/23/22 12:00	09/26/22 19:42	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			09/23/22 19:17	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	140		5.0	2.6	mg/L			09/23/22 19:17	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 19:17	1
Chloride (MCAWW 300.0)	7600		50	14	mg/L			10/16/22 03:30	50
Fluoride (MCAWW 300.0)	0.92		0.50	0.24	mg/L			10/16/22 03:10	10
Sulfate (MCAWW 300.0)	10	U	10	3.5	mg/L			10/16/22 03:10	10
Total Dissolved Solids (SM 2540C)	11000		100	78	mg/L			09/23/22 08:55	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.69		0.324	0.464	1.00	0.0979	pCi/L	09/29/22 13:16	10/21/22 10:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:27*	*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	5.64		0.673	0.850	1.00	0.458	pCi/L	09/29/22 13:16	10/13/22 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:00*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:00*	*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	9.34		0.747	0.968	5.00	0.458	pCi/L		10/24/22 10:15	1

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

Job ID: 240-173372-1

Client Sample ID: 93108-F-20220919-01

Date Collected: 09/19/22 14:48
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-4

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	450		100	57	ug/L		09/23/22 12:00	09/27/22 19:05	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	14000		1000	580	ug/L		09/23/22 12:00	09/26/22 17:51	1
Magnesium	4300		1000	200	ug/L		09/23/22 12:00	09/26/22 17:51	1
Potassium	1900		1000	220	ug/L		09/23/22 12:00	09/26/22 17:51	1
Sodium	1300000	B	10000	3300	ug/L		09/23/22 12:00	09/28/22 20:32	10

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		09/23/22 12:00	09/26/22 19:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	470		5.0	2.6	mg/L			09/23/22 19:22	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	470		5.0	2.6	mg/L			09/23/22 19:22	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 19:22	1
Chloride (MCAWW 300.0)	1600		20	5.7	mg/L			10/16/22 04:10	20
Fluoride (MCAWW 300.0)	3.1		0.10	0.048	mg/L			10/16/22 03:50	2
Sulfate (MCAWW 300.0)	27		2.0	0.70	mg/L			10/16/22 03:50	2
Total Dissolved Solids (SM 2540C)	3200		50	39	mg/L			09/23/22 08:55	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.562		0.132	0.142	1.00	0.0987	pCi/L	09/29/22 13:16	10/21/22 10:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:27*	*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	1.24		0.371	0.388	1.00	0.422	pCi/L	09/29/22 13:16	10/13/22 12:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:01*	*1*
Y Carrier	*84.9*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:01*	*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	1.80		0.394	0.413	5.00	0.422	pCi/L		10/24/22 10:15	1

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

Job ID: 240-173372-1

Client Sample ID: EB-001-F-20220919-01

Date Collected: 09/19/22 15:30
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-5

Matrix: Water

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		09/23/22 12:00	09/27/22 19:18	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		09/23/22 12:00	09/26/22 17:53	1
Magnesium	1000	U	1000	200	ug/L		09/23/22 12:00	09/26/22 17:53	1
Potassium	1000	U	1000	220	ug/L		09/23/22 12:00	09/26/22 17:53	1
Sodium	**1300**	**B**	1000	330	ug/L		09/23/22 12:00	09/26/22 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		09/23/22 12:00	09/26/22 19:46	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			09/23/22 19:24	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 19:24	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 19:24	1
Chloride (MCAWW 300.0)	**1.5**		1.0	0.28	mg/L			10/16/22 05:10	1
Fluoride (MCAWW 300.0)	**1.3**		0.050	0.024	mg/L			10/16/22 05:10	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			10/16/22 05:10	1
Total Dissolved Solids (SM 2540C)	10	U	10	7.8	mg/L			09/23/22 08:55	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0875	U	0.0760	0.0764	1.00	0.114	pCi/L	09/29/22 13:16	10/21/22 10:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:27*	*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	0.225	U	0.294	0.295	1.00	0.491	pCi/L	09/29/22 13:16	10/13/22 12:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.0*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:01*	*1*
Y Carrier	*84.5*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:01*	*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	0.312	U	0.304	0.305	5.00	0.491	pCi/L		10/24/22 10:15	1

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

Job ID: 240-173372-1

Client Sample ID: 9806-F-20220920-01

Date Collected: 09/20/22 10:21
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-6

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	290		100	57	ug/L		09/23/22 12:00	09/27/22 19:22	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	3000		1000	580	ug/L		09/23/22 12:00	09/26/22 17:56	1
Magnesium	800	J	1000	200	ug/L		09/23/22 12:00	09/26/22 17:56	1
Potassium	750	J	1000	220	ug/L		09/23/22 12:00	09/26/22 17:56	1
Sodium	290000	B	1000	330	ug/L		09/23/22 12:00	09/26/22 17:56	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		09/23/22 12:00	09/26/22 19:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	330		5.0	2.6	mg/L			09/23/22 19:28	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	290		5.0	2.6	mg/L			09/23/22 19:28	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	37		5.0	2.6	mg/L			09/23/22 19:28	1
Chloride (MCAWW 300.0)	200		1.0	0.28	mg/L			10/16/22 05:30	1
Fluoride (MCAWW 300.0)	1.4		0.050	0.024	mg/L			10/16/22 05:30	1
Sulfate (MCAWW 300.0)	130		1.0	0.35	mg/L			10/16/22 05:30	1
Total Dissolved Solids (SM 2540C)	750		20	16	mg/L			09/27/22 08:56	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	0.127		0.0778	0.0786	1.00	0.103	pCi/L	09/29/22 13:16	10/21/22 10:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:27*	*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	0.255	U	0.242	0.244	1.00	0.384	pCi/L	09/29/22 13:16	10/13/22 12:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:01*	*1*
Y Carrier	*87.5*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:01*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.382	U	0.254	0.256	5.00	0.384	pCi/L		10/24/22 10:15	1

Client Sample ID: 2003-F-20220920-01

Date Collected: 09/20/22 12:27
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-7

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	450		100	57	ug/L		09/23/22 12:00	09/27/22 13:49	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	23000		1000	580	ug/L		09/23/22 12:00	09/26/22 16:56	1
Magnesium	18000		1000	200	ug/L		09/23/22 12:00	09/26/22 16:56	1
Potassium	18000		1000	220	ug/L		09/23/22 12:00	09/26/22 16:56	1
Sodium	660000		10000	3300	ug/L		09/23/22 12:00	09/27/22 22:48	10

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		09/23/22 12:00	09/26/22 18:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	780		5.0	2.6	mg/L			09/23/22 19:34	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	770		5.0	2.6	mg/L			09/23/22 19:34	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	8.8		5.0	2.6	mg/L			09/23/22 19:34	1
Chloride (MCAWW 300.0)	430		10	2.8	mg/L			10/16/22 06:31	10
Fluoride (MCAWW 300.0)	3.0		0.050	0.024	mg/L			10/16/22 06:11	1
Sulfate (MCAWW 300.0)	66		1.0	0.35	mg/L			10/16/22 06:11	1
Total Dissolved Solids (SM 2540C)	2700		50	39	mg/L			09/27/22 08:56	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	2.62		0.619	0.662	1.00	0.423	pCi/L	09/29/22 13:16	10/21/22 10:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:27*	*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	2.90	G	1.49	1.51	1.00	2.07	pCi/L	09/29/22 13:16	10/13/22 12:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:02*	*1*
Y Carrier	*84.1*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:02*	*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	5.52		1.61	1.65	5.00	2.07	pCi/L		10/24/22 10:15	1

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

Job ID: 240-173372-1

Client Sample ID: 2000-F-20220920-01

Date Collected: 09/20/22 14:39
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-8

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	350		100	57	ug/L		09/23/22 12:00	09/27/22 13:53	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	2400		1000	580	ug/L		09/23/22 12:00	09/26/22 16:59	1
Magnesium	710	J	1000	200	ug/L		09/23/22 12:00	09/26/22 16:59	1
Potassium	830	J	1000	220	ug/L		09/23/22 12:00	09/26/22 16:59	1
Sodium	460000		1000	330	ug/L		09/23/22 12:00	09/26/22 16:59	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		09/23/22 12:00	09/26/22 18:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	380		5.0	2.6	mg/L			09/23/22 19:41	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	320		5.0	2.6	mg/L			09/23/22 19:41	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	54		5.0	2.6	mg/L			09/23/22 19:41	1
Chloride (MCAWW 300.0)	110		1.0	0.28	mg/L			10/16/22 06:51	1
Fluoride (MCAWW 300.0)	2.4		0.050	0.024	mg/L			10/16/22 06:51	1
Sulfate (MCAWW 300.0)	530		10	3.5	mg/L			10/16/22 07:11	10
Total Dissolved Solids (SM 2540C)	1200		20	16	mg/L			09/27/22 08:56	1

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.156		0.0909	0.0920	1.00	0.123	pCi/L	09/29/22 13:16	10/21/22 10:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:27*	*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	0.701		0.331	0.337	1.00	0.447	pCi/L	09/29/22 13:16	10/13/22 12:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:02*	*1*
Y Carrier	*85.2*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:02*	*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	0.857		0.343	0.349	5.00	0.447	pCi/L		10/24/22 10:15	1

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

Job ID: 240-173372-1

Client Sample ID: EB-001-F-20220920-01

Date Collected: 09/20/22 17:10
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-9

Matrix: Water

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		09/23/22 12:00	09/27/22 13:36	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		09/23/22 12:00	09/26/22 16:54	1
Magnesium	1000	U	1000	200	ug/L		09/23/22 12:00	09/26/22 16:54	1
Potassium	1000	U	1000	220	ug/L		09/23/22 12:00	09/26/22 16:54	1
Sodium	**1500**		1000	330	ug/L		09/23/22 12:00	09/26/22 16:54	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		09/23/22 12:00	09/26/22 17:59	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			09/23/22 19:43	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 19:43	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 19:43	1
Chloride (MCAWW 300.0)	**3.3**		1.0	0.28	mg/L			10/16/22 07:31	1
Fluoride (MCAWW 300.0)	**3.5**		0.050	0.024	mg/L			10/16/22 07:31	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			10/16/22 07:31	1
Total Dissolved Solids (SM 2540C)	**12**		10	7.8	mg/L			09/27/22 08:56	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	0.0794	U	0.0714	0.0718	1.00	0.108	pCi/L	09/29/22 13:16	10/21/22 14:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*09/29/22 13:16*	*10/21/22 14:20*	*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	0.000	U	0.242	0.242	1.00	0.457	pCi/L	09/29/22 13:16	10/13/22 12:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:02*	*1*
Y Carrier	*85.2*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:02*	*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	0.0794	U	0.252	0.252	5.00	0.457	pCi/L		10/24/22 10:15	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173372-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
240-173372-1	MW17-F-20220919-01	109
240-173372-2	9802-F-20220919-01	104
240-173372-3	9801-F-20220919-01	108
240-173372-4	93108-F-20220919-01	109
240-173372-5	EB-001-F-20220919-01	88.0
240-173372-6	9806-F-20220920-01	101
240-173372-7	2003-F-20220920-01	84.3
240-173372-8	2000-F-20220920-01	100
240-173372-9	EB-001-F-20220920-01	97.3
LCS 160-584028/2-A	Lab Control Sample	103
MB 160-584028/1-A	Method Blank	97.5

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-173372-1	MW17-F-20220919-01	109	85.6
240-173372-2	9802-F-20220919-01	104	84.5
240-173372-3	9801-F-20220919-01	108	86.4
240-173372-4	93108-F-20220919-01	109	84.9
240-173372-5	EB-001-F-20220919-01	88.0	84.5
240-173372-6	9806-F-20220920-01	101	87.5
240-173372-7	2003-F-20220920-01	84.3	84.1
240-173372-8	2000-F-20220920-01	100	85.2
240-173372-9	EB-001-F-20220920-01	97.3	85.2
LCS 160-584072/2-A	Lab Control Sample	103	87.1
MB 160-584072/1-A	Method Blank	97.5	84.1

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-544080/1-A
Matrix: Water
Analysis Batch: 544575

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/23/22 12:00	09/27/22 18:27	1

Lab Sample ID: LCS 240-544080/2-A
Matrix: Water
Analysis Batch: 544575

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1040		ug/L		104	80 - 120

Lab Sample ID: 240-173372-1 MS
Matrix: Water
Analysis Batch: 544575

Client Sample ID: MW17-F-20220919-01
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	450		1000	1320		ug/L		87	75 - 125

Lab Sample ID: 240-173372-1 MSD
Matrix: Water
Analysis Batch: 544575

Client Sample ID: MW17-F-20220919-01
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	450		1000	1390		ug/L		94	75 - 125	5	20

Lab Sample ID: MB 240-544088/1-A
Matrix: Water
Analysis Batch: 544575

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/23/22 12:00	09/27/22 12:40	1

Lab Sample ID: LCS 240-544088/2-A
Matrix: Water
Analysis Batch: 544575

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544088

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 240-544080/1-A
Matrix: Water
Analysis Batch: 544436

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/23/22 12:00	09/26/22 17:24	1
Magnesium	1000	U	1000	200	ug/L		09/23/22 12:00	09/26/22 17:24	1
Potassium	1000	U	1000	220	ug/L		09/23/22 12:00	09/26/22 17:24	1
Sodium	385	J	1000	330	ug/L		09/23/22 12:00	09/26/22 17:24	1

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

Lab Sample ID: LCS 240-544080/3-A
Matrix: Water
Analysis Batch: 544436

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	23700		ug/L		95	80 - 120
Magnesium	25000	24000		ug/L		96	80 - 120
Potassium	25000	23500		ug/L		94	80 - 120
Sodium	25000	24600		ug/L		98	80 - 120

Lab Sample ID: 240-173372-1 MS
Matrix: Water
Analysis Batch: 544436

Client Sample ID: MW17-F-20220919-01
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	78000		25000	101000		ug/L		95	80 - 120
Magnesium	15000		25000	38300		ug/L		94	80 - 120
Potassium	5000		25000	27500		ug/L		90	80 - 120

Lab Sample ID: 240-173372-1 MS
Matrix: Water
Analysis Batch: 544865

Client Sample ID: MW17-F-20220919-01
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	2700000	B	25000	2560000	4	ug/L		-475	80 - 120

Lab Sample ID: 240-173372-1 MSD
Matrix: Water
Analysis Batch: 544436

Client Sample ID: MW17-F-20220919-01
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	78000		25000	98300		ug/L		83	80 - 120	3	20
Magnesium	15000		25000	37700		ug/L		91	80 - 120	1	20
Potassium	5000		25000	27300		ug/L		89	80 - 120	1	20

Lab Sample ID: 240-173372-1 MSD
Matrix: Water
Analysis Batch: 544865

Client Sample ID: MW17-F-20220919-01
Prep Type: Total Recoverable
Prep Batch: 544080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sodium	2700000	B	25000	2690000	4	ug/L		58	80 - 120	5	20

Lab Sample ID: MB 240-544088/1-A
Matrix: Water
Analysis Batch: 544436

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/23/22 12:00	09/26/22 16:22	1
Magnesium	1000	U	1000	200	ug/L		09/23/22 12:00	09/26/22 16:22	1
Potassium	1000	U	1000	220	ug/L		09/23/22 12:00	09/26/22 16:22	1
Sodium	1000	U	1000	330	ug/L		09/23/22 12:00	09/26/22 16:22	1

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

Lab Sample ID: LCS 240-544088/3-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 544436
Prep Batch: 544088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	23600		ug/L		94	80 - 120
Magnesium	25000	24000		ug/L		96	80 - 120
Potassium	25000	23400		ug/L		94	80 - 120
Sodium	25000	24500		ug/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-544082/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 544360
Prep Batch: 544082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/23/22 12:00	09/26/22 19:28	1

Lab Sample ID: LCS 240-544082/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 544360
Prep Batch: 544082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.81		ug/L		96	80 - 120

Lab Sample ID: 240-173372-1 MS
Client Sample ID: MW17-F-20220919-01
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 544360
Prep Batch: 544082

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U	1.00	1.17		ug/L		117	80 - 120

Lab Sample ID: 240-173372-1 MSD
Client Sample ID: MW17-F-20220919-01
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 544360
Prep Batch: 544082

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.20	U	1.00	1.09		ug/L		109	80 - 120	6	20

Lab Sample ID: MB 240-544089/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 544360
Prep Batch: 544089

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/23/22 12:00	09/26/22 17:35	1

Lab Sample ID: LCS 240-544089/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 544360
Prep Batch: 544089

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.42		ug/L		108	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-544358/30
Matrix: Water
Analysis Batch: 544358

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			09/23/22 16:19	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 16:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 16:19	1

Lab Sample ID: MB 240-544358/56
Matrix: Water
Analysis Batch: 544358

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			09/23/22 18:04	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 18:04	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 18:04	1

Lab Sample ID: LCS 240-544358/55
Matrix: Water
Analysis Batch: 544358

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	119		mg/L		99	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-547199/3
Matrix: Water
Analysis Batch: 547199

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			10/15/22 21:07	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/15/22 21:07	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/15/22 21:07	1

Lab Sample ID: LCS 240-547199/4
Matrix: Water
Analysis Batch: 547199

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	49.9		mg/L		100	90 - 110
Fluoride	2.50	2.66		mg/L		106	90 - 110
Sulfate	50.0	52.0		mg/L		104	90 - 110

Lab Sample ID: 240-173372-9 MS
Matrix: Water
Analysis Batch: 547199

Client Sample ID: EB-001-F-20220920-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3.3		50.0	55.3		mg/L		104	80 - 120
Fluoride	3.5		2.50	6.17		mg/L		106	80 - 120
Sulfate	1.0	U	50.0	52.2		mg/L		104	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-173372-9 MSD
Matrix: Water
Analysis Batch: 547199

Client Sample ID: EB-001-F-20220920-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3.3		50.0	51.2		mg/L		96	80 - 120	8	15
Fluoride	3.5		2.50	5.97		mg/L		98	80 - 120	3	15
Sulfate	1.0	U	50.0	48.0		mg/L		96	80 - 120	8	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-544021/1
Matrix: Water
Analysis Batch: 544021

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			09/23/22 08:55	1

Lab Sample ID: LCS 240-544021/2
Matrix: Water
Analysis Batch: 544021

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: MB 240-544442/1
Matrix: Water
Analysis Batch: 544442

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			09/27/22 08:56	1

Lab Sample ID: LCS 240-544442/2
Matrix: Water
Analysis Batch: 544442

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	452		mg/L		92	80 - 120

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-584028/1-A
Matrix: Water
Analysis Batch: 586803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 584028

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.002296	U	0.0642	0.0642	1.00	0.128	pCi/L	09/29/22 13:16	10/21/22 10:26	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.5*		*40 - 110*	*09/29/22 13:16*	*10/21/22 10:26*	*1*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-584028/2-A
Matrix: Water
Analysis Batch: 586803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 584028

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	9.796		1.03	1.00	0.123	pCi/L	86	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-584072/1-A
Matrix: Water
Analysis Batch: 585868

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 584072

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.6896		0.332	0.338	1.00	0.447	pCi/L	09/29/22 13:16	10/13/22 12:00	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.5*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:00*	*1*
Y Carrier	*84.1*		*40 - 110*	*09/29/22 13:16*	*10/13/22 12:00*	*1*

Lab Sample ID: LCS 160-584072/2-A
Matrix: Water
Analysis Batch: 585868

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 584072

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.20	8.143		1.10	1.00	0.474	pCi/L	99	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*
Y Carrier	*87.1*		*40 - 110*

Metals

Prep Batch: 544080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total Recoverable	Water	3005A	
240-173372-2	9802-F-20220919-01	Total Recoverable	Water	3005A	
240-173372-3	9801-F-20220919-01	Total Recoverable	Water	3005A	
240-173372-4	93108-F-20220919-01	Total Recoverable	Water	3005A	
240-173372-5	EB-001-F-20220919-01	Total Recoverable	Water	3005A	
240-173372-6	9806-F-20220920-01	Total Recoverable	Water	3005A	
MB 240-544080/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-544080/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-544080/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-173372-1 MS	MW17-F-20220919-01	Total Recoverable	Water	3005A	
240-173372-1 MS	MW17-F-20220919-01	Total Recoverable	Water	3005A	
240-173372-1 MSD	MW17-F-20220919-01	Total Recoverable	Water	3005A	
240-173372-1 MSD	MW17-F-20220919-01	Total Recoverable	Water	3005A	

Prep Batch: 544082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total/NA	Water	7470A	
240-173372-2	9802-F-20220919-01	Total/NA	Water	7470A	
240-173372-3	9801-F-20220919-01	Total/NA	Water	7470A	
240-173372-4	93108-F-20220919-01	Total/NA	Water	7470A	
240-173372-5	EB-001-F-20220919-01	Total/NA	Water	7470A	
240-173372-6	9806-F-20220920-01	Total/NA	Water	7470A	
MB 240-544082/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-544082/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-173372-1 MS	MW17-F-20220919-01	Total/NA	Water	7470A	
240-173372-1 MSD	MW17-F-20220919-01	Total/NA	Water	7470A	

Prep Batch: 544088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-7	2003-F-20220920-01	Total Recoverable	Water	3005A	
240-173372-8	2000-F-20220920-01	Total Recoverable	Water	3005A	
240-173372-9	EB-001-F-20220920-01	Total Recoverable	Water	3005A	
MB 240-544088/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-544088/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-544088/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 544089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-7	2003-F-20220920-01	Total/NA	Water	7470A	
240-173372-8	2000-F-20220920-01	Total/NA	Water	7470A	
240-173372-9	EB-001-F-20220920-01	Total/NA	Water	7470A	
MB 240-544089/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-544089/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 544360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total/NA	Water	7470A	544082
240-173372-2	9802-F-20220919-01	Total/NA	Water	7470A	544082
240-173372-3	9801-F-20220919-01	Total/NA	Water	7470A	544082
240-173372-4	93108-F-20220919-01	Total/NA	Water	7470A	544082
240-173372-5	EB-001-F-20220919-01	Total/NA	Water	7470A	544082

Metals (Continued)

Analysis Batch: 544360 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-6	9806-F-20220920-01	Total/NA	Water	7470A	544082
240-173372-7	2003-F-20220920-01	Total/NA	Water	7470A	544089
240-173372-8	2000-F-20220920-01	Total/NA	Water	7470A	544089
240-173372-9	EB-001-F-20220920-01	Total/NA	Water	7470A	544089
MB 240-544082/1-A	Method Blank	Total/NA	Water	7470A	544082
MB 240-544089/1-A	Method Blank	Total/NA	Water	7470A	544089
LCS 240-544082/2-A	Lab Control Sample	Total/NA	Water	7470A	544082
LCS 240-544089/2-A	Lab Control Sample	Total/NA	Water	7470A	544089
240-173372-1 MS	MW17-F-20220919-01	Total/NA	Water	7470A	544082
240-173372-1 MSD	MW17-F-20220919-01	Total/NA	Water	7470A	544082

Analysis Batch: 544436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-2	9802-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-3	9801-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-4	93108-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-5	EB-001-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-6	9806-F-20220920-01	Total Recoverable	Water	6020B	544080
240-173372-7	2003-F-20220920-01	Total Recoverable	Water	6020B	544088
240-173372-8	2000-F-20220920-01	Total Recoverable	Water	6020B	544088
240-173372-9	EB-001-F-20220920-01	Total Recoverable	Water	6020B	544088
MB 240-544080/1-A	Method Blank	Total Recoverable	Water	6020B	544080
MB 240-544088/1-A	Method Blank	Total Recoverable	Water	6020B	544088
LCS 240-544080/3-A	Lab Control Sample	Total Recoverable	Water	6020B	544080
LCS 240-544088/3-A	Lab Control Sample	Total Recoverable	Water	6020B	544088
240-173372-1 MS	MW17-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-1 MSD	MW17-F-20220919-01	Total Recoverable	Water	6020B	544080

Analysis Batch: 544575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total Recoverable	Water	6010D	544080
240-173372-2	9802-F-20220919-01	Total Recoverable	Water	6010D	544080
240-173372-3	9801-F-20220919-01	Total Recoverable	Water	6010D	544080
240-173372-4	93108-F-20220919-01	Total Recoverable	Water	6010D	544080
240-173372-5	EB-001-F-20220919-01	Total Recoverable	Water	6010D	544080
240-173372-6	9806-F-20220920-01	Total Recoverable	Water	6010D	544080
240-173372-7	2003-F-20220920-01	Total Recoverable	Water	6010D	544088
240-173372-8	2000-F-20220920-01	Total Recoverable	Water	6010D	544088
240-173372-9	EB-001-F-20220920-01	Total Recoverable	Water	6010D	544088
MB 240-544080/1-A	Method Blank	Total Recoverable	Water	6010D	544080
MB 240-544088/1-A	Method Blank	Total Recoverable	Water	6010D	544088
LCS 240-544080/2-A	Lab Control Sample	Total Recoverable	Water	6010D	544080
LCS 240-544088/2-A	Lab Control Sample	Total Recoverable	Water	6010D	544088
240-173372-1 MS	MW17-F-20220919-01	Total Recoverable	Water	6010D	544080
240-173372-1 MSD	MW17-F-20220919-01	Total Recoverable	Water	6010D	544080

Analysis Batch: 544618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-7	2003-F-20220920-01	Total Recoverable	Water	6020B	544088

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173372-1
Project/Site: Federal CCR Wells

Metals

Analysis Batch: 544865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-3	9801-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-4	93108-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-1 MS	MW17-F-20220919-01	Total Recoverable	Water	6020B	544080
240-173372-1 MSD	MW17-F-20220919-01	Total Recoverable	Water	6020B	544080

General Chemistry

Analysis Batch: 544021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total/NA	Water	SM 2540C	
240-173372-2	9802-F-20220919-01	Total/NA	Water	SM 2540C	
240-173372-3	9801-F-20220919-01	Total/NA	Water	SM 2540C	
240-173372-4	93108-F-20220919-01	Total/NA	Water	SM 2540C	
240-173372-5	EB-001-F-20220919-01	Total/NA	Water	SM 2540C	
MB 240-544021/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-544021/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 544358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total/NA	Water	2320B-1997	
240-173372-2	9802-F-20220919-01	Total/NA	Water	2320B-1997	
240-173372-3	9801-F-20220919-01	Total/NA	Water	2320B-1997	
240-173372-4	93108-F-20220919-01	Total/NA	Water	2320B-1997	
240-173372-5	EB-001-F-20220919-01	Total/NA	Water	2320B-1997	
240-173372-6	9806-F-20220920-01	Total/NA	Water	2320B-1997	
240-173372-7	2003-F-20220920-01	Total/NA	Water	2320B-1997	
240-173372-8	2000-F-20220920-01	Total/NA	Water	2320B-1997	
240-173372-9	EB-001-F-20220920-01	Total/NA	Water	2320B-1997	
MB 240-544358/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-544358/56	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-544358/55	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 544442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-6	9806-F-20220920-01	Total/NA	Water	SM 2540C	
240-173372-7	2003-F-20220920-01	Total/NA	Water	SM 2540C	
240-173372-8	2000-F-20220920-01	Total/NA	Water	SM 2540C	
240-173372-9	EB-001-F-20220920-01	Total/NA	Water	SM 2540C	
MB 240-544442/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-544442/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 547199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total/NA	Water	300.0	
240-173372-1	MW17-F-20220919-01	Total/NA	Water	300.0	
240-173372-2	9802-F-20220919-01	Total/NA	Water	300.0	
240-173372-3	9801-F-20220919-01	Total/NA	Water	300.0	
240-173372-3	9801-F-20220919-01	Total/NA	Water	300.0	
240-173372-4	93108-F-20220919-01	Total/NA	Water	300.0	
240-173372-4	93108-F-20220919-01	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 547199 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-5	EB-001-F-20220919-01	Total/NA	Water	300.0	
240-173372-6	9806-F-20220920-01	Total/NA	Water	300.0	
240-173372-7	2003-F-20220920-01	Total/NA	Water	300.0	
240-173372-7	2003-F-20220920-01	Total/NA	Water	300.0	
240-173372-8	2000-F-20220920-01	Total/NA	Water	300.0	
240-173372-8	2000-F-20220920-01	Total/NA	Water	300.0	
240-173372-9	EB-001-F-20220920-01	Total/NA	Water	300.0	
MB 240-547199/3	Method Blank	Total/NA	Water	300.0	
LCS 240-547199/4	Lab Control Sample	Total/NA	Water	300.0	
240-173372-9 MS	EB-001-F-20220920-01	Total/NA	Water	300.0	
240-173372-9 MSD	EB-001-F-20220920-01	Total/NA	Water	300.0	

Rad

Prep Batch: 584028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total/NA	Water	PrecSep-21	
240-173372-2	9802-F-20220919-01	Total/NA	Water	PrecSep-21	
240-173372-3	9801-F-20220919-01	Total/NA	Water	PrecSep-21	
240-173372-4	93108-F-20220919-01	Total/NA	Water	PrecSep-21	
240-173372-5	EB-001-F-20220919-01	Total/NA	Water	PrecSep-21	
240-173372-6	9806-F-20220920-01	Total/NA	Water	PrecSep-21	
240-173372-7	2003-F-20220920-01	Total/NA	Water	PrecSep-21	
240-173372-8	2000-F-20220920-01	Total/NA	Water	PrecSep-21	
240-173372-9	EB-001-F-20220920-01	Total/NA	Water	PrecSep-21	
MB 160-584028/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-584028/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 584072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173372-1	MW17-F-20220919-01	Total/NA	Water	PrecSep_0	
240-173372-2	9802-F-20220919-01	Total/NA	Water	PrecSep_0	
240-173372-3	9801-F-20220919-01	Total/NA	Water	PrecSep_0	
240-173372-4	93108-F-20220919-01	Total/NA	Water	PrecSep_0	
240-173372-5	EB-001-F-20220919-01	Total/NA	Water	PrecSep_0	
240-173372-6	9806-F-20220920-01	Total/NA	Water	PrecSep_0	
240-173372-7	2003-F-20220920-01	Total/NA	Water	PrecSep_0	
240-173372-8	2000-F-20220920-01	Total/NA	Water	PrecSep_0	
240-173372-9	EB-001-F-20220920-01	Total/NA	Water	PrecSep_0	
MB 160-584072/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-584072/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 240-173372-1

Client Sample ID: MW17-F-20220919-01

Lab Sample ID: 240-173372-1

Date Collected: 09/19/22 11:01

Matrix: Water

Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 18:35
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 17:29
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		10	544865	AJC	EET CAN	09/28/22 20:17
Total/NA	Prep	7470A			544082	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 19:33
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:07
Total/NA	Analysis	300.0		5	547199	JWW	EET CAN	10/16/22 01:49
Total/NA	Analysis	300.0		50	547199	JWW	EET CAN	10/16/22 02:09
Total/NA	Analysis	SM 2540C		1	544021	MED	EET CAN	09/23/22 08:55
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 10:27
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:00
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

Client Sample ID: 9802-F-20220919-01

Lab Sample ID: 240-173372-2

Date Collected: 09/19/22 12:41

Matrix: Water

Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 18:56
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 17:41
Total/NA	Prep	7470A			544082	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 19:40
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:13
Total/NA	Analysis	300.0		1	547199	JWW	EET CAN	10/16/22 02:29
Total/NA	Analysis	SM 2540C		1	544021	MED	EET CAN	09/23/22 08:55
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 10:27
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:00
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

Lab Chronicle

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

Job ID: 240-173372-1

Client Sample ID: 9801-F-20220919-01

Date Collected: 09/19/22 13:23
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 19:01
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 17:43
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		50	544865	AJC	EET CAN	09/28/22 20:30
Total/NA	Prep	7470A			544082	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 19:42
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:17
Total/NA	Analysis	300.0		10	547199	JWW	EET CAN	10/16/22 03:10
Total/NA	Analysis	300.0		50	547199	JWW	EET CAN	10/16/22 03:30
Total/NA	Analysis	SM 2540C		1	544021	MED	EET CAN	09/23/22 08:55
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 10:27
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:00
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

Client Sample ID: 93108-F-20220919-01

Date Collected: 09/19/22 14:48
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 19:05
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 17:51
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		10	544865	AJC	EET CAN	09/28/22 20:32
Total/NA	Prep	7470A			544082	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 19:44
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:22
Total/NA	Analysis	300.0		2	547199	JWW	EET CAN	10/16/22 03:50
Total/NA	Analysis	300.0		20	547199	JWW	EET CAN	10/16/22 04:10
Total/NA	Analysis	SM 2540C		1	544021	MED	EET CAN	09/23/22 08:55
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 10:27
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:01
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

Lab Chronicle

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

Job ID: 240-173372-1

Client Sample ID: EB-001-F-20220919-01

Lab Sample ID: 240-173372-5

Date Collected: 09/19/22 15:30
Matrix: Water
Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 19:18
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 17:53
Total/NA	Prep	7470A			544082	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 19:46
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:24
Total/NA	Analysis	300.0		1	547199	JWW	EET CAN	10/16/22 05:10
Total/NA	Analysis	SM 2540C		1	544021	MED	EET CAN	09/23/22 08:55
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 10:27
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:01
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

Client Sample ID: 9806-F-20220920-01

Lab Sample ID: 240-173372-6

Date Collected: 09/20/22 10:21
Matrix: Water
Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 19:22
Total Recoverable	Prep	3005A			544080	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 17:56
Total/NA	Prep	7470A			544082	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 19:53
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:28
Total/NA	Analysis	300.0		1	547199	JWW	EET CAN	10/16/22 05:30
Total/NA	Analysis	SM 2540C		1	544442	MED	EET CAN	09/27/22 08:56
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 10:27
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:01
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

Client Sample ID: 2003-F-20220920-01

Lab Sample ID: 240-173372-7

Date Collected: 09/20/22 12:27
Matrix: Water
Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 13:49
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 16:56

Lab Chronicle

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

Job ID: 240-173372-1

Client Sample ID: 2003-F-20220920-01

Lab Sample ID: 240-173372-7

Date Collected: 09/20/22 12:27
Matrix: Water
Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		10	544618	AJC	EET CAN	09/27/22 22:48
Total/NA	Prep	7470A			544089	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 18:03
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:34
Total/NA	Analysis	300.0		1	547199	JWW	EET CAN	10/16/22 06:11
Total/NA	Analysis	300.0		10	547199	JWW	EET CAN	10/16/22 06:31
Total/NA	Analysis	SM 2540C		1	544442	MED	EET CAN	09/27/22 08:56
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 10:27
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:02
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

Client Sample ID: 2000-F-20220920-01

Lab Sample ID: 240-173372-8

Date Collected: 09/20/22 14:39
Matrix: Water
Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 13:53
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 16:59
Total/NA	Prep	7470A			544089	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 18:10
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:41
Total/NA	Analysis	300.0		1	547199	JWW	EET CAN	10/16/22 06:51
Total/NA	Analysis	300.0		10	547199	JWW	EET CAN	10/16/22 07:11
Total/NA	Analysis	SM 2540C		1	544442	MED	EET CAN	09/27/22 08:56
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 10:27
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:02
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

Client Sample ID: EB-001-F-20220920-01

Lab Sample ID: 240-173372-9

Date Collected: 09/20/22 17:10
Matrix: Water
Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 13:36
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 16:54

Lab Chronicle

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

Job ID: 240-173372-1

Client Sample ID: EB-001-F-20220920-01

Date Collected: 09/20/22 17:10
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173372-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			544089	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 17:59
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:43
Total/NA	Analysis	300.0		1	547199	JWW	EET CAN	10/16/22 07:31
Total/NA	Analysis	SM 2540C		1	544442	MED	EET CAN	09/27/22 08:56
Total/NA	Prep	PrecSep-21			584028	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9315		1	586803	EMH	EET SL	10/21/22 14:20
Total/NA	Prep	PrecSep_0			584072	MLK	EET SL	09/29/22 13:16
Total/NA	Analysis	9320		1	585868	FLC	EET SL	10/13/22 12:02
Total/NA	Analysis	Ra226_Ra228		1	586964	CAH	EET SL	10/24/22 10:15

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
Job ID: 240-173372-1
Project/Site: Federal CCR Wells

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	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	11-30-23
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.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173372-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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	06-30-22 *
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	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Cato	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List) D	6010B, 7470, 6020(See Metals List) N	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) D	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) N	9315_Ra226, 9320_Ra228 D	9315_Ra226, 9320_Ra228 N	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity) D	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity) N	Total Number of containers	Special Instructions/Note:
			Preservation Code:													
MW17-F-20220919-01	9-19-22	1101	G	W	N		1	1	2	1						
9802-F-20220919-01	9-19-22	1241	G	W	N		1	1	2	1						
9801-F-20220919-01	9-19-22	1323	G	W	N		1	1	2	1						
93108-F-20220919-01	9-19-22	1448	G	W	N		1	1	2	1						
EB-001-F-20220919-01	9-19-22	1530	G	W	N		1	1	2	1						
9806-F-20220920-01	9-20-22	1021	G	W	N		1	1	2	1						
2003-F-20220920-01	9-20-22	1227	G	W	N		1	1	2	1						*1 500ml for Ra Only*
2000-F-20220920-01	9-20-22	1439	G	W	N		1	1	2	1						
EB-001-F-20220920-01	9-20-22	1716	G	W	N		1	1	2	1						

240-173372 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Bobby Cato	9-22-22 1010	KEA		092222 0700	Kemron
Relinquished by: Walter Craft	Date/Time: 09/22/22 1200	Company Kemron	Received by:	Date/Time: 9-22-22 12:00	Company EA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

10/24/2022

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Brandon

Cooler Received on 9-22-22 Opened on 9-22-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 14 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)? 9-22-22	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# 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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____
_____
_____
_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	1.1	1.1	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	1.6	1.6	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	2.1	2.1	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

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-157569.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-173372-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 10/5/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
Preservation Code:											
MW17-F-20220919-01 (240-173372-1)	9/19/22	11:01 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
9802-F-20220919-01 (240-173372-2)	9/19/22	12:41 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
9801-F-20220919-01 (240-173372-3)	9/19/22	13:23 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
93108-F-20220919-01 (240-173372-4)	9/19/22	14:48 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220919-01 (240-173372-5)	9/19/22	15:30 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
9806-F-20220920-01 (240-173372-6)	9/20/22	10:21 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2003-F-20220920-01 (240-173372-7)	9/20/22	12:27 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2000-F-20220920-01 (240-173372-8)	9/20/22	14:39 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220920-01 (240-173372-9)	9/20/22	17:10 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	9-22-22 1539	TA	FED EX		
2	FED EX			Sierra Worthington	SEP 23 2022 0840	EMSL
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-173372-1

Login Number: 173372
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 09/23/22 10:33 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 | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-173373-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
10/25/2022 8:27:52 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

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

Job ID: 240-173373-1

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.
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
F3	Duplicate RPD exceeds the control limit
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-173373-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-173373-1

Comments
No additional comments.

Receipt
The samples were received on 9/22/2022 12:00 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 0.4º C, 0.7º C, 1.1º C, 1.6º C and 2.1º C.

RAD
Methods 9315: Radium 226 Batch 160-584264: 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. 2018-01-F-20220921-01 (240-173373-1), DUP-003-2018-01-F-20220921-01 (240-173373-2), 94137-F-20220921-01 (240-173373-3), 94136-F-20220921-01 (240-173373-4), 94136-F-20220921-01 (240-173373-4[MS]), 94136-F-20220921-01 (240-173373-4[MSD]), EB-001-F-20220921-01 (240-173373-5), (LCS 160-584264/2-A) and (MB 160-584264/1-A)

Methods 9320: Radium 228 Batch 160-584268: The method blank (MB) has Ra-228 activity above the MDC and RL. The following associated samples are non-detect for the analyte; therefore, re-analysis is not required. The data have been reported. 94137-F-20220921-01 (240-173373-3), 94136-F-20220921-01 (240-173373-4) and EB-001-F-20220921-01 (240-173373-5)

Methods 9320: Radium 228 Batch 160-584268: The method blank (MB) has Ra-228 activity above the MDC and RL. The following associated samples exhibit concentrations greater than five (5) times the concentrations observed in the MB; therefore, re-analysis is not required. The data have been reported. 94136-F-20220921-01 (240-173373-4[MS]) and 94136-F-20220921-01 (240-173373-4[MSD])

Methods 9320: Radium 228 Batch 160-584268: 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. 94137-F-20220921-01 (240-173373-3), 94136-F-20220921-01 (240-173373-4), 94136-F-20220921-01 (240-173373-4[MS]), 94136-F-20220921-01 (240-173373-4[MSD]), EB-001-F-20220921-01 (240-173373-5), (LCS 160-584268/2-A) and (MB 160-584268/1-A)

Methods 9320: Radium-226 prep batch 160-586322: 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. 2018-01-F-20220921-01 (240-173373-1), DUP-003-2018-01-F-20220921-01 (240-173373-2), (LCS 160-586322/2-A), (MB 160-586322/1-A)

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 sample duplicate (DUP) precision for analytical batch 240-544602 was outside control limits. Sample non-homogeneity is suspected.

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: 240-173373-1

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: 240-173373-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-173373-1	2018-01-F-20220921-01	Water	09/21/22 10:21	09/22/22 12:00
240-173373-2	DUP-003-2018-01-F-20220921-01	Water	09/21/22 10:21	09/22/22 12:00
240-173373-3	94137-F-20220921-01	Water	09/21/22 11:44	09/22/22 12:00
240-173373-4	94136-F-20220921-01	Water	09/21/22 12:41	09/22/22 12:00
240-173373-5	EB-001-F-20220921-01	Water	09/21/22 16:20	09/22/22 12:00

Detection Summary

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

Job ID: 240-173373-1

Client Sample ID: 2018-01-F-20220921-01 — Lab Sample ID: 240-173373-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450		100	57	ug/L	1		6010D	Total Recoverable
Calcium	31000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	300	J	1000	200	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2100000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	22		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3100		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	2.2		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	43		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: DUP-003-2018-01-F-20220921-01 — Lab Sample ID: 240-173373-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	440		100	57	ug/L	1		6010D	Total Recoverable
Calcium	31000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	300	J	1000	200	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2100000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	26		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3100		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	2.2		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	4600		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 94137-F-20220921-01 — Lab Sample ID: 240-173373-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	140000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	48000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	65000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	370		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	370		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	0.11		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	320		10	3.5	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 94137-F-20220921-01 (Continued) — Lab Sample ID: 240-173373-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	620		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 94136-F-20220921-01 — Lab Sample ID: 240-173373-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	350		100	57	ug/L	1		6010D	Total Recoverable
Calcium	13000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	3500		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	1800		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	720000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	310		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	310		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	920		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	1.3		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	52		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	1100		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220921-01 — Lab Sample ID: 240-173373-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	14000		1000	330	ug/L	1		6020B	Total Recoverable
Chloride	160		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	6.8		0.050	0.024	mg/L	1		300.0	Total/NA
Total Dissolved Solids	20		20	16	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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

Job ID: 240-173373-1

Client Sample ID: 2018-01-F-20220921-01

Date Collected: 09/21/22 10:21
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173373-1

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	450		100	57	ug/L		09/23/22 12:00	09/27/22 13:18	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	31000		1000	580	ug/L		09/23/22 12:00	09/26/22 16:44	1
Magnesium	300	J	1000	200	ug/L		09/23/22 12:00	09/26/22 16:44	1
Potassium	3300		1000	220	ug/L		09/23/22 12:00	09/26/22 16:44	1
Sodium	2100000		10000	3300	ug/L		09/23/22 12:00	09/27/22 22:43	10

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		09/23/22 12:00	09/26/22 17:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	250		5.0	2.6	mg/L			09/23/22 19:58	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	22		5.0	2.6	mg/L			09/23/22 19:58	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	220		5.0	2.6	mg/L			09/23/22 19:58	1
Chloride (MCAWW 300.0)	3100		25	7.1	mg/L			10/18/22 04:37	25
Fluoride (MCAWW 300.0)	2.2		0.25	0.12	mg/L			10/18/22 04:17	5
Sulfate (MCAWW 300.0)	43		5.0	1.7	mg/L			10/18/22 04:17	5
Total Dissolved Solids (SM 2540C)	4900		50	39	mg/L			09/28/22 08:26	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	0.960		0.180	0.199	1.00	0.127	pCi/L	09/30/22 15:12	10/24/22 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.1*		*40 - 110*	*09/30/22 15:12*	*10/24/22 15:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.15		0.516	0.527	1.00	0.695	pCi/L	10/18/22 09:52	10/21/22 12:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.7*		*40 - 110*	*10/18/22 09:52*	*10/21/22 12:10*	*1*
Y Carrier	*86.4*		*40 - 110*	*10/18/22 09:52*	*10/21/22 12:10*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.11		0.546	0.563	5.00	0.695	pCi/L		10/24/22 17:53	1

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

Job ID: 240-173373-1

Client Sample ID: DUP-003-2018-01-F-20220921-01

Date Collected: 09/21/22 10:21
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173373-2

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	440		100	57	ug/L		09/23/22 12:00	09/27/22 13:23	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	31000		1000	580	ug/L		09/23/22 12:00	09/26/22 16:46	1
Magnesium	300	J	1000	200	ug/L		09/23/22 12:00	09/26/22 16:46	1
Potassium	3300		1000	220	ug/L		09/23/22 12:00	09/26/22 16:46	1
Sodium	2100000		10000	3300	ug/L		09/23/22 12:00	09/27/22 22:45	10

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		09/23/22 12:00	09/26/22 17:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	250		5.0	2.6	mg/L			09/23/22 20:08	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	26		5.0	2.6	mg/L			09/23/22 20:08	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	220		5.0	2.6	mg/L			09/23/22 20:08	1
Chloride (MCAWW 300.0)	3100		25	7.1	mg/L			10/18/22 05:17	25
Fluoride (MCAWW 300.0)	2.2		0.25	0.12	mg/L			10/18/22 04:57	5
Sulfate (MCAWW 300.0)	42		5.0	1.7	mg/L			10/18/22 04:57	5
Total Dissolved Solids (SM 2540C)	4600		50	39	mg/L			09/28/22 08:26	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	0.965		0.168	0.189	1.00	0.0902	pCi/L	09/30/22 15:12	10/24/22 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*40 - 110*	*09/30/22 15:12*	*10/24/22 15:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.95		0.607	0.633	1.00	0.719	pCi/L	10/18/22 09:52	10/21/22 12:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.7*		*40 - 110*	*10/18/22 09:52*	*10/21/22 12:10*	*1*
Y Carrier	*85.6*		*40 - 110*	*10/18/22 09:52*	*10/21/22 12:10*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.92		0.630	0.661	5.00	0.719	pCi/L		10/24/22 17:53	1

Client Sample ID: 94137-F-20220921-01
Lab Sample ID: 240-173373-3

Date Collected: 09/21/22 11:44
Matrix: Water
Date Received: 09/22/22 12:00

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		09/23/22 12:00	09/27/22 13:27	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		09/23/22 12:00	09/26/22 16:49	1
Magnesium	**48000**		1000	200	ug/L		09/23/22 12:00	09/26/22 16:49	1
Potassium	**1600**		1000	220	ug/L		09/23/22 12:00	09/26/22 16:49	1
Sodium	**65000**		1000	330	ug/L		09/23/22 12:00	09/26/22 16:49	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		09/23/22 12:00	09/26/22 17:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	**370**		5.0	2.6	mg/L			09/23/22 20:12	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	**370**		5.0	2.6	mg/L			09/23/22 20:12	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 20:12	1
Chloride (MCAWW 300.0)	**27**		1.0	0.28	mg/L			10/18/22 05:57	1
Fluoride (MCAWW 300.0)	**0.11**		0.050	0.024	mg/L			10/18/22 05:57	1
Sulfate (MCAWW 300.0)	**320**		10	3.5	mg/L			10/18/22 06:18	10
Total Dissolved Solids (SM 2540C)	**620**		40	31	mg/L			09/28/22 08:26	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	**0.215**		0.0995	0.101	1.00	0.112	pCi/L	09/30/22 15:12	10/24/22 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.1*		*40 - 110*	*09/30/22 15:12*	*10/24/22 15:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.212	U	0.381	0.382	1.00	0.654	pCi/L	09/30/22 15:12	10/14/22 15:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.1*		*40 - 110*	*09/30/22 15:12*	*10/14/22 15:00*	*1*
Y Carrier	*86.4*		*40 - 110*	*09/30/22 15:12*	*10/14/22 15:00*	*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	0.427	U	0.394	0.395	5.00	0.654	pCi/L		10/24/22 17:53	1

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

Job ID: 240-173373-1

Client Sample ID: 94136-F-20220921-01

Date Collected: 09/21/22 12:41
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173373-4

Matrix: Water

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	350		100	57	ug/L		09/23/22 12:00	09/27/22 12:49	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	13000		1000	580	ug/L		09/23/22 12:00	09/26/22 16:27	1
Magnesium	3500		1000	200	ug/L		09/23/22 12:00	09/26/22 16:27	1
Potassium	1800		1000	220	ug/L		09/23/22 12:00	09/26/22 16:27	1
Sodium	720000		10000	3300	ug/L		09/23/22 12:00	09/27/22 22:31	10

Method: SW846 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		09/23/22 12:00	09/26/22 17:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	310		5.0	2.6	mg/L			09/23/22 20:17	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	310		5.0	2.6	mg/L			09/23/22 20:17	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 20:17	1
Chloride (MCAWW 300.0)	920		25	7.1	mg/L			10/18/22 08:59	25
Fluoride (MCAWW 300.0)	1.3		0.25	0.12	mg/L			10/19/22 13:36	5
Sulfate (MCAWW 300.0)	52		5.0	1.7	mg/L			10/18/22 07:58	5
Total Dissolved Solids (SM 2540C)	1100		40	31	mg/L			09/28/22 08:26	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	0.289		0.0988	0.102	1.00	0.0897	pCi/L	09/30/22 15:12	10/24/22 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*09/30/22 15:12*	*10/24/22 15:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0631	U	0.363	0.363	1.00	0.648	pCi/L	09/30/22 15:12	10/14/22 15:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.3*		*40 - 110*	*09/30/22 15:12*	*10/14/22 15:00*	*1*
Y Carrier	*85.2*		*40 - 110*	*09/30/22 15:12*	*10/14/22 15:00*	*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	0.352	U	0.376	0.377	5.00	0.648	pCi/L		10/24/22 17:53	1

Client Sample ID: EB-001-F-20220921-01
Lab Sample ID: 240-173373-5

Date Collected: 09/21/22 16:20
Matrix: Water
Date Received: 09/22/22 12:00

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		09/23/22 12:00	09/27/22 13:32	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		09/23/22 12:00	09/26/22 16:51	1
Magnesium	1000	U	1000	200	ug/L		09/23/22 12:00	09/26/22 16:51	1
Potassium	1000	U	1000	220	ug/L		09/23/22 12:00	09/26/22 16:51	1
Sodium	**14000**		1000	330	ug/L		09/23/22 12:00	09/26/22 16:51	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		09/23/22 12:00	09/26/22 17:57	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			09/23/22 20:19	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 20:19	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			09/23/22 20:19	1
Chloride (MCAWW 300.0)	**160**		1.0	0.28	mg/L			10/18/22 09:59	1
Fluoride (MCAWW 300.0)	**6.8**		0.050	0.024	mg/L			10/19/22 14:42	1
Sulfate (MCAWW 300.0)	1.0	U	1.0	0.35	mg/L			10/18/22 09:59	1
Total Dissolved Solids (SM 2540C)	**20**		20	16	mg/L			09/28/22 08:26	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	-0.0157	U	0.0438	0.0438	1.00	0.0989	pCi/L	09/30/22 15:12	10/24/22 15:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*09/30/22 15:12*	*10/24/22 15:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0433	U	0.299	0.299	1.00	0.544	pCi/L	09/30/22 15:12	10/14/22 15:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*09/30/22 15:12*	*10/14/22 15:00*	*1*
Y Carrier	*83.4*		*40 - 110*	*09/30/22 15:12*	*10/14/22 15:00*	*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	0.0276	U	0.302	0.302	5.00	0.544	pCi/L		10/24/22 17:53	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173373-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
240-173373-1	2018-01-F-20220921-01	92.1
240-173373-2	DUP-003-2018-01-F-20220921-01	99.3
240-173373-3	94137-F-20220921-01	81.1
240-173373-4	94136-F-20220921-01	97.3
240-173373-4 MS	94136-F-20220921-01	95.3
240-173373-4 MSD	94136-F-20220921-01	98.0
240-173373-5	EB-001-F-20220921-01	101
LCS 160-584264/2-A	Lab Control Sample	98.8
MB 160-584264/1-A	Method Blank	96.3

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-173373-1	2018-01-F-20220921-01	90.7	86.4
240-173373-2	DUP-003-2018-01-F-20220921-01	89.7	85.6
240-173373-3	94137-F-20220921-01	81.1	86.4
240-173373-4	94136-F-20220921-01	97.3	85.2
240-173373-4 MS	94136-F-20220921-01	95.3	87.5
240-173373-4 MSD	94136-F-20220921-01	98.0	86.4
240-173373-5	EB-001-F-20220921-01	101	83.4
LCS 160-584268/2-A	Lab Control Sample	98.8	83.0
LCS 160-586322/2-A	Lab Control Sample	93.9	81.9
MB 160-584268/1-A	Method Blank	96.3	82.6
MB 160-586322/1-A	Method Blank	92.6	86.0

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-544088/1-A
Matrix: Water
Analysis Batch: 544575

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		09/23/22 12:00	09/27/22 12:40	1

Lab Sample ID: LCS 240-544088/2-A
Matrix: Water
Analysis Batch: 544575

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1020		ug/L		102	80 - 120

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 544575

Client Sample ID: 94136-F-20220921-01
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	350		1000	1450		ug/L		110	75 - 125

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 544575

Client Sample ID: 94136-F-20220921-01
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	350		1000	1430		ug/L		108	75 - 125	1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-544088/1-A
Matrix: Water
Analysis Batch: 544436

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		09/23/22 12:00	09/26/22 16:22	1
Magnesium	1000	U	1000	200	ug/L		09/23/22 12:00	09/26/22 16:22	1
Potassium	1000	U	1000	220	ug/L		09/23/22 12:00	09/26/22 16:22	1
Sodium	1000	U	1000	330	ug/L		09/23/22 12:00	09/26/22 16:22	1

Lab Sample ID: LCS 240-544088/3-A
Matrix: Water
Analysis Batch: 544436

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	23600		ug/L		94	80 - 120
Magnesium	25000	24000		ug/L		96	80 - 120
Potassium	25000	23400		ug/L		94	80 - 120
Sodium	25000	24500		ug/L		98	80 - 120

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

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 544436

Client Sample ID: 94136-F-20220921-01
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	13000		25000	36400		ug/L		93	80 - 120
Magnesium	3500		25000	27200		ug/L		95	80 - 120
Potassium	1800		25000	24900		ug/L		92	80 - 120

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 544618

Client Sample ID: 94136-F-20220921-01
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	720000		25000	746000	4	ug/L		90	80 - 120

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 544436

Client Sample ID: 94136-F-20220921-01
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	13000		25000	34000		ug/L		83	80 - 120	7	20
Magnesium	3500		25000	25200		ug/L		87	80 - 120	8	20
Potassium	1800		25000	23100		ug/L		85	80 - 120	7	20

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 544618

Client Sample ID: 94136-F-20220921-01
Prep Type: Total Recoverable
Prep Batch: 544088

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sodium	720000		25000	688000	4	ug/L		-143	80 - 120	8	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-544089/1-A
Matrix: Water
Analysis Batch: 544360

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 544089

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		09/23/22 12:00	09/26/22 17:35	1

Lab Sample ID: LCS 240-544089/2-A
Matrix: Water
Analysis Batch: 544360

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 544089

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.42		ug/L		108	80 - 120

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 544360

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA
Prep Batch: 544089

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U F1	1.00	1.27	F1	ug/L		127	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 544360

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA
Prep Batch: 544089

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	1.19		ug/L		119	80 - 120	6	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-544358/56
Matrix: Water
Analysis Batch: 544358

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			09/23/22 18:04	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 18:04	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 18:04	1

Lab Sample ID: MB 240-544358/83
Matrix: Water
Analysis Batch: 544358

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			09/23/22 19:52	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 19:52	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			09/23/22 19:52	1

Lab Sample ID: LCS 240-544358/82
Matrix: Water
Analysis Batch: 544358

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: 240-173373-1 DU
Matrix: Water
Analysis Batch: 544358

Client Sample ID: 2018-01-F-20220921-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	250		248		mg/L		0.3	20
Bicarbonate Alkalinity as CaCO3	22		21.2		mg/L		3	20
Carbonate Alkalinity as CaCO3	220		226		mg/L		0.7	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-547446/27
Matrix: Water
Analysis Batch: 547446

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			10/18/22 07:18	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/18/22 07:18	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-547446/3
Matrix: Water
Analysis Batch: 547446

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			10/17/22 23:15	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/17/22 23:15	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/17/22 23:15	1

Lab Sample ID: LCS 240-547446/28
Matrix: Water
Analysis Batch: 547446

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.7		mg/L		101	90 - 110
Sulfate	50.0	52.4		mg/L		105	90 - 110

Lab Sample ID: LCS 240-547446/4
Matrix: Water
Analysis Batch: 547446

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	50.6		mg/L		101	90 - 110
Fluoride	2.50	2.54		mg/L		102	90 - 110
Sulfate	50.0	52.2		mg/L		104	90 - 110

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 547446

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	52		250	311		mg/L		104	80 - 120

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 547446

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	920		1250	2160		mg/L		99	80 - 120

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 547446

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	52		250	312		mg/L		104	80 - 120	0	15

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 547446

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	920		1250	2160		mg/L		99	80 - 120	0	15

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-547786/3
Matrix: Water
Analysis Batch: 547786

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			10/19/22 12:53	1
Fluoride	0.050	U	0.050	0.024	mg/L			10/19/22 12:53	1
Sulfate	1.0	U	1.0	0.35	mg/L			10/19/22 12:53	1

Lab Sample ID: LCS 240-547786/4
Matrix: Water
Analysis Batch: 547786

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	51.5		mg/L		103	90 - 110
Fluoride	2.50	2.69		mg/L		108	90 - 110
Sulfate	50.0	53.7		mg/L		107	90 - 110

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 547786

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	1.3		12.5	14.9		mg/L		109	80 - 120

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 547786

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	1.3		12.5	15.0		mg/L		110	80 - 120	0	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-544602/1
Matrix: Water
Analysis Batch: 544602

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			09/28/22 08:26	1

Lab Sample ID: LCS 240-544602/2
Matrix: Water
Analysis Batch: 544602

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	447		mg/L		91	80 - 120

Lab Sample ID: 240-173373-4 DU
Matrix: Water
Analysis Batch: 544602

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1100		1430	F3	mg/L		30	20

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-584264/1-A
Matrix: Water
Analysis Batch: 587140

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 584264

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01114	U	0.0655	0.0655	1.00	0.133	pCi/L	09/30/22 15:12	10/24/22 15:10	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.3*		*40 - 110*	*09/30/22 15:12*	*10/24/22 15:10*	*1*

Lab Sample ID: LCS 160-584264/2-A
Matrix: Water
Analysis Batch: 587140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 584264

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	9.590		1.00	1.00	0.116	pCi/L	85	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 587141

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA
Prep Batch: 584264

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.289		11.3	9.961		1.04	1.00	0.103	pCi/L	85	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*95.3*		*40 - 110*

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 587141

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA
Prep Batch: 584264

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.289		11.3	10.00		1.06	1.00	0.143	pCi/L	86	60 - 140	0.02	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*98.0*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-584268/1-A
Matrix: Water
Analysis Batch: 585945

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 584268

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.403		0.426	0.445	1.00	0.477	pCi/L	09/30/22 15:12	10/14/22 14:48	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110	09/30/22 15:12	10/14/22 14:48	1
Y Carrier	82.6		40 - 110	09/30/22 15:12	10/14/22 14:48	1

Lab Sample ID: LCS 160-584268/2-A
Matrix: Water
Analysis Batch: 585945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 584268

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.20	9.432		1.26	1.00	0.462	pCi/L	115	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.8		40 - 110
Y Carrier	83.0		40 - 110

Lab Sample ID: 240-173373-4 MS
Matrix: Water
Analysis Batch: 585928

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA
Prep Batch: 584268

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.0631	U	8.19	7.990		1.14	1.00	0.550	pCi/L	97	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	95.3		40 - 110
Y Carrier	87.5		40 - 110

Lab Sample ID: 240-173373-4 MSD
Matrix: Water
Analysis Batch: 585928

Client Sample ID: 94136-F-20220921-01
Prep Type: Total/NA
Prep Batch: 584268

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.0631	U	8.19	8.716		1.21	1.00	0.565	pCi/L	106	60 - 140	0.31	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	98.0		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: MB 160-586322/1-A
Matrix: Water
Analysis Batch: 586805

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586322

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2649	U	0.300	0.301	1.00	0.492	pCi/L	10/18/22 09:52	10/21/22 12:09	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110	10/18/22 09:52	10/21/22 12:09	1
Y Carrier	86.0		40 - 110	10/18/22 09:52	10/21/22 12:09	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-586322/2-A
Matrix: Water
Analysis Batch: 586805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586322

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.51	9.342		1.26	1.00	0.459	pCi/L	110	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*93.9*		*40 - 110*
Y Carrier	*81.9*		*40 - 110*

Metals

Prep Batch: 544088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total Recoverable	Water	3005A	
240-173373-2	DUP-003-2018-01-F-20220921-01	Total Recoverable	Water	3005A	
240-173373-3	94137-F-20220921-01	Total Recoverable	Water	3005A	
240-173373-4	94136-F-20220921-01	Total Recoverable	Water	3005A	
240-173373-5	EB-001-F-20220921-01	Total Recoverable	Water	3005A	
MB 240-544088/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-544088/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-544088/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-173373-4 MS	94136-F-20220921-01	Total Recoverable	Water	3005A	
240-173373-4 MS	94136-F-20220921-01	Total Recoverable	Water	3005A	
240-173373-4 MSD	94136-F-20220921-01	Total Recoverable	Water	3005A	
240-173373-4 MSD	94136-F-20220921-01	Total Recoverable	Water	3005A	

Prep Batch: 544089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total/NA	Water	7470A	
240-173373-2	DUP-003-2018-01-F-20220921-01	Total/NA	Water	7470A	
240-173373-3	94137-F-20220921-01	Total/NA	Water	7470A	
240-173373-4	94136-F-20220921-01	Total/NA	Water	7470A	
240-173373-5	EB-001-F-20220921-01	Total/NA	Water	7470A	
MB 240-544089/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-544089/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-173373-4 MS	94136-F-20220921-01	Total/NA	Water	7470A	
240-173373-4 MSD	94136-F-20220921-01	Total/NA	Water	7470A	

Analysis Batch: 544360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total/NA	Water	7470A	544089
240-173373-2	DUP-003-2018-01-F-20220921-01	Total/NA	Water	7470A	544089
240-173373-3	94137-F-20220921-01	Total/NA	Water	7470A	544089
240-173373-4	94136-F-20220921-01	Total/NA	Water	7470A	544089
240-173373-5	EB-001-F-20220921-01	Total/NA	Water	7470A	544089
MB 240-544089/1-A	Method Blank	Total/NA	Water	7470A	544089
LCS 240-544089/2-A	Lab Control Sample	Total/NA	Water	7470A	544089
240-173373-4 MS	94136-F-20220921-01	Total/NA	Water	7470A	544089
240-173373-4 MSD	94136-F-20220921-01	Total/NA	Water	7470A	544089

Analysis Batch: 544436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-2	DUP-003-2018-01-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-3	94137-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-4	94136-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-5	EB-001-F-20220921-01	Total Recoverable	Water	6020B	544088
MB 240-544088/1-A	Method Blank	Total Recoverable	Water	6020B	544088
LCS 240-544088/3-A	Lab Control Sample	Total Recoverable	Water	6020B	544088
240-173373-4 MS	94136-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-4 MSD	94136-F-20220921-01	Total Recoverable	Water	6020B	544088

Metals

Analysis Batch: 544575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total Recoverable	Water	6010D	544088
240-173373-2	DUP-003-2018-01-F-20220921-01	Total Recoverable	Water	6010D	544088
240-173373-3	94137-F-20220921-01	Total Recoverable	Water	6010D	544088
240-173373-4	94136-F-20220921-01	Total Recoverable	Water	6010D	544088
240-173373-5	EB-001-F-20220921-01	Total Recoverable	Water	6010D	544088
MB 240-544088/1-A	Method Blank	Total Recoverable	Water	6010D	544088
LCS 240-544088/2-A	Lab Control Sample	Total Recoverable	Water	6010D	544088
240-173373-4 MS	94136-F-20220921-01	Total Recoverable	Water	6010D	544088
240-173373-4 MSD	94136-F-20220921-01	Total Recoverable	Water	6010D	544088

Analysis Batch: 544618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-2	DUP-003-2018-01-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-4	94136-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-4 MS	94136-F-20220921-01	Total Recoverable	Water	6020B	544088
240-173373-4 MSD	94136-F-20220921-01	Total Recoverable	Water	6020B	544088

General Chemistry

Analysis Batch: 544358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total/NA	Water	2320B-1997	
240-173373-2	DUP-003-2018-01-F-20220921-01	Total/NA	Water	2320B-1997	
240-173373-3	94137-F-20220921-01	Total/NA	Water	2320B-1997	
240-173373-4	94136-F-20220921-01	Total/NA	Water	2320B-1997	
240-173373-5	EB-001-F-20220921-01	Total/NA	Water	2320B-1997	
MB 240-544358/56	Method Blank	Total/NA	Water	2320B-1997	
MB 240-544358/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-544358/82	Lab Control Sample	Total/NA	Water	2320B-1997	
240-173373-1 DU	2018-01-F-20220921-01	Total/NA	Water	2320B-1997	

Analysis Batch: 544602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total/NA	Water	SM 2540C	
240-173373-2	DUP-003-2018-01-F-20220921-01	Total/NA	Water	SM 2540C	
240-173373-3	94137-F-20220921-01	Total/NA	Water	SM 2540C	
240-173373-4	94136-F-20220921-01	Total/NA	Water	SM 2540C	
240-173373-5	EB-001-F-20220921-01	Total/NA	Water	SM 2540C	
MB 240-544602/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-544602/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-173373-4 DU	94136-F-20220921-01	Total/NA	Water	SM 2540C	

Analysis Batch: 547446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total/NA	Water	300.0	
240-173373-1	2018-01-F-20220921-01	Total/NA	Water	300.0	
240-173373-2	DUP-003-2018-01-F-20220921-01	Total/NA	Water	300.0	
240-173373-2	DUP-003-2018-01-F-20220921-01	Total/NA	Water	300.0	
240-173373-3	94137-F-20220921-01	Total/NA	Water	300.0	
240-173373-3	94137-F-20220921-01	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 547446 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-4	94136-F-20220921-01	Total/NA	Water	300.0	
240-173373-4	94136-F-20220921-01	Total/NA	Water	300.0	
240-173373-5	EB-001-F-20220921-01	Total/NA	Water	300.0	
MB 240-547446/27	Method Blank	Total/NA	Water	300.0	
MB 240-547446/3	Method Blank	Total/NA	Water	300.0	
LCS 240-547446/28	Lab Control Sample	Total/NA	Water	300.0	
LCS 240-547446/4	Lab Control Sample	Total/NA	Water	300.0	
240-173373-4 MS	94136-F-20220921-01	Total/NA	Water	300.0	
240-173373-4 MS	94136-F-20220921-01	Total/NA	Water	300.0	
240-173373-4 MSD	94136-F-20220921-01	Total/NA	Water	300.0	
240-173373-4 MSD	94136-F-20220921-01	Total/NA	Water	300.0	

Analysis Batch: 547786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-4	94136-F-20220921-01	Total/NA	Water	300.0	
240-173373-5	EB-001-F-20220921-01	Total/NA	Water	300.0	
MB 240-547786/3	Method Blank	Total/NA	Water	300.0	
LCS 240-547786/4	Lab Control Sample	Total/NA	Water	300.0	
240-173373-4 MS	94136-F-20220921-01	Total/NA	Water	300.0	
240-173373-4 MSD	94136-F-20220921-01	Total/NA	Water	300.0	

Rad

Prep Batch: 584264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total/NA	Water	PrecSep-21	
240-173373-2	DUP-003-2018-01-F-20220921-01	Total/NA	Water	PrecSep-21	
240-173373-3	94137-F-20220921-01	Total/NA	Water	PrecSep-21	
240-173373-4	94136-F-20220921-01	Total/NA	Water	PrecSep-21	
240-173373-5	EB-001-F-20220921-01	Total/NA	Water	PrecSep-21	
MB 160-584264/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-584264/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-173373-4 MS	94136-F-20220921-01	Total/NA	Water	PrecSep-21	
240-173373-4 MSD	94136-F-20220921-01	Total/NA	Water	PrecSep-21	

Prep Batch: 584268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-3	94137-F-20220921-01	Total/NA	Water	PrecSep_0	
240-173373-4	94136-F-20220921-01	Total/NA	Water	PrecSep_0	
240-173373-5	EB-001-F-20220921-01	Total/NA	Water	PrecSep_0	
MB 160-584268/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-584268/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-173373-4 MS	94136-F-20220921-01	Total/NA	Water	PrecSep_0	
240-173373-4 MSD	94136-F-20220921-01	Total/NA	Water	PrecSep_0	

Prep Batch: 586322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-173373-1	2018-01-F-20220921-01	Total/NA	Water	PrecSep_0	
240-173373-2	DUP-003-2018-01-F-20220921-01	Total/NA	Water	PrecSep_0	
MB 160-586322/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586322/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 240-173373-1

Client Sample ID: 2018-01-F-20220921-01

Lab Sample ID: 240-173373-1

Date Collected: 09/21/22 10:21

Matrix: Water

Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 13:18
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 16:44
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		10	544618	AJC	EET CAN	09/27/22 22:43
Total/NA	Prep	7470A			544089	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 17:51
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 19:58
Total/NA	Analysis	300.0		5	547446	JMB	EET CAN	10/18/22 04:17
Total/NA	Analysis	300.0		25	547446	JMB	EET CAN	10/18/22 04:37
Total/NA	Analysis	SM 2540C		1	544602	MED	EET CAN	09/28/22 08:26
Total/NA	Prep	PrecSep-21			584264	MLK	EET SL	09/30/22 15:12
Total/NA	Analysis	9315		1	587141	CLP	EET SL	10/24/22 15:14
Total/NA	Prep	PrecSep_0			586322	BMP	EET SL	10/18/22 09:52
Total/NA	Analysis	9320		1	586805	EMH	EET SL	10/21/22 12:10
Total/NA	Analysis	Ra226_Ra228		1	587160	CAH	EET SL	10/24/22 17:53

Client Sample ID: DUP-003-2018-01-F-20220921-01

Lab Sample ID: 240-173373-2

Date Collected: 09/21/22 10:21

Matrix: Water

Date Received: 09/22/22 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 13:23
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 16:46
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		10	544618	AJC	EET CAN	09/27/22 22:45
Total/NA	Prep	7470A			544089	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 17:53
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 20:08
Total/NA	Analysis	300.0		5	547446	JMB	EET CAN	10/18/22 04:57
Total/NA	Analysis	300.0		25	547446	JMB	EET CAN	10/18/22 05:17
Total/NA	Analysis	SM 2540C		1	544602	MED	EET CAN	09/28/22 08:26
Total/NA	Prep	PrecSep-21			584264	MLK	EET SL	09/30/22 15:12
Total/NA	Analysis	9315		1	587141	CLP	EET SL	10/24/22 15:14
Total/NA	Prep	PrecSep_0			586322	BMP	EET SL	10/18/22 09:52
Total/NA	Analysis	9320		1	586805	EMH	EET SL	10/21/22 12:10
Total/NA	Analysis	Ra226_Ra228		1	587160	CAH	EET SL	10/24/22 17:53

Lab Chronicle

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

Job ID: 240-173373-1

Client Sample ID: 94137-F-20220921-01

Date Collected: 09/21/22 11:44
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173373-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 13:27
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 16:49
Total/NA	Prep	7470A			544089	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 17:55
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 20:12
Total/NA	Analysis	300.0		1	547446	JMB	EET CAN	10/18/22 05:57
Total/NA	Analysis	300.0		10	547446	JMB	EET CAN	10/18/22 06:18
Total/NA	Analysis	SM 2540C		1	544602	MED	EET CAN	09/28/22 08:26
Total/NA	Prep	PrecSep-21			584264	MLK	EET SL	09/30/22 15:12
Total/NA	Analysis	9315		1	587141	CLP	EET SL	10/24/22 15:14
Total/NA	Prep	PrecSep_0			584268	MLK	EET SL	09/30/22 15:12
Total/NA	Analysis	9320		1	585928	JCB	EET SL	10/14/22 15:00
Total/NA	Analysis	Ra226_Ra228		1	587160	CAH	EET SL	10/24/22 17:53

Client Sample ID: 94136-F-20220921-01

Date Collected: 09/21/22 12:41
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173373-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 12:49
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 16:27
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		10	544618	AJC	EET CAN	09/27/22 22:31
Total/NA	Prep	7470A			544089	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 17:45
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 20:17
Total/NA	Analysis	300.0		5	547786	JMB	EET CAN	10/19/22 13:36
Total/NA	Analysis	300.0		5	547446	JMB	EET CAN	10/18/22 07:58
Total/NA	Analysis	300.0		25	547446	JMB	EET CAN	10/18/22 08:59
Total/NA	Analysis	SM 2540C		1	544602	MED	EET CAN	09/28/22 08:26
Total/NA	Prep	PrecSep-21			584264	MLK	EET SL	09/30/22 15:12
Total/NA	Analysis	9315		1	587141	CLP	EET SL	10/24/22 15:14
Total/NA	Prep	PrecSep_0			584268	MLK	EET SL	09/30/22 15:12
Total/NA	Analysis	9320		1	585928	JCB	EET SL	10/14/22 15:00
Total/NA	Analysis	Ra226_Ra228		1	587160	CAH	EET SL	10/24/22 17:53

Lab Chronicle

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

Job ID: 240-173373-1

Client Sample ID: EB-001-F-20220921-01

Date Collected: 09/21/22 16:20
Date Received: 09/22/22 12:00

Lab Sample ID: 240-173373-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6010D		1	544575	KLC	EET CAN	09/27/22 13:32
Total Recoverable	Prep	3005A			544088	SHB	EET CAN	09/23/22 12:00
Total Recoverable	Analysis	6020B		1	544436	AJC	EET CAN	09/26/22 16:51
Total/NA	Prep	7470A			544089	SHB	EET CAN	09/23/22 12:00
Total/NA	Analysis	7470A		1	544360	DSH	EET CAN	09/26/22 17:57
Total/NA	Analysis	2320B-1997		1	544358	JWW	EET CAN	09/23/22 20:19
Total/NA	Analysis	300.0		1	547786	JMB	EET CAN	10/19/22 14:42
Total/NA	Analysis	300.0		1	547446	JMB	EET CAN	10/18/22 09:59
Total/NA	Analysis	SM 2540C		1	544602	MED	EET CAN	09/28/22 08:26
Total/NA	Prep	PrecSep-21			584264	MLK	EET SL	09/30/22 15:12
Total/NA	Analysis	9315		1	587141	CLP	EET SL	10/24/22 15:14
Total/NA	Prep	PrecSep_0			584268	MLK	EET SL	09/30/22 15:12
Total/NA	Analysis	9320		1	585928	JCB	EET SL	10/14/22 15:00
Total/NA	Analysis	Ra226_Ra228		1	587160	CAH	EET SL	10/24/22 17:53

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
Job ID: 240-173373-1
Project/Site: Federal CCR Wells

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	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	11-30-23
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.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-173373-1
Project/Site: Federal CCR Wells

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
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	06-30-22 *
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	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | environment testing America

Client Information	Sampler: Bobby Cesco	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List) D	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate) N	9315_Ra226, 9320_Ra228 D	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity) N	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
2018-01-F-20220921-C1	9-21-22	1021	G	W	N		1	1	2	1	5	
DUP-003-2018-01-F-20220921-C1	9-21-22	1021	G	W	N		1	1	2	1	5	
94137-F-20220921-C1	9-21-22	1144	G	W	N		1	1	2	1	5	
94136-F-20220921-01	9-21-22	1241	G	W	N		1	1	2	1	5	
94136-F-20220921-MS	9-21-22	1241	G	W	N	Y	1	1	2	1	5	
94136-F-20220921-MSD	9-21-22	1241	G	W	N	Y	1	1	2	1	5	
EB-001-F-20220921-01	9-21-22	1620	G	W	N		1	1	2	1		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Bobby Cesco	9-22-22 0700	KEMRON	[illegible]	092220 0700	Kemron
2	[illegible]	09/22/22 1200	Kemron	[illegible]	9-22-22 12:00	UPTA
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Brandon

Cooler Received on 9-22-22 Opened on 9-22-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 14 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)? 9-22-22	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# 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

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: _____

WT-NC-099

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	1.1	1.1	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	1.6	1.6	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	2.1	2.1	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

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-157569.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-173373-1
Address: 13715 Rider Trail North,	Due Date Requested: 10/5/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitnc Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2018-01-F-20220921-01 (240-173373-1)	9/21/22	10:21 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
DUP-003-2018-01-F-20220921-01 (240-173373-2)	9/21/22	10:21 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
94137-F-20220921-01 (240-173373-3)	9/21/22	14:04 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
94136-F-20220921-01 (240-173373-4)	9/21/22	12:41 Eastern		Water			X	X	X	6	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
94136-F-20220921-01 (240-173373-4MS)	9/21/22	12:41 Eastern	MS	Water			X	X	X	1	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
94136-F-20220921-01 (240-173373-4MSD)	9/21/22	12:41 Eastern	MSD	Water			X	X	X	1	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220921-01 (240-173373-5)	9/21/22	16:20 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	9-22-22 1530	TA	FED EX		
2	FED EX			Sierra Woodrington	SEP 23 2022 0840	GTSL
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Page 34 of 35

10/25/2022

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-173373-1

Login Number: 173373
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 09/23/22 10:33 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-174224-1
Client Project/Site: Federal CCR Wells

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
11/10/2022 2:09:33 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-174224-1

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

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

Job ID: 240-174224-1

Job ID: 240-174224-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-174224-1

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

Receipt
The sample was received on 10/7/2022 10:30 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.4°C, 1.5°C, 2.0°C and 18.1°C

Receipt Exceptions
The following sample was received 800mL full while the requested analysis require at least 1 liter to run the analysis.: 2018-03-F-20220929-01 (240-174224-1).

Gas Flow Proportional Counter
Method 9315_Ra226: Radium-226 batch 586424Any 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.2018-03-F-20220929-01 (240-174224-1), (LCS 160-586424/2-A), (MB 160-586424/1-A)

Method 9320_Ra228: Radium-228 batch 586435The detection goal was not met for the following sample(s). Sample was prepped at a reduced volume due to the presence of matrix interferences: 2018-03-F-20220929-01 (240-174224-1). Analytical results are reported with the detection limit achieved.

Method 9320_Ra228: Radium-228 batch 586435Any 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 Date2018-03-F-20220929-01 (240-174224-1), (LCS 160-586435/2-A), (MB 160-586435/1-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.

Method Summary

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

Job ID: 240-174224-1

Method	Method Description	Protocol	Laboratory
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
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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 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: 240-174224-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-174224-1	2018-03-F-20220929-01	Water	09/29/22 13:00	10/07/22 10:30

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-174224-1
Project/Site: Federal CCR Wells

Client Sample ID: 2018-03-F-20220929-01
Lab Sample ID: 240-174224-1

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2018-03-F-20220929-01
Lab Sample ID: 240-174224-1

Date Collected: 09/29/22 13:00
Matrix: Water
Date Received: 10/07/22 10:30

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	1.42		0.296	0.322	1.00	0.184	pCi/L	10/18/22 13:24	11/09/22 10:38	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.2*		*40 - 110*	*10/18/22 13:24*	*11/09/22 10:38*	*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	2.54	G	0.900	0.930	1.00	1.18	pCi/L	10/18/22 15:20	10/28/22 11:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.2*		*40 - 110*	*10/18/22 15:20*	*10/28/22 11:27*	*1*
Y Carrier	*92.7*		*40 - 110*	*10/18/22 15:20*	*10/28/22 11:27*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.96		0.947	0.984	5.00	1.18	pCi/L		11/10/22 13:43	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-174224-1
Project/Site: Federal CCR Wells

Method: 9315 - Radium 226 by GFPC

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
240-174224-1	2018-03-F-20220929-01	92.2
LCS 160-586424/2-A	Lab Control Sample	97.5
MB 160-586424/1-A	Method Blank	93.6

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)
240-174224-1	2018-03-F-20220929-01	92.2	92.7
LCS 160-586435/2-A	Lab Control Sample	97.5	87.1
MB 160-586435/1-A	Method Blank	93.6	87.5

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-586424/1-A
Matrix: Water
Analysis Batch: 589434

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586424

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07547	U	0.0762	0.0765	1.00	0.121	pCi/L	10/18/22 13:24	11/09/22 08:41	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*40 - 110*	*10/18/22 13:24*	*11/09/22 08:41*	*1*

Lab Sample ID: LCS 160-586424/2-A
Matrix: Water
Analysis Batch: 589434

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586424

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.18		1.06	1.00	0.114	pCi/L	90	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.5*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-586435/1-A
Matrix: Water
Analysis Batch: 587626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 586435

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5753		0.319	0.323	1.00	0.447	pCi/L	10/18/22 15:20	10/28/22 11:20	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*40 - 110*	*10/18/22 15:20*	*10/28/22 11:20*	*1*
Y Carrier	*87.5*		*40 - 110*	*10/18/22 15:20*	*10/28/22 11:20*	*1*

Lab Sample ID: LCS 160-586435/2-A
Matrix: Water
Analysis Batch: 587626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 586435

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.49	9.149		1.21	1.00	0.475	pCi/L	108	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.5*		*40 - 110*
Y Carrier	*87.1*		*40 - 110*

QC Association Summary

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

Job ID: 240-174224-1

Rad

Prep Batch: 586424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174224-1	2018-03-F-20220929-01	Total/NA	Water	PrecSep-21	
MB 160-586424/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-586424/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 586435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174224-1	2018-03-F-20220929-01	Total/NA	Water	PrecSep_0	
MB 160-586435/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-586435/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 240-174224-1

Client Sample ID: 2018-03-F-20220929-01

Date Collected: 09/29/22 13:00
Date Received: 10/07/22 10:30

Lab Sample ID: 240-174224-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			586424	ZR	EET SL	10/18/22 13:24
Total/NA	Analysis	9315		1	589434	FLC	EET SL	11/09/22 10:38
Total/NA	Prep	PrecSep_0			586435	ZR	EET SL	10/18/22 15:20
Total/NA	Analysis	9320		1	587628	FLC	EET SL	10/28/22 11:27
Total/NA	Analysis	Ra226_Ra228		1	589626	CAH	EET SL	11/10/22 13:43

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-174224-1
Project/Site: Federal CCR Wells

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	11-30-23
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
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

Columbus
209 284

eurofins | Environment Testing America

Client Information	Sampler: Shawn / McCulla	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
2018-03-F-20220929-01	9-29-22	1300	G	W					1		1	

240-174224 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Shawn Shaun	10/6/22 0900	Savm		10-6-22 1150	ETA
2		10-6-22 1700	ETA		10-7-22 1030	EENC
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Page 14 of 19

11/10/2022

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client LIGHTSTONE GAVIN Site Name _____ Cooler unpacked by: M.A.D.

Cooler Received on 10/7/22 Opened on 10/7/22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# 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	Yes No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes No
-Were tamper/custody seals intact and uncompromised?	Yes No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes No
4. Did custody papers accompany the sample(s)?	Yes No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes No
7. Did all bottles arrive in good condition (Unbroken)?	Yes No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	
10. Were correct bottle(s) used for the test(s) indicated?	Yes No
11. Sufficient quantity received to perform indicated analyses?	Yes No
12. Are these work share samples and all listed on the COC?	Yes No
If yes, Questions 13-17 have been checked at the originating laboratory.	
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA pH Strip Lot# **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

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

Sample(s) _____ were received in a

Sample(s) _____ were received with bubble >6 mm in

20. SAMPLE PRESERVATION

Sample(s) _____ w

Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2018-03-F-20220929-01	240-174224-A-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

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	0-4	0-4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	2.2	2.0	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	13.1	16.1	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

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-158431.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-174224-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 10/20/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2018-03-F-20220929-01 (240-174224-1)	9/29/22	13:00 Eastern		Water			X	X	X	1	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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	FED EX	10/22 1445	EETL	FED EX		
2	Relinquished by: FED EX	Date/Time:	Company	Received by: Autumn R. Johnson	Date/Time: OCT 10 2022 0855	Company EASTC
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

11/10/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-174224-1

Login Number: 174224
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 10/10/22 04:43 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.	False	sample 1 received 800 mL full
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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-175053-1
Client Project/Site: Federal CCR Wells - resample

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
11/4/2022 11:47:51 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-175053-1

Qualifiers

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.
¤	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 - resample

Job ID: 240-175053-1

Job ID: 240-175053-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-175053-1

Receipt
The sample was received on 10/20/2022 9:25 AM. Unless otherwise noted below, the sample 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

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 - resample

Job ID: 240-175053-1

Method	Method Description	Protocol	Laboratory
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	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"

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 - resample

Job ID: 240-175053-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-175053-1	96154R-F-20221019-01	Water	10/19/22 14:36	10/20/22 09:25

Detection Summary

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

Job ID: 240-175053-1

Client Sample ID: 96154R-F-20221019-01

Lab Sample ID: 240-175053-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity	510		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	450		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	63		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	440		10	2.8	mg/L	10		300.0	Total/NA
Fluoride	4.1		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	65		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	1500		20	16	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175053-1
Project/Site: Federal CCR Wells - resample

Client Sample ID: 96154R-F-20221019-01
Lab Sample ID: 240-175053-1

Date Collected: 10/19/22 14:36
Matrix: Water
Date Received: 10/20/22 09:25

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	510		5.0	2.6	mg/L			10/25/22 21:00	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	450		5.0	2.6	mg/L			10/25/22 21:00	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	63		5.0	2.6	mg/L			10/25/22 21:00	1
Chloride (MCAWW 300.0)	440		10	2.8	mg/L			11/02/22 15:45	10
Fluoride (MCAWW 300.0)	4.1		0.050	0.024	mg/L			11/02/22 15:25	1
Sulfate (MCAWW 300.0)	65		1.0	0.35	mg/L			11/02/22 15:25	1
Total Dissolved Solids (SM 2540C)	1500		20	16	mg/L			10/25/22 09:09	1

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548766/30
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 18:27	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 18:27	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 18:27	1

Lab Sample ID: MB 240-548766/56
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 20:09	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 20:09	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 20:09	1

Lab Sample ID: LCS 240-548766/55
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		96	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-549786/58
Matrix: Water
Analysis Batch: 549786

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 10:23	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/02/22 10:23	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/02/22 10:23	1

Lab Sample ID: LCS 240-549786/59
Matrix: Water
Analysis Batch: 549786

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	50.6		mg/L		101	90 - 110
Fluoride	2.50	2.51		mg/L		100	90 - 110
Sulfate	50.0	51.8		mg/L		104	90 - 110

Lab Sample ID: 240-175053-1 MS
Matrix: Water
Analysis Batch: 549786

Client Sample ID: 96154R-F-20221019-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	430	E	500	915		mg/L		97	80 - 120
Fluoride	4.1		25.0	28.9		mg/L		99	80 - 120
Sulfate	65		500	563		mg/L		100	80 - 120

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175053-1
Project/Site: Federal CCR Wells - resample

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-175053-1 MSD
Client Sample ID: 96154R-F-20221019-01
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 549786

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	430	E	500	913		mg/L		97	80 - 120	0	15
Fluoride	4.1		25.0	28.8		mg/L		99	80 - 120	0	15
Sulfate	65		500	564		mg/L		100	80 - 120	0	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-548593/1
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 548593

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 09:09	1

Lab Sample ID: LCS 240-548593/2
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 548593

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	388	437		mg/L		113	80 - 120

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175053-1
Project/Site: Federal CCR Wells - resample

General Chemistry

Analysis Batch: 548593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175053-1	96154R-F-20221019-01	Total/NA	Water	SM 2540C	
MB 240-548593/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-548593/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175053-1	96154R-F-20221019-01	Total/NA	Water	2320B-1997	
MB 240-548766/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548766/56	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548766/55	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 549786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175053-1	96154R-F-20221019-01	Total/NA	Water	300.0	
240-175053-1	96154R-F-20221019-01	Total/NA	Water	300.0	
MB 240-549786/58	Method Blank	Total/NA	Water	300.0	
LCS 240-549786/59	Lab Control Sample	Total/NA	Water	300.0	
240-175053-1 MS	96154R-F-20221019-01	Total/NA	Water	300.0	
240-175053-1 MSD	96154R-F-20221019-01	Total/NA	Water	300.0	

Lab Chronicle

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

Job ID: 240-175053-1

Client Sample ID: 96154R-F-20221019-01
Date Collected: 10/19/22 14:36
Date Received: 10/20/22 09:25

Lab Sample ID: 240-175053-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320B-1997		1	548766	JMR	EET CAN	10/25/22 21:00
Total/NA	Analysis	300.0		1	549786	JMB	EET CAN	11/02/22 15:25
Total/NA	Analysis	300.0		10	549786	JMB	EET CAN	11/02/22 15:45
Total/NA	Analysis	SM 2540C		1	548593	MED	EET CAN	10/25/22 09:09

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
Job ID: 240-175053-1
Project/Site: Federal CCR Wells - resample

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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins environment testing America

Client Information	Sampler: Bobby Castle	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4303	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:	Analysis Requested		Job #:

Address: 7397 OH-7	Due Date Requested:		
City: Cheshire	TAT Requested (days):		
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No		
Phone: 740-925-3171(Tel)	PO #: 2935505		
Email: taylor.huffman@lightstonegen.com	WO #:		
Project Name: Federal - CCR Wells	Project #: 24019633		
Site: Ohio	SSOW#:		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
96154R-F-20221019-01	10-19-22	1436	G	W	N			1		1		*Resample of CCR wells*

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	10-22/0645	Kenrod		10/20/22 0645	Kenrod
Relinquished by:	102022 0925	Kenrod		10-20-22 925	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative Login # :_____
Barberton Facility

Client Lightstone Site Name_____ Cooler unpacked by: Danny Reyes

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 # A 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 e9d	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No	(NA) pH Strip Lot# 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)

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**	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

☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

eurofins | Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 240-175244-1
Client Project/Site: Federal CCR Wells - Resample

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
11/7/2022 12:29:25 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-175244-1

Qualifiers

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.
¤	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 - Resample

Job ID: 240-175244-1

Job ID: 240-175244-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-175244-1

Comments
No additional comments.

Receipt
The samples were received on 10/24/2022 12:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.2º C, 0.8º C and 1.2º C.

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 - Resample

Job ID: 240-175244-1

Method	Method Description	Protocol	Laboratory
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	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"

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 - Resample

Job ID: 240-175244-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-175244-1	2016-10-F-20221020-01	Water	10/20/22 10:02	10/24/22 12:30
240-175244-2	2016-07-F-20221020-01	Water	10/20/22 15:04	10/24/22 12:30
240-175244-3	96152-F-20221021-01	Water	10/21/22 11:53	10/24/22 12:30

Detection Summary

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

Job ID: 240-175244-1

Client Sample ID: 2016-10-F-20221020-01 — Lab Sample ID: 240-175244-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity	770		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	28		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	7000		50	14	mg/L	50		300.0	Total/NA
Fluoride	0.65		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	260		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	11000		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2016-07-F-20221020-01 — Lab Sample ID: 240-175244-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity	290		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
Carbonate Alkalinity as CaCO3	82		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	1300		20	5.7	mg/L	20		300.0	Total/NA
Fluoride	2.9		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	19		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	2300		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96152-F-20221021-01 — Lab Sample ID: 240-175244-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity	510		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	510		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3300		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	0.72		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	5200		50	39	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175244-1
Project/Site: Federal CCR Wells - Resample

Client Sample ID: 2016-10-F-20221020-01
Lab Sample ID: 240-175244-1

Date Collected: 10/20/22 10:02
Matrix: Water
Date Received: 10/24/22 12:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	**770**		5.0	2.6	mg/L			10/26/22 11:22	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/26/22 11:22	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	**28**		5.0	2.6	mg/L			10/26/22 11:22	1
Chloride (MCAWW 300.0)	**7000**		50	14	mg/L			11/04/22 07:19	50
Fluoride (MCAWW 300.0)	**0.65**		0.25	0.12	mg/L			11/04/22 06:59	5
Sulfate (MCAWW 300.0)	**260**		5.0	1.7	mg/L			11/04/22 06:59	5
Total Dissolved Solids (SM 2540C)	**11000**		1000	780	mg/L			10/27/22 09:52	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175244-1
Project/Site: Federal CCR Wells - Resample

Client Sample ID: 2016-07-F-20221020-01
Lab Sample ID: 240-175244-2

Date Collected: 10/20/22 15:04
Matrix: Water
Date Received: 10/24/22 12:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	290		5.0	2.6	mg/L			10/26/22 00:09	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	210		5.0	2.6	mg/L			10/26/22 00:09	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	82		5.0	2.6	mg/L			10/26/22 00:09	1
Chloride (MCAWW 300.0)	1300		20	5.7	mg/L			11/04/22 08:40	20
Fluoride (MCAWW 300.0)	2.9		0.10	0.048	mg/L			11/04/22 07:39	2
Sulfate (MCAWW 300.0)	19		2.0	0.70	mg/L			11/04/22 07:39	2
Total Dissolved Solids (SM 2540C)	2300		40	31	mg/L			10/27/22 09:52	1

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175244-1
Project/Site: Federal CCR Wells - Resample

Client Sample ID: 96152-F-20221021-01
Lab Sample ID: 240-175244-3

Date Collected: 10/21/22 11:53
Matrix: Water
Date Received: 10/24/22 12:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	**510**		5.0	2.6	mg/L			10/26/22 00:14	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	**510**		5.0	2.6	mg/L			10/26/22 00:14	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/26/22 00:14	1
Chloride (MCAWW 300.0)	**3300**		25	7.1	mg/L			11/04/22 09:20	25
Fluoride (MCAWW 300.0)	**0.72**		0.25	0.12	mg/L			11/04/22 09:00	5
Sulfate (MCAWW 300.0)	**42**		5.0	1.7	mg/L			11/04/22 09:00	5
Total Dissolved Solids (SM 2540C)	**5200**		50	39	mg/L			10/28/22 09:43	1

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548766/109
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 23:51	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 23:51	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 23:51	1

Lab Sample ID: MB 240-548766/83
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 22:01	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 22:01	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 22:01	1

Lab Sample ID: LCS 240-548766/108
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	140		mg/L		96	86 - 123

Lab Sample ID: MB 240-548974/4
Matrix: Water
Analysis Batch: 548974

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			10/26/22 10:49	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/26/22 10:49	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/26/22 10:49	1

Lab Sample ID: LCS 240-548974/3
Matrix: Water
Analysis Batch: 548974

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 240-550347/3
Matrix: Water
Analysis Batch: 550347

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			11/03/22 20:35	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/03/22 20:35	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/03/22 20:35	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-550347/4
Matrix: Water
Analysis Batch: 550347

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	51.0		mg/L		102	90 - 110
Fluoride	2.50	2.54		mg/L		102	90 - 110
Sulfate	50.0	52.1		mg/L		104	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-549041/1
Matrix: Water
Analysis Batch: 549041

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			10/27/22 09:52	1

Lab Sample ID: MB 240-549250/1
Matrix: Water
Analysis Batch: 549250

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 09:43	1

Lab Sample ID: LCS 240-549250/2
Matrix: Water
Analysis Batch: 549250

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	356		mg/L		92	80 - 120

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175244-1
Project/Site: Federal CCR Wells - Resample

General Chemistry

Analysis Batch: 548766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175244-2	2016-07-F-20221020-01	Total/NA	Water	2320B-1997	
240-175244-3	96152-F-20221021-01	Total/NA	Water	2320B-1997	
MB 240-548766/109	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548766/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548766/108	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 548974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175244-1	2016-10-F-20221020-01	Total/NA	Water	2320B-1997	
MB 240-548974/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548974/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 549041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175244-1	2016-10-F-20221020-01	Total/NA	Water	SM 2540C	
240-175244-2	2016-07-F-20221020-01	Total/NA	Water	SM 2540C	
MB 240-549041/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-549041/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 549250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175244-3	96152-F-20221021-01	Total/NA	Water	SM 2540C	
MB 240-549250/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-549250/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 550347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175244-1	2016-10-F-20221020-01	Total/NA	Water	300.0	
240-175244-1	2016-10-F-20221020-01	Total/NA	Water	300.0	
240-175244-2	2016-07-F-20221020-01	Total/NA	Water	300.0	
240-175244-2	2016-07-F-20221020-01	Total/NA	Water	300.0	
240-175244-3	96152-F-20221021-01	Total/NA	Water	300.0	
240-175244-3	96152-F-20221021-01	Total/NA	Water	300.0	
MB 240-550347/3	Method Blank	Total/NA	Water	300.0	
LCS 240-550347/4	Lab Control Sample	Total/NA	Water	300.0	

Lab Chronicle

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

Job ID: 240-175244-1

Client Sample ID: 2016-10-F-20221020-01

Lab Sample ID: 240-175244-1
Matrix: Water
Date Collected: 10/20/22 10:02
Date Received: 10/24/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320B-1997		1	548974	JMR	EET CAN	10/26/22 11:22
Total/NA	Analysis	300.0		5	550347	JMB	EET CAN	11/04/22 06:59
Total/NA	Analysis	300.0		50	550347	JMB	EET CAN	11/04/22 07:19
Total/NA	Analysis	SM 2540C		1	549041	MS	EET CAN	10/27/22 09:52

Client Sample ID: 2016-07-F-20221020-01

Lab Sample ID: 240-175244-2
Matrix: Water
Date Collected: 10/20/22 15:04
Date Received: 10/24/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320B-1997		1	548766	JMR	EET CAN	10/26/22 00:09
Total/NA	Analysis	300.0		2	550347	JMB	EET CAN	11/04/22 07:39
Total/NA	Analysis	300.0		20	550347	JMB	EET CAN	11/04/22 08:40
Total/NA	Analysis	SM 2540C		1	549041	MS	EET CAN	10/27/22 09:52

Client Sample ID: 96152-F-20221021-01

Lab Sample ID: 240-175244-3
Matrix: Water
Date Collected: 10/21/22 11:53
Date Received: 10/24/22 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320B-1997		1	548766	JMR	EET CAN	10/26/22 00:14
Total/NA	Analysis	300.0		5	550347	JMB	EET CAN	11/04/22 09:00
Total/NA	Analysis	300.0		25	550347	JMB	EET CAN	11/04/22 09:20
Total/NA	Analysis	SM 2540C		1	549250	MS	EET CAN	10/28/22 09:43

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
Job ID: 240-175244-1
Project/Site: Federal CCR Wells - Resample

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

Eurofins TestAmerica, Canton
4101 Shuffel Stree
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | environment Testing America

Client Information	Sampler: Bobby Custo	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
2016-10-F-20221020-01	10-20-22	1002	G	W	N			1		1		*Resample of CCR wells*
2016-07-F-20221020-01	10-20-22	1504	G	W	N			1		1		
96152-F-20221021-01	10-21-22	1153	G	W	N			1		1		

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

240-175244 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Bobby Custo	10-24-22/1630	Kemron		10/24/22 0630	Kemron
2		102422/1230	Kemron		10-24-22 1230	FA
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Page 16 of 18

11/7/2022

Login # : ______________

Eurofins - Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA (circled) Client Box Other	IR-13 IR-15 (circled)	0.8	0.8	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 IR-15 (circled)	1.2	1.2	Wet Ice Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 IR-15 (circled)	2.1	2.1	Wet Ice (circled) 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

175244

Eurofins - Canton Sample Receipt Form/Narrative Login # :
Barberton Facility

Client LSH, Stone GAUN Site Name ______ Cooler unpacked by: Mandy

Cooler Received on 10-24-22 Opened on 10-4-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time ______ Storage Location ______

Eurofins Cooler # ______ 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

Question	Response
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? If yes, Questions 13-17 have been checked at the originating laboratory.	Yes (No)
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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM ______ Date ______ by ______ via Verbal Voice Mail Other

Concerning ______

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page Samples processed by:

______

19. SAMPLE CONDITION

Sample(s) ______ were received after the recommended holding time had expired.
Sample(s) ______ were received in a broken container.
Sample(s) ______ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) ______ were further preserved in the laboratory.
Time preserved: ______ Preservative(s) added/Lot number(s): ______

VOA Sample Preservation - Date/Time VOAs Frozen: ______

WI-NC-099

eurofins | Environment Testing

ANALYTICAL REPORT

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

Laboratory Job ID: 240-175402-1
Client Project/Site: Federal CCR Wells - Resample

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
11/9/2022 11:59:44 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-175402-1

Qualifiers

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.
¤	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 - Resample

Job ID: 240-175402-1

Job ID: 240-175402-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-175402-1

Receipt
The samples were received on 10/27/2022 9:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.8°C, 1.0°C, 1.2°C and 1.4°C

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 - Resample

Job ID: 240-175402-1

Method	Method Description	Protocol	Laboratory
2320B-1997	Alkalinity, Total	SM	EET CAN
300.0	Anions, Ion Chromatography	MCAWW	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	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"

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 - Resample

Job ID: 240-175402-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-175402-1	MW-20-F-20221025-01	Water	10/25/22 11:41	10/27/22 09:06
240-175402-2	96153R-F-20221025-01	Water	10/25/22 12:15	10/27/22 09:06

Detection Summary

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

Job ID: 240-175402-1

Client Sample ID: MW-20-F-20221025-01 — Lab Sample ID: 240-175402-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
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	1.8		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	1.4		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	1600		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	2100		20	16	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96153R-F-20221025-01 — Lab Sample ID: 240-175402-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	13		1.0	0.28	mg/L	1		300.0	Total/NA
Fluoride	0.87		0.050	0.024	mg/L	1		300.0	Total/NA
Sulfate	900		10	3.5	mg/L	10		300.0	Total/NA
Total Dissolved Solids	1300		20	16	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175402-1
Project/Site: Federal CCR Wells - Resample

Client Sample ID: MW-20-F-20221025-01
Lab Sample ID: 240-175402-1

Date Collected: 10/25/22 11:41
Matrix: Water
Date Received: 10/27/22 09:06

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			11/07/22 18:14	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	**170**		5.0	2.6	mg/L			11/07/22 18:14	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			11/07/22 18:14	1
Chloride (MCAWW 300.0)	**1.8**		1.0	0.28	mg/L			11/06/22 02:36	1
Fluoride (MCAWW 300.0)	**1.4**		0.050	0.024	mg/L			11/06/22 02:36	1
Sulfate (MCAWW 300.0)	**1600**		10	3.5	mg/L			11/06/22 02:58	10
Total Dissolved Solids (SM 2540C)	**2100**		20	16	mg/L			11/01/22 10:23	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175402-1
Project/Site: Federal CCR Wells - Resample

Client Sample ID: 96153R-F-20221025-01
Lab Sample ID: 240-175402-2
Date Collected: 10/25/22 12:15
Matrix: Water
Date Received: 10/27/22 09:06

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	**250**		5.0	2.6	mg/L			11/07/22 18:19	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	**250**		5.0	2.6	mg/L			11/07/22 18:19	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			11/07/22 18:19	1
Chloride (MCAWW 300.0)	**13**		1.0	0.28	mg/L			11/06/22 03:19	1
Fluoride (MCAWW 300.0)	**0.87**		0.050	0.024	mg/L			11/06/22 03:19	1
Sulfate (MCAWW 300.0)	**900**		10	3.5	mg/L			11/06/22 05:08	10
Total Dissolved Solids (SM 2540C)	**1300**		20	16	mg/L			11/01/22 10:23	1

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-551033/30
Matrix: Water
Analysis Batch: 551033

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			11/07/22 17:29	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			11/07/22 17:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			11/07/22 17:29	1

Lab Sample ID: MB 240-551033/4
Matrix: Water
Analysis Batch: 551033

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			11/07/22 15:40	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			11/07/22 15:40	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			11/07/22 15:40	1

Lab Sample ID: LCS 240-551033/29
Matrix: Water
Analysis Batch: 551033

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	143		mg/L		98	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-550562/3
Matrix: Water
Analysis Batch: 550562

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			11/05/22 16:23	1
Fluoride	0.050	U	0.050	0.024	mg/L			11/05/22 16:23	1
Sulfate	1.0	U	1.0	0.35	mg/L			11/05/22 16:23	1

Lab Sample ID: LCS 240-550562/4
Matrix: Water
Analysis Batch: 550562

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	2.69		mg/L		108	90 - 110
Sulfate	50.0	53.5		mg/L		107	90 - 110

Lab Sample ID: 240-175402-2 MS
Matrix: Water
Analysis Batch: 550562

Client Sample ID: 96153R-F-20221025-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	13		50.0	62.9		mg/L		100	80 - 120
Fluoride	0.87		2.50	3.45		mg/L		103	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-175402-2 MSD
Matrix: Water
Analysis Batch: 550562

Client Sample ID: 96153R-F-20221025-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	13		50.0	63.9		mg/L		102	80 - 120	2	15
Fluoride	0.87		2.50	3.49		mg/L		105	80 - 120	1	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-549778/1
Matrix: Water
Analysis Batch: 549778

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 10:23	1

Lab Sample ID: LCS 240-549778/2
Matrix: Water
Analysis Batch: 549778

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	369		mg/L		95	80 - 120

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175402-1
Project/Site: Federal CCR Wells - Resample

General Chemistry

Analysis Batch: 549778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175402-1	MW-20-F-20221025-01	Total/NA	Water	SM 2540C	
240-175402-2	96153R-F-20221025-01	Total/NA	Water	SM 2540C	
MB 240-549778/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-549778/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 550562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175402-1	MW-20-F-20221025-01	Total/NA	Water	300.0	
240-175402-1	MW-20-F-20221025-01	Total/NA	Water	300.0	
240-175402-2	96153R-F-20221025-01	Total/NA	Water	300.0	
240-175402-2	96153R-F-20221025-01	Total/NA	Water	300.0	
MB 240-550562/3	Method Blank	Total/NA	Water	300.0	
LCS 240-550562/4	Lab Control Sample	Total/NA	Water	300.0	
240-175402-2 MS	96153R-F-20221025-01	Total/NA	Water	300.0	
240-175402-2 MSD	96153R-F-20221025-01	Total/NA	Water	300.0	

Analysis Batch: 551033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175402-1	MW-20-F-20221025-01	Total/NA	Water	2320B-1997	
240-175402-2	96153R-F-20221025-01	Total/NA	Water	2320B-1997	
MB 240-551033/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-551033/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-551033/29	Lab Control Sample	Total/NA	Water	2320B-1997	

Lab Chronicle

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

Job ID: 240-175402-1

Client Sample ID: MW-20-F-20221025-01

Lab Sample ID: 240-175402-1

Date Collected: 10/25/22 11:41
Matrix: Water
Date Received: 10/27/22 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320B-1997		1	551033	JWW	EET CAN	11/07/22 18:14
Total/NA	Analysis	300.0		1	550562	JMB	EET CAN	11/06/22 02:36
Total/NA	Analysis	300.0		10	550562	JMB	EET CAN	11/06/22 02:58
Total/NA	Analysis	SM 2540C		1	549778	MS	EET CAN	11/01/22 10:23

Client Sample ID: 96153R-F-20221025-01

Lab Sample ID: 240-175402-2

Date Collected: 10/25/22 12:15
Matrix: Water
Date Received: 10/27/22 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	2320B-1997		1	551033	JWW	EET CAN	11/07/22 18:19
Total/NA	Analysis	300.0		1	550562	JMB	EET CAN	11/06/22 03:19
Total/NA	Analysis	300.0		10	550562	JMB	EET CAN	11/06/22 05:08
Total/NA	Analysis	SM 2540C		1	549778	MS	EET CAN	11/01/22 10:23

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
Job ID: 240-175402-1
Project/Site: Federal CCR Wells - Resample

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

Eurofins TestAmerica, Canton
4101 Shuffel Street
North Canton, OH 44720
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Gesto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93018-34502
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal - CCR Wells	Project #: 24019633			
Site: Ohio	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 7470, 6020(See Metals List)	2540C_Calcd, 300.0_28D(Chloride, Fluoride, Sulfate)	9315_Ra226, 9320_Ra228	2320B(Carbonate Alkalinity/Bi-Carbonate Alkalinity)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	D	N		
MW-20-F-20221025-01	10-25-22	1141	G	W	N			1		1		
96153R-F-20221025-01	10-25-22	1215	G	W	N			1		1		*Gavin CCR Resample*

240-175402 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10-27-22 / 0645	KEMRON		10 27 22 0645	Kemron
2		10 27 22 / 0906	Kemron		10-27-22 0906	GETNC
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative Login # :_____
Barberton Facility

Client Lightstone Site Name_____ Cooler unpacked by: Brandon

Cooler Received on 10-27-22 Opened on 10-27-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 1 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)
    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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____
_____
_____
_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login # : ____________

Eurofins - Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA (circled) Client Box Other	IR-13 IR-15 (circled)	1.2	1.2	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 IR-15 (circled)	0.8	0.8	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 IR-15 (circled)	1.4	1.4	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 IR-15 (circled)	1.0	1.0	Wet Ice (circled) 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
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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

☐ See Temperature Excursion Form

WI-NC-099:Cooler Receipt Form Page 2 – Multiple Coolers

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-166117-1
Client Project/Site: Gavin CCR App III

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
5/17/2022 2:14:51 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App III

Job ID: 240-166117-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	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 III

Job ID: 240-166117-1

Job ID: 240-166117-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-166117-1

Comments
No additional comments.

Receipt
The samples were received on 5/6/2022 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1° C.

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

General Chemistry
Method 300.0: The following sample was diluted due to the nature of the sample matrix: 2019-07-F-20220504-01 (240-166117-2). 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: Gavin CCR App III

Job ID: 240-166117-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL 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:

TAL 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: Gavin CCR App III

Job ID: 240-166117-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166117-1	2019-02-F-20220504-01	Water	05/04/22 09:25	05/06/22 08:00
240-166117-2	2019-07-F-20220504-01	Water	05/04/22 12:49	05/06/22 08:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166117-1
Project/Site: Gavin CCR App III

Client Sample ID: 2019-02-F-20220504-01
Lab Sample ID: 240-166117-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	230000		1000	580	ug/L	1		6020	Total Recoverable
Potassium	12000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	420000	B	1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	1500		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	64		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	150		5.0	1.4	mg/L	5		300.0	Total/NA
Fluoride	0.62		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	2.3		1.0	0.35	mg/L	1		300.0	Total/NA
Total Dissolved Solids	1600		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2019-07-F-20220504-01
Lab Sample ID: 240-166117-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	470		100	57	ug/L	1		6010B	Total Recoverable
Calcium	730000		1000	580	ug/L	1		6020	Total Recoverable
Magnesium	220000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	19000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	9900000		50000	16000	ug/L	50		6020	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	17000		100	28	mg/L	100		300.0	Total/NA
Sulfate	530		100	35	mg/L	100		300.0	Total/NA
Total Dissolved Solids	27000		1000	780	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166117-1
Project/Site: Gavin CCR App III

Client Sample ID: 2019-02-F-20220504-01
Lab Sample ID: 240-166117-1

Date Collected: 05/04/22 09:25
Matrix: Water
Date Received: 05/06/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		05/10/22 12:00	05/12/22 21:46	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**230000**		1000	580	ug/L		05/10/22 12:00	05/11/22 14:54	1
Magnesium	1000	U	1000	200	ug/L		05/10/22 12:00	05/11/22 14:54	1
Potassium	**12000**		1000	220	ug/L		05/10/22 12:00	05/11/22 14:54	1
Sodium	**420000**	**B**	1000	330	ug/L		05/10/22 12:00	05/11/22 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1500**		5.0	2.6	mg/L			05/10/22 15:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/10/22 15:16	1
Carbonate Alkalinity as CaCO3	**64**		5.0	2.6	mg/L			05/10/22 15:16	1
Chloride	**150**		5.0	1.4	mg/L			05/11/22 19:42	5
Fluoride	**0.62**		0.25	0.12	mg/L			05/11/22 19:42	5
Sulfate	**2.3**		1.0	0.35	mg/L			05/13/22 20:01	1
Total Dissolved Solids	**1600**		50	39	mg/L			05/09/22 10:23	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166117-1
Project/Site: Gavin CCR App III

Client Sample ID: 2019-07-F-20220504-01
Lab Sample ID: 240-166117-2

Date Collected: 05/04/22 12:49
Matrix: Water
Date Received: 05/06/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	470		100	57	ug/L		05/09/22 12:00	05/10/22 22:28	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	730000		1000	580	ug/L		05/09/22 12:00	05/10/22 17:09	1
Magnesium	220000		1000	200	ug/L		05/09/22 12:00	05/10/22 17:09	1
Potassium	19000		1000	220	ug/L		05/09/22 12:00	05/10/22 17:09	1
Sodium	9900000		50000	16000	ug/L		05/09/22 12:00	05/13/22 15:09	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	200		5.0	2.6	mg/L			05/10/22 15:21	1
Bicarbonate Alkalinity as CaCO3	200		5.0	2.6	mg/L			05/10/22 15:21	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/10/22 15:21	1
Chloride	17000		100	28	mg/L			05/11/22 20:25	100
Fluoride	5.0	U	5.0	2.4	mg/L			05/11/22 20:25	100
Sulfate	530		100	35	mg/L			05/11/22 20:25	100
Total Dissolved Solids	27000		1000	780	mg/L			05/09/22 10:23	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-525665/1-A
Matrix: Water
Analysis Batch: 525842

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		05/09/22 12:00	05/10/22 21:21	1

Lab Sample ID: LCS 240-525665/2-A
Matrix: Water
Analysis Batch: 525842

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 525665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	949		ug/L		95	80 - 120

Lab Sample ID: MB 240-525816/1-A
Matrix: Water
Analysis Batch: 526304

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		05/10/22 12:00	05/12/22 21:03	1

Lab Sample ID: LCS 240-525816/2-A
Matrix: Water
Analysis Batch: 526304

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	977		ug/L		98	80 - 120

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-525665/1-A
Matrix: Water
Analysis Batch: 525938

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		05/09/22 12:00	05/10/22 16:31	1
Magnesium	1000	U	1000	200	ug/L		05/09/22 12:00	05/10/22 16:31	1
Potassium	1000	U	1000	220	ug/L		05/09/22 12:00	05/10/22 16:31	1
Sodium	1000	U	1000	330	ug/L		05/09/22 12:00	05/10/22 16:31	1

Lab Sample ID: LCS 240-525665/3-A
Matrix: Water
Analysis Batch: 525938

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 525665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	25100		ug/L		100	80 - 120
Magnesium	25000	24900		ug/L		100	80 - 120
Potassium	25000	24900		ug/L		100	80 - 120
Sodium	25000	24600		ug/L		99	80 - 120

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

Lab Sample ID: MB 240-525816/1-A
Matrix: Water
Analysis Batch: 526117

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		05/10/22 12:00	05/11/22 14:27	1
Magnesium	1000	U	1000	200	ug/L		05/10/22 12:00	05/11/22 14:27	1
Potassium	1000	U	1000	220	ug/L		05/10/22 12:00	05/11/22 14:27	1
Sodium	341	J	1000	330	ug/L		05/10/22 12:00	05/11/22 14:27	1

Lab Sample ID: LCS 240-525816/3-A
Matrix: Water
Analysis Batch: 526117

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24600		ug/L		98	80 - 120
Magnesium	25000	25600		ug/L		102	80 - 120
Potassium	25000	24800		ug/L		99	80 - 120
Sodium	25000	25900		ug/L		104	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-525918/4
Matrix: Water
Analysis Batch: 525918

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			05/10/22 14:03	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/10/22 14:03	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/10/22 14:03	1

Lab Sample ID: LCS 240-525918/3
Matrix: Water
Analysis Batch: 525918

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-526068/3
Matrix: Water
Analysis Batch: 526068

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			05/11/22 18:58	1
Fluoride	0.050	U	0.050	0.024	mg/L			05/11/22 18:58	1
Sulfate	1.0	U	1.0	0.35	mg/L			05/11/22 18:58	1

Lab Sample ID: MB 240-526068/42
Matrix: Water
Analysis Batch: 526068

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			05/12/22 11:47	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-526068/42
Matrix: Water
Analysis Batch: 526068

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			05/12/22 11:47	1
Sulfate	1.0	U	1.0	0.35	mg/L			05/12/22 11:47	1

Lab Sample ID: LCS 240-526068/4
Matrix: Water
Analysis Batch: 526068

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	49.9		mg/L		100	90 - 110
Fluoride	2.50	2.60		mg/L		104	90 - 110
Sulfate	50.0	51.2		mg/L		102	90 - 110

Lab Sample ID: LCS 240-526068/43
Matrix: Water
Analysis Batch: 526068

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.0		mg/L		100	90 - 110
Fluoride	2.50	2.61		mg/L		104	90 - 110
Sulfate	50.0	51.2		mg/L		102	90 - 110

Lab Sample ID: MB 240-526366/3
Matrix: Water
Analysis Batch: 526366

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			05/13/22 11:37	1
Fluoride	0.050	U	0.050	0.024	mg/L			05/13/22 11:37	1
Sulfate	1.0	U	1.0	0.35	mg/L			05/13/22 11:37	1

Lab Sample ID: LCS 240-526366/4
Matrix: Water
Analysis Batch: 526366

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.4		mg/L		97	90 - 110
Fluoride	2.50	2.42		mg/L		97	90 - 110
Sulfate	50.0	50.1		mg/L		100	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-525633/1
Matrix: Water
Analysis Batch: 525633

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			05/09/22 10:23	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-525633/2
Matrix: Water
Analysis Batch: 525633

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	482	466		mg/L		97	80 - 120

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166117-1
Project/Site: Gavin CCR App III

Metals

Prep Batch: 525665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-2	2019-07-F-20220504-01	Total Recoverable	Water	3005A	
MB 240-525665/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-525665/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-525665/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 525816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-1	2019-02-F-20220504-01	Total Recoverable	Water	3005A	
MB 240-525816/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-525816/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-525816/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 525842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-2	2019-07-F-20220504-01	Total Recoverable	Water	6010B	525665
MB 240-525665/1-A	Method Blank	Total Recoverable	Water	6010B	525665
LCS 240-525665/2-A	Lab Control Sample	Total Recoverable	Water	6010B	525665

Analysis Batch: 525938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-2	2019-07-F-20220504-01	Total Recoverable	Water	6020	525665
MB 240-525665/1-A	Method Blank	Total Recoverable	Water	6020	525665
LCS 240-525665/3-A	Lab Control Sample	Total Recoverable	Water	6020	525665

Analysis Batch: 526117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-1	2019-02-F-20220504-01	Total Recoverable	Water	6020	525816
MB 240-525816/1-A	Method Blank	Total Recoverable	Water	6020	525816
LCS 240-525816/3-A	Lab Control Sample	Total Recoverable	Water	6020	525816

Analysis Batch: 526304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-1	2019-02-F-20220504-01	Total Recoverable	Water	6010B	525816
MB 240-525816/1-A	Method Blank	Total Recoverable	Water	6010B	525816
LCS 240-525816/2-A	Lab Control Sample	Total Recoverable	Water	6010B	525816

Analysis Batch: 526512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-2	2019-07-F-20220504-01	Total Recoverable	Water	6020	525665

General Chemistry

Analysis Batch: 525633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-1	2019-02-F-20220504-01	Total/NA	Water	SM 2540C	
240-166117-2	2019-07-F-20220504-01	Total/NA	Water	SM 2540C	
MB 240-525633/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-525633/2	Lab Control Sample	Total/NA	Water	SM 2540C	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166117-1
Project/Site: Gavin CCR App III

General Chemistry

Analysis Batch: 525918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-1	2019-02-F-20220504-01	Total/NA	Water	2320B-1997	
240-166117-2	2019-07-F-20220504-01	Total/NA	Water	2320B-1997	
MB 240-525918/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-525918/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 526068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-1	2019-02-F-20220504-01	Total/NA	Water	300.0	
240-166117-2	2019-07-F-20220504-01	Total/NA	Water	300.0	
MB 240-526068/3	Method Blank	Total/NA	Water	300.0	
MB 240-526068/42	Method Blank	Total/NA	Water	300.0	
LCS 240-526068/4	Lab Control Sample	Total/NA	Water	300.0	
LCS 240-526068/43	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 526366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166117-1	2019-02-F-20220504-01	Total/NA	Water	300.0	
MB 240-526366/3	Method Blank	Total/NA	Water	300.0	
LCS 240-526366/4	Lab Control Sample	Total/NA	Water	300.0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App III

Job ID: 240-166117-1

Client Sample ID: 2019-02-F-20220504-01

Lab Sample ID: 240-166117-1

Date Collected: 05/04/22 09:25

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525816	05/10/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	526304	05/12/22 21:46	RKT	TAL CAN
Total Recoverable	Prep	3005A			525816	05/10/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526117	05/11/22 14:54	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	525918	05/10/22 15:16	BLW	TAL CAN
Total/NA	Analysis	300.0		5	526068	05/11/22 19:42	JMB	TAL CAN
Total/NA	Analysis	300.0		1	526366	05/13/22 20:01	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	525633	05/09/22 10:23	MED	TAL CAN

Client Sample ID: 2019-07-F-20220504-01

Lab Sample ID: 240-166117-2

Date Collected: 05/04/22 12:49

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525665	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	525842	05/10/22 22:28	RKT	TAL CAN
Total Recoverable	Prep	3005A			525665	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525938	05/10/22 17:09	AJC	TAL CAN
Total Recoverable	Prep	3005A			525665	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		50	526512	05/13/22 15:09	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	525918	05/10/22 15:21	BLW	TAL CAN
Total/NA	Analysis	300.0		100	526068	05/11/22 20:25	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	525633	05/09/22 10:23	MED	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166117-1
Project/Site: Gavin CCR App III

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	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	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	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

2-1/2-1

Chain of Custody Record

Columbus 209 129

eurofins | Environment Testing America

Client Information	Sampler: Shain	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-94764-34852.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 4
Company: Lightstone Generation Gavin Power LLC	PWSID:	Analysis Requested		Job #:
Address: 7397 OH-7	Due Date Requested:			Preservation Codes:
City: Cheshire	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, 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)
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			Other:
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			AP - 111
Site:	SSOW#:			Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020	2540C_Calcd, 300.0_28D	2320B - Alkalinity	Total Number of containers
			Preservation Code:				D	N	N	
2019-02-F-20220504-01	5-4-22	0925	G	Water			1	1	1	3
2019-07-F-20220504-01	5-4-22	1249	G	Water			1	1	1	3
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						

240-166117 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Shain	5/5/22 0830	Gavin		5-5-22 1095	ETA
	5-5-22 1700	ETA		5-6-22 800	ETNC

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 166117**
Canton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Tammy Boyer

Cooler Received on 5-6-22 Opened on 5-6-22

FedEx: 1st Grd Exp UPS FAS (Clipper) Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 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 **0.0** °C) Observed Cooler Temp. 2.1 °C Corrected Cooler Temp. 2.1 °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	(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# **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)

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 (circled) Client Box Other	IR-13 (circled) IR-15	2.6	2.6	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 (circled) IR-15	2.4	2.4	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 (circled) IR-15	2.1	2.1	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 (circled) IR-15	1.8	1.8	Wet Ice (circled) 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

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2019-02-F-20220504-01	240-166117-A-1	Plastic 250ml - unpreserved				
2019-02-F-20220504-01	240-166117-B-1	Plastic 500ml - unpreserved				
2019-02-F-20220504-01	240-166117-C-1	Plastic 500ml - with Nitric Acid	<2			
2019-07-F-20220504-01	240-166117-A-2	Plastic 250ml - unpreserved				
2019-07-F-20220504-01	240-166117-B-2	Plastic 500ml - unpreserved				
2019-07-F-20220504-01	240-166117-C-2	Plastic 500ml - with Nitric Acid				

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-166194-1
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:
6/10/2022 9:40:01 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166194-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-166194-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-166194-1

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 5/6/2022 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1º C.

RAD
Methods 9315: Radium-226 batch 564741: 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-20F-20220503-01 (240-166194-1), 2016-08-F-20220503-01 (240-166194-2), 2016-08-F-20220503-MS1/MSD1 (240-166194-3), 2016-08-F-20220503-MS2/MSD2 (240-166194-4), 2016-08-F-20220503-MS3/MSD3 (240-166194-5), 2019-02-F-20220504-01 (240-166194-6), 2019-06-F-20220504-01 (240-166194-7), 2019-07-F-20220504-01 (240-166194-8), (LCS 160-564741/1-A), (LCSD 160-564741/2-A) and (MB 160-564741/18-A)

Methods 9320: Radium 228 Batch 160-564747: 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-20F-20220503-01 (240-166194-1), 2016-08-F-20220503-01 (240-166194-2), 2016-08-F-20220503-MS1/MSD1 (240-166194-3), 2016-08-F-20220503-MS2/MSD2 (240-166194-4), 2016-08-F-20220503-MS3/MSD3 (240-166194-5), 2019-02-F-20220504-01 (240-166194-6), 2019-06-F-20220504-01 (240-166194-7), 2019-07-F-20220504-01 (240-166194-8), (LCS 160-564747/1-A), (LCSD 160-564747/2-A) and (MB 160-564747/18-A)

Method PrecSep_0: Radium-228 Prep Batch 160-564747: The following samples were prepared at a reduced aliquot due to Matrix: 2016-08-F-20220503-MS1/MSD1 (240-166194-3), 2016-08-F-20220503-MS2/MSD2 (240-166194-4), 2016-08-F-20220503-MS3/MSD3 (240-166194-5), 2019-06-F-20220504-01 (240-166194-7) and 2019-07-F-20220504-01 (240-166194-8). 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 160-564741: The following samples were prepared at a reduced aliquot due to Matrix: 2016-08-F-20220503-MS1/MSD1 (240-166194-3), 2016-08-F-20220503-MS2/MSD2 (240-166194-4), 2016-08-F-20220503-MS3/MSD3 (240-166194-5), 2019-06-F-20220504-01 (240-166194-7) and 2019-07-F-20220504-01 (240-166194-8). 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
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: Gavin CCR App IV

Job ID: 240-166194-1

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: 240-166194-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166194-1	MW-20F-20220503-01	Water	05/03/22 09:30	05/06/22 08:00
240-166194-2	2016-08-F-20220503-01	Water	05/03/22 13:30	05/06/22 08:00
240-166194-3	2016-08-F-20220503-MS1/MSD1	Water	05/03/22 13:42	05/06/22 08:00
240-166194-4	2016-08-F-20220503-MS2/MSD2	Water	05/03/22 13:52	05/06/22 08:00
240-166194-5	2016-08-F-20220503-MS3/MSD3	Water	05/03/22 14:03	05/06/22 08:00
240-166194-6	2019-02-F-20220504-01	Water	05/04/22 09:25	05/06/22 08:00
240-166194-7	2019-06-F-20220504-01	Water	05/04/22 10:04	05/06/22 08:00
240-166194-8	2019-07-F-20220504-01	Water	05/04/22 12:49	05/06/22 08:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166194-1

Client Sample ID: MW-20F-20220503-01 — Lab Sample ID: 240-166194-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	18		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	200		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	210	B	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	100000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	5700		1000	220	ug/L	1		6020	Total Recoverable
Selenium	1.7	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	22000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	1.6		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: 2016-08-F-20220503-01 — Lab Sample ID: 240-166194-2

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	1400		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.20	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	0.71	J B	1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	370	B	8.0	1.7	ug/L	1		6020	Total Recoverable
Molybdenum	23		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	24000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	420000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	1700		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	65		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.63		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: 2016-08-F-20220503-MS1/MSD1 — Lab Sample ID: 240-166194-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	1600		5.0	2.2	ug/L	1		6020	Total Recoverable
Lead	0.95	J B	1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	410	B	8.0	1.7	ug/L	1		6020	Total Recoverable
Molybdenum	10		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	26000		1000	220	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 2016-08-F-20220503-MS1/MSD1 (Continued) — Lab Sample ID: 240-166194-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	270000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	1800		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	130		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.53		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: 2016-08-F-20220503-MS2/MSD2 — Lab Sample ID: 240-166194-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	1600		5.0	2.2	ug/L	1		6020	Total Recoverable
Lead	0.93	J B	1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	400	B	8.0	1.7	ug/L	1		6020	Total Recoverable
Molybdenum	8.7		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	26000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	240000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	1900		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	52		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.51		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: 2016-08-F-20220503-MS3/MSD3 — Lab Sample ID: 240-166194-5

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	1700		5.0	2.2	ug/L	1		6020	Total Recoverable
Lead	1.0	B	1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	420	B	8.0	1.7	ug/L	1		6020	Total Recoverable
Molybdenum	8.4		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	27000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	250000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	1900		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	62		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.50		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: 2019-02-F-20220504-01 — Lab Sample ID: 240-166194-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.6		5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	710		5.0	2.2	ug/L	1		6020	Total Recoverable
Lead	0.46	J B	1.0	0.45	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2019-02-F-20220504-01 (Continued) — Lab Sample ID: 240-166194-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	290	B	8.0	1.7	ug/L	1		6020	Total Recoverable
Molybdenum	17		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	13000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	480000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	1500		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	65		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.59		0.10	0.048	mg/L	2		300.0-1993 R2.1	Total/NA

Client Sample ID: 2019-06-F-20220504-01 — Lab Sample ID: 240-166194-7

No Detections.

Client Sample ID: 2019-07-F-20220504-01 — Lab Sample ID: 240-166194-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.0	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	370		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	6.7		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	240	B	8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	210000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	8.6		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	18000		1000	220	ug/L	1		6020	Total Recoverable
Selenium	1.2	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	10000000		10000	3300	ug/L	10		6020	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

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-20F-20220503-01

Date Collected: 05/03/22 09:30
Date Received: 05/06/22 08:00

Lab Sample ID: 240-166194-1

Matrix: Water

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		05/09/22 12:00	05/10/22 14:13	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/09/22 12:00	05/10/22 14:13	1
Barium	**18**		5.0	2.2	ug/L		05/09/22 12:00	05/10/22 14:13	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/09/22 12:00	05/10/22 14:13	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:13	1
Chromium	5.0	U	5.0	2.5	ug/L		05/09/22 12:00	05/10/22 14:13	1
Cobalt	**200**		1.0	0.19	ug/L		05/09/22 12:00	05/10/22 14:13	1
Lead	1.0	U	1.0	0.45	ug/L		05/09/22 12:00	05/10/22 14:13	1
Lithium	**210**	**B**	8.0	1.7	ug/L		05/09/22 12:00	05/10/22 14:13	1
Magnesium	**100000**		1000	200	ug/L		05/09/22 12:00	05/10/22 14:13	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/09/22 12:00	05/10/22 14:13	1
Potassium	**5700**		1000	220	ug/L		05/09/22 12:00	05/10/22 14:13	1
Selenium	**1.7**	**J**	5.0	0.89	ug/L		05/09/22 12:00	05/10/22 14:13	1
Sodium	**22000**		1000	330	ug/L		05/09/22 12:00	05/10/22 14:13	1
Thallium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:13	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		05/09/22 12:00	05/10/22 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**160**		5.0	2.6	mg/L			05/17/22 11:44	1
Bicarbonate Alkalinity as CaCO3	**160**		5.0	2.6	mg/L			05/17/22 11:44	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 11:44	1
Fluoride	**1.6**		0.050	0.024	mg/L			05/27/22 18:02	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	0.0886	U	0.184	0.184	1.00	0.331	pCi/L	05/10/22 08:50	06/08/22 20:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.8*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:33*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.142	U	0.337	0.337	1.00	0.590	pCi/L	05/10/22 09:49	06/08/22 12:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.8*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:55*	*1*
Y Carrier	*80.4*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:55*	*1*

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166194-1

Client Sample ID: MW-20F-20220503-01
Date Collected: 05/03/22 09:30
Date Received: 05/06/22 08:00

Lab Sample ID: 240-166194-1
Matrix: Water

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	0.230	U	0.384	0.384	5.00	0.590	pCi/L		06/09/22 19:50	1

Client Sample ID: 2016-08-F-20220503-01

Date Collected: 05/03/22 13:30
Date Received: 05/06/22 08:00

Lab Sample ID: 240-166194-2

Matrix: Water

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		05/09/22 12:00	05/10/22 14:15	1
Arsenic	**2.7**	**J**	5.0	0.75	ug/L		05/09/22 12:00	05/10/22 14:15	1
Barium	**1400**		5.0	2.2	ug/L		05/09/22 12:00	05/10/22 14:15	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/09/22 12:00	05/10/22 14:15	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:15	1
Chromium	5.0	U	5.0	2.5	ug/L		05/09/22 12:00	05/10/22 14:15	1
Cobalt	**0.20**	**J**	1.0	0.19	ug/L		05/09/22 12:00	05/10/22 14:15	1
Lead	**0.71**	**J B**	1.0	0.45	ug/L		05/09/22 12:00	05/10/22 14:15	1
Lithium	**370**	**B**	8.0	1.7	ug/L		05/09/22 12:00	05/10/22 14:15	1
Magnesium	1000	U	1000	200	ug/L		05/09/22 12:00	05/10/22 14:15	1
Molybdenum	**23**		5.0	1.1	ug/L		05/09/22 12:00	05/10/22 14:15	1
Potassium	**24000**		1000	220	ug/L		05/09/22 12:00	05/10/22 14:15	1
Selenium	5.0	U	5.0	0.89	ug/L		05/09/22 12:00	05/10/22 14:15	1
Sodium	**420000**		1000	330	ug/L		05/09/22 12:00	05/10/22 14:15	1
Thallium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:15	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		05/09/22 12:00	05/10/22 13:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1700**		5.0	2.6	mg/L			05/17/22 11:53	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 11:53	1
Carbonate Alkalinity as CaCO3	**65**		5.0	2.6	mg/L			05/17/22 11:53	1
Fluoride	**0.63**		0.25	0.12	mg/L			05/27/22 18:24	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.69**		0.488	0.545	1.00	0.251	pCi/L	05/10/22 08:50	06/08/22 20:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:34*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.200	U	0.274	0.275	1.00	0.460	pCi/L	05/10/22 09:49	06/08/22 12:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:55*	*1*
Y Carrier	*81.9*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:55*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166194-1

Client Sample ID: 2016-08-F-20220503-01

Date Collected: 05/03/22 13:30
Date Received: 05/06/22 08:00

Lab Sample ID: 240-166194-2

Matrix: Water

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	2.89		0.560	0.610	5.00	0.460	pCi/L		06/09/22 19:50	1

Client Sample ID: 2016-08-F-20220503-MS1/MSD1
Lab Sample ID: 240-166194-3

Date Collected: 05/03/22 13:42
Matrix: Water
Date Received: 05/06/22 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		05/09/22 12:00	05/10/22 14:22	1
Arsenic	**2.1**	**J**	5.0	0.75	ug/L		05/09/22 12:00	05/10/22 14:22	1
Barium	**1600**		5.0	2.2	ug/L		05/09/22 12:00	05/10/22 14:22	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/09/22 12:00	05/10/22 14:22	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:22	1
Chromium	5.0	U	5.0	2.5	ug/L		05/09/22 12:00	05/10/22 14:22	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/09/22 12:00	05/10/22 14:22	1
Lead	**0.95**	**J B**	1.0	0.45	ug/L		05/09/22 12:00	05/10/22 14:22	1
Lithium	**410**	**B**	8.0	1.7	ug/L		05/09/22 12:00	05/10/22 14:22	1
Magnesium	1000	U	1000	200	ug/L		05/09/22 12:00	05/10/22 14:22	1
Molybdenum	**10**		5.0	1.1	ug/L		05/09/22 12:00	05/10/22 14:22	1
Potassium	**26000**		1000	220	ug/L		05/09/22 12:00	05/10/22 14:22	1
Selenium	5.0	U	5.0	0.89	ug/L		05/09/22 12:00	05/10/22 14:22	1
Sodium	**270000**		1000	330	ug/L		05/09/22 12:00	05/10/22 14:22	1
Thallium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:22	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		05/09/22 12:00	05/10/22 13:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1800**		5.0	2.6	mg/L			05/17/22 12:03	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 12:03	1
Carbonate Alkalinity as CaCO3	**130**		5.0	2.6	mg/L			05/17/22 12:03	1
Fluoride	**0.53**		0.25	0.12	mg/L			05/27/22 18:46	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**7.66**		0.971	1.19	1.00	0.463	pCi/L	05/10/22 08:50	06/08/22 20:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.5*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:34*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.667	U	0.475	0.479	1.00	0.719	pCi/L	05/10/22 09:49	06/08/22 12:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.5*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:55*	*1*
Y Carrier	*81.1*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:55*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166194-1
Project/Site: Gavin CCR App IV

Client Sample ID: 2016-08-F-20220503-MS1/MSD1
Lab Sample ID: 240-166194-3
Date Collected: 05/03/22 13:42
Matrix: Water
Date Received: 05/06/22 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	8.33		1.08	1.28	5.00	0.719	pCi/L		06/09/22 19:50	1

Client Sample ID: 2016-08-F-20220503-MS2/MSD2
Lab Sample ID: 240-166194-4

Date Collected: 05/03/22 13:52
Matrix: Water
Date Received: 05/06/22 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		05/09/22 12:00	05/10/22 14:25	1
Arsenic	**1.8**	**J**	5.0	0.75	ug/L		05/09/22 12:00	05/10/22 14:25	1
Barium	**1600**		5.0	2.2	ug/L		05/09/22 12:00	05/10/22 14:25	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/09/22 12:00	05/10/22 14:25	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:25	1
Chromium	5.0	U	5.0	2.5	ug/L		05/09/22 12:00	05/10/22 14:25	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/09/22 12:00	05/10/22 14:25	1
Lead	**0.93**	**J B**	1.0	0.45	ug/L		05/09/22 12:00	05/10/22 14:25	1
Lithium	**400**	**B**	8.0	1.7	ug/L		05/09/22 12:00	05/10/22 14:25	1
Magnesium	1000	U	1000	200	ug/L		05/09/22 12:00	05/10/22 14:25	1
Molybdenum	**8.7**		5.0	1.1	ug/L		05/09/22 12:00	05/10/22 14:25	1
Potassium	**26000**		1000	220	ug/L		05/09/22 12:00	05/10/22 14:25	1
Selenium	5.0	U	5.0	0.89	ug/L		05/09/22 12:00	05/10/22 14:25	1
Sodium	**240000**		1000	330	ug/L		05/09/22 12:00	05/10/22 14:25	1
Thallium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:25	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		05/09/22 12:00	05/10/22 13:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1900**		5.0	2.6	mg/L			05/17/22 12:12	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 12:12	1
Carbonate Alkalinity as CaCO3	**52**		5.0	2.6	mg/L			05/17/22 12:12	1
Fluoride	**0.51**		0.25	0.12	mg/L			05/27/22 19:07	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**8.90**		1.03	1.31	1.00	0.372	pCi/L	05/10/22 08:50	06/08/22 20:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:34*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.668	U	0.452	0.456	1.00	0.677	pCi/L	05/10/22 09:49	06/08/22 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:56*	*1*
Y Carrier	*83.4*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:56*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166194-1
Project/Site: Gavin CCR App IV

Client Sample ID: 2016-08-F-20220503-MS2/MSD2
Lab Sample ID: 240-166194-4
Date Collected: 05/03/22 13:52
Matrix: Water
Date Received: 05/06/22 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	9.57		1.12	1.39	5.00	0.677	pCi/L		06/09/22 19:50	1

Client Sample ID: 2016-08-F-20220503-MS3/MSD3

Date Collected: 05/03/22 14:03
Date Received: 05/06/22 08:00

Lab Sample ID: 240-166194-5

Matrix: Water

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		05/09/22 12:00	05/10/22 14:27	1
Arsenic	**1.6**	**J**	5.0	0.75	ug/L		05/09/22 12:00	05/10/22 14:27	1
Barium	**1700**		5.0	2.2	ug/L		05/09/22 12:00	05/10/22 14:27	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/09/22 12:00	05/10/22 14:27	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:27	1
Chromium	5.0	U	5.0	2.5	ug/L		05/09/22 12:00	05/10/22 14:27	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/09/22 12:00	05/10/22 14:27	1
Lead	**1.0**	**B**	1.0	0.45	ug/L		05/09/22 12:00	05/10/22 14:27	1
Lithium	**420**	**B**	8.0	1.7	ug/L		05/09/22 12:00	05/10/22 14:27	1
Magnesium	1000	U	1000	200	ug/L		05/09/22 12:00	05/10/22 14:27	1
Molybdenum	**8.4**		5.0	1.1	ug/L		05/09/22 12:00	05/10/22 14:27	1
Potassium	**27000**		1000	220	ug/L		05/09/22 12:00	05/10/22 14:27	1
Selenium	5.0	U	5.0	0.89	ug/L		05/09/22 12:00	05/10/22 14:27	1
Sodium	**250000**		1000	330	ug/L		05/09/22 12:00	05/10/22 14:27	1
Thallium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:27	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		05/09/22 12:00	05/10/22 13:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1900**		5.0	2.6	mg/L			05/17/22 12:22	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 12:22	1
Carbonate Alkalinity as CaCO3	**62**		5.0	2.6	mg/L			05/17/22 12:22	1
Fluoride	**0.50**		0.25	0.12	mg/L			05/27/22 19:29	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**7.48**		0.944	1.16	1.00	0.399	pCi/L	05/10/22 08:50	06/08/22 20:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:35*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.635**		0.390	0.394	1.00	0.553	pCi/L	05/10/22 09:49	06/08/22 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.5*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:56*	*1*
Y Carrier	*83.4*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:56*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166194-1
Project/Site: Gavin CCR App IV

Client Sample ID: 2016-08-F-20220503-MS3/MSD3
Lab Sample ID: 240-166194-5
Date Collected: 05/03/22 14:03
Matrix: Water
Date Received: 05/06/22 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	8.12		1.02	1.23	5.00	0.553	pCi/L		06/09/22 19:50	1

Client Sample ID: 2019-02-F-20220504-01
Lab Sample ID: 240-166194-6

Date Collected: 05/04/22 09:25
Matrix: Water
Date Received: 05/06/22 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		05/09/22 12:00	05/10/22 14:30	1
Arsenic	**5.6**		5.0	0.75	ug/L		05/09/22 12:00	05/10/22 14:30	1
Barium	**710**		5.0	2.2	ug/L		05/09/22 12:00	05/10/22 14:30	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/09/22 12:00	05/10/22 14:30	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:30	1
Chromium	5.0	U	5.0	2.5	ug/L		05/09/22 12:00	05/10/22 14:30	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/09/22 12:00	05/10/22 14:30	1
Lead	**0.46**	**J B**	1.0	0.45	ug/L		05/09/22 12:00	05/10/22 14:30	1
Lithium	**290**	**B**	8.0	1.7	ug/L		05/09/22 12:00	05/10/22 14:30	1
Magnesium	1000	U	1000	200	ug/L		05/09/22 12:00	05/10/22 14:30	1
Molybdenum	**17**		5.0	1.1	ug/L		05/09/22 12:00	05/10/22 14:30	1
Potassium	**13000**		1000	220	ug/L		05/09/22 12:00	05/10/22 14:30	1
Selenium	5.0	U	5.0	0.89	ug/L		05/09/22 12:00	05/10/22 14:30	1
Sodium	**480000**		1000	330	ug/L		05/09/22 12:00	05/10/22 14:30	1
Thallium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:30	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		05/09/22 12:00	05/10/22 13:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1500**		5.0	2.6	mg/L			05/17/22 12:30	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 12:30	1
Carbonate Alkalinity as CaCO3	**65**		5.0	2.6	mg/L			05/17/22 12:30	1
Fluoride	**0.59**		0.10	0.048	mg/L			05/27/22 19:51	2

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.79**		0.437	0.466	1.00	0.364	pCi/L	05/10/22 08:50	06/08/22 20:34	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.8*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:34*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.137	U	0.244	0.245	1.00	0.424	pCi/L	05/10/22 09:49	06/08/22 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.8*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:56*	*1*
Y Carrier	*83.4*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:56*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166194-1
Project/Site: Gavin CCR App IV

Client Sample ID: 2019-02-F-20220504-01
Lab Sample ID: 240-166194-6
Date Collected: 05/04/22 09:25
Matrix: Water
Date Received: 05/06/22 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	1.93		0.501	0.526	5.00	0.424	pCi/L		06/09/22 19:50	1

Client Sample ID: 2019-06-F-20220504-01
Lab Sample ID: 240-166194-7

Date Collected: 05/04/22 10:04
Matrix: Water
Date Received: 05/06/22 08:00

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.59		0.646	0.722	1.00	0.399	pCi/L	05/10/22 08:50	06/08/22 20:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:35*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.943		0.449	0.457	1.00	0.606	pCi/L	05/10/22 09:49	06/08/22 12:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:56*	*1*
Y Carrier	*83.4*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:56*	*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	4.53		0.787	0.854	5.00	0.606	pCi/L		06/09/22 19:50	1

Client Sample ID: 2019-07-F-20220504-01
Lab Sample ID: 240-166194-8

Date Collected: 05/04/22 12:49
Matrix: Water
Date Received: 05/06/22 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		05/09/22 12:00	05/10/22 14:32	1
Arsenic	**3.0**	**J**	5.0	0.75	ug/L		05/09/22 12:00	05/10/22 14:32	1
Barium	**370**		5.0	2.2	ug/L		05/09/22 12:00	05/10/22 14:32	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/09/22 12:00	05/10/22 14:32	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:32	1
Chromium	5.0	U	5.0	2.5	ug/L		05/09/22 12:00	05/10/22 14:32	1
Cobalt	**6.7**		1.0	0.19	ug/L		05/09/22 12:00	05/10/22 14:32	1
Lead	1.0	U	1.0	0.45	ug/L		05/09/22 12:00	05/10/22 14:32	1
Lithium	**240**	**B**	8.0	1.7	ug/L		05/09/22 12:00	05/10/22 14:32	1
Magnesium	**210000**		1000	200	ug/L		05/09/22 12:00	05/10/22 14:32	1
Molybdenum	**8.6**		5.0	1.1	ug/L		05/09/22 12:00	05/10/22 14:32	1
Potassium	**18000**		1000	220	ug/L		05/09/22 12:00	05/10/22 14:32	1
Selenium	**1.2**	**J**	5.0	0.89	ug/L		05/09/22 12:00	05/10/22 14:32	1
Sodium	**10000000**		10000	3300	ug/L		05/09/22 12:00	05/12/22 12:29	10
Thallium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:32	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		05/09/22 12:00	05/10/22 13:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**200**		5.0	2.6	mg/L			05/17/22 12:34	1
Bicarbonate Alkalinity as CaCO3	**200**		5.0	2.6	mg/L			05/17/22 12:34	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 12:34	1
Fluoride	0.050	U	0.050	0.024	mg/L			05/31/22 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	**0.806**		0.356	0.363	1.00	0.414	pCi/L	05/10/22 08:50	06/08/22 20:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:35*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.174	U	0.355	0.356	1.00	0.618	pCi/L	05/10/22 09:49	06/08/22 12:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:51*	*1*
Y Carrier	*82.2*		*40 - 110*	*05/10/22 09:49*	*06/08/22 12:51*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166194-1

Client Sample ID: 2019-07-F-20220504-01

Date Collected: 05/04/22 12:49
Date Received: 05/06/22 08:00

Lab Sample ID: 240-166194-8

Matrix: Water

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	0.980		0.503	0.508	5.00	0.618	pCi/L		06/09/22 19:50	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166194-1
Project/Site: Gavin CCR App IV

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)
240-166194-1	MW-20F-20220503-01	87.8
240-166194-2	2016-08-F-20220503-01	93.8
240-166194-3	2016-08-F-20220503-MS1/MSD 1	88.5
240-166194-4	2016-08-F-20220503-MS2/MSD 2	92.8
240-166194-5	2016-08-F-20220503-MS3/MSD 3	93.5
240-166194-6	2019-02-F-20220504-01	90.8
240-166194-7	2019-06-F-20220504-01	102
240-166194-8	2019-07-F-20220504-01	102
LCS 160-564741/1-A	Lab Control Sample	92.5
LCSD 160-564741/2-A	Lab Control Sample Dup	97.3
MB 160-564741/18-A	Method Blank	101

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)
240-166194-1	MW-20F-20220503-01	87.8	80.4
240-166194-2	2016-08-F-20220503-01	93.8	81.9
240-166194-3	2016-08-F-20220503-MS1/MSD 1	88.5	81.1
240-166194-4	2016-08-F-20220503-MS2/MSD 2	92.8	83.4
240-166194-5	2016-08-F-20220503-MS3/MSD 3	93.5	83.4
240-166194-6	2019-02-F-20220504-01	90.8	83.4
240-166194-7	2019-06-F-20220504-01	102	83.4
240-166194-8	2019-07-F-20220504-01	102	82.2
LCS 160-564747/1-A	Lab Control Sample	92.5	87.9
LCSD 160-564747/2-A	Lab Control Sample Dup	97.3	89.0
MB 160-564747/18-A	Method Blank	101	83.4

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-525619/1-A
Matrix: Water
Analysis Batch: 525938

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525619

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	1000	U	1000	330	ug/L		05/09/22 12:00	05/10/22 13:26	1

Lab Sample ID: MB 240-525619/1-A
Matrix: Water
Analysis Batch: 525938

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525619

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/09/22 12:00	05/10/22 14:35	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/09/22 12:00	05/10/22 14:35	1
Barium	5.0	U	5.0	2.2	ug/L		05/09/22 12:00	05/10/22 14:35	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/09/22 12:00	05/10/22 14:35	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:35	1
Chromium	5.0	U	5.0	2.5	ug/L		05/09/22 12:00	05/10/22 14:35	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/09/22 12:00	05/10/22 14:35	1
Lead	1.0	U	1.0	0.45	ug/L		05/09/22 12:00	05/10/22 14:35	1
Lithium	2.60	J	8.0	1.7	ug/L		05/09/22 12:00	05/10/22 14:35	1
Magnesium	1000	U	1000	200	ug/L		05/09/22 12:00	05/10/22 14:35	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/09/22 12:00	05/10/22 14:35	1
Potassium	1000	U	1000	220	ug/L		05/09/22 12:00	05/10/22 14:35	1
Selenium	5.0	U	5.0	0.89	ug/L		05/09/22 12:00	05/10/22 14:35	1
Thallium	1.0	U	1.0	0.20	ug/L		05/09/22 12:00	05/10/22 14:35	1

Lab Sample ID: LCS 240-525619/2-A
Matrix: Water
Analysis Batch: 525938

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 525619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	107		ug/L		107	80 - 120
Arsenic	1000	959		ug/L		96	80 - 120
Barium	1000	1050		ug/L		105	80 - 120
Beryllium	500	485		ug/L		97	80 - 120
Cadmium	500	511		ug/L		102	80 - 120
Chromium	500	522		ug/L		104	80 - 120
Cobalt	500	497		ug/L		99	80 - 120
Lead	500	544		ug/L		109	80 - 120
Lithium	500	530		ug/L		106	80 - 120
Magnesium	25000	24700		ug/L		99	80 - 120
Molybdenum	500	501		ug/L		100	80 - 120
Potassium	25000	24400		ug/L		98	80 - 120
Selenium	1000	967		ug/L		97	80 - 120
Sodium	25000	24300		ug/L		97	80 - 120
Thallium	1000	1030		ug/L		103	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-525625/1-A
Matrix: Water
Analysis Batch: 525851

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525625

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/09/22 12:00	05/10/22 12:28	1

Lab Sample ID: LCS 240-525625/2-A
Matrix: Water
Analysis Batch: 525851

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525625

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.03		ug/L		101	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-526813/7
Matrix: Water
Analysis Batch: 526813

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			05/17/22 11:14	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 11:14	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 11:14	1

Lab Sample ID: LCS 240-526813/6
Matrix: Water
Analysis Batch: 526813

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	115		mg/L		95	86 - 123

Lab Sample ID: 240-166194-8 DU
Matrix: Water
Analysis Batch: 526813

Client Sample ID: 2019-07-F-20220504-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	200		190		mg/L		4	20
Bicarbonate Alkalinity as CaCO3	200		190		mg/L		4	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 240-528335/3
Matrix: Water
Analysis Batch: 528335

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			05/27/22 11:37	1

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-528335/4
Matrix: Water
Analysis Batch: 528335

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: MB 240-528619/3
Matrix: Water
Analysis Batch: 528619

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			05/31/22 18:01	1

Lab Sample ID: LCS 240-528619/4
Matrix: Water
Analysis Batch: 528619

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	2.60		mg/L		104	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-564741/18-A
Matrix: Water
Analysis Batch: 569217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 564741

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.04415	U	0.169	0.169	1.00	0.356	pCi/L	05/10/22 08:50	06/08/22 20:35	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/10/22 08:50*	*06/08/22 20:35*	*1*

Lab Sample ID: LCS 160-564741/1-A
Matrix: Water
Analysis Batch: 569033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 564741

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.95		1.38	1.00	0.267	pCi/L	97	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.5*		*40 - 110*

Lab Sample ID: LCSD 160-564741/2-A
Matrix: Water
Analysis Batch: 569033

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 564741

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	11.3	10.15		1.30	1.00	0.273	pCi/L	89	75 - 125	0.30	1

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCSD 160-564741/2-A
Matrix: Water
Analysis Batch: 569033

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 564741

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	97.3		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-564747/18-A
Matrix: Water
Analysis Batch: 569218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 564747

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.06096	U	0.235	0.235	1.00	0.428	pCi/L	05/10/22 09:49	06/08/22 12:52	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110	05/10/22 09:49	06/08/22 12:52	1
Y Carrier	83.4		40 - 110	05/10/22 09:49	06/08/22 12:52	1

Lab Sample ID: LCS 160-564747/1-A
Matrix: Water
Analysis Batch: 569033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 564747

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.55	9.692		1.27	1.00	0.456	pCi/L	113	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	92.5		40 - 110
Y Carrier	87.9		40 - 110

Lab Sample ID: LCSD 160-564747/2-A
Matrix: Water
Analysis Batch: 569033

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 564747

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.55	9.010		1.20	1.00	0.514	pCi/L	105	75 - 125	0.28	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	97.3		40 - 110
Y Carrier	89.0		40 - 110

Metals

Prep Batch: 525619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-1	MW-20F-20220503-01	Total Recoverable	Water	3005A	
240-166194-2	2016-08-F-20220503-01	Total Recoverable	Water	3005A	
240-166194-3	2016-08-F-20220503-MS1/MSD1	Total Recoverable	Water	3005A	
240-166194-4	2016-08-F-20220503-MS2/MSD2	Total Recoverable	Water	3005A	
240-166194-5	2016-08-F-20220503-MS3/MSD3	Total Recoverable	Water	3005A	
240-166194-6	2019-02-F-20220504-01	Total Recoverable	Water	3005A	
240-166194-8	2019-07-F-20220504-01	Total Recoverable	Water	3005A	
MB 240-525619/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-525619/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 525625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-1	MW-20F-20220503-01	Total/NA	Water	7470A	
240-166194-2	2016-08-F-20220503-01	Total/NA	Water	7470A	
240-166194-3	2016-08-F-20220503-MS1/MSD1	Total/NA	Water	7470A	
240-166194-4	2016-08-F-20220503-MS2/MSD2	Total/NA	Water	7470A	
240-166194-5	2016-08-F-20220503-MS3/MSD3	Total/NA	Water	7470A	
240-166194-6	2019-02-F-20220504-01	Total/NA	Water	7470A	
240-166194-8	2019-07-F-20220504-01	Total/NA	Water	7470A	
MB 240-525625/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-525625/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 525851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-1	MW-20F-20220503-01	Total/NA	Water	7470A	525625
240-166194-2	2016-08-F-20220503-01	Total/NA	Water	7470A	525625
240-166194-3	2016-08-F-20220503-MS1/MSD1	Total/NA	Water	7470A	525625
240-166194-4	2016-08-F-20220503-MS2/MSD2	Total/NA	Water	7470A	525625
240-166194-5	2016-08-F-20220503-MS3/MSD3	Total/NA	Water	7470A	525625
240-166194-6	2019-02-F-20220504-01	Total/NA	Water	7470A	525625
240-166194-8	2019-07-F-20220504-01	Total/NA	Water	7470A	525625
MB 240-525625/1-A	Method Blank	Total/NA	Water	7470A	525625
LCS 240-525625/2-A	Lab Control Sample	Total/NA	Water	7470A	525625

Analysis Batch: 525938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-1	MW-20F-20220503-01	Total Recoverable	Water	6020	525619
240-166194-2	2016-08-F-20220503-01	Total Recoverable	Water	6020	525619
240-166194-3	2016-08-F-20220503-MS1/MSD1	Total Recoverable	Water	6020	525619
240-166194-4	2016-08-F-20220503-MS2/MSD2	Total Recoverable	Water	6020	525619
240-166194-5	2016-08-F-20220503-MS3/MSD3	Total Recoverable	Water	6020	525619
240-166194-6	2019-02-F-20220504-01	Total Recoverable	Water	6020	525619
240-166194-8	2019-07-F-20220504-01	Total Recoverable	Water	6020	525619
MB 240-525619/1-A	Method Blank	Total Recoverable	Water	6020	525619
MB 240-525619/1-A	Method Blank	Total Recoverable	Water	6020	525619
LCS 240-525619/2-A	Lab Control Sample	Total Recoverable	Water	6020	525619

Analysis Batch: 526220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-8	2019-07-F-20220504-01	Total Recoverable	Water	6020	525619

General Chemistry

Analysis Batch: 526813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-1	MW-20F-20220503-01	Total/NA	Water	2320B-1997	
240-166194-2	2016-08-F-20220503-01	Total/NA	Water	2320B-1997	
240-166194-3	2016-08-F-20220503-MS1/MSD1	Total/NA	Water	2320B-1997	
240-166194-4	2016-08-F-20220503-MS2/MSD2	Total/NA	Water	2320B-1997	
240-166194-5	2016-08-F-20220503-MS3/MSD3	Total/NA	Water	2320B-1997	
240-166194-6	2019-02-F-20220504-01	Total/NA	Water	2320B-1997	
240-166194-8	2019-07-F-20220504-01	Total/NA	Water	2320B-1997	
MB 240-526813/7	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-526813/6	Lab Control Sample	Total/NA	Water	2320B-1997	
240-166194-8 DU	2019-07-F-20220504-01	Total/NA	Water	2320B-1997	

Analysis Batch: 528335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-1	MW-20F-20220503-01	Total/NA	Water	300.0-1993 R2.1	
240-166194-2	2016-08-F-20220503-01	Total/NA	Water	300.0-1993 R2.1	
240-166194-3	2016-08-F-20220503-MS1/MSD1	Total/NA	Water	300.0-1993 R2.1	
240-166194-4	2016-08-F-20220503-MS2/MSD2	Total/NA	Water	300.0-1993 R2.1	
240-166194-5	2016-08-F-20220503-MS3/MSD3	Total/NA	Water	300.0-1993 R2.1	
240-166194-6	2019-02-F-20220504-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-528335/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-528335/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 528619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-8	2019-07-F-20220504-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-528619/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-528619/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 564741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-1	MW-20F-20220503-01	Total/NA	Water	PrecSep-21	
240-166194-2	2016-08-F-20220503-01	Total/NA	Water	PrecSep-21	
240-166194-3	2016-08-F-20220503-MS1/MSD1	Total/NA	Water	PrecSep-21	
240-166194-4	2016-08-F-20220503-MS2/MSD2	Total/NA	Water	PrecSep-21	
240-166194-5	2016-08-F-20220503-MS3/MSD3	Total/NA	Water	PrecSep-21	
240-166194-6	2019-02-F-20220504-01	Total/NA	Water	PrecSep-21	
240-166194-7	2019-06-F-20220504-01	Total/NA	Water	PrecSep-21	
240-166194-8	2019-07-F-20220504-01	Total/NA	Water	PrecSep-21	
MB 160-564741/18-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-564741/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-564741/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 564747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-1	MW-20F-20220503-01	Total/NA	Water	PrecSep_0	
240-166194-2	2016-08-F-20220503-01	Total/NA	Water	PrecSep_0	
240-166194-3	2016-08-F-20220503-MS1/MSD1	Total/NA	Water	PrecSep_0	
240-166194-4	2016-08-F-20220503-MS2/MSD2	Total/NA	Water	PrecSep_0	
240-166194-5	2016-08-F-20220503-MS3/MSD3	Total/NA	Water	PrecSep_0	

Rad (Continued)

Prep Batch: 564747 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166194-6	2019-02-F-20220504-01	Total/NA	Water	PrecSep_0	
240-166194-7	2019-06-F-20220504-01	Total/NA	Water	PrecSep_0	
240-166194-8	2019-07-F-20220504-01	Total/NA	Water	PrecSep_0	
MB 160-564747/18-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-564747/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-564747/2-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: 240-166194-1

Client Sample ID: MW-20F-20220503-01

Lab Sample ID: 240-166194-1

Date Collected: 05/03/22 09:30
Date Received: 05/06/22 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525619	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525938	05/10/22 14:13	AJC	TAL CAN
Total/NA	Prep	7470A			525625	05/09/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525851	05/10/22 13:08	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 11:44	JMB	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	528335	05/27/22 18:02	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			564741	05/10/22 08:50	MS	TAL SL
Total/NA	Analysis	9315		1	569033	06/08/22 20:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564747	05/10/22 09:49	MS	TAL SL
Total/NA	Analysis	9320		1	569035	06/08/22 12:55	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569421	06/09/22 19:50	EMH	TAL SL

Client Sample ID: 2016-08-F-20220503-01

Lab Sample ID: 240-166194-2

Date Collected: 05/03/22 13:30
Date Received: 05/06/22 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525619	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525938	05/10/22 14:15	AJC	TAL CAN
Total/NA	Prep	7470A			525625	05/09/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525851	05/10/22 13:10	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 11:53	JMB	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		5	528335	05/27/22 18:24	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			564741	05/10/22 08:50	MS	TAL SL
Total/NA	Analysis	9315		1	569033	06/08/22 20:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564747	05/10/22 09:49	MS	TAL SL
Total/NA	Analysis	9320		1	569035	06/08/22 12:55	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569421	06/09/22 19:50	EMH	TAL SL

Client Sample ID: 2016-08-F-20220503-MS1/MSD1

Lab Sample ID: 240-166194-3

Date Collected: 05/03/22 13:42
Date Received: 05/06/22 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525619	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525938	05/10/22 14:22	AJC	TAL CAN
Total/NA	Prep	7470A			525625	05/09/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525851	05/10/22 13:12	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 12:03	JMB	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		5	528335	05/27/22 18:46	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			564741	05/10/22 08:50	MS	TAL SL
Total/NA	Analysis	9315		1	569033	06/08/22 20:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564747	05/10/22 09:49	MS	TAL SL
Total/NA	Analysis	9320		1	569035	06/08/22 12:55	CLP	TAL SL

Client Sample ID: 2016-08-F-20220503-MS1/MSD1

Lab Sample ID: 240-166194-3

Date Collected: 05/03/22 13:42

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	569421	06/09/22 19:50	EMH	TAL SL

Client Sample ID: 2016-08-F-20220503-MS2/MSD2

Lab Sample ID: 240-166194-4

Date Collected: 05/03/22 13:52

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525619	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525938	05/10/22 14:25	AJC	TAL CAN
Total/NA	Prep	7470A			525625	05/09/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525851	05/10/22 13:14	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 12:12	JMB	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		5	528335	05/27/22 19:07	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			564741	05/10/22 08:50	MS	TAL SL
Total/NA	Analysis	9315		1	569033	06/08/22 20:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564747	05/10/22 09:49	MS	TAL SL
Total/NA	Analysis	9320		1	569035	06/08/22 12:56	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569421	06/09/22 19:50	EMH	TAL SL

Client Sample ID: 2016-08-F-20220503-MS3/MSD3

Lab Sample ID: 240-166194-5

Date Collected: 05/03/22 14:03

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525619	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525938	05/10/22 14:27	AJC	TAL CAN
Total/NA	Prep	7470A			525625	05/09/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525851	05/10/22 13:16	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 12:22	JMB	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		5	528335	05/27/22 19:29	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			564741	05/10/22 08:50	MS	TAL SL
Total/NA	Analysis	9315		1	569033	06/08/22 20:35	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564747	05/10/22 09:49	MS	TAL SL
Total/NA	Analysis	9320		1	569035	06/08/22 12:56	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569421	06/09/22 19:50	EMH	TAL SL

Client Sample ID: 2019-02-F-20220504-01

Lab Sample ID: 240-166194-6

Date Collected: 05/04/22 09:25

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525619	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525938	05/10/22 14:30	AJC	TAL CAN
Total/NA	Prep	7470A			525625	05/09/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525851	05/10/22 13:18	DSH	TAL CAN

Client Sample ID: 2019-02-F-20220504-01

Lab Sample ID: 240-166194-6

Date Collected: 05/04/22 09:25

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 12:30	JMB	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		2	528335	05/27/22 19:51	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			564741	05/10/22 08:50	MS	TAL SL
Total/NA	Analysis	9315		1	569033	06/08/22 20:34	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564747	05/10/22 09:49	MS	TAL SL
Total/NA	Analysis	9320		1	569035	06/08/22 12:56	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569421	06/09/22 19:50	EMH	TAL SL

Client Sample ID: 2019-06-F-20220504-01

Lab Sample ID: 240-166194-7

Date Collected: 05/04/22 10:04

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			564741	05/10/22 08:50	MS	TAL SL
Total/NA	Analysis	9315		1	569217	06/08/22 20:35	CLP	TAL SL
Total/NA	Prep	PrecSep_0			564747	05/10/22 09:49	MS	TAL SL
Total/NA	Analysis	9320		1	569035	06/08/22 12:56	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569421	06/09/22 19:50	EMH	TAL SL

Client Sample ID: 2019-07-F-20220504-01

Lab Sample ID: 240-166194-8

Date Collected: 05/04/22 12:49

Matrix: Water

Date Received: 05/06/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525619	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	525938	05/10/22 14:32	AJC	TAL CAN
Total Recoverable	Prep	3005A			525619	05/09/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		10	526220	05/12/22 12:29	AJC	TAL CAN
Total/NA	Prep	7470A			525625	05/09/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	525851	05/10/22 13:24	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 12:34	JMB	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	528619	05/31/22 18:44	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			564741	05/10/22 08:50	MS	TAL SL
Total/NA	Analysis	9315		1	569217	06/08/22 20:35	CLP	TAL SL
Total/NA	Prep	PrecSep_0			564747	05/10/22 09:49	MS	TAL SL
Total/NA	Analysis	9320		1	569218	06/08/22 12:51	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569421	06/09/22 19:50	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
Job ID: 240-166194-1
Project/Site: Gavin CCR App IV

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	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	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	05-31-22
Washington	State	C971	06-05-22
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
Job ID: 240-166194-1
Project/Site: Gavin CCR App IV

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

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

2.1|2.1

Chain of Custody Record

Columbus 209

129 eurofins | Environment Testing America

Client Information	Sampler: Shawn	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-94765-34853.2
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 2 of 3
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
Preservation Code:							D	N	N	D		AP-IV
MW-20-F-20220503-01	5-3-22	0930	G	Water			1	1	1	2	5	
2016-08-F-20220503-01	5-3-22	1330	G	Water			1	1	1	2	5	
2016-08-F-20220503-MS1				Water								
2016-08-F-20220503-MSD1	5-3-22	1342	G	Water			1	1	1	2	5	
2016-08-F-20220503-MS2				Water								
2016-08-F-20220503-MSD2	5-3-22	1352	G	Water			1	1	1	2	5	
2016-08-F-20220503-MS3				Water								
2016-08-F-20220503-MSD3	5-3-22	1403	G	Water			1	1	1	2	5	
2019-02-F-20220504-01	5-4-22	0925	G	Water			1	1	1	2	5	
2019-06-F-20220504-01	5-4-22	1004	G	Water						2	2	
2019-07-F-20220504-01	5-4-22	1249	G	Water			1	1	1	2	5	

240-166194 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Shawn Shawn	5/5/22 0830	Shawn	[illegible]	5-6-22 [illegible]	ETC
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[illegible]	5-6-22 1100	ETC	Tammy Page	5-6-22 800	EETNC
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

6/10/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Tammy Boyer
Cooler Received on 5-6-22 Opened on 5-6-22
FedEx: 1st Grd Exp UPS FAS (Clipper) Client Drop Off TestAmerica Courier Other _____
Receipt After-hours: Drop-off Date/Time _____ Storage Location _____
TestAmerica Cooler # 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 0.0 °C) Observed Cooler Temp. 2.1 °C Corrected Cooler Temp. 2.1 °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	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Y)	(Y)
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA	pH Strip Lot# 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	

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: _____

Eurofins - Canton Sample Receipt Multipl[redacted]

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	
TA Client Box Other	IR-13 IR-15	2.6	
TA Client Box Other	IR-13 IR-15	2.[illegible]	
TA Client Box Other	IR-13 IR-15	2.[illegible]	
TA Client Box Other	IR-13 IR-15	1.[illegible]	
TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		
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TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		
TA Client Box Other	IR-13 IR-15		

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	2.6	2.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	2.4	2.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	2.1	2.1	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			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

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW-20F-20220503-01	240-166194-C-1	Plastic 500ml - with Nitric Acid	<2			
MW-20F-20220503-01	240-166194-D-1	Plastic 1 liter - Nitric Acid	<2			
MW-20F-20220503-01	240-166194-E-1	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220503-01	240-166194-C-2	Plastic 500ml - with Nitric Acid	<2			
2016-08-F-20220503-01	240-166194-D-2	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220503-01	240-166194-E-2	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220503-MS1/MSD1	240-166194-C-3	Plastic 500ml - with Nitric Acid	<2			
2016-08-F-20220503-MS1/MSD1	240-166194-D-3	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220503-MS1/MSD1	240-166194-E-3	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220503-MS2/MSD2	240-166194-C-4	Plastic 500ml - with Nitric Acid	<2			
2016-08-F-20220503-MS2/MSD2	240-166194-D-4	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220503-MS2/MSD2	240-166194-E-4	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220503-MS3/MSD3	240-166194-C-5	Plastic 500ml - with Nitric Acid	<2			
2016-08-F-20220503-MS3/MSD3	240-166194-D-5	Plastic 1 liter - Nitric Acid	<2			
2016-08-F-20220503-MS3/MSD3	240-166194-E-5	Plastic 1 liter - Nitric Acid	<2			
2019-02-F-20220504-01	240-166194-C-6	Plastic 500ml - with Nitric Acid	<2			
2019-02-F-20220504-01	240-166194-D-6	Plastic 1 liter - Nitric Acid	<2			
2019-02-F-20220504-01	240-166194-E-6	Plastic 1 liter - Nitric Acid	<2			
2019-06-F-20220504-01	240-166194-A-7	Plastic 1 liter - Nitric Acid	<2			
2019-06-F-20220504-01	240-166194-B-7	Plastic 1 liter - Nitric Acid	<2			
2019-07-F-20220504-01	240-166194-C-8	Plastic 500ml - with Nitric Acid	<2			
2019-07-F-20220504-01	240-166194-D-8	Plastic 1 liter - Nitric Acid	<2			
2019-07-F-20220504-01	240-166194-E-8	Plastic 1 liter - Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-151727.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-166194-1
Address: 13715 Rider Trail North,	Due Date Requested: 5/19/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-20F-20220503-01 (240-166194-1)	5/3/22	09:30 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-08-F-20220503-01 (240-166194-2)	5/3/22	13:30 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-08-F-20220503-MS1/MSD1 (240-166194-3)	5/3/22	13:42 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-08-F-20220503-MS2/MSD2 (240-166194-4)	5/3/22	13:52 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-08-F-20220503-MS3/MSD3 (240-166194-5)	5/3/22	14:03 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2019-02-F-20220504-01 (240-166194-6)	5/4/22	09:25 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2019-06-F-20220504-01 (240-166194-7)	5/4/22	10:04 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2019-07-F-20220504-01 (240-166194-8)	5/4/22	12:49 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Mandoly Black	5-6-22 15:00	ETNC	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by: Sierra Worthington	Date/Time: MAY 0 9 2022 0835	Company: ETNSR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

6/10/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-166194-1

Login Number: 166194
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 05/09/22 02:25 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-166242-1
Client Project/Site: Gavin CCR App III

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
5/17/2022 2:28:26 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App III

Job ID: 240-166242-1

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.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	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 III

Job ID: 240-166242-1

Job ID: 240-166242-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-166242-1

Comments
No additional comments.

Receipt
The samples were received on 5/9/2022 1:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.3º C.

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 III

Job ID: 240-166242-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL 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:

TAL 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: Gavin CCR App III

Job ID: 240-166242-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166242-1	MW-17-F-20220505-01	Water	05/05/22 12:44	05/09/22 13:30
240-166242-2	DUP-002-MW-17-F-20220505-01	Water	05/05/22 12:54	05/09/22 13:30

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App III

Job ID: 240-166242-1

Client Sample ID: MW-17-F-20220505-01 — Lab Sample ID: 240-166242-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	400		100	57	ug/L	1		6010B	Total Recoverable
Calcium	78000		1000	580	ug/L	1		6020	Total Recoverable
Magnesium	18000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	5200		1000	220	ug/L	1		6020	Total Recoverable
Sodium	2500000	B	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
Chloride	4200		50	14	mg/L	50		300.0	Total/NA
Fluoride	1.7		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	60		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	5800		100	78	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-002-MW-17-F-20220505-01 — Lab Sample ID: 240-166242-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	420		100	57	ug/L	1		6010B	Total Recoverable
Calcium	83000		1000	580	ug/L	1		6020	Total Recoverable
Magnesium	18000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	5500		1000	220	ug/L	1		6020	Total Recoverable
Sodium	2700000	B	1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	4200		50	14	mg/L	50		300.0	Total/NA
Fluoride	1.6		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	48		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	6500		100	78	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166242-1
Project/Site: Gavin CCR App III

Client Sample ID: MW-17-F-20220505-01
Lab Sample ID: 240-166242-1

Date Collected: 05/05/22 12:44
Matrix: Water
Date Received: 05/09/22 13:30

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	400		100	57	ug/L		05/10/22 12:00	05/12/22 21:11	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	78000		1000	580	ug/L		05/10/22 12:00	05/11/22 14:32	1
Magnesium	18000		1000	200	ug/L		05/10/22 12:00	05/11/22 14:32	1
Potassium	5200		1000	220	ug/L		05/10/22 12:00	05/11/22 14:32	1
Sodium	2500000	B	1000	330	ug/L		05/10/22 12:00	05/11/22 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	260		5.0	2.6	mg/L			05/11/22 15:30	1
Bicarbonate Alkalinity as CaCO3	260		5.0	2.6	mg/L			05/11/22 15:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/11/22 15:30	1
Chloride	4200		50	14	mg/L			05/14/22 22:48	50
Fluoride	1.7		0.25	0.12	mg/L			05/14/22 22:27	5
Sulfate	60		5.0	1.7	mg/L			05/14/22 22:27	5
Total Dissolved Solids	5800		100	78	mg/L			05/11/22 10:03	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166242-1
Project/Site: Gavin CCR App III

Client Sample ID: DUP-002-MW-17-F-20220505-01
Lab Sample ID: 240-166242-2

Date Collected: 05/05/22 12:54
Matrix: Water
Date Received: 05/09/22 13:30

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	420		100	57	ug/L		05/10/22 12:00	05/12/22 21:29	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	83000		1000	580	ug/L		05/10/22 12:00	05/11/22 14:44	1
Magnesium	18000		1000	200	ug/L		05/10/22 12:00	05/11/22 14:44	1
Potassium	5500		1000	220	ug/L		05/10/22 12:00	05/11/22 14:44	1
Sodium	2700000	B	1000	330	ug/L		05/10/22 12:00	05/11/22 14:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	250		5.0	2.6	mg/L			05/11/22 15:37	1
Bicarbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L			05/11/22 15:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/11/22 15:37	1
Chloride	4200		50	14	mg/L			05/15/22 00:08	50
Fluoride	1.6		0.25	0.12	mg/L			05/14/22 23:08	5
Sulfate	48		5.0	1.7	mg/L			05/14/22 23:08	5
Total Dissolved Solids	6500		100	78	mg/L			05/11/22 10:03	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-525816/1-A
Matrix: Water
Analysis Batch: 526304

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		05/10/22 12:00	05/12/22 21:03	1

Lab Sample ID: LCS 240-525816/2-A
Matrix: Water
Analysis Batch: 526304

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	977		ug/L		98	80 - 120

Lab Sample ID: 240-166242-1 MS
Matrix: Water
Analysis Batch: 526304

Client Sample ID: MW-17-F-20220505-01
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	400		1000	1490		ug/L		109	75 - 125

Lab Sample ID: 240-166242-1 MSD
Matrix: Water
Analysis Batch: 526304

Client Sample ID: MW-17-F-20220505-01
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	400		1000	1500		ug/L		110	75 - 125	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-525816/1-A
Matrix: Water
Analysis Batch: 526117

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		05/10/22 12:00	05/11/22 14:27	1
Magnesium	1000	U	1000	200	ug/L		05/10/22 12:00	05/11/22 14:27	1
Potassium	1000	U	1000	220	ug/L		05/10/22 12:00	05/11/22 14:27	1
Sodium	341	J	1000	330	ug/L		05/10/22 12:00	05/11/22 14:27	1

Lab Sample ID: LCS 240-525816/3-A
Matrix: Water
Analysis Batch: 526117

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24600		ug/L		98	80 - 120
Magnesium	25000	25600		ug/L		102	80 - 120
Potassium	25000	24800		ug/L		99	80 - 120
Sodium	25000	25900		ug/L		104	80 - 120

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

Lab Sample ID: 240-166242-1 MS
Matrix: Water
Analysis Batch: 526117

Client Sample ID: MW-17-F-20220505-01
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	78000		25000	103000		ug/L		98	75 - 125
Magnesium	18000		25000	41400		ug/L		95	75 - 125
Potassium	5200		25000	28400		ug/L		93	75 - 125
Sodium	2500000	B	25000	2580000	4	ug/L		219	75 - 125

Lab Sample ID: 240-166242-1 MSD
Matrix: Water
Analysis Batch: 526117

Client Sample ID: MW-17-F-20220505-01
Prep Type: Total Recoverable
Prep Batch: 525816

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	78000		25000	105000		ug/L		108	75 - 125	2	20
Magnesium	18000		25000	42100		ug/L		98	75 - 125	2	20
Potassium	5200		25000	28800		ug/L		95	75 - 125	1	20
Sodium	2500000	B	25000	2620000	4	ug/L		378	75 - 125	2	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-526133/4
Matrix: Water
Analysis Batch: 526133

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			05/11/22 14:53	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/11/22 14:53	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/11/22 14:53	1

Lab Sample ID: LCS 240-526133/3
Matrix: Water
Analysis Batch: 526133

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	119		mg/L		98	86 - 123

Lab Sample ID: 240-166242-2 DU
Matrix: Water
Analysis Batch: 526133

Client Sample ID: DUP-002-MW-17-F-20220505-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	250		248		mg/L		0.2	20
Bicarbonate Alkalinity as CaCO3	250		248		mg/L		0.2	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 240-526405/3
Matrix: Water
Analysis Batch: 526405

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			05/14/22 12:03	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-526405/3
Matrix: Water
Analysis Batch: 526405

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			05/14/22 12:03	1
Sulfate	1.0	U	1.0	0.35	mg/L			05/14/22 12:03	1

Lab Sample ID: LCS 240-526405/4
Matrix: Water
Analysis Batch: 526405

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.2		mg/L		96	90 - 110
Fluoride	2.50	2.44		mg/L		98	90 - 110
Sulfate	50.0	49.8		mg/L		100	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-525986/1
Matrix: Water
Analysis Batch: 525986

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			05/11/22 10:03	1

Lab Sample ID: LCS 240-525986/2
Matrix: Water
Analysis Batch: 525986

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	482	478		mg/L		99	80 - 120

Metals

Prep Batch: 525816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166242-1	MW-17-F-20220505-01	Total Recoverable	Water	3005A	
240-166242-2	DUP-002-MW-17-F-20220505-01	Total Recoverable	Water	3005A	
MB 240-525816/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-525816/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-525816/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-166242-1 MS	MW-17-F-20220505-01	Total Recoverable	Water	3005A	
240-166242-1 MS	MW-17-F-20220505-01	Total Recoverable	Water	3005A	
240-166242-1 MSD	MW-17-F-20220505-01	Total Recoverable	Water	3005A	
240-166242-1 MSD	MW-17-F-20220505-01	Total Recoverable	Water	3005A	

Analysis Batch: 526117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166242-1	MW-17-F-20220505-01	Total Recoverable	Water	6020	525816
240-166242-2	DUP-002-MW-17-F-20220505-01	Total Recoverable	Water	6020	525816
MB 240-525816/1-A	Method Blank	Total Recoverable	Water	6020	525816
LCS 240-525816/3-A	Lab Control Sample	Total Recoverable	Water	6020	525816
240-166242-1 MS	MW-17-F-20220505-01	Total Recoverable	Water	6020	525816
240-166242-1 MSD	MW-17-F-20220505-01	Total Recoverable	Water	6020	525816

Analysis Batch: 526304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166242-1	MW-17-F-20220505-01	Total Recoverable	Water	6010B	525816
240-166242-2	DUP-002-MW-17-F-20220505-01	Total Recoverable	Water	6010B	525816
MB 240-525816/1-A	Method Blank	Total Recoverable	Water	6010B	525816
LCS 240-525816/2-A	Lab Control Sample	Total Recoverable	Water	6010B	525816
240-166242-1 MS	MW-17-F-20220505-01	Total Recoverable	Water	6010B	525816
240-166242-1 MSD	MW-17-F-20220505-01	Total Recoverable	Water	6010B	525816

General Chemistry

Analysis Batch: 525986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166242-1	MW-17-F-20220505-01	Total/NA	Water	SM 2540C	
240-166242-2	DUP-002-MW-17-F-20220505-01	Total/NA	Water	SM 2540C	
MB 240-525986/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-525986/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 526133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166242-1	MW-17-F-20220505-01	Total/NA	Water	2320B-1997	
240-166242-2	DUP-002-MW-17-F-20220505-01	Total/NA	Water	2320B-1997	
MB 240-526133/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-526133/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-166242-2 DU	DUP-002-MW-17-F-20220505-01	Total/NA	Water	2320B-1997	

Analysis Batch: 526405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166242-1	MW-17-F-20220505-01	Total/NA	Water	300.0	
240-166242-1	MW-17-F-20220505-01	Total/NA	Water	300.0	
240-166242-2	DUP-002-MW-17-F-20220505-01	Total/NA	Water	300.0	
240-166242-2	DUP-002-MW-17-F-20220505-01	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 526405 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-526405/3	Method Blank	Total/NA	Water	300.0	
LCS 240-526405/4	Lab Control Sample	Total/NA	Water	300.0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App III

Job ID: 240-166242-1

Client Sample ID: MW-17-F-20220505-01

Lab Sample ID: 240-166242-1

Date Collected: 05/05/22 12:44
Date Received: 05/09/22 13:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525816	05/10/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	526304	05/12/22 21:11	RKT	TAL CAN
Total Recoverable	Prep	3005A			525816	05/10/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526117	05/11/22 14:32	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	526133	05/11/22 15:30	BLW	TAL CAN
Total/NA	Analysis	300.0		5	526405	05/14/22 22:27	JMB	TAL CAN
Total/NA	Analysis	300.0		50	526405	05/14/22 22:48	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	525986	05/11/22 10:03	MED	TAL CAN

Client Sample ID: DUP-002-MW-17-F-20220505-01

Lab Sample ID: 240-166242-2

Date Collected: 05/05/22 12:54
Date Received: 05/09/22 13:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525816	05/10/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	526304	05/12/22 21:29	RKT	TAL CAN
Total Recoverable	Prep	3005A			525816	05/10/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526117	05/11/22 14:44	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	526133	05/11/22 15:37	BLW	TAL CAN
Total/NA	Analysis	300.0		5	526405	05/14/22 23:08	JMB	TAL CAN
Total/NA	Analysis	300.0		50	526405	05/15/22 00:08	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	525986	05/11/22 10:03	MED	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166242-1
Project/Site: Gavin CCR App III

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	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	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	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

3.3/3.3

Chain of Custody Record

Columbus 209 131

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Client Information	Sampler: Shaun	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-94764-34852.2
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 2 of 4
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

AP - 111

Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020	2540C_Calcd, 300.0_28D	2320B - Alkalinity	Total Number of containers
			Preservation Code:				D	N	N	
MW-17-F-20220505-01	5/5/22	1344	G	Water			1	1	1	3
Dup-002-MW-17-F-20220505-01	5/5/22	1254	G	Water			1	1	1	3
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						

240-166242 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Shaun	5-9-22 0830	Eurofins		5-9-22 1330	EETMC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/17/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative **Login # : 166242**
Canton Facility

Client LightStone Site Name _____ Cooler unpacked by: Tanya Rya

Cooler Received on 5-9-22 Opened on 5-9-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ 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. 3.3 °C Corrected Cooler Temp. 3.3 °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	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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

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 Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW-17-F-20220505-01	240-166242-A-1	Plastic 250ml - unpreserved				
MW-17-F-20220505-01	240-166242-B-1	Plastic 500ml - unpreserved				
MW-17-F-20220505-01	240-166242-C-1	Plastic 500ml - with Nitric Acid	<2			
DUP-002-MW-17-F-20220505-01	240-166242-A-2	Plastic 250ml - unpreserved				
DUP-002-MW-17-F-20220505-01	240-166242-B-2	Plastic 500ml - unpreserved				
DUP-002-MW-17-F-20220505-01	240-166242-C-2	Plastic 500ml - with Nitric Acid	<2			

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-166243-1
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:
6/8/2022 3:16:18 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166243-1

Qualifiers

Metals

Qualifier	Qualifier Description
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-166243-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-166243-1

Comments
No additional comments.

Receipt
The samples were received on 5/9/2022 1:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.3º C.

RAD
Methods 9315: Radium-226 batch 564957: 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-16-F-20220505-01 (240-166243-1), MW-17-F-20220505-01 (240-166243-2), DUP-002-MW-17-F-20220505-01 (240-166243-3), (LCS 160-564957/1-A), (MB 160-564957/22-A)

Method 9320: Radium-228 Batch 564962: 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: MW-16-F-20220505-01 (240-166243-1). Analytical results are reported with the detection limit achieved.

Methods 9320: Radium-228 Batch 564962: 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-16-F-20220505-01 (240-166243-1), MW-17-F-20220505-01 (240-166243-2), DUP-002-MW-17-F-20220505-01 (240-166243-3), (LCS 160-564962/1-A), (MB 160-564962/22-A)

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: 240-166243-1

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: 240-166243-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166243-1	MW-16-F-20220505-01	Water	05/05/22 10:28	05/09/22 13:30
240-166243-2	MW-17-F-20220505-01	Water	05/05/22 12:44	05/09/22 13:30
240-166243-3	DUP-002-MW-17-F-20220505-01	Water	05/05/22 12:54	05/09/22 13:30

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166243-1

Client Sample ID: MW-16-F-20220505-01 — Lab Sample ID: 240-166243-1

No Detections.

Client Sample ID: MW-17-F-20220505-01 — Lab Sample ID: 240-166243-2

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	2200		5.0	2.2	ug/L	1		6020	Total Recoverable
Lithium	75		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	17000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	7.1		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	5000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	2500000		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	1.7		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: DUP-002-MW-17-F-20220505-01 — Lab Sample ID: 240-166243-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	18		5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	2400		5.0	2.2	ug/L	1		6020	Total Recoverable
Lithium	80		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	18000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	9.1		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	5500		1000	220	ug/L	1		6020	Total Recoverable
Sodium	2700000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	1.7		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-16-F-20220505-01
Lab Sample ID: 240-166243-1

Date Collected: 05/05/22 10:28
Matrix: Water
Date Received: 05/09/22 13:30

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.370	U	0.435	0.436	1.00	0.702	pCi/L	05/11/22 09:11	06/07/22 20:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.1*		*40 - 110*	*05/11/22 09:11*	*06/07/22 20:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.674	U G	0.728	0.731	1.00	1.19	pCi/L	05/11/22 10:17	06/07/22 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.1*		*40 - 110*	*05/11/22 10:17*	*06/07/22 12:13*	*1*
Y Carrier	*85.6*		*40 - 110*	*05/11/22 10:17*	*06/07/22 12:13*	*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	1.04	U	0.848	0.851	5.00	1.19	pCi/L		06/08/22 14:45	1

Client Sample ID: MW-17-F-20220505-01
Lab Sample ID: 240-166243-2

Date Collected: 05/05/22 12:44
Matrix: Water
Date Received: 05/09/22 13:30

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		05/10/22 12:00	05/11/22 14:15	1
Arsenic	**17**		5.0	0.75	ug/L		05/10/22 12:00	05/11/22 14:15	1
Barium	**2200**		5.0	2.2	ug/L		05/10/22 12:00	05/11/22 14:15	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/10/22 12:00	05/11/22 14:15	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/10/22 12:00	05/11/22 14:15	1
Chromium	5.0	U	5.0	2.5	ug/L		05/10/22 12:00	05/11/22 14:15	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/10/22 12:00	05/11/22 14:15	1
Lead	1.0	U	1.0	0.45	ug/L		05/10/22 12:00	05/11/22 14:15	1
Lithium	**75**		8.0	1.7	ug/L		05/10/22 12:00	05/11/22 14:15	1
Magnesium	**17000**		1000	200	ug/L		05/10/22 12:00	05/11/22 14:15	1
Molybdenum	**7.1**		5.0	1.1	ug/L		05/10/22 12:00	05/11/22 14:15	1
Potassium	**5000**		1000	220	ug/L		05/10/22 12:00	05/11/22 14:15	1
Selenium	5.0	U	5.0	0.89	ug/L		05/10/22 12:00	05/11/22 14:15	1
Sodium	**2500000**		1000	330	ug/L		05/10/22 12:00	05/11/22 14:15	1
Thallium	1.0	U	1.0	0.20	ug/L		05/10/22 12:00	05/11/22 14:15	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		05/10/22 12:00	05/11/22 16:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**260**		5.0	2.6	mg/L			05/11/22 15:47	1
Bicarbonate Alkalinity as CaCO3	**260**		5.0	2.6	mg/L			05/11/22 15:47	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/11/22 15:47	1
Fluoride	**1.7**		0.25	0.12	mg/L			05/15/22 00:28	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.20**		0.519	0.556	1.00	0.351	pCi/L	05/11/22 09:11	06/07/22 20:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*40 - 110*	*05/11/22 09:11*	*06/07/22 20:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.88**		0.671	0.722	1.00	0.686	pCi/L	05/11/22 10:17	06/07/22 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*40 - 110*	*05/11/22 10:17*	*06/07/22 12:13*	*1*
Y Carrier	*84.9*		*40 - 110*	*05/11/22 10:17*	*06/07/22 12:13*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166243-1
Project/Site: Gavin CCR App IV

Client Sample ID: MW-17-F-20220505-01
Lab Sample ID: 240-166243-2
Date Collected: 05/05/22 12:44
Matrix: Water
Date Received: 05/09/22 13:30

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	5.08		0.848	0.911	5.00	0.686	pCi/L		06/08/22 14:45	1

Client Sample ID: DUP-002-MW-17-F-20220505-01
Lab Sample ID: 240-166243-3

Date Collected: 05/05/22 12:54
Matrix: Water
Date Received: 05/09/22 13:30

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		05/10/22 12:00	05/11/22 14:17	1
Arsenic	**18**		5.0	0.75	ug/L		05/10/22 12:00	05/11/22 14:17	1
Barium	**2400**		5.0	2.2	ug/L		05/10/22 12:00	05/11/22 14:17	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/10/22 12:00	05/11/22 14:17	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/10/22 12:00	05/11/22 14:17	1
Chromium	5.0	U	5.0	2.5	ug/L		05/10/22 12:00	05/11/22 14:17	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/10/22 12:00	05/11/22 14:17	1
Lead	1.0	U	1.0	0.45	ug/L		05/10/22 12:00	05/11/22 14:17	1
Lithium	**80**		8.0	1.7	ug/L		05/10/22 12:00	05/11/22 14:17	1
Magnesium	**18000**		1000	200	ug/L		05/10/22 12:00	05/11/22 14:17	1
Molybdenum	**9.1**		5.0	1.1	ug/L		05/10/22 12:00	05/11/22 14:17	1
Potassium	**5500**		1000	220	ug/L		05/10/22 12:00	05/11/22 14:17	1
Selenium	5.0	U	5.0	0.89	ug/L		05/10/22 12:00	05/11/22 14:17	1
Sodium	**2700000**		1000	330	ug/L		05/10/22 12:00	05/11/22 14:17	1
Thallium	1.0	U	1.0	0.20	ug/L		05/10/22 12:00	05/11/22 14:17	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		05/10/22 12:00	05/11/22 16:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**250**		5.0	2.6	mg/L			05/11/22 15:51	1
Bicarbonate Alkalinity as CaCO3	**250**		5.0	2.6	mg/L			05/11/22 15:51	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/11/22 15:51	1
Fluoride	**1.7**		0.25	0.12	mg/L			05/14/22 12:46	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.18**		0.508	0.545	1.00	0.345	pCi/L	05/11/22 09:11	06/07/22 20:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/11/22 09:11*	*06/07/22 20:09*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.73**		0.620	0.669	1.00	0.607	pCi/L	05/11/22 10:17	06/07/22 12:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/11/22 10:17*	*06/07/22 12:13*	*1*
Y Carrier	*84.5*		*40 - 110*	*05/11/22 10:17*	*06/07/22 12:13*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166243-1
Project/Site: Gavin CCR App IV

Client Sample ID: DUP-002-MW-17-F-20220505-01
Lab Sample ID: 240-166243-3
Date Collected: 05/05/22 12:54
Matrix: Water
Date Received: 05/09/22 13:30

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	4.91		0.802	0.863	5.00	0.607	pCi/L		06/08/22 14:45	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166243-1
Project/Site: Gavin CCR App IV

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)
240-166243-1	MW-16-F-20220505-01	78.1
240-166243-2	MW-17-F-20220505-01	93.8
240-166243-3	DUP-002-MW-17-F-20220505-01	101
LCS 160-564957/1-A	Lab Control Sample	86.0
MB 160-564957/22-A	Method Blank	93.0

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-166243-1	MW-16-F-20220505-01	78.1	85.6
240-166243-2	MW-17-F-20220505-01	93.8	84.9
240-166243-3	DUP-002-MW-17-F-20220505-01	101	84.5
LCS 160-564962/1-A	Lab Control Sample	86.0	88.2
MB 160-564962/22-A	Method Blank	93.0	91.2

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-525813/1-A
Matrix: Water
Analysis Batch: 526117

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 525813

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/10/22 12:00	05/11/22 13:36	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/10/22 12:00	05/11/22 13:36	1
Barium	5.0	U	5.0	2.2	ug/L		05/10/22 12:00	05/11/22 13:36	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/10/22 12:00	05/11/22 13:36	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/10/22 12:00	05/11/22 13:36	1
Chromium	5.0	U	5.0	2.5	ug/L		05/10/22 12:00	05/11/22 13:36	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/10/22 12:00	05/11/22 13:36	1
Lead	1.0	U	1.0	0.45	ug/L		05/10/22 12:00	05/11/22 13:36	1
Lithium	8.0	U	8.0	1.7	ug/L		05/10/22 12:00	05/11/22 13:36	1
Magnesium	1000	U	1000	200	ug/L		05/10/22 12:00	05/11/22 13:36	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/10/22 12:00	05/11/22 13:36	1
Potassium	1000	U	1000	220	ug/L		05/10/22 12:00	05/11/22 13:36	1
Selenium	5.0	U	5.0	0.89	ug/L		05/10/22 12:00	05/11/22 13:36	1
Sodium	1000	U	1000	330	ug/L		05/10/22 12:00	05/11/22 13:36	1
Thallium	1.0	U	1.0	0.20	ug/L		05/10/22 12:00	05/11/22 13:36	1

Lab Sample ID: LCS 240-525813/3-A
Matrix: Water
Analysis Batch: 526117

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 525813

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	102		ug/L		102	80 - 120
Arsenic	1000	941		ug/L		94	80 - 120
Barium	1000	1010		ug/L		101	80 - 120
Beryllium	500	506		ug/L		101	80 - 120
Cadmium	500	488		ug/L		98	80 - 120
Chromium	500	488		ug/L		98	80 - 120
Cobalt	500	491		ug/L		98	80 - 120
Lead	500	512		ug/L		102	80 - 120
Lithium	500	499		ug/L		100	80 - 120
Magnesium	25000	24500		ug/L		98	80 - 120
Molybdenum	500	478		ug/L		96	80 - 120
Potassium	25000	24000		ug/L		96	80 - 120
Selenium	1000	941		ug/L		94	80 - 120
Sodium	25000	24500		ug/L		98	80 - 120
Thallium	1000	966		ug/L		97	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-525815/1-A
Matrix: Water
Analysis Batch: 526118

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525815

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/10/22 12:00	05/11/22 15:58	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-525815/2-A
Matrix: Water
Analysis Batch: 526118

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525815

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.29		ug/L		106	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-526133/4
Matrix: Water
Analysis Batch: 526133

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			05/11/22 14:53	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/11/22 14:53	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/11/22 14:53	1

Lab Sample ID: LCS 240-526133/3
Matrix: Water
Analysis Batch: 526133

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	119		mg/L		98	86 - 123

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-526405/3
Matrix: Water
Analysis Batch: 526405

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			05/14/22 12:03	1

Lab Sample ID: LCS 240-526405/4
Matrix: Water
Analysis Batch: 526405

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	2.44		mg/L		98	90 - 110

Lab Sample ID: MB 240-526415/3
Matrix: Water
Analysis Batch: 526415

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			05/14/22 12:02	1

Lab Sample ID: LCS 240-526415/4
Matrix: Water
Analysis Batch: 526415

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	2.54		mg/L		102	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-564957/22-A
Matrix: Water
Analysis Batch: 568823

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 564957

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.08193	U	0.150	0.151	1.00	0.269	pCi/L	05/11/22 09:11	06/07/22 22:01	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.0*		*40 - 110*	*05/11/22 09:11*	*06/07/22 22:01*	*1*

Lab Sample ID: LCS 160-564957/1-A
Matrix: Water
Analysis Batch: 568823

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 564957

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	9.385		1.26	1.00	0.377	pCi/L	83	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*86.0*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-564962/22-A
Matrix: Water
Analysis Batch: 568823

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 564962

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1495	U	0.297	0.297	1.00	0.514	pCi/L	05/11/22 10:17	06/07/22 12:23	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.0*		*40 - 110*	*05/11/22 10:17*	*06/07/22 12:23*	*1*
Y Carrier	*91.2*		*40 - 110*	*05/11/22 10:17*	*06/07/22 12:23*	*1*

Lab Sample ID: LCS 160-564962/1-A
Matrix: Water
Analysis Batch: 568850

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 564962

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.55	8.547		1.20	1.00	0.534	pCi/L	100	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*86.0*		*40 - 110*
Y Carrier	*88.2*		*40 - 110*

Metals

Prep Batch: 525813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-2	MW-17-F-20220505-01	Total Recoverable	Water	3005A	
240-166243-3	DUP-002-MW-17-F-20220505-01	Total Recoverable	Water	3005A	
MB 240-525813/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-525813/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 525815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-2	MW-17-F-20220505-01	Total/NA	Water	7470A	
240-166243-3	DUP-002-MW-17-F-20220505-01	Total/NA	Water	7470A	
MB 240-525815/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-525815/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 526117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-2	MW-17-F-20220505-01	Total Recoverable	Water	6020	525813
240-166243-3	DUP-002-MW-17-F-20220505-01	Total Recoverable	Water	6020	525813
MB 240-525813/1-A	Method Blank	Total Recoverable	Water	6020	525813
LCS 240-525813/3-A	Lab Control Sample	Total Recoverable	Water	6020	525813

Analysis Batch: 526118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-2	MW-17-F-20220505-01	Total/NA	Water	7470A	525815
240-166243-3	DUP-002-MW-17-F-20220505-01	Total/NA	Water	7470A	525815
MB 240-525815/1-A	Method Blank	Total/NA	Water	7470A	525815
LCS 240-525815/2-A	Lab Control Sample	Total/NA	Water	7470A	525815

General Chemistry

Analysis Batch: 526133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-2	MW-17-F-20220505-01	Total/NA	Water	2320B-1997	
240-166243-3	DUP-002-MW-17-F-20220505-01	Total/NA	Water	2320B-1997	
MB 240-526133/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-526133/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 526405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-2	MW-17-F-20220505-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-526405/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-526405/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 526415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-3	DUP-002-MW-17-F-20220505-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-526415/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-526415/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 564957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-1	MW-16-F-20220505-01	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 564957 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-2	MW-17-F-20220505-01	Total/NA	Water	PrecSep-21	
240-166243-3	DUP-002-MW-17-F-20220505-01	Total/NA	Water	PrecSep-21	
MB 160-564957/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-564957/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 564962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166243-1	MW-16-F-20220505-01	Total/NA	Water	PrecSep_0	
240-166243-2	MW-17-F-20220505-01	Total/NA	Water	PrecSep_0	
240-166243-3	DUP-002-MW-17-F-20220505-01	Total/NA	Water	PrecSep_0	
MB 160-564962/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-564962/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166243-1

Client Sample ID: MW-16-F-20220505-01

Lab Sample ID: 240-166243-1

Date Collected: 05/05/22 10:28
Matrix: Water
Date Received: 05/09/22 13:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			564957	05/11/22 09:11	LPS	TAL SL
Total/NA	Analysis	9315		1	568823	06/07/22 20:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564962	05/11/22 10:17	MS	TAL SL
Total/NA	Analysis	9320		1	568850	06/07/22 12:13	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569200	06/08/22 14:45	SCB	TAL SL

Client Sample ID: MW-17-F-20220505-01

Lab Sample ID: 240-166243-2

Date Collected: 05/05/22 12:44
Matrix: Water
Date Received: 05/09/22 13:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525813	05/10/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526117	05/11/22 14:15	AJC	TAL CAN
Total/NA	Prep	7470A			525815	05/10/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	526118	05/11/22 16:35	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	526133	05/11/22 15:47	BLW	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		5	526405	05/15/22 00:28	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			564957	05/11/22 09:11	LPS	TAL SL
Total/NA	Analysis	9315		1	568823	06/07/22 20:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564962	05/11/22 10:17	MS	TAL SL
Total/NA	Analysis	9320		1	568850	06/07/22 12:13	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569200	06/08/22 14:45	SCB	TAL SL

Client Sample ID: DUP-002-MW-17-F-20220505-01

Lab Sample ID: 240-166243-3

Date Collected: 05/05/22 12:54
Matrix: Water
Date Received: 05/09/22 13:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			525813	05/10/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526117	05/11/22 14:17	AJC	TAL CAN
Total/NA	Prep	7470A			525815	05/10/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	526118	05/11/22 16:37	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	526133	05/11/22 15:51	BLW	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		5	526415	05/14/22 12:46	JMB	TAL CAN
Total/NA	Prep	PrecSep-21			564957	05/11/22 09:11	LPS	TAL SL
Total/NA	Analysis	9315		1	568823	06/07/22 20:09	FLC	TAL SL
Total/NA	Prep	PrecSep_0			564962	05/11/22 10:17	MS	TAL SL
Total/NA	Analysis	9320		1	568850	06/07/22 12:13	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569200	06/08/22 14:45	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
Job ID: 240-166243-1
Project/Site: Gavin CCR App IV

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	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
Job ID: 240-166243-1
Project/Site: Gavin CCR App IV

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

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

Columbus 209 131

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Client Information	Sampler: Shain	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-94765-34853.2
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 2 of 3
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

AP - IV

Special Instructions/Note:

240-166243 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers
			Preservation Code:				D	N	N	D	
MW-16-F-20220505-01	5-5-22	1028	G	Water						2	2
MW-17-F-20220505-01	5-5-22	1244	G	Water			1	1	1	2	5
Dup-002-MW-17-F-20220505-01	5-5-22	1254	G	Water			1	1	1	2	5
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Lauren Shain	5-9-22 0830	Gavin		5-9-22 1330	ET NC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : 166293
Canton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Nancy Reyes

Cooler Received on 5-9-22 Opened on 5-9-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1 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. 3.3 °C Corrected Cooler Temp. 3.3 °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)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Y)	(N) (Y)
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# **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)

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 Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW-16-F-20220505-01	240-166243-A-1	Plastic 1 liter - Nitric Acid	<2			
MW-16-F-20220505-01	240-166243-B-1	Plastic 1 liter - Nitric Acid	<2			
MW-17-F-20220505-01	240-166243-A-2	Plastic 250ml - unpreserved				
MW-17-F-20220505-01	240-166243-B-2	Plastic 250ml - unpreserved				
MW-17-F-20220505-01	240-166243-C-2	Plastic 500ml - with Nitric Acid	<2			
MW-17-F-20220505-01	240-166243-D-2	Plastic 1 liter - Nitric Acid	<2			
MW-17-F-20220505-01	240-166243-E-2	Plastic 1 liter - Nitric Acid	<2			
DUP-002-MW-17-F-20220505-01	240-166243-A-3	Plastic 250ml - unpreserved				
DUP-002-MW-17-F-20220505-01	240-166243-B-3	Plastic 250ml - unpreserved				
DUP-002-MW-17-F-20220505-01	240-166243-C-3	Plastic 500ml - with Nitric Acid	<2			
DUP-002-MW-17-F-20220505-01	240-166243-D-3	Plastic 1 liter - Nitric Acid	<2			
DUP-002-MW-17-F-20220505-01	240-166243-E-3	Plastic 1 liter - Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-151774.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-166243-1
Address: 13715 Rider Trail North,	Due Date Requested: 5/22/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-16-F-20220505-01 (240-166243-1)	5/5/22	10:28 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
MW-17-F-20220505-01 (240-166243-2)	5/5/22	12:44 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
DUP-002-MW-17-F-20220505-01 (240-166243-3)	5/5/22	12:54 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5-4-22 1425	ccmc	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by: [signature]	Date/Time: MAY 10 2022 0915	Company ETNCR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-166243-1

Login Number: 166243
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 05/10/22 11:53 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-166589-1
Client Project/Site: Gavin CCR App III

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
5/27/2022 8:42:45 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App III

Job ID: 240-166589-1

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.
¤	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 III

Job ID: 240-166589-1

Job ID: 240-166589-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-166589-1

Comments
No additional comments.

Receipt
The samples were received on 5/13/2022 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 2 coolers at receipt time were 2.2º C and 3.9º C.

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: Gavin CCR App III

Job ID: 240-166589-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL 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:

TAL 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: Gavin CCR App III

Job ID: 240-166589-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166589-1	2018-01-F-20220509-01	Water	05/09/22 09:30	05/13/22 08:00
240-166589-2	96152-F-20220510-01	Water	05/10/22 09:19	05/13/22 08:00
240-166589-3	EB-001-F-20220510-01	Water	05/10/22 10:30	05/13/22 08:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App III

Job ID: 240-166589-1

Client Sample ID: 2018-01-F-20220509-01 — Lab Sample ID: 240-166589-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	360		100	57	ug/L	1		6010B	Total Recoverable
Calcium	34000		1000	580	ug/L	1		6020	Total Recoverable
Magnesium	250	J	1000	200	ug/L	1		6020	Total Recoverable
Potassium	3400		1000	220	ug/L	1		6020	Total Recoverable
Sodium	2200000		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	37		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	200		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3800		50	14	mg/L	50		300.0	Total/NA
Fluoride	2.7		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	36		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	6200		100	78	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 96152-F-20220510-01 — Lab Sample ID: 240-166589-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	450		100	57	ug/L	1		6010B	Total Recoverable
Calcium	49000		1000	580	ug/L	1		6020	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020	Total Recoverable
Potassium	8300		1000	220	ug/L	1		6020	Total Recoverable
Sodium	2100000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	470		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	470		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3500		50	14	mg/L	50		300.0	Total/NA
Fluoride	0.91		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	43		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	5000		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220510-01 — Lab Sample ID: 240-166589-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	820	J	1000	330	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166589-1
Project/Site: Gavin CCR App III

Client Sample ID: 2018-01-F-20220509-01
Lab Sample ID: 240-166589-1

Date Collected: 05/09/22 09:30
Matrix: Water
Date Received: 05/13/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	360		100	57	ug/L		05/16/22 12:00	05/18/22 02:15	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	34000		1000	580	ug/L		05/16/22 12:00	05/17/22 19:28	1
Magnesium	250	J	1000	200	ug/L		05/16/22 12:00	05/17/22 19:28	1
Potassium	3400		1000	220	ug/L		05/16/22 12:00	05/17/22 19:28	1
Sodium	2200000		1000	330	ug/L		05/16/22 12:00	05/17/22 19:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			05/17/22 13:13	1
Bicarbonate Alkalinity as CaCO3	37		5.0	2.6	mg/L			05/17/22 13:13	1
Carbonate Alkalinity as CaCO3	200		5.0	2.6	mg/L			05/17/22 13:13	1
Chloride	3800		50	14	mg/L			05/19/22 10:52	50
Fluoride	2.7		0.25	0.12	mg/L			05/19/22 10:30	5
Sulfate	36		5.0	1.7	mg/L			05/19/22 10:30	5
Total Dissolved Solids	6200		100	78	mg/L			05/16/22 09:02	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166589-1
Project/Site: Gavin CCR App III

Client Sample ID: 96152-F-20220510-01
Lab Sample ID: 240-166589-2

Date Collected: 05/10/22 09:19
Matrix: Water
Date Received: 05/13/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	450		100	57	ug/L		05/16/22 12:00	05/18/22 02:41	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	49000		1000	580	ug/L		05/16/22 12:00	05/17/22 19:40	1
Magnesium	16000		1000	200	ug/L		05/16/22 12:00	05/17/22 19:40	1
Potassium	8300		1000	220	ug/L		05/16/22 12:00	05/17/22 19:40	1
Sodium	2100000		1000	330	ug/L		05/16/22 12:00	05/17/22 19:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	470		5.0	2.6	mg/L			05/17/22 13:18	1
Bicarbonate Alkalinity as CaCO3	470		5.0	2.6	mg/L			05/17/22 13:18	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 13:18	1
Chloride	3500		50	14	mg/L			05/19/22 11:35	50
Fluoride	0.91		0.25	0.12	mg/L			05/19/22 11:14	5
Sulfate	43		5.0	1.7	mg/L			05/19/22 11:14	5
Total Dissolved Solids	5000		50	39	mg/L			05/16/22 09:02	1

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166589-1
Project/Site: Gavin CCR App III

Client Sample ID: EB-001-F-20220510-01
Lab Sample ID: 240-166589-3
Date Collected: 05/10/22 10:30
Matrix: Water
Date Received: 05/13/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		05/16/22 12:00	05/18/22 02:46	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		05/16/22 12:00	05/17/22 19:42	1
Magnesium	1000	U	1000	200	ug/L		05/16/22 12:00	05/17/22 19:42	1
Potassium	1000	U	1000	220	ug/L		05/16/22 12:00	05/17/22 19:42	1
Sodium	**820**	**J**	1000	330	ug/L		05/16/22 12:00	05/17/22 19:42	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			05/17/22 13:21	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 13:21	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 13:21	1
Chloride	1.0	U	1.0	0.28	mg/L			05/19/22 11:57	1
Fluoride	0.050	U	0.050	0.024	mg/L			05/19/22 11:57	1
Sulfate	1.0	U	1.0	0.35	mg/L			05/19/22 11:57	1
Total Dissolved Solids	10	U	10	7.8	mg/L			05/16/22 09:02	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-526629/1-A
Matrix: Water
Analysis Batch: 526894

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 526629

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		05/16/22 12:00	05/18/22 02:06	1

Lab Sample ID: LCS 240-526629/2-A
Matrix: Water
Analysis Batch: 526894

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 526629

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	999		ug/L		100	80 - 120

Lab Sample ID: 240-166589-1 MS
Matrix: Water
Analysis Batch: 526894

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total Recoverable
Prep Batch: 526629

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	360		1000	1380		ug/L		102	75 - 125

Lab Sample ID: 240-166589-1 MSD
Matrix: Water
Analysis Batch: 526894

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total Recoverable
Prep Batch: 526629

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	360		1000	1350		ug/L		99	75 - 125	2	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-526629/1-A
Matrix: Water
Analysis Batch: 526903

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 526629

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		05/16/22 12:00	05/17/22 19:23	1
Magnesium	1000	U	1000	200	ug/L		05/16/22 12:00	05/17/22 19:23	1
Potassium	1000	U	1000	220	ug/L		05/16/22 12:00	05/17/22 19:23	1
Sodium	1000	U	1000	330	ug/L		05/16/22 12:00	05/17/22 19:23	1

Lab Sample ID: LCS 240-526629/3-A
Matrix: Water
Analysis Batch: 526903

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 526629

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24000		ug/L		96	80 - 120
Magnesium	25000	24800		ug/L		99	80 - 120
Potassium	25000	24100		ug/L		96	80 - 120
Sodium	25000	24500		ug/L		98	80 - 120

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

Lab Sample ID: 240-166589-1 MS
Matrix: Water
Analysis Batch: 526903

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total Recoverable
Prep Batch: 526629

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	34000		25000	59100		ug/L		101	75 - 125
Magnesium	250	J	25000	25800		ug/L		102	75 - 125
Potassium	3400		25000	28000		ug/L		99	75 - 125
Sodium	2200000		25000	2240000	4	ug/L		97	75 - 125

Lab Sample ID: 240-166589-1 MSD
Matrix: Water
Analysis Batch: 526903

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total Recoverable
Prep Batch: 526629

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	34000		25000	58100		ug/L		96	75 - 125	2	20
Magnesium	250	J	25000	25300		ug/L		100	75 - 125	2	20
Potassium	3400		25000	27400		ug/L		96	75 - 125	2	20
Sodium	2200000		25000	2200000	4	ug/L		-51	75 - 125	2	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-526813/7
Matrix: Water
Analysis Batch: 526813

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			05/17/22 11:14	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 11:14	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/17/22 11:14	1

Lab Sample ID: LCS 240-526813/6
Matrix: Water
Analysis Batch: 526813

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	115		mg/L		95	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-526998/3
Matrix: Water
Analysis Batch: 526998

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			05/19/22 00:22	1
Fluoride	0.050	U	0.050	0.024	mg/L			05/19/22 00:22	1
Sulfate	1.0	U	1.0	0.35	mg/L			05/19/22 00:22	1

Lab Sample ID: LCS 240-526998/4
Matrix: Water
Analysis Batch: 526998

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	50.2		mg/L		100	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-526998/4
Matrix: Water
Analysis Batch: 526998

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	2.59		mg/L		104	90 - 110		
Sulfate			50.0	51.5		mg/L		103	90 - 110		

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-526525/1
Matrix: Water
Analysis Batch: 526525

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			05/16/22 09:02	1

Lab Sample ID: LCS 240-526525/2
Matrix: Water
Analysis Batch: 526525

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			482	450		mg/L		93	80 - 120		

Lab Sample ID: 240-166589-1 DU
Matrix: Water
Analysis Batch: 526525

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	6200			6000		mg/L				4	20

Metals

Prep Batch: 526629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166589-1	2018-01-F-20220509-01	Total Recoverable	Water	3005A	
240-166589-2	96152-F-20220510-01	Total Recoverable	Water	3005A	
240-166589-3	EB-001-F-20220510-01	Total Recoverable	Water	3005A	
MB 240-526629/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-526629/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-526629/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-166589-1 MS	2018-01-F-20220509-01	Total Recoverable	Water	3005A	
240-166589-1 MS	2018-01-F-20220509-01	Total Recoverable	Water	3005A	
240-166589-1 MSD	2018-01-F-20220509-01	Total Recoverable	Water	3005A	
240-166589-1 MSD	2018-01-F-20220509-01	Total Recoverable	Water	3005A	

Analysis Batch: 526894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166589-1	2018-01-F-20220509-01	Total Recoverable	Water	6010B	526629
240-166589-2	96152-F-20220510-01	Total Recoverable	Water	6010B	526629
240-166589-3	EB-001-F-20220510-01	Total Recoverable	Water	6010B	526629
MB 240-526629/1-A	Method Blank	Total Recoverable	Water	6010B	526629
LCS 240-526629/2-A	Lab Control Sample	Total Recoverable	Water	6010B	526629
240-166589-1 MS	2018-01-F-20220509-01	Total Recoverable	Water	6010B	526629
240-166589-1 MSD	2018-01-F-20220509-01	Total Recoverable	Water	6010B	526629

Analysis Batch: 526903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166589-1	2018-01-F-20220509-01	Total Recoverable	Water	6020	526629
240-166589-2	96152-F-20220510-01	Total Recoverable	Water	6020	526629
240-166589-3	EB-001-F-20220510-01	Total Recoverable	Water	6020	526629
MB 240-526629/1-A	Method Blank	Total Recoverable	Water	6020	526629
LCS 240-526629/3-A	Lab Control Sample	Total Recoverable	Water	6020	526629
240-166589-1 MS	2018-01-F-20220509-01	Total Recoverable	Water	6020	526629
240-166589-1 MSD	2018-01-F-20220509-01	Total Recoverable	Water	6020	526629

General Chemistry

Analysis Batch: 526525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166589-1	2018-01-F-20220509-01	Total/NA	Water	SM 2540C	
240-166589-2	96152-F-20220510-01	Total/NA	Water	SM 2540C	
240-166589-3	EB-001-F-20220510-01	Total/NA	Water	SM 2540C	
MB 240-526525/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-526525/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-166589-1 DU	2018-01-F-20220509-01	Total/NA	Water	SM 2540C	

Analysis Batch: 526813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166589-1	2018-01-F-20220509-01	Total/NA	Water	2320B-1997	
240-166589-2	96152-F-20220510-01	Total/NA	Water	2320B-1997	
240-166589-3	EB-001-F-20220510-01	Total/NA	Water	2320B-1997	
MB 240-526813/7	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-526813/6	Lab Control Sample	Total/NA	Water	2320B-1997	

General Chemistry

Analysis Batch: 526998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166589-1	2018-01-F-20220509-01	Total/NA	Water	300.0	
240-166589-1	2018-01-F-20220509-01	Total/NA	Water	300.0	
240-166589-2	96152-F-20220510-01	Total/NA	Water	300.0	
240-166589-2	96152-F-20220510-01	Total/NA	Water	300.0	
240-166589-3	EB-001-F-20220510-01	Total/NA	Water	300.0	
MB 240-526998/3	Method Blank	Total/NA	Water	300.0	
LCS 240-526998/4	Lab Control Sample	Total/NA	Water	300.0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App III

Job ID: 240-166589-1

Client Sample ID: 2018-01-F-20220509-01

Lab Sample ID: 240-166589-1

Date Collected: 05/09/22 09:30
Matrix: Water
Date Received: 05/13/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			526629	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	526894	05/18/22 02:15	RKT	TAL CAN
Total Recoverable	Prep	3005A			526629	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526903	05/17/22 19:28	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 13:13	JMB	TAL CAN
Total/NA	Analysis	300.0		5	526998	05/19/22 10:30	JMB	TAL CAN
Total/NA	Analysis	300.0		50	526998	05/19/22 10:52	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	526525	05/16/22 09:02	MED	TAL CAN

Client Sample ID: 96152-F-20220510-01

Lab Sample ID: 240-166589-2

Date Collected: 05/10/22 09:19
Matrix: Water
Date Received: 05/13/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			526629	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	526894	05/18/22 02:41	RKT	TAL CAN
Total Recoverable	Prep	3005A			526629	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526903	05/17/22 19:40	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 13:18	JMB	TAL CAN
Total/NA	Analysis	300.0		5	526998	05/19/22 11:14	JMB	TAL CAN
Total/NA	Analysis	300.0		50	526998	05/19/22 11:35	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	526525	05/16/22 09:02	MED	TAL CAN

Client Sample ID: EB-001-F-20220510-01

Lab Sample ID: 240-166589-3

Date Collected: 05/10/22 10:30
Matrix: Water
Date Received: 05/13/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			526629	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010B		1	526894	05/18/22 02:46	RKT	TAL CAN
Total Recoverable	Prep	3005A			526629	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526903	05/17/22 19:42	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	526813	05/17/22 13:21	JMB	TAL CAN
Total/NA	Analysis	300.0		1	526998	05/19/22 11:57	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	526525	05/16/22 09:02	MED	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166589-1
Project/Site: Gavin CCR App III

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	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	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	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

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Chain of Custody Record

Columbus 209

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Client Information	Sampler: Shawn	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-94764-34852.3
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 3 of 4
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

AP-111

Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020	2540C_Calcd, 300.0_28D	2320B - Alkalinity	Total Number of containers
			Preservation Code:				D	N	N	
2018-01-F-20220509-01	5-9-22	0930	G	Water			1	1	1	3
96152-F-20220510-01	5-10-22	0919	G	Water			1	1	1	3
EB-001-F-20220510-01	5-10-22	1030	G	Water			1	1	1	3
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						

240-166589 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
1	Cash	5-12-22 0845	Gavin	[illegible]	5/12/22 1500	ETA
2	J. Mills	5/12/22 1700	ETA	[illegible]	5-13-22 0800	ETNC
3						

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

5/27/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative Login # : 166589
Canton Facility

Client Lightstone Generation Site Name _____ Cooler unpacked by: One

Cooler Received on 5-13-22 Opened on 5-13-22

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 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
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login # : 166589

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	3.9	3.9	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	2.2	2.2	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
				☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2018-01-F-20220509-01	240-166589-C-1	Plastic 500ml - with Nitric Acid	<2			
96152-5-20220510-01	240-166589-C-2	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220510-01	240-166589-C-3	Plastic 500ml - with Nitric Acid	<2			

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-166591-1
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:
6/14/2022 9:04:29 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166591-1

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.
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
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-166591-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-166591-1

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 5/13/2022 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 2 coolers at receipt time were 2.2º C and 3.9º C.

RAD
Method 9315: Radium-226 batch 566195: 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: 2003-F-20220510-01 (240-166591-5). Analytical results are reported with the detection limit achieved.

Methods 9315: Radium-226 batch 566195: 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. 2018-01-F-20220509-01 (240-166591-1), 2016-07-F-20220509-01 (240-166591-2), 96152-F-20220510-01 (240-166591-3), EB-001-F-20220510-01 (240-166591-4), 2003-F-20220510-01 (240-166591-5), (LCS 160-566195/1-A), (LCSD 160-566195/2-A) and (MB 160-566195/23-A)

Method 9320: Radium-228 Batch 566201: 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: 2003-F-20220510-01 (240-166591-5). Analytical results are reported with the detection limit achieved.

Methods 9320: Radium-228 Batch 566201: 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. 2018-01-F-20220509-01 (240-166591-1), 2016-07-F-20220509-01 (240-166591-2), 96152-F-20220510-01 (240-166591-3), EB-001-F-20220510-01 (240-166591-4), 2003-F-20220510-01 (240-166591-5), (LCS 160-566201/1-A), (LCSD 160-566201/2-A) and (MB 160-566201/23-A)

Method PrecSep_0: Radium-22 Prep Batch 160-566201: The following samples were prepared at a reduced aliquot due to Matrix: 2018-01-F-20220509-01 (240-166591-1), 2016-07-F-20220509-01 (240-166591-2), 96152-F-20220510-01 (240-166591-3) and 2003-F-20220510-01 (240-166591-5). 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 160-566195: The following samples were prepared at a reduced aliquot due to Matrix: 2018-01-F-20220509-01 (240-166591-1), 2016-07-F-20220509-01 (240-166591-2), 96152-F-20220510-01 (240-166591-3) and 2003-F-20220510-01 (240-166591-5). 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
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: Gavin CCR App IV

Job ID: 240-166591-1

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: 240-166591-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-166591-1	2018-01-F-20220509-01	Water	05/09/22 09:30	05/13/22 08:00
240-166591-2	2016-07-F-20220509-01	Water	05/09/22 13:13	05/13/22 08:00
240-166591-3	96152-F-20220510-01	Water	05/10/22 09:19	05/13/22 08:00
240-166591-4	EB-001-F-20220510-01	Water	05/10/22 10:30	05/13/22 08:00
240-166591-5	2003-F-20220510-01	Water	05/10/22 13:27	05/13/22 08:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166591-1

Client Sample ID: 2018-01-F-20220509-01 — Lab Sample ID: 240-166591-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	130		5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	690		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	0.19	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Magnesium	250	J	1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	72		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	3500		1000	220	ug/L	1		6020	Total Recoverable
Selenium	2.1	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	2200000		1000	330	ug/L	1		6020	Total Recoverable
Total Alkalinity	240	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	39	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	200		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	2.7		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: 2016-07-F-20220509-01 — Lab Sample ID: 240-166591-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.0	J	2.0	0.57	ug/L	1		6020	Total Recoverable
Arsenic	2.2	J	5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	300		5.0	2.2	ug/L	1		6020	Total Recoverable
Chromium	2.9	J	5.0	2.5	ug/L	1		6020	Total Recoverable
Cobalt	0.92	J	1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	1.7		1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	180		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	1200		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	81		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	9000		1000	220	ug/L	1		6020	Total Recoverable
Sodium	620000		1000	330	ug/L	1		6020	Total Recoverable
Thallium	0.47	J	1.0	0.20	ug/L	1		6020	Total Recoverable
Total Alkalinity	320	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	2.7		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: 96152-F-20220510-01 — Lab Sample ID: 240-166591-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.2	J	5.0	0.75	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: 96152-F-20220510-01 (Continued) — Lab Sample ID: 240-166591-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	510		5.0	2.2	ug/L	1		6020	Total Recoverable
Cobalt	2.0		1.0	0.19	ug/L	1		6020	Total Recoverable
Lithium	69		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	12000		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	3.2	J	5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	6900		1000	220	ug/L	1		6020	Total Recoverable
Sodium	1700000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.15	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	490	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	490	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	6.5		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20220510-01 — Lab Sample ID: 240-166591-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	580	J	1000	330	ug/L	1		6020	Total Recoverable

Client Sample ID: 2003-F-20220510-01 — Lab Sample ID: 240-166591-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	19		5.0	0.75	ug/L	1		6020	Total Recoverable
Barium	130		5.0	2.2	ug/L	1		6020	Total Recoverable
Chromium	11		5.0	2.5	ug/L	1		6020	Total Recoverable
Cobalt	2.8		1.0	0.19	ug/L	1		6020	Total Recoverable
Lead	2.7		1.0	0.45	ug/L	1		6020	Total Recoverable
Lithium	26		8.0	1.7	ug/L	1		6020	Total Recoverable
Magnesium	2200		1000	200	ug/L	1		6020	Total Recoverable
Molybdenum	130		5.0	1.1	ug/L	1		6020	Total Recoverable
Potassium	2700		1000	220	ug/L	1		6020	Total Recoverable
Selenium	2.6	J	5.0	0.89	ug/L	1		6020	Total Recoverable
Sodium	610000		1000	330	ug/L	1		6020	Total Recoverable
Mercury	0.13	J	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	750	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	740	B	5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	9.5		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	3.6		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2018-01-F-20220509-01

Date Collected: 05/09/22 09:30
Date Received: 05/13/22 08:00

Lab Sample ID: 240-166591-1

Matrix: Water

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		05/16/22 12:00	05/17/22 16:00	1
Arsenic	**130**		5.0	0.75	ug/L		05/16/22 12:00	05/17/22 16:00	1
Barium	**690**		5.0	2.2	ug/L		05/16/22 12:00	05/17/22 16:00	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/16/22 12:00	05/17/22 16:00	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:00	1
Chromium	5.0	U	5.0	2.5	ug/L		05/16/22 12:00	05/17/22 16:00	1
Cobalt	**0.19**	**J**	1.0	0.19	ug/L		05/16/22 12:00	05/17/22 16:00	1
Lead	1.0	U	1.0	0.45	ug/L		05/16/22 12:00	05/17/22 16:00	1
Lithium	8.0	U	8.0	1.7	ug/L		05/16/22 12:00	05/17/22 16:00	1
Magnesium	**250**	**J**	1000	200	ug/L		05/16/22 12:00	05/17/22 16:00	1
Molybdenum	**72**		5.0	1.1	ug/L		05/16/22 12:00	05/17/22 16:00	1
Potassium	**3500**		1000	220	ug/L		05/16/22 12:00	05/17/22 16:00	1
Selenium	**2.1**	**J**	5.0	0.89	ug/L		05/16/22 12:00	05/17/22 16:00	1
Sodium	**2200000**		1000	330	ug/L		05/16/22 12:00	05/17/22 16:00	1
Thallium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:00	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		05/16/22 12:00	05/18/22 14:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**240**	**B**	5.0	2.6	mg/L			05/20/22 10:51	1
Bicarbonate Alkalinity as CaCO3	**39**	**B**	5.0	2.6	mg/L			05/20/22 10:51	1
Carbonate Alkalinity as CaCO3	**200**		5.0	2.6	mg/L			05/20/22 10:51	1
Fluoride	**2.7**		0.25	0.12	mg/L			06/03/22 06:08	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.01**		0.372	0.383	1.00	0.350	pCi/L	05/18/22 10:14	06/10/22 16:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*05/18/22 10:14*	*06/10/22 16:33*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.565	U	0.382	0.385	1.00	0.570	pCi/L	05/18/22 10:52	06/10/22 12:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:21*	*1*
Y Carrier	*83.7*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:21*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166591-1
Project/Site: Gavin CCR App IV

Client Sample ID: 2018-01-F-20220509-01
Lab Sample ID: 240-166591-1

Date Collected: 05/09/22 09:30
Matrix: Water
Date Received: 05/13/22 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	1.57		0.533	0.543	5.00	0.570	pCi/L		06/13/22 19:01	1

Client Sample ID: 2016-07-F-20220509-01
Lab Sample ID: 240-166591-2

Date Collected: 05/09/22 13:13
Matrix: Water
Date Received: 05/13/22 08:00

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.0	J	2.0	0.57	ug/L		05/16/22 12:00	05/17/22 16:12	1
Arsenic	2.2	J	5.0	0.75	ug/L		05/16/22 12:00	05/17/22 16:12	1
Barium	300		5.0	2.2	ug/L		05/16/22 12:00	05/17/22 16:12	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/16/22 12:00	05/17/22 16:12	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:12	1
Chromium	2.9	J	5.0	2.5	ug/L		05/16/22 12:00	05/17/22 16:12	1
Cobalt	0.92	J	1.0	0.19	ug/L		05/16/22 12:00	05/17/22 16:12	1
Lead	1.7		1.0	0.45	ug/L		05/16/22 12:00	05/17/22 16:12	1
Lithium	180		8.0	1.7	ug/L		05/16/22 12:00	05/17/22 16:12	1
Magnesium	1200		1000	200	ug/L		05/16/22 12:00	05/17/22 16:12	1
Molybdenum	81		5.0	1.1	ug/L		05/16/22 12:00	05/17/22 16:12	1
Potassium	9000		1000	220	ug/L		05/16/22 12:00	05/17/22 16:12	1
Selenium	5.0	U	5.0	0.89	ug/L		05/16/22 12:00	05/17/22 16:12	1
Sodium	620000		1000	330	ug/L		05/16/22 12:00	05/17/22 16:12	1
Thallium	0.47	J	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:12	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		05/16/22 12:00	05/18/22 14:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	320	B	5.0	2.6	mg/L			05/20/22 10:56	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/20/22 10:56	1
Carbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L			05/20/22 10:56	1
Fluoride	2.7		0.050	0.024	mg/L			06/03/22 06:30	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	0.930		0.358	0.368	1.00	0.349	pCi/L	05/18/22 10:14	06/10/22 16:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/18/22 10:14*	*06/10/22 16:33*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.979		0.459	0.467	1.00	0.629	pCi/L	05/18/22 10:52	06/10/22 12:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:21*	*1*
Y Carrier	*80.0*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:21*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166591-1
Project/Site: Gavin CCR App IV

Client Sample ID: 2016-07-F-20220509-01
Lab Sample ID: 240-166591-2

Date Collected: 05/09/22 13:13
Matrix: Water
Date Received: 05/13/22 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	1.91		0.582	0.595	5.00	0.629	pCi/L		06/13/22 19:01	1

Client Sample ID: 96152-F-20220510-01
Lab Sample ID: 240-166591-3

Date Collected: 05/10/22 09:19
Matrix: Water
Date Received: 05/13/22 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		05/16/22 12:00	05/17/22 16:14	1
Arsenic	**2.2**	**J**	5.0	0.75	ug/L		05/16/22 12:00	05/17/22 16:14	1
Barium	**510**		5.0	2.2	ug/L		05/16/22 12:00	05/17/22 16:14	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/16/22 12:00	05/17/22 16:14	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:14	1
Chromium	5.0	U	5.0	2.5	ug/L		05/16/22 12:00	05/17/22 16:14	1
Cobalt	**2.0**		1.0	0.19	ug/L		05/16/22 12:00	05/17/22 16:14	1
Lead	1.0	U	1.0	0.45	ug/L		05/16/22 12:00	05/17/22 16:14	1
Lithium	**69**		8.0	1.7	ug/L		05/16/22 12:00	05/17/22 16:14	1
Magnesium	**12000**		1000	200	ug/L		05/16/22 12:00	05/17/22 16:14	1
Molybdenum	**3.2**	**J**	5.0	1.1	ug/L		05/16/22 12:00	05/17/22 16:14	1
Potassium	**6900**		1000	220	ug/L		05/16/22 12:00	05/17/22 16:14	1
Selenium	5.0	U	5.0	0.89	ug/L		05/16/22 12:00	05/17/22 16:14	1
Sodium	**1700000**		1000	330	ug/L		05/16/22 12:00	05/17/22 16:14	1
Thallium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:14	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		05/16/22 12:00	05/18/22 14:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**490**	**B**	5.0	2.6	mg/L			05/23/22 20:20	1
Bicarbonate Alkalinity as CaCO3	**490**	**B**	5.0	2.6	mg/L			05/23/22 20:20	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/23/22 20:20	1
Fluoride	**6.5**		0.25	0.12	mg/L			06/03/22 06:52	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.14**		0.385	0.398	1.00	0.338	pCi/L	05/18/22 10:14	06/10/22 16:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*05/18/22 10:14*	*06/10/22 16:33*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.61**		0.508	0.529	1.00	0.607	pCi/L	05/18/22 10:52	06/10/22 12:21	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:21*	*1*
Y Carrier	*80.7*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:21*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166591-1
Project/Site: Gavin CCR App IV

Client Sample ID: 96152-F-20220510-01
Lab Sample ID: 240-166591-3
Date Collected: 05/10/22 09:19
Matrix: Water
Date Received: 05/13/22 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	2.75		0.637	0.662	5.00	0.607	pCi/L		06/13/22 19:01	1

Client Sample ID: EB-001-F-20220510-01
Lab Sample ID: 240-166591-4

Date Collected: 05/10/22 10:30
Matrix: Water
Date Received: 05/13/22 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		05/16/22 12:00	05/17/22 16:17	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/16/22 12:00	05/17/22 16:17	1
Barium	5.0	U	5.0	2.2	ug/L		05/16/22 12:00	05/17/22 16:17	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/16/22 12:00	05/17/22 16:17	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:17	1
Chromium	5.0	U	5.0	2.5	ug/L		05/16/22 12:00	05/17/22 16:17	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/16/22 12:00	05/17/22 16:17	1
Lead	1.0	U	1.0	0.45	ug/L		05/16/22 12:00	05/17/22 16:17	1
Lithium	8.0	U	8.0	1.7	ug/L		05/16/22 12:00	05/17/22 16:17	1
Magnesium	1000	U	1000	200	ug/L		05/16/22 12:00	05/17/22 16:17	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/16/22 12:00	05/17/22 16:17	1
Potassium	1000	U	1000	220	ug/L		05/16/22 12:00	05/17/22 16:17	1
Selenium	5.0	U	5.0	0.89	ug/L		05/16/22 12:00	05/17/22 16:17	1
Sodium	**580**	**J**	1000	330	ug/L		05/16/22 12:00	05/17/22 16:17	1
Thallium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:17	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		05/16/22 12:00	05/18/22 14:46	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			05/23/22 20:24	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/23/22 20:24	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/23/22 20:24	1
Fluoride	0.050	U	0.050	0.024	mg/L			06/03/22 07:14	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	0.0491	U	0.190	0.190	1.00	0.374	pCi/L	05/18/22 10:14	06/10/22 16:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.1*		*40 - 110*	*05/18/22 10:14*	*06/10/22 16:33*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.173	U	0.352	0.352	1.00	0.704	pCi/L	05/18/22 10:52	06/10/22 12:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.1*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:22*	*1*
Y Carrier	*80.7*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:22*	*1*

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166591-1

Client Sample ID: EB-001-F-20220510-01
Date Collected: 05/10/22 10:30
Date Received: 05/13/22 08:00

Lab Sample ID: 240-166591-4
Matrix: Water

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	-0.123	U	0.400	0.400	5.00	0.704	pCi/L		06/13/22 19:01	1

Client Sample ID: 2003-F-20220510-01
Lab Sample ID: 240-166591-5

Date Collected: 05/10/22 13:27
Matrix: Water
Date Received: 05/13/22 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		05/16/22 12:00	05/17/22 16:19	1
Arsenic	**19**		5.0	0.75	ug/L		05/16/22 12:00	05/17/22 16:19	1
Barium	**130**		5.0	2.2	ug/L		05/16/22 12:00	05/17/22 16:19	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/16/22 12:00	05/17/22 16:19	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:19	1
Chromium	**11**		5.0	2.5	ug/L		05/16/22 12:00	05/17/22 16:19	1
Cobalt	**2.8**		1.0	0.19	ug/L		05/16/22 12:00	05/17/22 16:19	1
Lead	**2.7**		1.0	0.45	ug/L		05/16/22 12:00	05/17/22 16:19	1
Lithium	**26**		8.0	1.7	ug/L		05/16/22 12:00	05/17/22 16:19	1
Magnesium	**2200**		1000	200	ug/L		05/16/22 12:00	05/17/22 16:19	1
Molybdenum	**130**		5.0	1.1	ug/L		05/16/22 12:00	05/17/22 16:19	1
Potassium	**2700**		1000	220	ug/L		05/16/22 12:00	05/17/22 16:19	1
Selenium	**2.6**	**J**	5.0	0.89	ug/L		05/16/22 12:00	05/17/22 16:19	1
Sodium	**610000**		1000	330	ug/L		05/16/22 12:00	05/17/22 16:19	1
Thallium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 16:19	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		05/16/22 12:00	05/18/22 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**750**	**B**	5.0	2.6	mg/L			05/23/22 20:29	1
Bicarbonate Alkalinity as CaCO3	**740**	**B**	5.0	2.6	mg/L			05/23/22 20:29	1
Carbonate Alkalinity as CaCO3	**9.5**		5.0	2.6	mg/L			05/23/22 20:29	1
Fluoride	**3.6**		0.050	0.024	mg/L			06/03/22 08:19	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	0.169	U G	0.550	0.550	1.00	1.04	pCi/L	05/18/22 10:14	06/10/22 16:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*55.1*		*40 - 110*	*05/18/22 10:14*	*06/10/22 16:33*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.511	U G	0.872	0.873	1.00	1.50	pCi/L	05/18/22 10:52	06/10/22 12:22	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*55.1*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:22*	*1*
Y Carrier	*83.7*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:22*	*1*

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166591-1

Client Sample ID: 2003-F-20220510-01
Date Collected: 05/10/22 13:27
Date Received: 05/13/22 08:00

Lab Sample ID: 240-166591-5
Matrix: Water

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	0.680	U	1.03	1.03	5.00	1.50	pCi/L		06/13/22 19:01	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166591-1

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)
240-166591-1	2018-01-F-20220509-01	100
240-166591-2	2016-07-F-20220509-01	101
240-166591-3	96152-F-20220510-01	103
240-166591-4	EB-001-F-20220510-01	69.1
240-166591-5	2003-F-20220510-01	55.1
LCS 160-566195/1-A	Lab Control Sample	102
LCSD 160-566195/2-A	Lab Control Sample Dup	96.3
MB 160-566195/23-A	Method Blank	101

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)
240-166591-1	2018-01-F-20220509-01	100	83.7
240-166591-2	2016-07-F-20220509-01	101	80.0
240-166591-3	96152-F-20220510-01	103	80.7
240-166591-4	EB-001-F-20220510-01	69.1	80.7
240-166591-5	2003-F-20220510-01	55.1	83.7
LCS 160-566201/1-A	Lab Control Sample	102	85.6
LCSD 160-566201/2-A	Lab Control Sample Dup	96.3	81.5
MB 160-566201/23-A	Method Blank	101	83.0

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-526602/1-A
Matrix: Water
Analysis Batch: 526903

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 526602

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		05/16/22 12:00	05/17/22 15:47	1
Arsenic	5.0	U	5.0	0.75	ug/L		05/16/22 12:00	05/17/22 15:47	1
Barium	5.0	U	5.0	2.2	ug/L		05/16/22 12:00	05/17/22 15:47	1
Beryllium	1.0	U	1.0	0.62	ug/L		05/16/22 12:00	05/17/22 15:47	1
Cadmium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 15:47	1
Chromium	5.0	U	5.0	2.5	ug/L		05/16/22 12:00	05/17/22 15:47	1
Cobalt	1.0	U	1.0	0.19	ug/L		05/16/22 12:00	05/17/22 15:47	1
Lead	1.0	U	1.0	0.45	ug/L		05/16/22 12:00	05/17/22 15:47	1
Lithium	8.0	U	8.0	1.7	ug/L		05/16/22 12:00	05/17/22 15:47	1
Magnesium	1000	U	1000	200	ug/L		05/16/22 12:00	05/17/22 15:47	1
Molybdenum	5.0	U	5.0	1.1	ug/L		05/16/22 12:00	05/17/22 15:47	1
Potassium	1000	U	1000	220	ug/L		05/16/22 12:00	05/17/22 15:47	1
Selenium	5.0	U	5.0	0.89	ug/L		05/16/22 12:00	05/17/22 15:47	1
Sodium	1000	U	1000	330	ug/L		05/16/22 12:00	05/17/22 15:47	1
Thallium	1.0	U	1.0	0.20	ug/L		05/16/22 12:00	05/17/22 15:47	1

Lab Sample ID: LCS 240-526602/2-A
Matrix: Water
Analysis Batch: 526903

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 526602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	103		ug/L		103	80 - 120
Arsenic	1000	965		ug/L		96	80 - 120
Barium	1000	1010		ug/L		101	80 - 120
Beryllium	500	490		ug/L		98	80 - 120
Cadmium	500	486		ug/L		97	80 - 120
Chromium	500	509		ug/L		102	80 - 120
Cobalt	500	505		ug/L		101	80 - 120
Lead	500	520		ug/L		104	80 - 120
Lithium	500	525		ug/L		105	80 - 120
Magnesium	25000	25000		ug/L		100	80 - 120
Molybdenum	500	490		ug/L		98	80 - 120
Potassium	25000	24500		ug/L		98	80 - 120
Selenium	1000	946		ug/L		95	80 - 120
Sodium	25000	24600		ug/L		98	80 - 120
Thallium	1000	968		ug/L		97	80 - 120

Lab Sample ID: 240-166591-1 MS
Matrix: Water
Analysis Batch: 526903

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total Recoverable
Prep Batch: 526602

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2.0	U	100	108		ug/L		108	75 - 125
Arsenic	130		1000	1230		ug/L		109	75 - 125
Barium	690		1000	1790		ug/L		110	75 - 125
Beryllium	1.0	U	500	497		ug/L		99	75 - 125
Cadmium	1.0	U	500	488		ug/L		98	75 - 125
Chromium	5.0	U	500	501		ug/L		100	75 - 125
Cobalt	0.19	J	500	559		ug/L		112	75 - 125

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

Lab Sample ID: 240-166591-1 MS
Matrix: Water
Analysis Batch: 526903

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total Recoverable
Prep Batch: 526602

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	1.0	U	500	505		ug/L		101	75 - 125
Lithium	8.0	U	500	519		ug/L		104	75 - 125
Magnesium	250	J	25000	25100		ug/L		100	75 - 125
Molybdenum	72		500	614		ug/L		108	75 - 125
Potassium	3500		25000	27800		ug/L		97	75 - 125
Selenium	2.1	J	1000	989		ug/L		99	75 - 125
Sodium	2200000		25000	2220000	4	ug/L		-96	75 - 125
Thallium	1.0	U	1000	944		ug/L		94	75 - 125

Lab Sample ID: 240-166591-1 MSD
Matrix: Water
Analysis Batch: 526903

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total Recoverable
Prep Batch: 526602

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	2.0	U	100	105		ug/L		105	75 - 125	2	20
Arsenic	130		1000	1150		ug/L		102	75 - 125	6	20
Barium	690		1000	1700		ug/L		101	75 - 125	5	20
Beryllium	1.0	U	500	475		ug/L		95	75 - 125	5	20
Cadmium	1.0	U	500	469		ug/L		94	75 - 125	4	20
Chromium	5.0	U	500	482		ug/L		96	75 - 125	4	20
Cobalt	0.19	J	500	521		ug/L		104	75 - 125	7	20
Lead	1.0	U	500	486		ug/L		97	75 - 125	4	20
Lithium	8.0	U	500	498		ug/L		100	75 - 125	4	20
Magnesium	250	J	25000	23700		ug/L		94	75 - 125	6	20
Molybdenum	72		500	585		ug/L		103	75 - 125	5	20
Potassium	3500		25000	26300		ug/L		92	75 - 125	5	20
Selenium	2.1	J	1000	954		ug/L		95	75 - 125	4	20
Sodium	2200000		25000	2120000	4	ug/L		-468	75 - 125	4	20
Thallium	1.0	U	1000	890		ug/L		89	75 - 125	6	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-526603/1-A
Matrix: Water
Analysis Batch: 527080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 526603

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		05/16/22 12:00	05/18/22 14:32	1

Lab Sample ID: LCS 240-526603/2-A
Matrix: Water
Analysis Batch: 527080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 526603

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.25		ug/L		105	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-166591-1 MS
Matrix: Water
Analysis Batch: 527080

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total/NA
Prep Batch: 526603

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U F1	1.00	1.31	F1	ug/L		131	80 - 120

Lab Sample ID: 240-166591-1 MSD
Matrix: Water
Analysis Batch: 527080

Client Sample ID: 2018-01-F-20220509-01
Prep Type: Total/NA
Prep Batch: 526603

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	1.26	F1	ug/L		126	80 - 120	4	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-527344/4
Matrix: Water
Analysis Batch: 527344

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	4.45	J	5.0	2.6	mg/L			05/20/22 10:04	1
Bicarbonate Alkalinity as CaCO3	4.45	J	5.0	2.6	mg/L			05/20/22 10:04	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/20/22 10:04	1

Lab Sample ID: LCS 240-527344/3
Matrix: Water
Analysis Batch: 527344

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 240-527755/4
Matrix: Water
Analysis Batch: 527755

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	2.63	J	5.0	2.6	mg/L			05/23/22 19:54	1
Bicarbonate Alkalinity as CaCO3	2.63	J	5.0	2.6	mg/L			05/23/22 19:54	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			05/23/22 19:54	1

Lab Sample ID: LCS 240-527755/3
Matrix: Water
Analysis Batch: 527755

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

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-528799/3
Matrix: Water
Analysis Batch: 528799

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			06/02/22 21:27	1

Lab Sample ID: LCS 240-528799/4
Matrix: Water
Analysis Batch: 528799

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	2.61		mg/L		104	90 - 110

Lab Sample ID: 240-166591-4 MS
Matrix: Water
Analysis Batch: 528799

Client Sample ID: EB-001-F-20220510-01
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	2.31		mg/L		92	80 - 120

Lab Sample ID: 240-166591-4 MSD
Matrix: Water
Analysis Batch: 528799

Client Sample ID: EB-001-F-20220510-01
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	2.43		mg/L		97	80 - 120	5	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-566195/23-A
Matrix: Water
Analysis Batch: 569457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 566195

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.04462	U	0.128	0.128	1.00	0.297	pCi/L	05/18/22 10:14	06/10/22 16:35	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/18/22 10:14*	*06/10/22 16:35*	*1*

Lab Sample ID: LCS 160-566195/1-A
Matrix: Water
Analysis Batch: 569457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 566195

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	9.436		1.23	1.00	0.282	pCi/L	83	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCSD 160-566195/2-A
Matrix: Water
Analysis Batch: 569457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 566195

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	9.059		1.21	1.00	0.275	pCi/L	80	75 - 125	0.15	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.3*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-566201/23-A
Matrix: Water
Analysis Batch: 569458

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 566201

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1966	U	0.248	0.249	1.00	0.412	pCi/L	05/18/22 10:52	06/10/22 12:23	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:23*	*1*
Y Carrier	*83.0*		*40 - 110*	*05/18/22 10:52*	*06/10/22 12:23*	*1*

Lab Sample ID: LCS 160-566201/1-A
Matrix: Water
Analysis Batch: 569469

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 566201

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.55	6.576		0.929	1.00	0.395	pCi/L	77	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*
Y Carrier	*85.6*		*40 - 110*

Lab Sample ID: LCSD 160-566201/2-A
Matrix: Water
Analysis Batch: 569469

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 566201

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.55	6.523		0.958	1.00	0.442	pCi/L	76	75 - 125	0.03	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.3*		*40 - 110*
Y Carrier	*81.5*		*40 - 110*

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-166591-1
Project/Site: Gavin CCR App IV

Metals

Prep Batch: 526602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-1	2018-01-F-20220509-01	Total Recoverable	Water	3005A	
240-166591-2	2016-07-F-20220509-01	Total Recoverable	Water	3005A	
240-166591-3	96152-F-20220510-01	Total Recoverable	Water	3005A	
240-166591-4	EB-001-F-20220510-01	Total Recoverable	Water	3005A	
240-166591-5	2003-F-20220510-01	Total Recoverable	Water	3005A	
MB 240-526602/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-526602/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-166591-1 MS	2018-01-F-20220509-01	Total Recoverable	Water	3005A	
240-166591-1 MSD	2018-01-F-20220509-01	Total Recoverable	Water	3005A	

Prep Batch: 526603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-1	2018-01-F-20220509-01	Total/NA	Water	7470A	
240-166591-2	2016-07-F-20220509-01	Total/NA	Water	7470A	
240-166591-3	96152-F-20220510-01	Total/NA	Water	7470A	
240-166591-4	EB-001-F-20220510-01	Total/NA	Water	7470A	
240-166591-5	2003-F-20220510-01	Total/NA	Water	7470A	
MB 240-526603/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-526603/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-166591-1 MS	2018-01-F-20220509-01	Total/NA	Water	7470A	
240-166591-1 MSD	2018-01-F-20220509-01	Total/NA	Water	7470A	

Analysis Batch: 526903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-1	2018-01-F-20220509-01	Total Recoverable	Water	6020	526602
240-166591-2	2016-07-F-20220509-01	Total Recoverable	Water	6020	526602
240-166591-3	96152-F-20220510-01	Total Recoverable	Water	6020	526602
240-166591-4	EB-001-F-20220510-01	Total Recoverable	Water	6020	526602
240-166591-5	2003-F-20220510-01	Total Recoverable	Water	6020	526602
MB 240-526602/1-A	Method Blank	Total Recoverable	Water	6020	526602
LCS 240-526602/2-A	Lab Control Sample	Total Recoverable	Water	6020	526602
240-166591-1 MS	2018-01-F-20220509-01	Total Recoverable	Water	6020	526602
240-166591-1 MSD	2018-01-F-20220509-01	Total Recoverable	Water	6020	526602

Analysis Batch: 527080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-1	2018-01-F-20220509-01	Total/NA	Water	7470A	526603
240-166591-2	2016-07-F-20220509-01	Total/NA	Water	7470A	526603
240-166591-3	96152-F-20220510-01	Total/NA	Water	7470A	526603
240-166591-4	EB-001-F-20220510-01	Total/NA	Water	7470A	526603
240-166591-5	2003-F-20220510-01	Total/NA	Water	7470A	526603
MB 240-526603/1-A	Method Blank	Total/NA	Water	7470A	526603
LCS 240-526603/2-A	Lab Control Sample	Total/NA	Water	7470A	526603
240-166591-1 MS	2018-01-F-20220509-01	Total/NA	Water	7470A	526603
240-166591-1 MSD	2018-01-F-20220509-01	Total/NA	Water	7470A	526603

General Chemistry

Analysis Batch: 527344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-1	2018-01-F-20220509-01	Total/NA	Water	2320B-1997	

General Chemistry (Continued)

Analysis Batch: 527344 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-2	2016-07-F-20220509-01	Total/NA	Water	2320B-1997	
MB 240-527344/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-527344/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 527755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-3	96152-F-20220510-01	Total/NA	Water	2320B-1997	
240-166591-4	EB-001-F-20220510-01	Total/NA	Water	2320B-1997	
240-166591-5	2003-F-20220510-01	Total/NA	Water	2320B-1997	
MB 240-527755/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-527755/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 528799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-1	2018-01-F-20220509-01	Total/NA	Water	300.0-1993 R2.1	
240-166591-2	2016-07-F-20220509-01	Total/NA	Water	300.0-1993 R2.1	
240-166591-3	96152-F-20220510-01	Total/NA	Water	300.0-1993 R2.1	
240-166591-4	EB-001-F-20220510-01	Total/NA	Water	300.0-1993 R2.1	
240-166591-5	2003-F-20220510-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-528799/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-528799/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
240-166591-4 MS	EB-001-F-20220510-01	Total/NA	Water	300.0-1993 R2.1	
240-166591-4 MSD	EB-001-F-20220510-01	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 566195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-1	2018-01-F-20220509-01	Total/NA	Water	PrecSep-21	
240-166591-2	2016-07-F-20220509-01	Total/NA	Water	PrecSep-21	
240-166591-3	96152-F-20220510-01	Total/NA	Water	PrecSep-21	
240-166591-4	EB-001-F-20220510-01	Total/NA	Water	PrecSep-21	
240-166591-5	2003-F-20220510-01	Total/NA	Water	PrecSep-21	
MB 160-566195/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-566195/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-566195/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 566201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-166591-1	2018-01-F-20220509-01	Total/NA	Water	PrecSep_0	
240-166591-2	2016-07-F-20220509-01	Total/NA	Water	PrecSep_0	
240-166591-3	96152-F-20220510-01	Total/NA	Water	PrecSep_0	
240-166591-4	EB-001-F-20220510-01	Total/NA	Water	PrecSep_0	
240-166591-5	2003-F-20220510-01	Total/NA	Water	PrecSep_0	
MB 160-566201/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-566201/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-566201/2-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: 240-166591-1

Client Sample ID: 2018-01-F-20220509-01

Lab Sample ID: 240-166591-1

Date Collected: 05/09/22 09:30
Date Received: 05/13/22 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			526602	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526903	05/17/22 16:00	AJC	TAL CAN
Total/NA	Prep	7470A			526603	05/16/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	527080	05/18/22 14:36	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	527344	05/20/22 10:51	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		5	528799	06/03/22 06:08	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			566195	05/18/22 10:14	MS	TAL SL
Total/NA	Analysis	9315		1	569457	06/10/22 16:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			566201	05/18/22 10:52	MS	TAL SL
Total/NA	Analysis	9320		1	569458	06/10/22 12:21	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569801	06/13/22 19:01	CLP	TAL SL

Client Sample ID: 2016-07-F-20220509-01

Lab Sample ID: 240-166591-2

Date Collected: 05/09/22 13:13
Date Received: 05/13/22 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			526602	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526903	05/17/22 16:12	AJC	TAL CAN
Total/NA	Prep	7470A			526603	05/16/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	527080	05/18/22 14:42	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	527344	05/20/22 10:56	AJ	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	528799	06/03/22 06:30	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			566195	05/18/22 10:14	MS	TAL SL
Total/NA	Analysis	9315		1	569457	06/10/22 16:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			566201	05/18/22 10:52	MS	TAL SL
Total/NA	Analysis	9320		1	569458	06/10/22 12:21	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569801	06/13/22 19:01	CLP	TAL SL

Client Sample ID: 96152-F-20220510-01

Lab Sample ID: 240-166591-3

Date Collected: 05/10/22 09:19
Date Received: 05/13/22 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			526602	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526903	05/17/22 16:14	AJC	TAL CAN
Total/NA	Prep	7470A			526603	05/16/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	527080	05/18/22 14:44	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	527755	05/23/22 20:20	JWW	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		5	528799	06/03/22 06:52	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			566195	05/18/22 10:14	MS	TAL SL
Total/NA	Analysis	9315		1	569457	06/10/22 16:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			566201	05/18/22 10:52	MS	TAL SL
Total/NA	Analysis	9320		1	569458	06/10/22 12:21	FLC	TAL SL

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Gavin CCR App IV

Job ID: 240-166591-1

Client Sample ID: 96152-F-20220510-01

Lab Sample ID: 240-166591-3

Date Collected: 05/10/22 09:19
Matrix: Water
Date Received: 05/13/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1	569801	06/13/22 19:01	CLP	TAL SL

Client Sample ID: EB-001-F-20220510-01

Lab Sample ID: 240-166591-4

Date Collected: 05/10/22 10:30
Matrix: Water
Date Received: 05/13/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			526602	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526903	05/17/22 16:17	AJC	TAL CAN
Total/NA	Prep	7470A			526603	05/16/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	527080	05/18/22 14:46	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	527755	05/23/22 20:24	JWW	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	528799	06/03/22 07:14	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			566195	05/18/22 10:14	MS	TAL SL
Total/NA	Analysis	9315		1	569457	06/10/22 16:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			566201	05/18/22 10:52	MS	TAL SL
Total/NA	Analysis	9320		1	569458	06/10/22 12:22	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569801	06/13/22 19:01	CLP	TAL SL

Client Sample ID: 2003-F-20220510-01

Lab Sample ID: 240-166591-5

Date Collected: 05/10/22 13:27
Matrix: Water
Date Received: 05/13/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			526602	05/16/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020		1	526903	05/17/22 16:19	AJC	TAL CAN
Total/NA	Prep	7470A			526603	05/16/22 12:00	SHB	TAL CAN
Total/NA	Analysis	7470A		1	527080	05/18/22 14:48	DSH	TAL CAN
Total/NA	Analysis	2320B-1997		1	527755	05/23/22 20:29	JWW	TAL CAN
Total/NA	Analysis	300.0-1993 R2.1		1	528799	06/03/22 08:19	KMS	TAL CAN
Total/NA	Prep	PrecSep-21			566195	05/18/22 10:14	MS	TAL SL
Total/NA	Analysis	9315		1	569457	06/10/22 16:33	FLC	TAL SL
Total/NA	Prep	PrecSep_0			566201	05/18/22 10:52	MS	TAL SL
Total/NA	Analysis	9320		1	569458	06/10/22 12:22	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	569801	06/13/22 19:01	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
Job ID: 240-166591-1
Project/Site: Gavin CCR App IV

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	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	06-09-22
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	T104704517-22-17	06-09-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	06-05-22
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
Job ID: 240-166591-1
Project/Site: Gavin CCR App IV

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

3-9/3-9

Columbus
209

133

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Shein	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-94765-34853.2
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 2 of 3
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers
			Preservation Code:				D	N	N	D	
2018-01-F-20220509-01	5-9-22	0930	G	Water			1	1	1	2	5
2016-07-F-20220509-01	5-9-22	1313	G	Water			1	1	1	2	5
96152-F-20220510-01	5-10-22	0919	G	Water			1	1	1	2	5
EB-001-F-20220510-01	5-10-22	1030	G	Water			1	1	1	2	5
2003-F-20220510-01	5-10-22	1327	G	Water			1	1	1	2	2
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

AP-IV
Special Instructions/Note:

240-166591 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed ... longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5-12-22 0945	Gavin	[signature]	5/12/22 1500	ETA
Relinquished by: [signature]	Date/Time: 5/12/22 1700	Company ETA	Received by: [signature]	Date/Time: 5-13-22 0800	Company EETNC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

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6/14/2022

Login # : 166591

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Client Lightstone Generation Site Name _____ Cooler unpacked by: Me

Cooler Received on 5-13-22 Opened on 5-13-22

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 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)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? Yes (No)
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# 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)

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 # : 166591

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	3.9	3.9	**Wet Ice** Blue Ice Dry Ice Water None
TA Client Box Other	**IR-13** IR-15	2.2	2.2	**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

☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2018-01-F-20220509-01	240-166591-A-1	Plastic 250ml - unpreserved				
2018-01-F-20220509-01	240-166591-B-1	Plastic 250ml - unpreserved				
2018-01-F-20220509-01	240-166591-C-1	Plastic 500ml - with Nitric Acid	<2			
2018-01-F-20220509-01	240-166591-D-1	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220509-01	240-166591-E-1	Plastic 1 liter - Nitric Acid	<2			
2016-07-F-20220509-01	240-166591-A-2	Plastic 250ml - unpreserved				
2016-07-F-20220509-01	240-166591-B-2	Plastic 250ml - unpreserved				
2016-07-F-20220509-01	240-166591-C-2	Plastic 500ml - with Nitric Acid	<2			
2016-07-F-20220509-01	240-166591-D-2	Plastic 1 liter - Nitric Acid	<2			
2016-07-F-20220509-01	240-166591-E-2	Plastic 1 liter - Nitric Acid	<2			
96152-F-20220510-01	240-166591-A-3	Plastic 250ml - unpreserved				
96152-F-20220510-01	240-166591-B-3	Plastic 250ml - unpreserved				
96152-F-20220510-01	240-166591-C-3	Plastic 500ml - with Nitric Acid	<2			
96152-F-20220510-01	240-166591-D-3	Plastic 1 liter - Nitric Acid	<2			
96152-F-20220510-01	240-166591-E-3	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220510-01	240-166591-A-4	Plastic 250ml - unpreserved				
EB-001-F-20220510-01	240-166591-B-4	Plastic 250ml - unpreserved				
EB-001-F-20220510-01	240-166591-C-4	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220510-01	240-166591-D-4	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220510-01	240-166591-E-4	Plastic 1 liter - Nitric Acid	<2			
2003-F-20220510-01	240-166591-A-5	Plastic 250ml - unpreserved				
2003-F-20220510-01	240-166591-B-5	Plastic 250ml - unpreserved				
2003-F-20220510-01	240-166591-C-5	Plastic 500ml - with Nitric Acid	<2			
2003-F-20220510-01	240-166591-D-5	Plastic 1 liter - Nitric Acid	<2			
2003-F-20220510-01	240-166591-E-5	Plastic 1 liter - Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-152037.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-166591-1
Address: 13715 Rider Trail North,	Due Date Requested: 6/13/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR App IV	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2018-01-F-20220509-01 (240-166591-1)	5/9/22	09:30 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2016-07-F-20220509-01 (240-166591-2)	5/9/22	13:13 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
96152-F-20220510-01 (240-166591-3)	5/10/22	09:19 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220510-01 (240-166591-4)	5/10/22	10:30 Eastern		Water			X	X	X	2	Recount of TAR after 21 day ingrowth if > action limit; save planchet
2003-F-20220510-01 (240-166591-5)	5/10/22	13:27 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Mandy Black	5-13-22 17:00	Eurofins	FED EX		
2	FED EX			Sierra Worthington	MAY 17 2022 1005	Eurofins
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

6/14/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-166591-1

Login Number: 166591
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 05/17/22 11:01 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-169904-1
Client Project/Site: Federal CCR Wells - App IV

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
8/16/2022 10:21:10 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-169904-1

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
^-	Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-169904-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-169904-1

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 7/16/2022 10:15 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 0.3º C and 1.0º C.

RAD
Methods 9315: Radium 226 Batch 160-574615: 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-20-F-20220714-01 (240-169904-1), 9910-F-20220714-01 (240-169904-2), EB-001-F-20220714-01 (240-169904-3), (LCS 160-574615/2-A), (MB 160-574615/1-A)

Methods 9320: Radium 228 Batch 574616: 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-20-F-20220714-01 (240-169904-1), 9910-F-20220714-01 (240-169904-2), EB-001-F-20220714-01 (240-169904-3), (LCS 160-574616/2-A), (MB 160-574616/1-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 - App IV

Job ID: 240-169904-1

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: 240-169904-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-169904-1	MW-20-F-20220714-01	Water	07/14/22 11:19	07/16/22 10:15
240-169904-2	9910-F-20220714-01	Water	07/14/22 14:09	07/16/22 10:15
240-169904-3	EB-001-F-20220714-01	Water	07/14/22 17:30	07/16/22 10:15

Detection Summary

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

Job ID: 240-169904-1

Client Sample ID: MW-20-F-20220714-01 — Lab Sample ID: 240-169904-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.7	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	16		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cadmium	0.22	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Cobalt	150		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	150		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	89000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	4500		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	20000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	160		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	1.4	^-	0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: 9910-F-20220714-01 — Lab Sample ID: 240-169904-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	260		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	34		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	0.58	J	1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	0.48	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	25		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	4300		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	17		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	2900		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	6.4		5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	1100000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	820		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	820		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	1.8	^-	0.10	0.048	mg/L	2		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20220714-01 — Lab Sample ID: 240-169904-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: MW-20-F-20220714-01

Date Collected: 07/14/22 11:19
Date Received: 07/16/22 10:15

Lab Sample ID: 240-169904-1

Matrix: Water

Method: 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		07/18/22 12:00	07/19/22 18:26	1
Arsenic	**1.7**	**J**	5.0	0.75	ug/L		07/18/22 12:00	07/19/22 18:26	1
Barium	**16**		5.0	2.2	ug/L		07/18/22 12:00	07/19/22 18:26	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 18:26	1
Cadmium	**0.22**	**J**	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 18:26	1
Chromium	5.0	U	5.0	2.5	ug/L		07/18/22 12:00	07/19/22 18:26	1
Cobalt	**150**		1.0	0.19	ug/L		07/18/22 12:00	07/19/22 18:26	1
Lead	1.0	U	1.0	0.45	ug/L		07/18/22 12:00	07/19/22 18:26	1
Lithium	**150**		8.0	1.7	ug/L		07/18/22 12:00	07/19/22 18:26	1
Magnesium	**89000**		1000	200	ug/L		07/18/22 12:00	07/19/22 18:26	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/18/22 12:00	07/19/22 18:26	1
Potassium	**4500**		1000	220	ug/L		07/18/22 12:00	07/19/22 18:26	1
Selenium	5.0	U	5.0	0.89	ug/L		07/18/22 12:00	07/19/22 18:26	1
Sodium	**20000**		1000	330	ug/L		07/18/22 12:00	07/19/22 18:26	1
Thallium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 18:26	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		07/18/22 12:00	07/20/22 10:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**160**		5.0	2.6	mg/L			07/21/22 10:17	1
Bicarbonate Alkalinity as CaCO3	**160**		5.0	2.6	mg/L			07/21/22 10:17	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/21/22 10:17	1
Fluoride	**1.4**	**^-**	0.050	0.024	mg/L			08/10/22 22:55	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	0.147	U	0.117	0.117	1.00	0.176	pCi/L	07/20/22 10:56	08/11/22 11:50	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.6*		*40 - 110*	*07/20/22 10:56*	*08/11/22 11:50*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.705**		0.353	0.359	1.00	0.478	pCi/L	07/20/22 11:16	08/04/22 11:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.6*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:32*	*1*
Y Carrier	*86.7*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:32*	*1*

Client Sample Results

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

Job ID: 240-169904-1

Client Sample ID: MW-20-F-20220714-01
Date Collected: 07/14/22 11:19
Date Received: 07/16/22 10:15

Lab Sample ID: 240-169904-1
Matrix: Water

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	0.852		0.372	0.378	5.00	0.478	pCi/L		08/11/22 22:44	1

Client Sample ID: 9910-F-20220714-01
Lab Sample ID: 240-169904-2

Date Collected: 07/14/22 14:09
Matrix: Water
Date Received: 07/16/22 10:15

Method: 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		07/18/22 12:00	07/19/22 18:39	1
Arsenic	**2.1**	**J**	5.0	0.75	ug/L		07/18/22 12:00	07/19/22 18:39	1
Barium	**260**		5.0	2.2	ug/L		07/18/22 12:00	07/19/22 18:39	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 18:39	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 18:39	1
Chromium	**34**		5.0	2.5	ug/L		07/18/22 12:00	07/19/22 18:39	1
Cobalt	**0.58**	**J**	1.0	0.19	ug/L		07/18/22 12:00	07/19/22 18:39	1
Lead	**0.48**	**J**	1.0	0.45	ug/L		07/18/22 12:00	07/19/22 18:39	1
Lithium	**25**		8.0	1.7	ug/L		07/18/22 12:00	07/19/22 18:39	1
Magnesium	**4300**		1000	200	ug/L		07/18/22 12:00	07/19/22 18:39	1
Molybdenum	**17**		5.0	1.1	ug/L		07/18/22 12:00	07/19/22 18:39	1
Potassium	**2900**		1000	220	ug/L		07/18/22 12:00	07/19/22 18:39	1
Selenium	**6.4**		5.0	0.89	ug/L		07/18/22 12:00	07/19/22 18:39	1
Sodium	**1100000**		10000	3300	ug/L		07/18/22 12:00	07/21/22 18:01	10
Thallium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 18:39	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		07/18/22 12:00	07/20/22 10:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**820**		5.0	2.6	mg/L			07/21/22 10:23	1
Bicarbonate Alkalinity as CaCO3	**820**		5.0	2.6	mg/L			07/21/22 10:23	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/21/22 10:23	1
Fluoride	**1.8**	**^-**	0.10	0.048	mg/L			08/11/22 00:01	2

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**		0.142	0.145	1.00	0.162	pCi/L	07/20/22 10:56	08/11/22 11:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*77.5*		*40 - 110*	*07/20/22 10:56*	*08/11/22 11:51*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.553	U	0.501	0.503	1.00	0.793	pCi/L	07/20/22 11:16	08/04/22 11:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*77.5*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:33*	*1*
Y Carrier	*85.6*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:33*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169904-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 9910-F-20220714-01
Lab Sample ID: 240-169904-2
Date Collected: 07/14/22 14:09
Matrix: Water
Date Received: 07/16/22 10:15

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	0.842		0.521	0.523	5.00	0.793	pCi/L		08/11/22 22:44	1

Client Sample ID: EB-001-F-20220714-01
Lab Sample ID: 240-169904-3

Date Collected: 07/14/22 17:30
Matrix: Water
Date Received: 07/16/22 10:15

Method: 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		07/18/22 12:00	07/19/22 18:36	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/18/22 12:00	07/19/22 18:36	1
Barium	5.0	U	5.0	2.2	ug/L		07/18/22 12:00	07/19/22 18:36	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 18:36	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 18:36	1
Chromium	5.0	U	5.0	2.5	ug/L		07/18/22 12:00	07/19/22 18:36	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/18/22 12:00	07/19/22 18:36	1
Lead	1.0	U	1.0	0.45	ug/L		07/18/22 12:00	07/19/22 18:36	1
Lithium	8.0	U	8.0	1.7	ug/L		07/18/22 12:00	07/19/22 18:36	1
Magnesium	1000	U	1000	200	ug/L		07/18/22 12:00	07/19/22 18:36	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/18/22 12:00	07/19/22 18:36	1
Potassium	1000	U	1000	220	ug/L		07/18/22 12:00	07/19/22 18:36	1
Selenium	5.0	U	5.0	0.89	ug/L		07/18/22 12:00	07/19/22 18:36	1
Sodium	1000	U	1000	330	ug/L		07/18/22 12:00	07/19/22 18:36	1
Thallium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 18:36	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		07/18/22 12:00	07/20/22 10:05	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			07/21/22 10:27	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/21/22 10:27	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/21/22 10:27	1
Fluoride	0.050	U ^-	0.050	0.024	mg/L			08/11/22 00:22	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	0.0378	U	0.0573	0.0574	1.00	0.0990	pCi/L	07/20/22 10:56	08/11/22 11:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*07/20/22 10:56*	*08/11/22 11:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.544**		0.313	0.317	1.00	0.438	pCi/L	07/20/22 11:16	08/04/22 11:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:33*	*1*
Y Carrier	*86.0*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:33*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169904-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: EB-001-F-20220714-01
Lab Sample ID: 240-169904-3
Date Collected: 07/14/22 17:30
Matrix: Water
Date Received: 07/16/22 10:15

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	0.582		0.318	0.322	5.00	0.438	pCi/L		08/11/22 22:44	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169904-1
Project/Site: Federal CCR Wells - App IV

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)
240-169904-1	MW-20-F-20220714-01	85.6
240-169904-2	9910-F-20220714-01	77.5
240-169904-3	EB-001-F-20220714-01	89.6
LCS 160-574615/2-A	Lab Control Sample	92.9
MB 160-574615/1-A	Method Blank	97.7

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)
240-169904-1	MW-20-F-20220714-01	85.6	86.7
240-169904-2	9910-F-20220714-01	77.5	85.6
240-169904-3	EB-001-F-20220714-01	89.6	86.0
LCS 160-574616/2-A	Lab Control Sample	92.9	85.2
MB 160-574616/1-A	Method Blank	97.7	87.5

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-535120/1-A
Matrix: Water
Analysis Batch: 535400

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535120

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/18/22 12:00	07/19/22 17:25	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/18/22 12:00	07/19/22 17:25	1
Barium	5.0	U	5.0	2.2	ug/L		07/18/22 12:00	07/19/22 17:25	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 17:25	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 17:25	1
Chromium	5.0	U	5.0	2.5	ug/L		07/18/22 12:00	07/19/22 17:25	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/18/22 12:00	07/19/22 17:25	1
Lead	1.0	U	1.0	0.45	ug/L		07/18/22 12:00	07/19/22 17:25	1
Lithium	8.0	U	8.0	1.7	ug/L		07/18/22 12:00	07/19/22 17:25	1
Magnesium	1000	U	1000	200	ug/L		07/18/22 12:00	07/19/22 17:25	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/18/22 12:00	07/19/22 17:25	1
Potassium	1000	U	1000	220	ug/L		07/18/22 12:00	07/19/22 17:25	1
Selenium	5.0	U	5.0	0.89	ug/L		07/18/22 12:00	07/19/22 17:25	1
Sodium	1000	U	1000	330	ug/L		07/18/22 12:00	07/19/22 17:25	1
Thallium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 17:25	1

Lab Sample ID: LCS 240-535120/2-A
Matrix: Water
Analysis Batch: 535400

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	99.3		ug/L		99	80 - 120
Arsenic	1000	957		ug/L		96	80 - 120
Barium	1000	973		ug/L		97	80 - 120
Beryllium	500	457		ug/L		91	80 - 120
Cadmium	500	475		ug/L		95	80 - 120
Chromium	500	493		ug/L		99	80 - 120
Cobalt	500	441		ug/L		88	80 - 120
Lead	500	485		ug/L		97	80 - 120
Lithium	500	470		ug/L		94	80 - 120
Magnesium	25000	24500		ug/L		98	80 - 120
Molybdenum	500	464		ug/L		93	80 - 120
Potassium	25000	24000		ug/L		96	80 - 120
Selenium	1000	878		ug/L		88	80 - 120
Sodium	25000	24500		ug/L		98	80 - 120
Thallium	1000	964		ug/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-535121/1-A
Matrix: Water
Analysis Batch: 535489

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 535121

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/18/22 12:00	07/20/22 09:13	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-535121/2-A
Matrix: Water
Analysis Batch: 535489

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 535121

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.60		ug/L		112	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-535715/7
Matrix: Water
Analysis Batch: 535715

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			07/21/22 10:01	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/21/22 10:01	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/21/22 10:01	1

Lab Sample ID: LCS 240-535715/6
Matrix: Water
Analysis Batch: 535715

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	120		mg/L		99	86 - 123

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-538097/4
Matrix: Water
Analysis Batch: 538097

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			08/10/22 10:59	1

Lab Sample ID: LCS 240-538097/5
Matrix: Water
Analysis Batch: 538097

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

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-574615/1-A
Matrix: Water
Analysis Batch: 577571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 574615

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03850	U	0.0757	0.0758	1.00	0.135	pCi/L	07/20/22 10:56	08/11/22 08:32	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.7*		*40 - 110*	*07/20/22 10:56*	*08/11/22 08:32*	*1*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-574615/2-A
Matrix: Water
Analysis Batch: 577571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 574615

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.13		1.08	1.00	0.107	pCi/L	89	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.9*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-574616/1-A
Matrix: Water
Analysis Batch: 576480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 574616

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4337	U	0.294	0.297	1.00	0.439	pCi/L	07/20/22 11:16	08/04/22 11:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.7*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:30*	*1*
Y Carrier	*87.5*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:30*	*1*

Lab Sample ID: LCS 160-574616/2-A
Matrix: Water
Analysis Batch: 576480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 574616

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.39	9.235		1.24	1.00	0.494	pCi/L	110	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.9*		*40 - 110*
Y Carrier	*85.2*		*40 - 110*

Metals

Prep Batch: 535120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-1	MW-20-F-20220714-01	Total Recoverable	Water	3005A	
240-169904-2	9910-F-20220714-01	Total Recoverable	Water	3005A	
240-169904-3	EB-001-F-20220714-01	Total Recoverable	Water	3005A	
MB 240-535120/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535120/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 535121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-1	MW-20-F-20220714-01	Total/NA	Water	7470A	
240-169904-2	9910-F-20220714-01	Total/NA	Water	7470A	
240-169904-3	EB-001-F-20220714-01	Total/NA	Water	7470A	
MB 240-535121/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-535121/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 535400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-1	MW-20-F-20220714-01	Total Recoverable	Water	6020B	535120
240-169904-2	9910-F-20220714-01	Total Recoverable	Water	6020B	535120
240-169904-3	EB-001-F-20220714-01	Total Recoverable	Water	6020B	535120
MB 240-535120/1-A	Method Blank	Total Recoverable	Water	6020B	535120
LCS 240-535120/2-A	Lab Control Sample	Total Recoverable	Water	6020B	535120

Analysis Batch: 535489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-1	MW-20-F-20220714-01	Total/NA	Water	7470A	535121
240-169904-2	9910-F-20220714-01	Total/NA	Water	7470A	535121
240-169904-3	EB-001-F-20220714-01	Total/NA	Water	7470A	535121
MB 240-535121/1-A	Method Blank	Total/NA	Water	7470A	535121
LCS 240-535121/2-A	Lab Control Sample	Total/NA	Water	7470A	535121

Analysis Batch: 535817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-2	9910-F-20220714-01	Total Recoverable	Water	6020B	535120

General Chemistry

Analysis Batch: 535715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-1	MW-20-F-20220714-01	Total/NA	Water	2320B-1997	
240-169904-2	9910-F-20220714-01	Total/NA	Water	2320B-1997	
240-169904-3	EB-001-F-20220714-01	Total/NA	Water	2320B-1997	
MB 240-535715/7	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-535715/6	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 538097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-1	MW-20-F-20220714-01	Total/NA	Water	300.0-1993 R2.1	
240-169904-2	9910-F-20220714-01	Total/NA	Water	300.0-1993 R2.1	
240-169904-3	EB-001-F-20220714-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-538097/4	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-538097/5	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 574615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-1	MW-20-F-20220714-01	Total/NA	Water	PrecSep-21	
240-169904-2	9910-F-20220714-01	Total/NA	Water	PrecSep-21	
240-169904-3	EB-001-F-20220714-01	Total/NA	Water	PrecSep-21	
MB 160-574615/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-574615/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 574616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169904-1	MW-20-F-20220714-01	Total/NA	Water	PrecSep_0	
240-169904-2	9910-F-20220714-01	Total/NA	Water	PrecSep_0	
240-169904-3	EB-001-F-20220714-01	Total/NA	Water	PrecSep_0	
MB 160-574616/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-574616/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 240-169904-1

Client Sample ID: MW-20-F-20220714-01

Lab Sample ID: 240-169904-1
Date Collected: 07/14/22 11:19
Matrix: Water
Date Received: 07/16/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535120	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		1	535400	AJC	EET CAN	07/19/22 18:26
Total/NA	Prep	7470A			535121	SHB	EET CAN	07/18/22 12:00
Total/NA	Analysis	7470A		1	535489	MRL	EET CAN	07/20/22 10:01
Total/NA	Analysis	2320B-1997		1	535715	MMS	EET CAN	07/21/22 10:17
Total/NA	Analysis	300.0-1993 R2.1		1	538097	KMS	EET CAN	08/10/22 22:55
Total/NA	Prep	PrecSep-21			574615	MS	EET SL	07/20/22 10:56
Total/NA	Analysis	9315		1	577571	FLC	EET SL	08/11/22 11:50
Total/NA	Prep	PrecSep_0			574616	MS	EET SL	07/20/22 11:16
Total/NA	Analysis	9320		1	576480	SCB	EET SL	08/04/22 11:32
Total/NA	Analysis	Ra226_Ra228		1	577617	SCB	EET SL	08/11/22 22:44

Client Sample ID: 9910-F-20220714-01

Lab Sample ID: 240-169904-2
Date Collected: 07/14/22 14:09
Matrix: Water
Date Received: 07/16/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535120	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		1	535400	AJC	EET CAN	07/19/22 18:39
Total Recoverable	Prep	3005A			535120	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		10	535817	AJC	EET CAN	07/21/22 18:01
Total/NA	Prep	7470A			535121	SHB	EET CAN	07/18/22 12:00
Total/NA	Analysis	7470A		1	535489	MRL	EET CAN	07/20/22 10:03
Total/NA	Analysis	2320B-1997		1	535715	MMS	EET CAN	07/21/22 10:23
Total/NA	Analysis	300.0-1993 R2.1		2	538097	KMS	EET CAN	08/11/22 00:01
Total/NA	Prep	PrecSep-21			574615	MS	EET SL	07/20/22 10:56
Total/NA	Analysis	9315		1	577571	FLC	EET SL	08/11/22 11:51
Total/NA	Prep	PrecSep_0			574616	MS	EET SL	07/20/22 11:16
Total/NA	Analysis	9320		1	576480	SCB	EET SL	08/04/22 11:33
Total/NA	Analysis	Ra226_Ra228		1	577617	SCB	EET SL	08/11/22 22:44

Client Sample ID: EB-001-F-20220714-01

Lab Sample ID: 240-169904-3
Date Collected: 07/14/22 17:30
Matrix: Water
Date Received: 07/16/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535120	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		1	535400	AJC	EET CAN	07/19/22 18:36
Total/NA	Prep	7470A			535121	SHB	EET CAN	07/18/22 12:00
Total/NA	Analysis	7470A		1	535489	MRL	EET CAN	07/20/22 10:05
Total/NA	Analysis	2320B-1997		1	535715	MMS	EET CAN	07/21/22 10:27
Total/NA	Analysis	300.0-1993 R2.1		1	538097	KMS	EET CAN	08/11/22 00:22
Total/NA	Prep	PrecSep-21			574615	MS	EET SL	07/20/22 10:56
Total/NA	Analysis	9315		1	577570	FLC	EET SL	08/11/22 11:52

Lab Chronicle

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

Job ID: 240-169904-1

Client Sample ID: EB-001-F-20220714-01

Date Collected: 07/14/22 17:30
Date Received: 07/16/22 10:15

Lab Sample ID: 240-169904-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep_0			574616	MS	EET SL	07/20/22 11:16
Total/NA	Analysis	9320		1	576480	SCB	EET SL	08/04/22 11:33
Total/NA	Analysis	Ra226_Ra228		1	577617	SCB	EET SL	08/11/22 22:44

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
Job ID: 240-169904-1
Project/Site: Federal CCR Wells - App IV

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	02-23-23
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	08-31-22
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	06-30-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169904-1
Project/Site: Federal CCR Wells - App IV

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	07-31-23
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.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

1.7/1.0 / 1.0/0.3

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Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93466-34578.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:

Address: 7397 OH-7	Due Date Requested:
City: Cheshire	TAT Requested (days):
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No
Phone: 740-925-3171(Tel)	PO #: 2935505
Email: taylor.huffman@lightstonegen.com	WO #:
Project Name: Federal CCR Wells - App IV	Project #: 24019633
Site:	SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
MW-20-F-20220714-01	7-14-22	1119	G	Water			1	1	1	2		
9910-F-20220714-01	7-14-22	1409	G	Water			1	1	1	2		
EB-001-F-20220714-01	7-14-22	1730	G	Water			1	1	1	2		
				Water								
				Water								

240-169904 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Walter Clark	071522 1015	Kenton		7-15-22 1015	TA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Page 24 of 28

8/16/2022

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative Login # :_____
Barberton Facility

Client Lightsong Capital Site Name_____ Cooler unpacked by: Mandy Be

Cooler Received on 7-15-22 Opened on 7-15-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # IA 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)	
-Were tamper/custody seals intact and uncompromised?	Yes No (NA)	
3. Shippers' packing slip attached to the cooler(s)?	Yes (No)	
4. Did custody papers accompany the sample(s)?	(Yes) No	
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7. Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11. Sufficient quantity received to perform indicated analyses?	(Yes) No	
12. Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# 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: _____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW-20-F-20220714-01	240-169904-A-1	Plastic 250ml - unpreserved				
MW-20-F-20220714-01	240-169904-B-1	Plastic 250ml - unpreserved				
MW-20-F-20220714-01	240-169904-C-1	Plastic 500ml - with Nitric Acid	<2			
MW-20-F-20220714-01	240-169904-D-1	Plastic 1 liter - Nitric Acid	<2			
MW-20-F-20220714-01	240-169904-E-1	Plastic 1 liter - Nitric Acid	<2			
9910-F-20220714-01	240-169904-A-2	Plastic 250ml - unpreserved				
9910-F-20220714-01	240-169904-B-2	Plastic 250ml - unpreserved				
9910-F-20220714-01	240-169904-C-2	Plastic 500ml - with Nitric Acid	<2			
9910-F-20220714-01	240-169904-D-2	Plastic 1 liter - Nitric Acid	<2			
9910-F-20220714-01	240-169904-E-2	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220714-01	240-169904-A-3	Plastic 250ml - unpreserved				
EB-001-F-20220714-01	240-169904-B-3	Plastic 250ml - unpreserved				
EB-001-F-20220714-01	240-169904-C-3	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220714-01	240-169904-D-3	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220714-01	240-169904-E-3	Plastic 1 liter - Nitric Acid	<2			

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-154670.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-169904-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 8/17/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells - App IV	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-20-F-20220714-01 (240-169904-1)	7/14/22	11:19 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
9910-F-20220714-01 (240-169904-2)	7/14/22	14:09 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220714-01 (240-169904-3)	7/14/22	17:30 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Rachelle Haeder	7-18-22 13:00	FEDEX	FED EX		
2	FED EX			Sierra Worthington	JUL 19 2022 1010	FEDEX
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-169904-1

Login Number: 169904
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 07/19/22 02:47 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-169911-1
Client Project/Site: Federal CCR Well - App IV

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
8/12/2022 12:35:59 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Well - App IV

Job ID: 240-169911-1

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.
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
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-169911-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-169911-1

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 7/15/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.1º C, 0.5º C and 3.8º C.

RAD
Methods 9315: Radium 226 Batch 160-574615: 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. 2019-02-F-20220713-01 (240-169911-1), 2018-01-F-20220713-01 (240-169911-2), 2018-01-F-20220713-01 (240-169911-2[MS]), 2018-01-F-20220713-01 (240-169911-2[MSD]), DUP-002-2018-01-F-20220713-01 (240-169911-3), EB-001-F-20220713-01 (240-169911-4), (LCS 160-574615/2-A) and (MB 160-574615/1-A)

Methods 9320: Radium 228 Batch 574616: 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. 2019-02-F-20220713-01 (240-169911-1), 2018-01-F-20220713-01 (240-169911-2), 2018-01-F-20220713-01 (240-169911-2[MS]), 2018-01-F-20220713-01 (240-169911-2[MSD]), DUP-002-2018-01-F-20220713-01 (240-169911-3), EB-001-F-20220713-01 (240-169911-4), (LCS 160-574616/2-A) and (MB 160-574616/1-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 Well - App IV

Job ID: 240-169911-1

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 Well - App IV

Job ID: 240-169911-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-169911-1	2019-02-F-20220713-01	Water	07/13/22 10:12	07/15/22 10:00
240-169911-2	2018-01-F-20220713-01	Water	07/13/22 13:15	07/15/22 10:00
240-169911-3	DUP-002-2018-01-F-20220713-01	Water	07/13/22 13:15	07/15/22 10:00
240-169911-4	EB-001-F-20220713-01	Water	07/13/22 16:00	07/15/22 10:00

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Well - App IV

Job ID: 240-169911-1

Client Sample ID: 2019-02-F-20220713-01 — Lab Sample ID: 240-169911-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	9.0		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	760		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	11		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	0.85	J	1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	1.2		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	250		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	210	J	1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	20		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	14000		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	1.8	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	400000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	1400		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	23		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.53		0.10	0.048	mg/L	2		300.0-1993 R2.1	Total/NA

Client Sample ID: 2018-01-F-20220713-01 — Lab Sample ID: 240-169911-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.84	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Arsenic	110		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	650		5.0	2.2	ug/L	1		6020B	Total Recoverable
Lead	0.65	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	5.5	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Molybdenum	57		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	4.4	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	2200000		10000	3300	ug/L	10		6020B	Total Recoverable
Thallium	0.20	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	310		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	2.5		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169911-1
Project/Site: Federal CCR Well - App IV

Client Sample ID: DUP-002-2018-01-F-20220713-01
Lab Sample ID: 240-169911-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.64	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Arsenic	100		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	600		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	6.0		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	0.45	J	1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	0.80	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	4.7	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	290	J	1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	53		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	3.4	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	2000000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	310		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	2.5		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20220713-01
Lab Sample ID: 240-169911-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	730	J	1000	330	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2019-02-F-20220713-01

Date Collected: 07/13/22 10:12
Date Received: 07/15/22 10:00

Lab Sample ID: 240-169911-1

Matrix: Water

Method: 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		07/18/22 12:00	07/19/22 15:40	1
Arsenic	**9.0**		5.0	0.75	ug/L		07/18/22 12:00	07/19/22 15:40	1
Barium	**760**		5.0	2.2	ug/L		07/18/22 12:00	07/19/22 15:40	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 15:40	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:40	1
Chromium	**11**		5.0	2.5	ug/L		07/18/22 12:00	07/19/22 15:40	1
Cobalt	**0.85**	**J**	1.0	0.19	ug/L		07/18/22 12:00	07/19/22 15:40	1
Lead	**1.2**		1.0	0.45	ug/L		07/18/22 12:00	07/19/22 15:40	1
Lithium	**250**		8.0	1.7	ug/L		07/18/22 12:00	07/19/22 15:40	1
Magnesium	**210**	**J**	1000	200	ug/L		07/18/22 12:00	07/19/22 15:40	1
Molybdenum	**20**		5.0	1.1	ug/L		07/18/22 12:00	07/19/22 15:40	1
Potassium	**14000**		1000	220	ug/L		07/18/22 12:00	07/19/22 15:40	1
Selenium	**1.8**	**J**	5.0	0.89	ug/L		07/18/22 12:00	07/19/22 15:40	1
Sodium	**400000**		1000	330	ug/L		07/18/22 12:00	07/19/22 15:40	1
Thallium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:40	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		07/18/22 12:00	07/19/22 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1400**		5.0	2.6	mg/L			07/18/22 17:10	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 17:10	1
Carbonate Alkalinity as CaCO3	**23**		5.0	2.6	mg/L			07/18/22 17:10	1
Fluoride	**0.53**		0.10	0.048	mg/L			08/03/22 18:21	2

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.05**		0.419	0.458	1.00	0.312	pCi/L	07/20/22 10:56	08/11/22 08:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.7*		*40 - 110*	*07/20/22 10:56*	*08/11/22 08:32*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.59**		0.744	0.758	1.00	0.959	pCi/L	07/20/22 11:16	08/04/22 11:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.7*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:30*	*1*
Y Carrier	*85.2*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:30*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Well - App IV

Job ID: 240-169911-1

Client Sample ID: 2019-02-F-20220713-01

Date Collected: 07/13/22 10:12
Date Received: 07/15/22 10:00

Lab Sample ID: 240-169911-1

Matrix: Water

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	3.64		0.854	0.886	5.00	0.959	pCi/L		08/11/22 22:44	1

Client Sample ID: 2018-01-F-20220713-01

Date Collected: 07/13/22 13:15
Date Received: 07/15/22 10:00

Lab Sample ID: 240-169911-2

Matrix: Water

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.84**	**J**	2.0	0.57	ug/L		07/18/22 12:00	07/19/22 15:18	1
Arsenic	**110**		5.0	0.75	ug/L		07/18/22 12:00	07/19/22 15:18	1
Barium	**650**		5.0	2.2	ug/L		07/18/22 12:00	07/19/22 15:18	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 15:18	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:18	1
Chromium	5.0	U	5.0	2.5	ug/L		07/18/22 12:00	07/19/22 15:18	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/18/22 12:00	07/19/22 15:18	1
Lead	**0.65**	**J**	1.0	0.45	ug/L		07/18/22 12:00	07/19/22 15:18	1
Lithium	**5.5**	**J**	8.0	1.7	ug/L		07/18/22 12:00	07/19/22 15:18	1
Magnesium	1000	U	1000	200	ug/L		07/18/22 12:00	07/19/22 15:18	1
Molybdenum	**57**		5.0	1.1	ug/L		07/18/22 12:00	07/19/22 15:18	1
Potassium	**3300**		1000	220	ug/L		07/18/22 12:00	07/19/22 15:18	1
Selenium	**4.4**	**J**	5.0	0.89	ug/L		07/18/22 12:00	07/19/22 15:18	1
Sodium	**2200000**		10000	3300	ug/L		07/18/22 12:00	07/22/22 18:49	10
Thallium	**0.20**	**J**	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:18	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		07/18/22 12:00	07/19/22 12:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**310**		5.0	2.6	mg/L			07/18/22 17:20	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 17:20	1
Carbonate Alkalinity as CaCO3	**270**		5.0	2.6	mg/L			07/18/22 17:20	1
Fluoride	**2.5**		0.25	0.12	mg/L			08/03/22 18:41	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.905**		0.296	0.307	1.00	0.321	pCi/L	07/20/22 10:56	08/11/22 08:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.7*		*40 - 110*	*07/20/22 10:56*	*08/11/22 08:33*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.29**		0.687	0.697	1.00	0.970	pCi/L	07/20/22 11:16	08/04/22 11:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.7*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:30*	*1*
Y Carrier	*84.1*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:30*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169911-1
Project/Site: Federal CCR Well - App IV

Client Sample ID: 2018-01-F-20220713-01
Lab Sample ID: 240-169911-2
Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 10:00

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	2.19		0.748	0.762	5.00	0.970	pCi/L		08/11/22 22:44	1

Client Sample ID: DUP-002-2018-01-F-20220713-01
Lab Sample ID: 240-169911-3

Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 10:00

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.64	J	2.0	0.57	ug/L		07/18/22 12:00	07/19/22 15:43	1
Arsenic	100		5.0	0.75	ug/L		07/18/22 12:00	07/19/22 15:43	1
Barium	600		5.0	2.2	ug/L		07/18/22 12:00	07/19/22 15:43	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 15:43	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:43	1
Chromium	6.0		5.0	2.5	ug/L		07/18/22 12:00	07/19/22 15:43	1
Cobalt	0.45	J	1.0	0.19	ug/L		07/18/22 12:00	07/19/22 15:43	1
Lead	0.80	J	1.0	0.45	ug/L		07/18/22 12:00	07/19/22 15:43	1
Lithium	4.7	J	8.0	1.7	ug/L		07/18/22 12:00	07/19/22 15:43	1
Magnesium	290	J	1000	200	ug/L		07/18/22 12:00	07/19/22 15:43	1
Molybdenum	53		5.0	1.1	ug/L		07/18/22 12:00	07/19/22 15:43	1
Potassium	3300		1000	220	ug/L		07/18/22 12:00	07/19/22 15:43	1
Selenium	3.4	J	5.0	0.89	ug/L		07/18/22 12:00	07/19/22 15:43	1
Sodium	2000000		10000	3300	ug/L		07/18/22 12:00	07/22/22 19:02	10
Thallium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:43	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		07/18/22 12:00	07/19/22 13:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	310		5.0	2.6	mg/L			07/18/22 17:26	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 17:26	1
Carbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L			07/18/22 17:26	1
Fluoride	2.5		0.25	0.12	mg/L			08/03/22 19:42	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.02		0.210	0.229	1.00	0.142	pCi/L	07/20/22 10:56	08/11/22 11:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*07/20/22 10:56*	*08/11/22 11:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.62		0.543	0.563	1.00	0.682	pCi/L	07/20/22 11:16	08/04/22 11:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:31*	*1*
Y Carrier	*86.4*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:31*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169911-1
Project/Site: Federal CCR Well - App IV

Client Sample ID: DUP-002-2018-01-F-20220713-01
Lab Sample ID: 240-169911-3
Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 10:00

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	2.64		0.582	0.608	5.00	0.682	pCi/L		08/11/22 22:44	1

Client Sample ID: EB-001-F-20220713-01
Lab Sample ID: 240-169911-4

Date Collected: 07/13/22 16:00
Matrix: Water
Date Received: 07/15/22 10:00

Method: 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		07/18/22 12:00	07/19/22 15:45	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/18/22 12:00	07/19/22 15:45	1
Barium	5.0	U	5.0	2.2	ug/L		07/18/22 12:00	07/19/22 15:45	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 15:45	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:45	1
Chromium	5.0	U	5.0	2.5	ug/L		07/18/22 12:00	07/19/22 15:45	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/18/22 12:00	07/19/22 15:45	1
Lead	1.0	U	1.0	0.45	ug/L		07/18/22 12:00	07/19/22 15:45	1
Lithium	8.0	U	8.0	1.7	ug/L		07/18/22 12:00	07/19/22 15:45	1
Magnesium	1000	U	1000	200	ug/L		07/18/22 12:00	07/19/22 15:45	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/18/22 12:00	07/19/22 15:45	1
Potassium	1000	U	1000	220	ug/L		07/18/22 12:00	07/19/22 15:45	1
Selenium	5.0	U	5.0	0.89	ug/L		07/18/22 12:00	07/19/22 15:45	1
Sodium	**730**	**J**	1000	330	ug/L		07/18/22 12:00	07/19/22 15:45	1
Thallium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:45	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		07/18/22 12:00	07/19/22 13:09	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			07/18/22 17:29	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 17:29	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 17:29	1
Fluoride	0.050	U	0.050	0.024	mg/L			08/03/22 20:02	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	-0.0334	U	0.0693	0.0694	1.00	0.158	pCi/L	07/20/22 10:56	08/11/22 11:49	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.7*		*40 - 110*	*07/20/22 10:56*	*08/11/22 11:49*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.642**		0.379	0.384	1.00	0.544	pCi/L	07/20/22 11:16	08/04/22 11:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.7*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:31*	*1*
Y Carrier	*84.5*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:31*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169911-1
Project/Site: Federal CCR Well - App IV

Client Sample ID: EB-001-F-20220713-01
Lab Sample ID: 240-169911-4
Date Collected: 07/13/22 16:00
Matrix: Water
Date Received: 07/15/22 10:00

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	0.609		0.385	0.390	5.00	0.544	pCi/L		08/11/22 22:44	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169911-1
Project/Site: Federal CCR Well - App IV

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)
240-169911-1	2019-02-F-20220713-01	79.7
240-169911-2	2018-01-F-20220713-01	95.7
240-169911-2 MS	2018-01-F-20220713-01	97.2
240-169911-2 MSD	2018-01-F-20220713-01	92.4
240-169911-3	DUP-002-2018-01-F-20220713-01	103
240-169911-4	EB-001-F-20220713-01	79.7
LCS 160-574615/2-A	Lab Control Sample	92.9
MB 160-574615/1-A	Method Blank	97.7

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-169911-1	2019-02-F-20220713-01	79.7	85.2
240-169911-2	2018-01-F-20220713-01	95.7	84.1
240-169911-2 MS	2018-01-F-20220713-01	97.2	84.9
240-169911-2 MSD	2018-01-F-20220713-01	92.4	86.7
240-169911-3	DUP-002-2018-01-F-20220713-01	103	86.4
240-169911-4	EB-001-F-20220713-01	79.7	84.5
LCS 160-574616/2-A	Lab Control Sample	92.9	85.2
MB 160-574616/1-A	Method Blank	97.7	87.5

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-535118/1-A
Matrix: Water
Analysis Batch: 535400

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535118

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/18/22 12:00	07/19/22 15:14	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/18/22 12:00	07/19/22 15:14	1
Barium	5.0	U	5.0	2.2	ug/L		07/18/22 12:00	07/19/22 15:14	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/18/22 12:00	07/19/22 15:14	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:14	1
Chromium	5.0	U	5.0	2.5	ug/L		07/18/22 12:00	07/19/22 15:14	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/18/22 12:00	07/19/22 15:14	1
Lead	1.0	U	1.0	0.45	ug/L		07/18/22 12:00	07/19/22 15:14	1
Lithium	8.0	U	8.0	1.7	ug/L		07/18/22 12:00	07/19/22 15:14	1
Magnesium	1000	U	1000	200	ug/L		07/18/22 12:00	07/19/22 15:14	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/18/22 12:00	07/19/22 15:14	1
Potassium	1000	U	1000	220	ug/L		07/18/22 12:00	07/19/22 15:14	1
Selenium	5.0	U	5.0	0.89	ug/L		07/18/22 12:00	07/19/22 15:14	1
Sodium	1000	U	1000	330	ug/L		07/18/22 12:00	07/19/22 15:14	1
Thallium	1.0	U	1.0	0.20	ug/L		07/18/22 12:00	07/19/22 15:14	1

Lab Sample ID: LCS 240-535118/2-A
Matrix: Water
Analysis Batch: 535400

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535118

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	100		ug/L		100	80 - 120
Arsenic	1000	976		ug/L		98	80 - 120
Barium	1000	967		ug/L		97	80 - 120
Beryllium	500	476		ug/L		95	80 - 120
Cadmium	500	480		ug/L		96	80 - 120
Chromium	500	498		ug/L		100	80 - 120
Cobalt	500	460		ug/L		92	80 - 120
Lead	500	476		ug/L		95	80 - 120
Lithium	500	459		ug/L		92	80 - 120
Magnesium	25000	24800		ug/L		99	80 - 120
Molybdenum	500	464		ug/L		93	80 - 120
Potassium	25000	24700		ug/L		99	80 - 120
Selenium	1000	915		ug/L		92	80 - 120
Sodium	25000	24900		ug/L		100	80 - 120
Thallium	1000	929		ug/L		93	80 - 120

Lab Sample ID: 240-169911-2 MS
Matrix: Water
Analysis Batch: 535400

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total Recoverable
Prep Batch: 535118

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.84	J	100	107		ug/L		107	80 - 120
Arsenic	110		1000	1100		ug/L		99	80 - 120
Barium	650		1000	1660		ug/L		101	80 - 120
Beryllium	1.0	U	500	507		ug/L		101	80 - 120
Cadmium	1.0	U	500	482		ug/L		96	80 - 120
Chromium	5.0	U	500	495		ug/L		99	80 - 120
Cobalt	1.0	U	500	495		ug/L		99	80 - 120

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

Lab Sample ID: 240-169911-2 MS
Matrix: Water
Analysis Batch: 535400

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total Recoverable
Prep Batch: 535118

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.65	J	500	475		ug/L		95	80 - 120
Lithium	5.5	J	500	501		ug/L		99	80 - 120
Magnesium	1000	U	25000	24700		ug/L		99	80 - 120
Molybdenum	57		500	579		ug/L		104	80 - 120
Potassium	3300		25000	27700		ug/L		97	80 - 120
Selenium	4.4	J	1000	970		ug/L		97	80 - 120
Thallium	0.20	J	1000	923		ug/L		92	80 - 120

Lab Sample ID: 240-169911-2 MS
Matrix: Water
Analysis Batch: 536003

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total Recoverable
Prep Batch: 535118

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	2200000		25000	2210000	4	ug/L		129	80 - 120

Lab Sample ID: 240-169911-2 MSD
Matrix: Water
Analysis Batch: 535400

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total Recoverable
Prep Batch: 535118

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	0.84	J	100	105		ug/L		104	80 - 120	2	20
Arsenic	110		1000	1070		ug/L		96	80 - 120	3	20
Barium	650		1000	1610		ug/L		96	80 - 120	3	20
Beryllium	1.0	U	500	493		ug/L		99	80 - 120	3	20
Cadmium	1.0	U	500	469		ug/L		94	80 - 120	3	20
Chromium	5.0	U	500	486		ug/L		97	80 - 120	2	20
Cobalt	1.0	U	500	488		ug/L		98	80 - 120	1	20
Lead	0.65	J	500	458		ug/L		92	80 - 120	4	20
Lithium	5.5	J	500	487		ug/L		96	80 - 120	3	20
Magnesium	1000	U	25000	23700		ug/L		95	80 - 120	4	20
Molybdenum	57		500	570		ug/L		103	80 - 120	1	20
Potassium	3300		25000	27100		ug/L		95	80 - 120	2	20
Selenium	4.4	J	1000	945		ug/L		94	80 - 120	3	20
Thallium	0.20	J	1000	889		ug/L		89	80 - 120	4	20

Lab Sample ID: 240-169911-2 MSD
Matrix: Water
Analysis Batch: 536003

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total Recoverable
Prep Batch: 535118

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sodium	2200000		25000	2180000	4	ug/L		2	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-535119/1-A
Matrix: Water
Analysis Batch: 535319

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 535119

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/18/22 12:00	07/19/22 12:54	1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LCS 240-535119/2-A
Matrix: Water
Analysis Batch: 535319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 535119

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	5.26		ug/L		105	80 - 120		

Lab Sample ID: 240-169911-2 MS
Matrix: Water
Analysis Batch: 535319

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA
Prep Batch: 535119

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: 240-169911-2 MSD
Matrix: Water
Analysis Batch: 535319

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA
Prep Batch: 535119

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	1.16		ug/L		116	80 - 120	6	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-535236/4
Matrix: Water
Analysis Batch: 535236

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			07/18/22 16:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 16:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 16:16	1

Lab Sample ID: LCS 240-535236/3
Matrix: Water
Analysis Batch: 535236

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		98	86 - 123		

Lab Sample ID: 240-169911-2 DU
Matrix: Water
Analysis Batch: 535236

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	310			313		mg/L				0.2	20
Bicarbonate Alkalinity as CaCO3	5.0	U		5.0	U	mg/L				NC	20
Carbonate Alkalinity as CaCO3	270			262		mg/L				2	20

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-537242/3
Matrix: Water
Analysis Batch: 537242

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			08/03/22 13:39	1

Lab Sample ID: LCS 240-537242/4
Matrix: Water
Analysis Batch: 537242

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	2.54		mg/L		102	90 - 110

Lab Sample ID: 240-169911-2 MS
Matrix: Water
Analysis Batch: 537242

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.5		12.5	15.1		mg/L		101	80 - 120

Lab Sample ID: 240-169911-2 MSD
Matrix: Water
Analysis Batch: 537242

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	2.5		12.5	14.8		mg/L		98	80 - 120	2	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-574615/1-A
Matrix: Water
Analysis Batch: 577571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 574615

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03850	U	0.0757	0.0758	1.00	0.135	pCi/L	07/20/22 10:56	08/11/22 08:32	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.7*		*40 - 110*	*07/20/22 10:56*	*08/11/22 08:32*	*1*

Lab Sample ID: LCS 160-574615/2-A
Matrix: Water
Analysis Batch: 577571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 574615

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.13		1.08	1.00	0.107	pCi/L	89	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.9*		*40 - 110*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: 240-169911-2 MS
Matrix: Water
Analysis Batch: 577571

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA
Prep Batch: 574615

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.905		22.7	21.13		2.22	1.00	0.226	pCi/L	89	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*97.2*		*40 - 110*

Lab Sample ID: 240-169911-2 MSD
Matrix: Water
Analysis Batch: 577571

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA
Prep Batch: 574615

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.905		22.3	19.26		2.08	1.00	0.299	pCi/L	82	60 - 140	0.43	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*92.4*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-574616/1-A
Matrix: Water
Analysis Batch: 576480

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 574616

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4337	U	0.294	0.297	1.00	0.439	pCi/L	07/20/22 11:16	08/04/22 11:30	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.7*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:30*	*1*
Y Carrier	*87.5*		*40 - 110*	*07/20/22 11:16*	*08/04/22 11:30*	*1*

Lab Sample ID: LCS 160-574616/2-A
Matrix: Water
Analysis Batch: 576480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 574616

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.39	9.235		1.24	1.00	0.494	pCi/L	110	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.9*		*40 - 110*
Y Carrier	*85.2*		*40 - 110*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 240-169911-2 MS
Matrix: Water
Analysis Batch: 576480

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA
Prep Batch: 574616

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	1.29		16.8	18.13		2.41	1.00	0.838	pCi/L	100	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*97.2*		*40 - 110*
Y Carrier	*84.9*		*40 - 110*

Lab Sample ID: 240-169911-2 MSD
Matrix: Water
Analysis Batch: 576480

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA
Prep Batch: 574616

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	1.29		16.5	20.01		2.60	1.00	0.925	pCi/L	113	60 - 140	0.38	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*92.4*		*40 - 110*
Y Carrier	*86.7*		*40 - 110*

Metals

Prep Batch: 535118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-1	2019-02-F-20220713-01	Total Recoverable	Water	3005A	
240-169911-2	2018-01-F-20220713-01	Total Recoverable	Water	3005A	
240-169911-3	DUP-002-2018-01-F-20220713-01	Total Recoverable	Water	3005A	
240-169911-4	EB-001-F-20220713-01	Total Recoverable	Water	3005A	
MB 240-535118/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535118/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-169911-2 MS	2018-01-F-20220713-01	Total Recoverable	Water	3005A	
240-169911-2 MSD	2018-01-F-20220713-01	Total Recoverable	Water	3005A	

Prep Batch: 535119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-1	2019-02-F-20220713-01	Total/NA	Water	7470A	
240-169911-2	2018-01-F-20220713-01	Total/NA	Water	7470A	
240-169911-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	7470A	
240-169911-4	EB-001-F-20220713-01	Total/NA	Water	7470A	
MB 240-535119/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-535119/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-169911-2 MS	2018-01-F-20220713-01	Total/NA	Water	7470A	
240-169911-2 MSD	2018-01-F-20220713-01	Total/NA	Water	7470A	

Analysis Batch: 535319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-1	2019-02-F-20220713-01	Total/NA	Water	7470A	535119
240-169911-2	2018-01-F-20220713-01	Total/NA	Water	7470A	535119
240-169911-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	7470A	535119
240-169911-4	EB-001-F-20220713-01	Total/NA	Water	7470A	535119
MB 240-535119/1-A	Method Blank	Total/NA	Water	7470A	535119
LCS 240-535119/2-A	Lab Control Sample	Total/NA	Water	7470A	535119
240-169911-2 MS	2018-01-F-20220713-01	Total/NA	Water	7470A	535119
240-169911-2 MSD	2018-01-F-20220713-01	Total/NA	Water	7470A	535119

Analysis Batch: 535400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-1	2019-02-F-20220713-01	Total Recoverable	Water	6020B	535118
240-169911-2	2018-01-F-20220713-01	Total Recoverable	Water	6020B	535118
240-169911-3	DUP-002-2018-01-F-20220713-01	Total Recoverable	Water	6020B	535118
240-169911-4	EB-001-F-20220713-01	Total Recoverable	Water	6020B	535118
MB 240-535118/1-A	Method Blank	Total Recoverable	Water	6020B	535118
LCS 240-535118/2-A	Lab Control Sample	Total Recoverable	Water	6020B	535118
240-169911-2 MS	2018-01-F-20220713-01	Total Recoverable	Water	6020B	535118
240-169911-2 MSD	2018-01-F-20220713-01	Total Recoverable	Water	6020B	535118

Analysis Batch: 536003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-2	2018-01-F-20220713-01	Total Recoverable	Water	6020B	535118
240-169911-3	DUP-002-2018-01-F-20220713-01	Total Recoverable	Water	6020B	535118
240-169911-2 MS	2018-01-F-20220713-01	Total Recoverable	Water	6020B	535118
240-169911-2 MSD	2018-01-F-20220713-01	Total Recoverable	Water	6020B	535118

General Chemistry

Analysis Batch: 535236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-1	2019-02-F-20220713-01	Total/NA	Water	2320B-1997	
240-169911-2	2018-01-F-20220713-01	Total/NA	Water	2320B-1997	
240-169911-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	2320B-1997	
240-169911-4	EB-001-F-20220713-01	Total/NA	Water	2320B-1997	
MB 240-535236/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-535236/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-169911-2 DU	2018-01-F-20220713-01	Total/NA	Water	2320B-1997	

Analysis Batch: 537242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-1	2019-02-F-20220713-01	Total/NA	Water	300.0-1993 R2.1	
240-169911-2	2018-01-F-20220713-01	Total/NA	Water	300.0-1993 R2.1	
240-169911-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	300.0-1993 R2.1	
240-169911-4	EB-001-F-20220713-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-537242/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-537242/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
240-169911-2 MS	2018-01-F-20220713-01	Total/NA	Water	300.0-1993 R2.1	
240-169911-2 MSD	2018-01-F-20220713-01	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 574615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-1	2019-02-F-20220713-01	Total/NA	Water	PrecSep-21	
240-169911-2	2018-01-F-20220713-01	Total/NA	Water	PrecSep-21	
240-169911-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	PrecSep-21	
240-169911-4	EB-001-F-20220713-01	Total/NA	Water	PrecSep-21	
MB 160-574615/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-574615/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-169911-2 MS	2018-01-F-20220713-01	Total/NA	Water	PrecSep-21	
240-169911-2 MSD	2018-01-F-20220713-01	Total/NA	Water	PrecSep-21	

Prep Batch: 574616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169911-1	2019-02-F-20220713-01	Total/NA	Water	PrecSep_0	
240-169911-2	2018-01-F-20220713-01	Total/NA	Water	PrecSep_0	
240-169911-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	PrecSep_0	
240-169911-4	EB-001-F-20220713-01	Total/NA	Water	PrecSep_0	
MB 160-574616/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-574616/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-169911-2 MS	2018-01-F-20220713-01	Total/NA	Water	PrecSep_0	
240-169911-2 MSD	2018-01-F-20220713-01	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Well - App IV

Job ID: 240-169911-1

Client Sample ID: 2019-02-F-20220713-01

Lab Sample ID: 240-169911-1

Date Collected: 07/13/22 10:12
Matrix: Water
Date Received: 07/15/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535118	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		1	535400	AJC	EET CAN	07/19/22 15:40
Total/NA	Prep	7470A			535119	SHB	EET CAN	07/18/22 12:00
Total/NA	Analysis	7470A		1	535319	MRL	EET CAN	07/19/22 13:05
Total/NA	Analysis	2320B-1997		1	535236	MMS	EET CAN	07/18/22 17:10
Total/NA	Analysis	300.0-1993 R2.1		2	537242	JMB	EET CAN	08/03/22 18:21
Total/NA	Prep	PrecSep-21			574615	MS	EET SL	07/20/22 10:56
Total/NA	Analysis	9315		1	577571	FLC	EET SL	08/11/22 08:32
Total/NA	Prep	PrecSep_0			574616	MS	EET SL	07/20/22 11:16
Total/NA	Analysis	9320		1	576480	SCB	EET SL	08/04/22 11:30
Total/NA	Analysis	Ra226_Ra228		1	577617	SCB	EET SL	08/11/22 22:44

Client Sample ID: 2018-01-F-20220713-01

Lab Sample ID: 240-169911-2

Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535118	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		1	535400	AJC	EET CAN	07/19/22 15:18
Total Recoverable	Prep	3005A			535118	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		10	536003	AJC	EET CAN	07/22/22 18:49
Total/NA	Prep	7470A			535119	SHB	EET CAN	07/18/22 12:00
Total/NA	Analysis	7470A		1	535319	MRL	EET CAN	07/19/22 12:58
Total/NA	Analysis	2320B-1997		1	535236	MMS	EET CAN	07/18/22 17:20
Total/NA	Analysis	300.0-1993 R2.1		5	537242	JMB	EET CAN	08/03/22 18:41
Total/NA	Prep	PrecSep-21			574615	MS	EET SL	07/20/22 10:56
Total/NA	Analysis	9315		1	577571	FLC	EET SL	08/11/22 08:33
Total/NA	Prep	PrecSep_0			574616	MS	EET SL	07/20/22 11:16
Total/NA	Analysis	9320		1	576480	SCB	EET SL	08/04/22 11:30
Total/NA	Analysis	Ra226_Ra228		1	577617	SCB	EET SL	08/11/22 22:44

Client Sample ID: DUP-002-2018-01-F-20220713-01

Lab Sample ID: 240-169911-3

Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535118	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		1	535400	AJC	EET CAN	07/19/22 15:43
Total Recoverable	Prep	3005A			535118	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		10	536003	AJC	EET CAN	07/22/22 19:02
Total/NA	Prep	7470A			535119	SHB	EET CAN	07/18/22 12:00
Total/NA	Analysis	7470A		1	535319	MRL	EET CAN	07/19/22 13:07
Total/NA	Analysis	2320B-1997		1	535236	MMS	EET CAN	07/18/22 17:26
Total/NA	Analysis	300.0-1993 R2.1		5	537242	JMB	EET CAN	08/03/22 19:42

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Well - App IV

Job ID: 240-169911-1

Client Sample ID: DUP-002-2018-01-F-20220713-01

Lab Sample ID: 240-169911-3

Date Collected: 07/13/22 13:15

Matrix: Water

Date Received: 07/15/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			574615	MS	EET SL	07/20/22 10:56
Total/NA	Analysis	9315		1	577571	FLC	EET SL	08/11/22 11:49
Total/NA	Prep	PrecSep_0			574616	MS	EET SL	07/20/22 11:16
Total/NA	Analysis	9320		1	576480	SCB	EET SL	08/04/22 11:31
Total/NA	Analysis	Ra226_Ra228		1	577617	SCB	EET SL	08/11/22 22:44

Client Sample ID: EB-001-F-20220713-01

Lab Sample ID: 240-169911-4

Date Collected: 07/13/22 16:00

Matrix: Water

Date Received: 07/15/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535118	SHB	EET CAN	07/18/22 12:00
Total Recoverable	Analysis	6020B		1	535400	AJC	EET CAN	07/19/22 15:45
Total/NA	Prep	7470A			535119	SHB	EET CAN	07/18/22 12:00
Total/NA	Analysis	7470A		1	535319	MRL	EET CAN	07/19/22 13:09
Total/NA	Analysis	2320B-1997		1	535236	MMS	EET CAN	07/18/22 17:29
Total/NA	Analysis	300.0-1993 R2.1		1	537242	JMB	EET CAN	08/03/22 20:02
Total/NA	Prep	PrecSep-21			574615	MS	EET SL	07/20/22 10:56
Total/NA	Analysis	9315		1	577571	FLC	EET SL	08/11/22 11:49
Total/NA	Prep	PrecSep_0			574616	MS	EET SL	07/20/22 11:16
Total/NA	Analysis	9320		1	576480	SCB	EET SL	08/04/22 11:31
Total/NA	Analysis	Ra226_Ra228		1	577617	SCB	EET SL	08/11/22 22:44

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
Job ID: 240-169911-1
Project/Site: Federal CCR Well - App IV

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	02-23-23
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	08-31-22
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	06-30-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169911-1
Project/Site: Federal CCR Well - App IV

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	07-31-23
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.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

3.8/3.8 0.1/0.1 0.5/0.5 NOTE: Columbus 3 COOLERS09

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93466-34578.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal CCR Wells - App IV	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
2019-02-F-20220713-01	7-13-22	1012	G	Water			1	1	1	2		
2018-01-F-20220713-01	7-13-22	1315	G	Water			1	1	1	2		
2018-01-F-20220713-MS	7-13-22	1315	G	Water			1	1	1	2		
2018-01-F-20220713-MSD	7-13-22	1315	G	Water			1	1	1	2		
DUP-001-2018-01-F-20220713-01	7-13-22	1315	G	Water			1	1	1	2		
EB-001-F-20220713-01	7-13-22	1600	G	water			1	1	1	2		

240-169911 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[illegible]	7-14-22 1090	KEMRON	[illegible]	7-14-22 11:50	C74
2	[illegible]	7-14-22 1200	ETT	[illegible]	7-15-22 10:00	eetn
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

8/12/2022

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	3.8	3.8	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	0.5	0.5	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
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

Eurofins - Canton Sample Receipt Form/Narrative Login # :_____

Barberton Facility

Client LightStone GAVIN Site Name_____ Cooler unpacked by: Mandy Bee

Cooler Received on 7-15-22 Opened on 7-15-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 7B 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
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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) 2014-02-F-2022-07 13-01 were further preserved in the laboratory.

Time preserved: 17:30 Preservative(s) added/Lot number(s): HNO3 62004

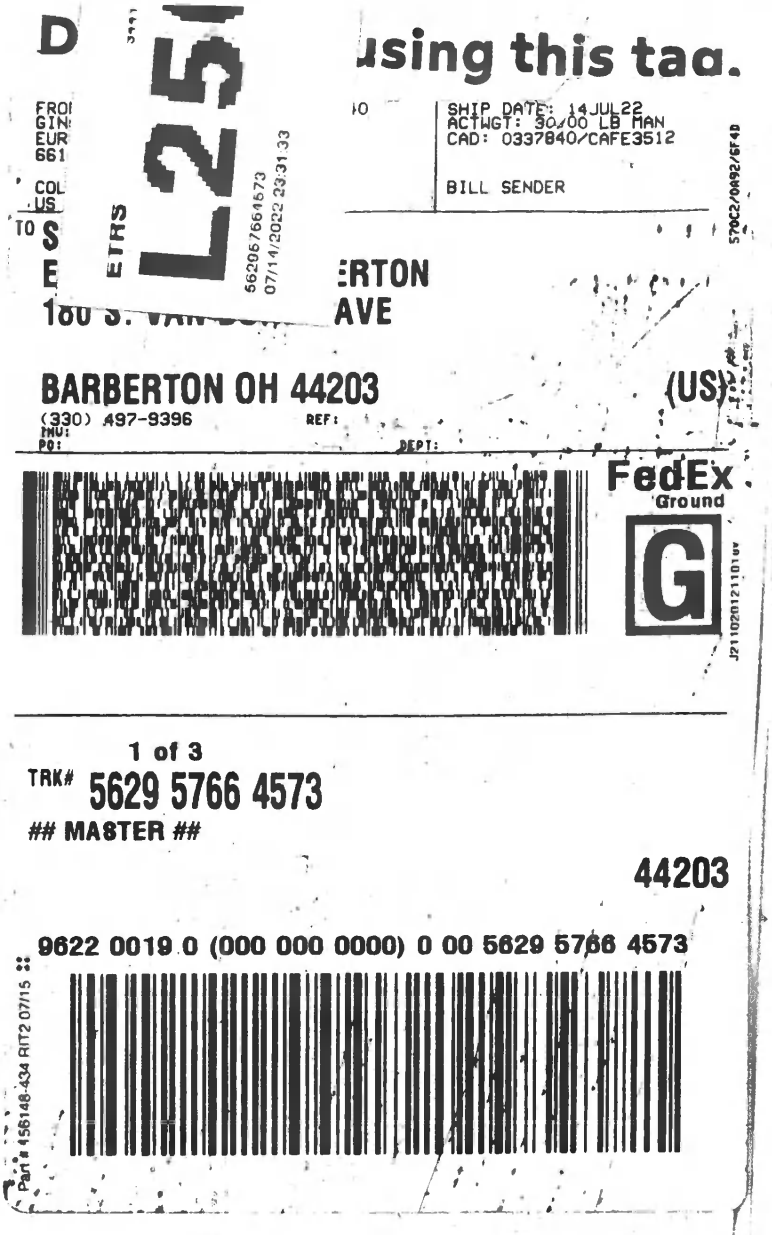
VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2019-02-F-20220713-01	240-169911-C-1	Plastic 500ml - with Nitric Acid	<2			
2019-02-F-20220713-01	240-169911-D-1	Plastic 1 liter - Nitric Acid	<2			
2019-02-F-20220713-01	240-169911-E-1	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-G-2	Plastic 500ml - with Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-H-2	Plastic 500ml - with Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-I-2	Plastic 500ml - with Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-J-2	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-K-2	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-L-2	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-M-2	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-N-2	Plastic 1 liter - Nitric Acid	<2			
2018-01-F-20220713-01	240-169911-O-2	Plastic 1 liter - Nitric Acid	<2			
DUP-002-2018-01-F-20220713-01	240-169911-C-3	Plastic 500ml - with Nitric Acid	<2			
DUP-002-2018-01-F-20220713-01	240-169911-D-3	Plastic 1 liter - Nitric Acid	<2			
DUP-002-2018-01-F-20220713-01	240-169911-E-3	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220713-01	240-169911-C-4	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220713-01	240-169911-D-4	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220713-01	240-169911-E-4	Plastic 1 liter - Nitric Acid	<2			



D using this tag.

FROM:
GINA RIVERA
EUROFINS
6610 SINGLETREE DR
COLUMBUS OH 43229
US

SHIP DATE: 14JUL22
ACTWGT: 30.00 LB MAN
CAD: 0337840/CAFE3512

BILL SENDER

TO S
E ERTON
180 S. VAN BUREN AVE

BARBERTON OH 44203 (US)
(330) 497-9396 REF:
INV:
PO: DEPT:

ETRS L25 5662 0766 4573 07/14/2022 23:31:33

570C2/0892/6F4D

FedEx Ground G

J211020121101sv

1 of 3
TRK# 5629 5766 4573
MASTER

44203

9622 0019 0 (000 000 0000) 0 00 5629 5766 4573

Part # 156148-434 RIT2 07/15

Do not lift tag.

FROM:
GINA RIVERA
EUROFINS
6610 SINGLETREE DR
COLUMBUS OH 43229
US

(614) 800-0

MAN
E3512

TO SAMPLE RECEIVING
EUROFINS - BARB
180 S. VAN BUREN

BARBERTON OH 44203 (US)
(330) 497-9396 REF:
INV:
PO: DEPT:

ETRS L25 5662 0766 4584 07/14/2022 23:31:20

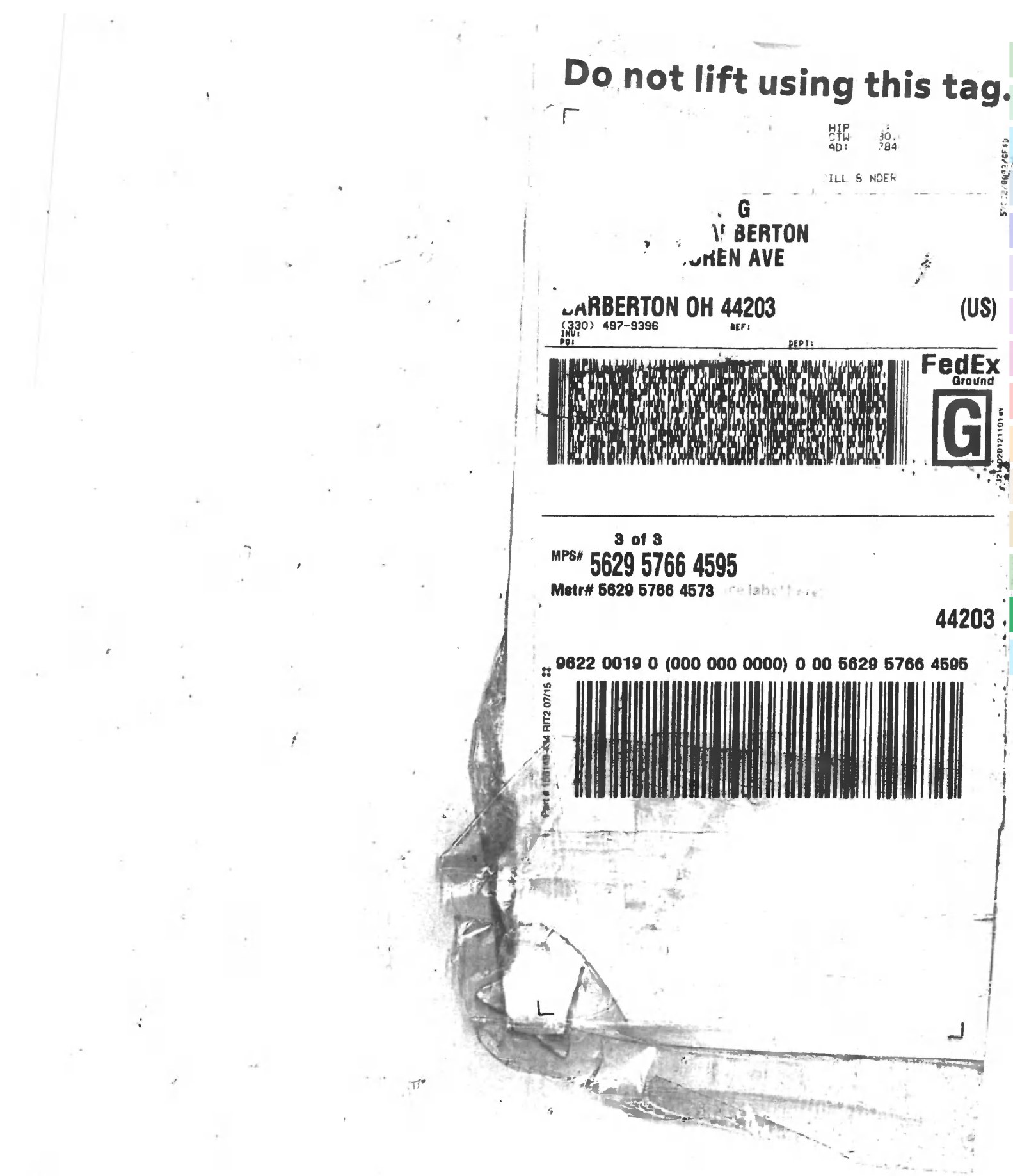
FedEx Ground G

2 of 3
MPS# 5629 5766 4584
Mstr# 5629 5766 4573

44203

9622 0019 0 (000 000 0000) 0 00 5629 5766 4584

Part # 156148-434 RIT2 07/15


Do not lift using this tag.
HIP
CTW
9D:
ILL S NDER
G
BERTON
KEN AVE
ARBERTON OH 44203
(US)
(330) 497-9396
REF:
INV:
PO:
DEPT:
FedEx
Ground
G
3 of 3
MPS# 5629 5766 4595
Mstr# 5629 5766 4573
44203
9622 0019 0 (000 000 0000) 0 00 5629 5766 4595

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-154670.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-169911-1
Address: 13715 Rider Trail North,	Due Date Requested: 8/16/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Well - App IV	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra228/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2019-02-F-20220713-01 (240-169911-1)	7/13/22	10:12 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2018-01-F-20220713-01 (240-169911-2)	7/13/22	13:15 Eastern		Water			X	X	X	6	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2018-01-F-20220713-01 (240-169911-2MS)	7/13/22	13:15 Eastern	MS	Water			X	X	X	1	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2018-01-F-20220713-01 (240-169911-2MSD)	7/13/22	13:15 Eastern	MSD	Water			X	X	X	1	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
DUP-002-2018-01-F-20220713-01 (240-169911-3)	7/13/22	13:15 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220713-01 (240-169911-4)	7/13/22	16:00 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Rachelle Hayes FED EX	7-18-22 13:00	FETNC	FED EX		
2	Relinquished by: FED EX	Date/Time:	Company	Received by: Sara Worthington	Date/Time: JUL 19 2022 1010	Company ENSR
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

8/12/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-169911-1

Login Number: 169911
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 07/19/22 12:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-169913-1
Client Project/Site: Federal CCR Wells - App III

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

Attn: Taylor Huffman

Authorized for release by:
7/28/2022 2:08:05 PM
Michael DelMonico, Project Manager I
(330)497-9396
Michael.DelMonico@et.eurofinsus.com

Designee for

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

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.

Table of Contents

Definitions/Glossary

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

Job ID: 240-169913-1

Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-169913-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-169913-1

Comments
No additional comments.

Receipt
The samples were received on 7/15/2022 1:10 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.1º C, 0.5º C and 3.0º C.

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 - App III

Job ID: 240-169913-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	TAL CAN
6020B	Metals (ICP/MS)	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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL 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:

TAL 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: 240-169913-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-169913-1	2019-02-F-20220713-01	Water	07/13/22 10:12	07/15/22 13:10
240-169913-2	2018-01-F-20220713-01	Water	07/13/22 13:15	07/15/22 13:10
240-169913-3	DUP-002-2018-01-F-20220713-01	Water	07/13/22 13:15	07/15/22 13:10
240-169913-4	EB-001-F-20220713-01	Water	07/13/22 16:00	07/15/22 13:10

Detection Summary

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

Job ID: 240-169913-1

Client Sample ID: 2019-02-F-20220713-01 — Lab Sample ID: 240-169913-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	240000		1000	580	ug/L	1		6020B	Total Recoverable
Potassium	13000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	400000		1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	1400		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	26		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	120		2.0	0.57	mg/L	2		300.0	Total/NA
Fluoride	0.59		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	9.7		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	1300		40	31	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2018-01-F-20220713-01 — Lab Sample ID: 240-169913-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	390		100	57	ug/L	1		6010D	Total Recoverable
Calcium	33000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	440	J	1000	200	ug/L	1		6020B	Total Recoverable
Potassium	3400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2100000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	310		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3200	F1	25	7.1	mg/L	25		300.0	Total/NA
Fluoride	2.8		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	38		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	5800		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-002-2018-01-F-20220713-01 — Lab Sample ID: 240-169913-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	390		100	57	ug/L	1		6010D	Total Recoverable
Calcium	32000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	240	J	1000	200	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2300000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	300		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	3300		25	7.1	mg/L	25		300.0	Total/NA
Fluoride	2.8		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	38		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	5600		50	39	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169913-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: EB-001-F-20220713-01
Lab Sample ID: 240-169913-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	510	J	1000	330	ug/L	1		6020B	Total Recoverable
Chloride	0.53	J	1.0	0.28	mg/L	1		300.0	Total/NA
Total Dissolved Solids	66		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169913-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: 2019-02-F-20220713-01
Lab Sample ID: 240-169913-1

Date Collected: 07/13/22 10:12
Matrix: Water
Date Received: 07/15/22 13:10

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/19/22 12:00	07/20/22 17:56	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**240000**		1000	580	ug/L		07/19/22 12:00	07/21/22 12:18	1
Magnesium	1000	U	1000	200	ug/L		07/19/22 12:00	07/21/22 12:18	1
Potassium	**13000**		1000	220	ug/L		07/19/22 12:00	07/21/22 12:18	1
Sodium	**400000**		1000	330	ug/L		07/19/22 12:00	07/21/22 12:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1400**		5.0	2.6	mg/L			07/18/22 18:06	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 18:06	1
Carbonate Alkalinity as CaCO3	**26**		5.0	2.6	mg/L			07/18/22 18:06	1
Chloride	**120**		2.0	0.57	mg/L			07/20/22 01:11	2
Fluoride	**0.59**		0.10	0.048	mg/L			07/20/22 01:11	2
Sulfate	**9.7**		2.0	0.70	mg/L			07/20/22 01:11	2
Total Dissolved Solids	**1300**		40	31	mg/L			07/18/22 08:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169913-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: 2018-01-F-20220713-01
Lab Sample ID: 240-169913-2

Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 13:10

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	390		100	57	ug/L		07/18/22 12:00	07/19/22 17:29	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	33000		1000	580	ug/L		07/18/22 12:00	07/19/22 18:53	1
Magnesium	440	J	1000	200	ug/L		07/18/22 12:00	07/19/22 18:53	1
Potassium	3400		1000	220	ug/L		07/18/22 12:00	07/19/22 18:53	1
Sodium	2100000		10000	3300	ug/L		07/18/22 12:00	07/22/22 18:30	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	310		5.0	2.6	mg/L			07/18/22 18:25	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 18:25	1
Carbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L			07/18/22 18:25	1
Chloride	3200	F1	25	7.1	mg/L			07/20/22 02:52	25
Fluoride	2.8		0.25	0.12	mg/L			07/20/22 01:51	5
Sulfate	38		5.0	1.7	mg/L			07/20/22 01:51	5
Total Dissolved Solids	5800		50	39	mg/L			07/18/22 08:59	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169913-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: DUP-002-2018-01-F-20220713-01
Lab Sample ID: 240-169913-3

Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 13:10

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	390		100	57	ug/L		07/18/22 12:00	07/19/22 17:50	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	32000		1000	580	ug/L		07/18/22 12:00	07/19/22 19:05	1
Magnesium	240	J	1000	200	ug/L		07/18/22 12:00	07/19/22 19:05	1
Potassium	3300		1000	220	ug/L		07/18/22 12:00	07/19/22 19:05	1
Sodium	2300000		10000	3300	ug/L		07/18/22 12:00	07/27/22 14:16	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	300		5.0	2.6	mg/L			07/18/22 18:31	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 18:31	1
Carbonate Alkalinity as CaCO3	270		5.0	2.6	mg/L			07/18/22 18:31	1
Chloride	3300		25	7.1	mg/L			07/20/22 04:12	25
Fluoride	2.8		0.25	0.12	mg/L			07/20/22 03:52	5
Sulfate	38		5.0	1.7	mg/L			07/20/22 03:52	5
Total Dissolved Solids	5600		50	39	mg/L			07/18/22 08:59	1

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169913-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: EB-001-F-20220713-01
Lab Sample ID: 240-169913-4

Date Collected: 07/13/22 16:00
Matrix: Water
Date Received: 07/15/22 13:10

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/20/22 12:00	07/21/22 16:17	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		07/20/22 12:00	07/21/22 15:15	1
Magnesium	1000	U	1000	200	ug/L		07/20/22 12:00	07/21/22 15:15	1
Potassium	1000	U	1000	220	ug/L		07/20/22 12:00	07/21/22 15:15	1
Sodium	**510**	**J**	1000	330	ug/L		07/20/22 12:00	07/21/22 15:15	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			07/18/22 18:34	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 18:34	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 18:34	1
Chloride	**0.53**	**J**	1.0	0.28	mg/L			07/20/22 05:12	1
Fluoride	0.050	U	0.050	0.024	mg/L			07/20/22 05:12	1
Sulfate	1.0	U	1.0	0.35	mg/L			07/20/22 05:12	1
Total Dissolved Solids	**66**		10	7.8	mg/L			07/20/22 09:00	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-535107/1-A
Matrix: Water
Analysis Batch: 535398

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/18/22 12:00	07/19/22 17:12	1

Lab Sample ID: LCS 240-535107/2-A
Matrix: Water
Analysis Batch: 535398

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	924		ug/L		92	80 - 120

Lab Sample ID: 240-169913-2 MS
Matrix: Water
Analysis Batch: 535398

Client Sample ID: 2018-01-F-20220713-01 MS
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	390		1000	1390		ug/L		99	75 - 125

Lab Sample ID: 240-169913-2 MSD
Matrix: Water
Analysis Batch: 535398

Client Sample ID: 2018-01-F-20220713-01 MSD
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	390		1000	1360		ug/L		96	75 - 125	2	20

Lab Sample ID: MB 240-535279/1-A
Matrix: Water
Analysis Batch: 535495

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535279

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/19/22 12:00	07/20/22 16:43	1

Lab Sample ID: LCS 240-535279/2-A
Matrix: Water
Analysis Batch: 535495

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	967		ug/L		97	80 - 120

Lab Sample ID: MB 240-535446/1-A
Matrix: Water
Analysis Batch: 535786

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/20/22 12:00	07/21/22 14:35	1

Lab Sample ID: LCS 240-535446/2-A
Matrix: Water
Analysis Batch: 535786

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	951		ug/L		95	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-535107/1-A
Matrix: Water
Analysis Batch: 535400

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		07/18/22 12:00	07/19/22 18:49	1
Magnesium	1000	U	1000	200	ug/L		07/18/22 12:00	07/19/22 18:49	1
Potassium	1000	U	1000	220	ug/L		07/18/22 12:00	07/19/22 18:49	1
Sodium	1000	U	1000	330	ug/L		07/18/22 12:00	07/19/22 18:49	1

Lab Sample ID: LCS 240-535107/3-A
Matrix: Water
Analysis Batch: 535400

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24900		ug/L		99	80 - 120
Magnesium	25000	24400		ug/L		98	80 - 120
Potassium	25000	23900		ug/L		95	80 - 120
Sodium	25000	24500		ug/L		98	80 - 120

Lab Sample ID: 240-169913-2 MS
Matrix: Water
Analysis Batch: 535400

Client Sample ID: 2018-01-F-20220713-01 MS
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	33000		25000	58500		ug/L		102	80 - 120
Magnesium	440	J	25000	24100		ug/L		95	80 - 120
Potassium	3400		25000	27100		ug/L		95	80 - 120

Lab Sample ID: 240-169913-2 MS
Matrix: Water
Analysis Batch: 536003

Client Sample ID: 2018-01-F-20220713-01 MS
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	2100000		25000	2140000	4	ug/L		282	80 - 120

Lab Sample ID: 240-169913-2 MSD
Matrix: Water
Analysis Batch: 535400

Client Sample ID: 2018-01-F-20220713-01 MSD
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	33000		25000	58700		ug/L		103	80 - 120	0	20
Magnesium	440	J	25000	24600		ug/L		97	80 - 120	2	20
Potassium	3400		25000	27200		ug/L		95	80 - 120	0	20

Lab Sample ID: 240-169913-2 MSD
Matrix: Water
Analysis Batch: 536003

Client Sample ID: 2018-01-F-20220713-01 MSD
Prep Type: Total Recoverable
Prep Batch: 535107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sodium	2100000		25000	2130000	4	ug/L		236	80 - 120	1	20

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

Lab Sample ID: MB 240-535279/1-A
Matrix: Water
Analysis Batch: 535817

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535279

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		07/19/22 12:00	07/21/22 11:29	1
Magnesium	1000	U	1000	200	ug/L		07/19/22 12:00	07/21/22 11:29	1
Potassium	1000	U	1000	220	ug/L		07/19/22 12:00	07/21/22 11:29	1
Sodium	1000	U	1000	330	ug/L		07/19/22 12:00	07/21/22 11:29	1

Lab Sample ID: LCS 240-535279/3-A
Matrix: Water
Analysis Batch: 535817

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24300		ug/L		97	80 - 120
Magnesium	25000	24800		ug/L		99	80 - 120
Potassium	25000	24500		ug/L		98	80 - 120
Sodium	25000	24600		ug/L		98	80 - 120

Lab Sample ID: MB 240-535446/1-A
Matrix: Water
Analysis Batch: 535817

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		07/20/22 12:00	07/21/22 14:15	1
Magnesium	1000	U	1000	200	ug/L		07/20/22 12:00	07/21/22 14:15	1
Potassium	1000	U	1000	220	ug/L		07/20/22 12:00	07/21/22 14:15	1
Sodium	1000	U ^+	1000	330	ug/L		07/20/22 12:00	07/21/22 14:15	1

Lab Sample ID: LCS 240-535446/3-A
Matrix: Water
Analysis Batch: 535817

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24400		ug/L		98	80 - 120
Magnesium	25000	24800		ug/L		99	80 - 120
Potassium	25000	24600		ug/L		98	80 - 120
Sodium	25000	25000	^+	ug/L		100	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-535236/30
Matrix: Water
Analysis Batch: 535236

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			07/18/22 18:14	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 18:14	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 18:14	1

Method: 2320B-1997 - Alkalinity, Total (Continued)

Lab Sample ID: MB 240-535236/4
Matrix: Water
Analysis Batch: 535236

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			07/18/22 16:16	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 16:16	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/18/22 16:16	1

Lab Sample ID: LCS 240-535236/29
Matrix: Water
Analysis Batch: 535236

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	129		mg/L		107	86 - 123

Lab Sample ID: LCS 240-535236/3
Matrix: Water
Analysis Batch: 535236

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		98	86 - 123

Lab Sample ID: 240-169913-2 DU
Matrix: Water
Analysis Batch: 535236

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	310		305		mg/L		1	20
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20
Carbonate Alkalinity as CaCO3	270		271		mg/L		0.5	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-535347/3
Matrix: Water
Analysis Batch: 535347

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			07/19/22 16:56	1
Fluoride	0.050	U	0.050	0.024	mg/L			07/19/22 16:56	1
Sulfate	1.0	U	1.0	0.35	mg/L			07/19/22 16:56	1

Lab Sample ID: LCS 240-535347/4
Matrix: Water
Analysis Batch: 535347

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.1		mg/L		100	90 - 110
Fluoride	2.50	2.70		mg/L		108	90 - 110
Sulfate	50.0	51.1		mg/L		102	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-169913-2 MS
Matrix: Water
Analysis Batch: 535347

Client Sample ID: 2018-01-F-20220713-01 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.8		12.5	16.2		mg/L		107	80 - 120
Sulfate	38		250	295		mg/L		103	80 - 120

Lab Sample ID: 240-169913-2 MS
Matrix: Water
Analysis Batch: 535347

Client Sample ID: 2018-01-F-20220713-01 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3200	F1	1250	4350		mg/L		91	80 - 120

Lab Sample ID: 240-169913-2 MSD
Matrix: Water
Analysis Batch: 535347

Client Sample ID: 2018-01-F-20220713-01 MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	2.8		12.5	16.4		mg/L		109	80 - 120	1	15
Sulfate	38		250	297		mg/L		104	80 - 120	1	15

Lab Sample ID: 240-169913-2 MSD
Matrix: Water
Analysis Batch: 535347

Client Sample ID: 2018-01-F-20220713-01 MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3200	F1	1250	4060	F1	mg/L		67	80 - 120	7	15

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-535044/1
Matrix: Water
Analysis Batch: 535044

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			07/18/22 08:59	1

Lab Sample ID: LCS 240-535044/2
Matrix: Water
Analysis Batch: 535044

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	186	194		mg/L		104	80 - 120

Lab Sample ID: 240-169913-2 DU
Matrix: Water
Analysis Batch: 535044

Client Sample ID: 2018-01-F-20220713-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	5800		5770		mg/L		0.09	20

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 240-535418/1
Matrix: Water
Analysis Batch: 535418

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			07/20/22 09:00	1

Lab Sample ID: LCS 240-535418/2
Matrix: Water
Analysis Batch: 535418

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	186	159		mg/L		85	80 - 120

Metals

Prep Batch: 535107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-2	2018-01-F-20220713-01	Total Recoverable	Water	3005A	
240-169913-3	DUP-002-2018-01-F-20220713-01	Total Recoverable	Water	3005A	
MB 240-535107/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535107/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-535107/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-169913-2 MS	2018-01-F-20220713-01 MS	Total Recoverable	Water	3005A	
240-169913-2 MS	2018-01-F-20220713-01 MS	Total Recoverable	Water	3005A	
240-169913-2 MSD	2018-01-F-20220713-01 MSD	Total Recoverable	Water	3005A	
240-169913-2 MSD	2018-01-F-20220713-01 MSD	Total Recoverable	Water	3005A	

Prep Batch: 535279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-1	2019-02-F-20220713-01	Total Recoverable	Water	3005A	
MB 240-535279/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535279/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-535279/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 535398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-2	2018-01-F-20220713-01	Total Recoverable	Water	6010D	535107
240-169913-3	DUP-002-2018-01-F-20220713-01	Total Recoverable	Water	6010D	535107
MB 240-535107/1-A	Method Blank	Total Recoverable	Water	6010D	535107
LCS 240-535107/2-A	Lab Control Sample	Total Recoverable	Water	6010D	535107
240-169913-2 MS	2018-01-F-20220713-01 MS	Total Recoverable	Water	6010D	535107
240-169913-2 MSD	2018-01-F-20220713-01 MSD	Total Recoverable	Water	6010D	535107

Analysis Batch: 535400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-2	2018-01-F-20220713-01	Total Recoverable	Water	6020B	535107
240-169913-3	DUP-002-2018-01-F-20220713-01	Total Recoverable	Water	6020B	535107
MB 240-535107/1-A	Method Blank	Total Recoverable	Water	6020B	535107
LCS 240-535107/3-A	Lab Control Sample	Total Recoverable	Water	6020B	535107
240-169913-2 MS	2018-01-F-20220713-01 MS	Total Recoverable	Water	6020B	535107
240-169913-2 MSD	2018-01-F-20220713-01 MSD	Total Recoverable	Water	6020B	535107

Prep Batch: 535446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-4	EB-001-F-20220713-01	Total Recoverable	Water	3005A	
MB 240-535446/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535446/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-535446/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 535495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-1	2019-02-F-20220713-01	Total Recoverable	Water	6010D	535279
MB 240-535279/1-A	Method Blank	Total Recoverable	Water	6010D	535279
LCS 240-535279/2-A	Lab Control Sample	Total Recoverable	Water	6010D	535279

Analysis Batch: 535786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-4	EB-001-F-20220713-01	Total Recoverable	Water	6010D	535446

Metals (Continued)

Analysis Batch: 535786 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-535446/1-A	Method Blank	Total Recoverable	Water	6010D	535446
LCS 240-535446/2-A	Lab Control Sample	Total Recoverable	Water	6010D	535446

Analysis Batch: 535817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-1	2019-02-F-20220713-01	Total Recoverable	Water	6020B	535279
240-169913-4	EB-001-F-20220713-01	Total Recoverable	Water	6020B	535446
MB 240-535279/1-A	Method Blank	Total Recoverable	Water	6020B	535279
MB 240-535446/1-A	Method Blank	Total Recoverable	Water	6020B	535446
LCS 240-535279/3-A	Lab Control Sample	Total Recoverable	Water	6020B	535279
LCS 240-535446/3-A	Lab Control Sample	Total Recoverable	Water	6020B	535446

Analysis Batch: 536003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-2	2018-01-F-20220713-01	Total Recoverable	Water	6020B	535107
240-169913-2 MS	2018-01-F-20220713-01 MS	Total Recoverable	Water	6020B	535107
240-169913-2 MSD	2018-01-F-20220713-01 MSD	Total Recoverable	Water	6020B	535107

Analysis Batch: 536551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-3	DUP-002-2018-01-F-20220713-01	Total Recoverable	Water	6020B	535107

General Chemistry

Analysis Batch: 535044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-1	2019-02-F-20220713-01	Total/NA	Water	SM 2540C	
240-169913-2	2018-01-F-20220713-01	Total/NA	Water	SM 2540C	
240-169913-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	SM 2540C	
MB 240-535044/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-535044/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-169913-2 DU	2018-01-F-20220713-01	Total/NA	Water	SM 2540C	

Analysis Batch: 535236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-1	2019-02-F-20220713-01	Total/NA	Water	2320B-1997	
240-169913-2	2018-01-F-20220713-01	Total/NA	Water	2320B-1997	
240-169913-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	2320B-1997	
240-169913-4	EB-001-F-20220713-01	Total/NA	Water	2320B-1997	
MB 240-535236/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-535236/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-535236/29	Lab Control Sample	Total/NA	Water	2320B-1997	
LCS 240-535236/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-169913-2 DU	2018-01-F-20220713-01	Total/NA	Water	2320B-1997	

Analysis Batch: 535347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-1	2019-02-F-20220713-01	Total/NA	Water	300.0	
240-169913-2	2018-01-F-20220713-01	Total/NA	Water	300.0	
240-169913-2	2018-01-F-20220713-01	Total/NA	Water	300.0	
240-169913-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 535347 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-3	DUP-002-2018-01-F-20220713-01	Total/NA	Water	300.0	
240-169913-4	EB-001-F-20220713-01	Total/NA	Water	300.0	
MB 240-535347/3	Method Blank	Total/NA	Water	300.0	
LCS 240-535347/4	Lab Control Sample	Total/NA	Water	300.0	
240-169913-2 MS	2018-01-F-20220713-01 MS	Total/NA	Water	300.0	
240-169913-2 MS	2018-01-F-20220713-01 MS	Total/NA	Water	300.0	
240-169913-2 MSD	2018-01-F-20220713-01 MSD	Total/NA	Water	300.0	
240-169913-2 MSD	2018-01-F-20220713-01 MSD	Total/NA	Water	300.0	

Analysis Batch: 535418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-169913-4	EB-001-F-20220713-01	Total/NA	Water	SM 2540C	
MB 240-535418/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-535418/2	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: 240-169913-1

Client Sample ID: 2019-02-F-20220713-01

Lab Sample ID: 240-169913-1
Date Collected: 07/13/22 10:12
Matrix: Water
Date Received: 07/15/22 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			535279	07/19/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010D		1	535495	07/20/22 17:56	RKT	TAL CAN
Total Recoverable	Prep	3005A			535279	07/19/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		1	535817	07/21/22 12:18	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	535236	07/18/22 18:06	MMS	TAL CAN
Total/NA	Analysis	300.0		2	535347	07/20/22 01:11	JWW	TAL CAN
Total/NA	Analysis	SM 2540C		1	535044	07/18/22 08:59	MED	TAL CAN

Client Sample ID: 2018-01-F-20220713-01

Lab Sample ID: 240-169913-2
Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			535107	07/18/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010D		1	535398	07/19/22 17:29	RKT	TAL CAN
Total Recoverable	Prep	3005A			535107	07/18/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		1	535400	07/19/22 18:53	AJC	TAL CAN
Total Recoverable	Prep	3005A			535107	07/18/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		10	536003	07/22/22 18:30	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	535236	07/18/22 18:25	MMS	TAL CAN
Total/NA	Analysis	300.0		5	535347	07/20/22 01:51	JWW	TAL CAN
Total/NA	Analysis	300.0		25	535347	07/20/22 02:52	JWW	TAL CAN
Total/NA	Analysis	SM 2540C		1	535044	07/18/22 08:59	MED	TAL CAN

Client Sample ID: DUP-002-2018-01-F-20220713-01

Lab Sample ID: 240-169913-3
Date Collected: 07/13/22 13:15
Matrix: Water
Date Received: 07/15/22 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			535107	07/18/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010D		1	535398	07/19/22 17:50	RKT	TAL CAN
Total Recoverable	Prep	3005A			535107	07/18/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		1	535400	07/19/22 19:05	AJC	TAL CAN
Total Recoverable	Prep	3005A			535107	07/18/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		10	536551	07/27/22 14:16	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	535236	07/18/22 18:31	MMS	TAL CAN
Total/NA	Analysis	300.0		5	535347	07/20/22 03:52	JWW	TAL CAN
Total/NA	Analysis	300.0		25	535347	07/20/22 04:12	JWW	TAL CAN
Total/NA	Analysis	SM 2540C		1	535044	07/18/22 08:59	MED	TAL CAN

Lab Chronicle

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

Job ID: 240-169913-1

Client Sample ID: EB-001-F-20220713-01

Date Collected: 07/13/22 16:00
Date Received: 07/15/22 13:10

Lab Sample ID: 240-169913-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			535446	07/20/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010D		1	535786	07/21/22 16:17	RKT	TAL CAN
Total Recoverable	Prep	3005A			535446	07/20/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		1	535817	07/21/22 15:15	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	535236	07/18/22 18:34	MMS	TAL CAN
Total/NA	Analysis	300.0		1	535347	07/20/22 05:12	JWW	TAL CAN
Total/NA	Analysis	SM 2540C		1	535418	07/20/22 09:00	MED	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-169913-1
Project/Site: Federal CCR Wells - App III

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	02-23-23
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	08-31-22
Virginia	NELAP	11570	07-27-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

NOTE: 3 COOLERS 209

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

Columbus eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93465-34577.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:

Address: 7397 OH-7	Due Date Requested:
City: Cheshire	TAT Requested (days):
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No
Phone: 740-925-3171(Tel)	PO #: 2935505
Email: taylor.huffman@lightstonegen.com	WO #:
Project Name: Federal CCR Wells - App III	Project #: 24019633
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020	2540C_Calcd, 300.0_28D	2320B - Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N		
2019-02-F-20220713-01	7-13-22	1012	G	W			1	1	1		
2018-01-F-20220713-01	7-13-22	1315	G	W			1	1	1		
2018-01-F-20220713-MS	7-13-22	1315	G	W			1	1	1		
2018-01-F-20220713-MSD	7-13-22	1315	G	W			1	1	1		
DUP-002-2018-01-F-20220713-01	7-13-22	1315	G	W			1	1	1		
EB-001-F-20220713-01	7-13-22	1600	G	W			1	1	1		

240-169913 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
David Tipper	7-14-22 / 0905			7-14-22 1150	ETR
Relinquished by:	Date/Time: 7-14-22 1700	Company ETR	Received by:	Date/Time: 7-15-22 10:00	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7.15.22 13:10	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative Login # :_____
Barberton Facility

Client Light Store Site Name_____ Cooler unpacked by: Mandy Ba

Cooler Received on 7-15-22 Opened on 7-15-22

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # NA 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
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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:

2014-02-F-20220713-01 high pH

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2019-02-F-20220713-01	240-169913-C-1	Plastic 500ml - with Nitric Acid	<2			
2018-02-F-20220713-01	240-169913-G-2	Plastic 500ml - with Nitric Acid	<2			
2018-02-F-20220713-01	240-169913-H-2	Plastic 500ml - with Nitric Acid	<2			
2018-02-F-20220713-01	240-169913-I-2	Plastic 500ml - with Nitric Acid	<2			
DUP-002-2018-02-F-20220713-01	240-169913-C-3	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220713-01	240-169913-C-4	Plastic 500ml - with Nitric Acid	<2			

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	3.8	3.8	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	0.5	0.5	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
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

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-170075-1
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:
8/1/2022 2:31:42 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-170075-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

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

Job ID: 240-170075-1

Job ID: 240-170075-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-170075-1

Comments
No additional comments.

Receipt
The samples were received on 7/19/2022 2:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.4º C and 0.5º C.

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: Federal CCR Wells - App III

Job ID: 240-170075-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	TAL CAN
6020B	Metals (ICP/MS)	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
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL 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:

TAL 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: 240-170075-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-170075-1	MW-17-F-20220718-01	Water	07/18/22 09:40	07/19/22 14:15
240-170075-2	EB-001-F-20220718-01	Water	07/18/22 16:30	07/19/22 14:15

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170075-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: MW-17-F-20220718-01 — Lab Sample ID: 240-170075-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	320		100	57	ug/L	1		6010D	Total Recoverable
Calcium	72000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	15000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	4700		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2900000	B	10000	3300	ug/L	10		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	4500		50	14	mg/L	50		300.0	Total/NA
Fluoride	1.7		0.25	0.12	mg/L	5		300.0	Total/NA
Total Dissolved Solids	4700		100	78	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220718-01 — Lab Sample ID: 240-170075-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	430	J B	1000	330	ug/L	1		6020B	Total Recoverable
Chloride	0.57	J	1.0	0.28	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170075-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: MW-17-F-20220718-01
Lab Sample ID: 240-170075-1

Date Collected: 07/18/22 09:40
Matrix: Water
Date Received: 07/19/22 14:15

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	320		100	57	ug/L		07/20/22 12:00	07/21/22 16:21	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	72000		1000	580	ug/L		07/20/22 12:00	07/21/22 15:27	1
Magnesium	15000		1000	200	ug/L		07/20/22 12:00	07/21/22 15:27	1
Potassium	4700		1000	220	ug/L		07/20/22 12:00	07/21/22 15:27	1
Sodium	2900000	B	10000	3300	ug/L		07/20/22 12:00	07/25/22 20:14	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	220		5.0	2.6	mg/L			07/29/22 16:26	1
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L			07/29/22 16:26	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/29/22 16:26	1
Chloride	4500		50	14	mg/L			07/22/22 08:00	50
Fluoride	1.7		0.25	0.12	mg/L			07/22/22 06:59	5
Sulfate	50	U	50	17	mg/L			07/22/22 08:00	50
Total Dissolved Solids	4700		100	78	mg/L			07/22/22 09:51	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170075-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: EB-001-F-20220718-01
Lab Sample ID: 240-170075-2

Date Collected: 07/18/22 16:30
Matrix: Water
Date Received: 07/19/22 14:15

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/20/22 12:00	07/21/22 16:26	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		07/20/22 12:00	07/21/22 15:30	1
Magnesium	1000	U	1000	200	ug/L		07/20/22 12:00	07/21/22 15:30	1
Potassium	1000	U	1000	220	ug/L		07/20/22 12:00	07/21/22 15:30	1
Sodium	**430**	**J B**	1000	330	ug/L		07/20/22 12:00	07/25/22 20:16	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			07/29/22 16:30	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/29/22 16:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/29/22 16:30	1
Chloride	**0.57**	**J**	1.0	0.28	mg/L			07/22/22 08:20	1
Fluoride	0.050	U	0.050	0.024	mg/L			07/22/22 08:20	1
Sulfate	1.0	U	1.0	0.35	mg/L			07/22/22 08:20	1
Total Dissolved Solids	20	U	20	16	mg/L			07/22/22 09:51	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-535446/1-A
Matrix: Water
Analysis Batch: 535786

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/20/22 12:00	07/21/22 14:35	1

Lab Sample ID: LCS 240-535446/2-A
Matrix: Water
Analysis Batch: 535786

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	951		ug/L		95	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-535446/1-A
Matrix: Water
Analysis Batch: 535817

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		07/20/22 12:00	07/21/22 14:15	1
Magnesium	1000	U	1000	200	ug/L		07/20/22 12:00	07/21/22 14:15	1
Potassium	1000	U	1000	220	ug/L		07/20/22 12:00	07/21/22 14:15	1

Lab Sample ID: MB 240-535446/1-A
Matrix: Water
Analysis Batch: 536230

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	373	J	1000	330	ug/L		07/20/22 12:00	07/25/22 19:24	1

Lab Sample ID: LCS 240-535446/3-A
Matrix: Water
Analysis Batch: 535817

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	24400		ug/L		98	80 - 120
Magnesium	25000	24800		ug/L		99	80 - 120
Potassium	25000	24600		ug/L		98	80 - 120

Lab Sample ID: LCS 240-535446/3-A
Matrix: Water
Analysis Batch: 536230

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535446

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	25000	26000		ug/L		104	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-536915/30
Matrix: Water
Analysis Batch: 536915

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			07/29/22 17:57	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/29/22 17:57	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/29/22 17:57	1

Lab Sample ID: MB 240-536915/4
Matrix: Water
Analysis Batch: 536915

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			07/29/22 16:08	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/29/22 16:08	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/29/22 16:08	1

Lab Sample ID: LCS 240-536915/29
Matrix: Water
Analysis Batch: 536915

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	115		mg/L		95	86 - 123

Lab Sample ID: LCS 240-536915/3
Matrix: Water
Analysis Batch: 536915

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

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-535738/3
Matrix: Water
Analysis Batch: 535738

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			07/21/22 19:55	1
Fluoride	0.050	U	0.050	0.024	mg/L			07/21/22 19:55	1
Sulfate	1.0	U	1.0	0.35	mg/L			07/21/22 19:55	1

Lab Sample ID: LCS 240-535738/4
Matrix: Water
Analysis Batch: 535738

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.1		mg/L		98	90 - 110
Fluoride	2.50	2.66		mg/L		106	90 - 110
Sulfate	50.0	50.5		mg/L		101	90 - 110

QC Sample Results

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

Job ID: 240-170075-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-535840/1
Matrix: Water
Analysis Batch: 535840

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			07/22/22 09:51	1

Lab Sample ID: LCS 240-535840/2
Matrix: Water
Analysis Batch: 535840

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	186	195		mg/L		105	80 - 120

Metals

Prep Batch: 535446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170075-1	MW-17-F-20220718-01	Total Recoverable	Water	3005A	
240-170075-2	EB-001-F-20220718-01	Total Recoverable	Water	3005A	
MB 240-535446/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535446/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-535446/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 535786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170075-1	MW-17-F-20220718-01	Total Recoverable	Water	6010D	535446
240-170075-2	EB-001-F-20220718-01	Total Recoverable	Water	6010D	535446
MB 240-535446/1-A	Method Blank	Total Recoverable	Water	6010D	535446
LCS 240-535446/2-A	Lab Control Sample	Total Recoverable	Water	6010D	535446

Analysis Batch: 535817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170075-1	MW-17-F-20220718-01	Total Recoverable	Water	6020B	535446
240-170075-2	EB-001-F-20220718-01	Total Recoverable	Water	6020B	535446
MB 240-535446/1-A	Method Blank	Total Recoverable	Water	6020B	535446
LCS 240-535446/3-A	Lab Control Sample	Total Recoverable	Water	6020B	535446

Analysis Batch: 536230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170075-1	MW-17-F-20220718-01	Total Recoverable	Water	6020B	535446
240-170075-2	EB-001-F-20220718-01	Total Recoverable	Water	6020B	535446
MB 240-535446/1-A	Method Blank	Total Recoverable	Water	6020B	535446
LCS 240-535446/3-A	Lab Control Sample	Total Recoverable	Water	6020B	535446

General Chemistry

Analysis Batch: 535738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170075-1	MW-17-F-20220718-01	Total/NA	Water	300.0	
240-170075-1	MW-17-F-20220718-01	Total/NA	Water	300.0	
240-170075-2	EB-001-F-20220718-01	Total/NA	Water	300.0	
MB 240-535738/3	Method Blank	Total/NA	Water	300.0	
LCS 240-535738/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 535840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170075-1	MW-17-F-20220718-01	Total/NA	Water	SM 2540C	
240-170075-2	EB-001-F-20220718-01	Total/NA	Water	SM 2540C	
MB 240-535840/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-535840/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 536915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170075-1	MW-17-F-20220718-01	Total/NA	Water	2320B-1997	
240-170075-2	EB-001-F-20220718-01	Total/NA	Water	2320B-1997	
MB 240-536915/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-536915/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-536915/29	Lab Control Sample	Total/NA	Water	2320B-1997	

General Chemistry (Continued)

Analysis Batch: 536915 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-536915/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Lab Chronicle

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

Job ID: 240-170075-1

Client Sample ID: MW-17-F-20220718-01

Lab Sample ID: 240-170075-1

Date Collected: 07/18/22 09:40
Date Received: 07/19/22 14:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			535446	07/20/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010D		1	535786	07/21/22 16:21	RKT	TAL CAN
Total Recoverable	Prep	3005A			535446	07/20/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		1	535817	07/21/22 15:27	AJC	TAL CAN
Total Recoverable	Prep	3005A			535446	07/20/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		10	536230	07/25/22 20:14	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	536915	07/29/22 16:26	MMS	TAL CAN
Total/NA	Analysis	300.0		5	535738	07/22/22 06:59	JMB	TAL CAN
Total/NA	Analysis	300.0		50	535738	07/22/22 08:00	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	535840	07/22/22 09:51	MED	TAL CAN

Client Sample ID: EB-001-F-20220718-01

Lab Sample ID: 240-170075-2

Date Collected: 07/18/22 16:30
Date Received: 07/19/22 14:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			535446	07/20/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6010D		1	535786	07/21/22 16:26	RKT	TAL CAN
Total Recoverable	Prep	3005A			535446	07/20/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		1	535817	07/21/22 15:30	AJC	TAL CAN
Total Recoverable	Prep	3005A			535446	07/20/22 12:00	SHB	TAL CAN
Total Recoverable	Analysis	6020B		1	536230	07/25/22 20:16	AJC	TAL CAN
Total/NA	Analysis	2320B-1997		1	536915	07/29/22 16:30	MMS	TAL CAN
Total/NA	Analysis	300.0		1	535738	07/22/22 08:20	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	535840	07/22/22 09:51	MED	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170075-1
Project/Site: Federal CCR Wells - App III

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	02-23-23
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	08-31-22
Virginia	NELAP	11570	09-14-22
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

eurofins Environment Testing America

Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93465-34577.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:	**Analysis Requested**		Job #:
Address: 7397 OH-7	**Due Date Requested:**			
City: Cheshire	**TAT Requested (days):**			
State, Zip: OH, 45620	**Compliance Project:** Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal CCR Wells - App III	Project #: 24019633			
Site:	SSOW#:			

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA
M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020	2540C_Calcd, 300.0_28D	2320B - Alkalinity	Total Number of containers	Special Instructions/Note:
				Preservation Code:			D	N	N		
MW-17-F-20220718-01	7-18-22	940	G	W			1	1	1		
EB-001-F-20220718-01	7-18-22	1630	G	W			1	1	1		

240-170075 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:	

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Walt Huffman (signature)	07/19/22 1415	Rearson	Mandy Bl... (signature)	7-19-22 12:15	EEMC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative Login # : 170075
Barberton Facility

Client Lightstone Site Name

Cooler Received on 7-19-22 Opened on 7-19-22

Cooler unpacked by: Brandon

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 0.0 °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
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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: _____

WI-NC-099

Login # : 170075

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	0.4	0.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	0.5	0.5	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
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

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW-17-F-20220718-01	240-170075-C-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
EB-001-F-20220718-01	240-170075-C-2	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-170077-1
Client Project/Site: Federal CCR Well - App IV

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
8/16/2022 10:21:57 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170077-1
Project/Site: Federal CCR Well - App IV

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.
¤	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 Well - App IV

Job ID: 240-170077-1

Job ID: 240-170077-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-170077-1

Comments
No additional comments.

Receipt
The samples were received on 7/19/2022 11:15 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 0.4º C and 0.5º C.

RAD
Methods 9315, RA-06-RC: Radium 226 Batch 160-574945: 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-17-F-20220718-01 (240-170077-1), EB-001-F-20220718-01 (240-170077-2), (LCS 160-574945/2-A), (LCSD 160-574945/3-A) and (MB 160-574945/1-A)

Methods 9320, RA-06-RC: Radium-228 prep batch 160-574956: 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-17-F-20220718-01 (240-170077-1), EB-001-F-20220718-01 (240-170077-2), (LCS 160-574956/2-A), (LCSD 160-574956/3-A) and (MB 160-574956/1-A)

Method PrecSep_0: Radium-228 Prep Batch 160-574956: The following samples were prepared at a reduced aliquot due to Matrix: MW-17-F-20220718-01 (240-170077-1) and EB-001-F-20220718-01 (240-170077-2). 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 160-574956: Insufficient sample volume was available to perform a sample duplicate for the following samples: MW-17-F-20220718-01 (240-170077-1) and EB-001-F-20220718-01 (240-170077-2). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-574945: Insufficient sample volume was available to perform a sample duplicate for the following samples: MW-17-F-20220718-01 (240-170077-1) and EB-001-F-20220718-01 (240-170077-2). 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
Job ID: 240-170077-1
Project/Site: Federal CCR Well - App IV

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 Well - App IV

Job ID: 240-170077-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-170077-1	MW-17-F-20220718-01	Water	07/18/22 09:40	07/19/22 11:15
240-170077-2	EB-001-F-20220718-01	Water	07/18/22 16:30	07/19/22 11:15

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Well - App IV

Job ID: 240-170077-1

Client Sample ID: MW-17-F-20220718-01 — Lab Sample ID: 240-170077-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.2		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	1900		5.0	2.2	ug/L	1		6020B	Total Recoverable
Lithium	63		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	14000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	6.0		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	4400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2800000		10000	3300	ug/L	10		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
Fluoride	1.6		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20220718-01 — Lab Sample ID: 240-170077-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	770	J	1000	330	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-17-F-20220718-01
Lab Sample ID: 240-170077-1

Date Collected: 07/18/22 09:40
Matrix: Water
Date Received: 07/19/22 11:15

Method: 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		07/20/22 12:00	07/21/22 17:51	1
Arsenic	**5.2**		5.0	0.75	ug/L		07/20/22 12:00	07/21/22 17:51	1
Barium	**1900**		5.0	2.2	ug/L		07/20/22 12:00	07/21/22 17:51	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/20/22 12:00	07/21/22 17:51	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/20/22 12:00	07/21/22 17:51	1
Chromium	5.0	U	5.0	2.5	ug/L		07/20/22 12:00	07/21/22 17:51	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/20/22 12:00	07/21/22 17:51	1
Lead	1.0	U	1.0	0.45	ug/L		07/20/22 12:00	07/21/22 17:51	1
Lithium	**63**		8.0	1.7	ug/L		07/20/22 12:00	07/21/22 17:51	1
Magnesium	**14000**		1000	200	ug/L		07/20/22 12:00	07/21/22 17:51	1
Molybdenum	**6.0**		5.0	1.1	ug/L		07/20/22 12:00	07/21/22 17:51	1
Potassium	**4400**		1000	220	ug/L		07/20/22 12:00	07/21/22 17:51	1
Selenium	5.0	U	5.0	0.89	ug/L		07/20/22 12:00	07/21/22 17:51	1
Sodium	**2800000**		10000	3300	ug/L		07/20/22 12:00	07/22/22 14:48	10
Thallium	1.0	U	1.0	0.20	ug/L		07/20/22 12:00	07/21/22 17:51	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		07/20/22 12:00	07/22/22 17:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**240**		5.0	2.6	mg/L			07/22/22 14:50	1
Bicarbonate Alkalinity as CaCO3	**240**		5.0	2.6	mg/L			07/22/22 14:50	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 14:50	1
Fluoride	**1.6**		0.25	0.12	mg/L			07/23/22 00:42	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.55**		0.268	0.353	1.00	0.0825	pCi/L	07/22/22 11:06	08/15/22 09:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.3*		*40 - 110*	*07/22/22 11:06*	*08/15/22 09:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**3.25**		0.546	0.622	1.00	0.391	pCi/L	07/22/22 11:53	08/05/22 10:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.3*		*40 - 110*	*07/22/22 11:53*	*08/05/22 10:58*	*1*
Y Carrier	*86.7*		*40 - 110*	*07/22/22 11:53*	*08/05/22 10:58*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170077-1
Project/Site: Federal CCR Well - App IV

Client Sample ID: MW-17-F-20220718-01
Lab Sample ID: 240-170077-1
Date Collected: 07/18/22 09:40
Matrix: Water
Date Received: 07/19/22 11:15

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	5.80		0.608	0.715	5.00	0.391	pCi/L		08/15/22 22:37	1

Client Sample ID: EB-001-F-20220718-01
Lab Sample ID: 240-170077-2

Date Collected: 07/18/22 16:30
Matrix: Water
Date Received: 07/19/22 11:15

Method: 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		07/20/22 12:00	07/21/22 17:53	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/20/22 12:00	07/21/22 17:53	1
Barium	5.0	U	5.0	2.2	ug/L		07/20/22 12:00	07/21/22 17:53	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/20/22 12:00	07/21/22 17:53	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/20/22 12:00	07/21/22 17:53	1
Chromium	5.0	U	5.0	2.5	ug/L		07/20/22 12:00	07/21/22 17:53	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/20/22 12:00	07/21/22 17:53	1
Lead	1.0	U	1.0	0.45	ug/L		07/20/22 12:00	07/21/22 17:53	1
Lithium	8.0	U	8.0	1.7	ug/L		07/20/22 12:00	07/21/22 17:53	1
Magnesium	1000	U	1000	200	ug/L		07/20/22 12:00	07/21/22 17:53	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/20/22 12:00	07/21/22 17:53	1
Potassium	1000	U	1000	220	ug/L		07/20/22 12:00	07/21/22 17:53	1
Selenium	5.0	U	5.0	0.89	ug/L		07/20/22 12:00	07/21/22 17:53	1
Sodium	**770**	**J**	1000	330	ug/L		07/20/22 12:00	07/21/22 17:53	1
Thallium	1.0	U	1.0	0.20	ug/L		07/20/22 12:00	07/21/22 17:53	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		07/20/22 12:00	07/22/22 17:52	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			07/22/22 14:54	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 14:54	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 14:54	1
Fluoride	0.050	U	0.050	0.024	mg/L			07/23/22 01:04	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	0.00757	U	0.0454	0.0454	1.00	0.0915	pCi/L	07/22/22 11:06	08/15/22 09:24	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*07/22/22 11:06*	*08/15/22 09:24*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.209	U	0.222	0.223	1.00	0.481	pCi/L	07/22/22 11:53	08/05/22 10:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.3*		*40 - 110*	*07/22/22 11:53*	*08/05/22 10:58*	*1*
Y Carrier	*86.4*		*40 - 110*	*07/22/22 11:53*	*08/05/22 10:58*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Well - App IV

Job ID: 240-170077-1

Client Sample ID: EB-001-F-20220718-01
Date Collected: 07/18/22 16:30
Date Received: 07/19/22 11:15

Lab Sample ID: 240-170077-2
Matrix: Water

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	-0.201	U	0.227	0.228	5.00	0.481	pCi/L		08/15/22 22:37	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170077-1
Project/Site: Federal CCR Well - App IV

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)
240-170077-1	MW-17-F-20220718-01	96.3
240-170077-2	EB-001-F-20220718-01	95.3
LCS 160-574945/2-A	Lab Control Sample	86.8
LCSD 160-574945/3-A	Lab Control Sample Dup	88.5
MB 160-574945/1-A	Method Blank	86.8

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)
240-170077-1	MW-17-F-20220718-01	96.3	86.7
240-170077-2	EB-001-F-20220718-01	95.3	86.4
LCS 160-574956/2-A	Lab Control Sample	86.8	85.6
LCSD 160-574956/3-A	Lab Control Sample Dup	88.5	85.6
MB 160-574956/1-A	Method Blank	86.8	83.4

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-535432/1-A
Matrix: Water
Analysis Batch: 535817

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535432

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/20/22 12:00	07/21/22 17:04	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/20/22 12:00	07/21/22 17:04	1
Barium	5.0	U	5.0	2.2	ug/L		07/20/22 12:00	07/21/22 17:04	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/20/22 12:00	07/21/22 17:04	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/20/22 12:00	07/21/22 17:04	1
Chromium	5.0	U	5.0	2.5	ug/L		07/20/22 12:00	07/21/22 17:04	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/20/22 12:00	07/21/22 17:04	1
Lead	1.0	U	1.0	0.45	ug/L		07/20/22 12:00	07/21/22 17:04	1
Lithium	8.0	U	8.0	1.7	ug/L		07/20/22 12:00	07/21/22 17:04	1
Magnesium	1000	U	1000	200	ug/L		07/20/22 12:00	07/21/22 17:04	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/20/22 12:00	07/21/22 17:04	1
Potassium	1000	U	1000	220	ug/L		07/20/22 12:00	07/21/22 17:04	1
Selenium	5.0	U	5.0	0.89	ug/L		07/20/22 12:00	07/21/22 17:04	1
Sodium	1000	U	1000	330	ug/L		07/20/22 12:00	07/21/22 17:04	1
Thallium	1.0	U	1.0	0.20	ug/L		07/20/22 12:00	07/21/22 17:04	1

Lab Sample ID: LCS 240-535432/3-A
Matrix: Water
Analysis Batch: 535817

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535432

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	103		ug/L		103	80 - 120
Arsenic	1000	992		ug/L		99	80 - 120
Barium	1000	1000		ug/L		100	80 - 120
Beryllium	500	524		ug/L		105	80 - 120
Cadmium	500	491		ug/L		98	80 - 120
Chromium	500	517		ug/L		103	80 - 120
Cobalt	500	477		ug/L		95	80 - 120
Lead	500	506		ug/L		101	80 - 120
Lithium	500	496		ug/L		99	80 - 120
Magnesium	25000	24600		ug/L		99	80 - 120
Molybdenum	500	497		ug/L		99	80 - 120
Potassium	25000	24500		ug/L		98	80 - 120
Selenium	1000	918		ug/L		92	80 - 120
Sodium	25000	25300		ug/L		101	80 - 120
Thallium	1000	968		ug/L		97	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-535437/1-A
Matrix: Water
Analysis Batch: 535898

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 535437

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/20/22 12:00	07/22/22 17:08	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-535437/2-A
Matrix: Water
Analysis Batch: 535898

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 535437

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.71		ug/L		94	80 - 120		

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-535929/4
Matrix: Water
Analysis Batch: 535929

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			07/22/22 14:35	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 14:35	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 14:35	1

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-535908/3
Matrix: Water
Analysis Batch: 535908

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			07/22/22 17:28	1

Lab Sample ID: LCS 240-535908/4
Matrix: Water
Analysis Batch: 535908

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		

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-574945/1-A
Matrix: Water
Analysis Batch: 577998

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 574945

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.009060	U	0.0498	0.0498	1.00	0.0999	pCi/L	07/22/22 11:06	08/15/22 09:23	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.8*		*40 - 110*	*07/22/22 11:06*	*08/15/22 09:23*	*1*

Lab Sample ID: LCS 160-574945/2-A
Matrix: Water
Analysis Batch: 577998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 574945

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.83		1.13	1.00	0.149	pCi/L	96	75 - 125		

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-574945/2-A
Matrix: Water
Analysis Batch: 577998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 574945

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.8		40 - 110

Lab Sample ID: LCSD 160-574945/3-A
Matrix: Water
Analysis Batch: 577998

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 574945

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	9.819		1.04	1.00	0.124	pCi/L	87	75 - 125	0.47	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	88.5		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-574956/1-A
Matrix: Water
Analysis Batch: 576727

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 574956

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1314	U	0.270	0.270	1.00	0.474	pCi/L	07/22/22 11:53	08/05/22 10:57	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		40 - 110	07/22/22 11:53	08/05/22 10:57	1
Y Carrier	83.4		40 - 110	07/22/22 11:53	08/05/22 10:57	1

Lab Sample ID: LCS 160-574956/2-A
Matrix: Water
Analysis Batch: 576727

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 574956

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.39	9.461		1.28	1.00	0.507	pCi/L	113	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.8		40 - 110
Y Carrier	85.6		40 - 110

Lab Sample ID: LCSD 160-574956/3-A
Matrix: Water
Analysis Batch: 576727

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 574956

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.39	9.870		1.32	1.00	0.519	pCi/L	118	75 - 125	0.16	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-574956/3-A
Matrix: Water
Analysis Batch: 576727

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 574956

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	88.5		40 - 110
Y Carrier	85.6		40 - 110

Metals

Prep Batch: 535432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total Recoverable	Water	3005A	
240-170077-2	EB-001-F-20220718-01	Total Recoverable	Water	3005A	
MB 240-535432/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535432/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 535437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total/NA	Water	7470A	
240-170077-2	EB-001-F-20220718-01	Total/NA	Water	7470A	
MB 240-535437/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-535437/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 535817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total Recoverable	Water	6020B	535432
240-170077-2	EB-001-F-20220718-01	Total Recoverable	Water	6020B	535432
MB 240-535432/1-A	Method Blank	Total Recoverable	Water	6020B	535432
LCS 240-535432/3-A	Lab Control Sample	Total Recoverable	Water	6020B	535432

Analysis Batch: 535898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total/NA	Water	7470A	535437
240-170077-2	EB-001-F-20220718-01	Total/NA	Water	7470A	535437
MB 240-535437/1-A	Method Blank	Total/NA	Water	7470A	535437
LCS 240-535437/2-A	Lab Control Sample	Total/NA	Water	7470A	535437

Analysis Batch: 536003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total Recoverable	Water	6020B	535432

General Chemistry

Analysis Batch: 535908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total/NA	Water	300.0-1993 R2.1	
240-170077-2	EB-001-F-20220718-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-535908/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-535908/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 535929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total/NA	Water	2320B-1997	
240-170077-2	EB-001-F-20220718-01	Total/NA	Water	2320B-1997	
MB 240-535929/4	Method Blank	Total/NA	Water	2320B-1997	

Rad

Prep Batch: 574945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total/NA	Water	PrecSep-21	
240-170077-2	EB-001-F-20220718-01	Total/NA	Water	PrecSep-21	
MB 160-574945/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 574945 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-574945/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-574945/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 574956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170077-1	MW-17-F-20220718-01	Total/NA	Water	PrecSep_0	
240-170077-2	EB-001-F-20220718-01	Total/NA	Water	PrecSep_0	
MB 160-574956/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-574956/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-574956/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Project/Site: Federal CCR Well - App IV

Job ID: 240-170077-1

Client Sample ID: MW-17-F-20220718-01

Lab Sample ID: 240-170077-1

Date Collected: 07/18/22 09:40

Matrix: Water

Date Received: 07/19/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535432	SHB	EET CAN	07/20/22 12:00
Total Recoverable	Analysis	6020B		1	535817	AJC	EET CAN	07/21/22 17:51
Total Recoverable	Prep	3005A			535432	SHB	EET CAN	07/20/22 12:00
Total Recoverable	Analysis	6020B		10	536003	AJC	EET CAN	07/22/22 14:48
Total/NA	Prep	7470A			535437	SHB	EET CAN	07/20/22 12:00
Total/NA	Analysis	7470A		1	535898	DSH	EET CAN	07/22/22 17:50
Total/NA	Analysis	2320B-1997		1	535929	KMS	EET CAN	07/22/22 14:50
Total/NA	Analysis	300.0-1993 R2.1		5	535908	JMB	EET CAN	07/23/22 00:42
Total/NA	Prep	PrecSep-21			574945	MS	EET SL	07/22/22 11:06
Total/NA	Analysis	9315		1	577998	CLP	EET SL	08/15/22 09:24
Total/NA	Prep	PrecSep_0			574956	MS	EET SL	07/22/22 11:53
Total/NA	Analysis	9320		1	576727	JCB	EET SL	08/05/22 10:58
Total/NA	Analysis	Ra226_Ra228		1	578125	EMH	EET SL	08/15/22 22:37

Client Sample ID: EB-001-F-20220718-01

Lab Sample ID: 240-170077-2

Date Collected: 07/18/22 16:30

Matrix: Water

Date Received: 07/19/22 11:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535432	SHB	EET CAN	07/20/22 12:00
Total Recoverable	Analysis	6020B		1	535817	AJC	EET CAN	07/21/22 17:53
Total/NA	Prep	7470A			535437	SHB	EET CAN	07/20/22 12:00
Total/NA	Analysis	7470A		1	535898	DSH	EET CAN	07/22/22 17:52
Total/NA	Analysis	2320B-1997		1	535929	KMS	EET CAN	07/22/22 14:54
Total/NA	Analysis	300.0-1993 R2.1		1	535908	JMB	EET CAN	07/23/22 01:04
Total/NA	Prep	PrecSep-21			574945	MS	EET SL	07/22/22 11:06
Total/NA	Analysis	9315		1	577998	CLP	EET SL	08/15/22 09:24
Total/NA	Prep	PrecSep_0			574956	MS	EET SL	07/22/22 11:53
Total/NA	Analysis	9320		1	576727	JCB	EET SL	08/05/22 10:58
Total/NA	Analysis	Ra226_Ra228		1	578125	EMH	EET SL	08/15/22 22:37

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

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170077-1
Project/Site: Federal CCR Well - App IV

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	02-23-23
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	07-31-23
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
Job ID: 240-170077-1
Project/Site: Federal CCR Well - App IV

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	07-31-23
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.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93466-34578.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:

Address: 7397 OH-7	Due Date Requested:
City: Cheshire	TAT Requested (days):
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No
Phone: 740-925-3171(Tel)	PO #: 2935505
Email: taylor.huffman@lightstonegen.com	WO #:
Project Name: Federal CCR Wells - App IV	Project #: 24019633
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
MW-17-F-20220718-01	7-18-22	940	G	Water			1	1	1	2		
EB-001-F-20220718-01	7-18-22	1630	G	Water			1	1	1	2		
				Water								
				Water								
				Water								

240-170077 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	07/19/22 1415	Kemron	Received by:	7-19-22 19:15	ccnc
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

8/16/2022

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Brandon

Cooler Received on 7-19-22 Opened on 7-19-22

FedEx: 1st Grd Exp UPS FAS Clipper ~~Client Drop Off~~ Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 14 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
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# 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: _____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW-17-F-20220718-01	240-170077-C-1	Plastic 500ml - with Nitric Acid	<2			
MW-17-F-20220718-01	240-170077-D-1	Plastic 1 liter - Nitric Acid	<2			
MW-17-F-20220718-01	240-170077-E-1	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220718-01	240-170077-C-2	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220718-01	240-170077-D-2	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220718-01	240-170077-E-2	Plastic 1 liter - Nitric Acid	<2			

Login # : _______________

Eurofins - Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA (circled) Client Box Other	IR-13 (circled) IR-15	0.4	0.4	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 (circled) IR-15	0.5	0.5	Wet Ice (circled) 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

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-154740.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-170077-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 8/1/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Tnzma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-17-F-20220718-01 (240-170077-1)	7/18/22	09:40 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220718-01 (240-170077-2)	7/18/22	16:30 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Rachel Hauser FED EX	Date/Time: 7/2022 9:22	Company EETNC	Received by: FED EX	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: JUL 21 2022 1010	Company EATSC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-170077-1

Login Number: 170077
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 07/21/22 12:22 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 | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-170252-1
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:
8/5/2022 8:05:17 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-170252-1

Qualifiers

Metals

Qualifier	Qualifier Description
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-170252-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-170252-1

Comments
No additional comments.

Receipt
The samples were received on 7/21/2022 11:50 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 0.6º C and 1.4º C.

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
Job ID: 240-170252-1
Project/Site: Federal CCR Wells - App III

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EETNC CAN
6020B	Metals (ICP/MS)	SW846	EETNC CAN
2320B-1997	Alkalinity, Total	SM	EETNC CAN
300.0	Anions, Ion Chromatography	MCAWW	EETNC CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EETNC CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EETNC 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:

EETNC 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: 240-170252-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-170252-1	2019-07-F-20220720-01	Water	07/20/22 14:11	07/21/22 11:50
240-170252-2	EB-001-F-20220720-01	Water	07/20/22 15:00	07/21/22 11:50

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170252-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: 2019-07-F-20220720-01 — Lab Sample ID: 240-170252-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	520		100	57	ug/L	1		6010D	Total Recoverable
Calcium	880000		50000	29000	ug/L	50		6020B	Total Recoverable
Magnesium	250000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	23000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	9200000		50000	16000	ug/L	50		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	17000		1000	280	mg/L	1000		300.0	Total/NA
Sulfate	510		50	17	mg/L	50		300.0	Total/NA
Total Dissolved Solids	21000		1000	780	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220720-01 — Lab Sample ID: 240-170252-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	0.48	J	1.0	0.28	mg/L	1		300.0	Total/NA
Total Dissolved Solids	240		10	7.8	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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

Job ID: 240-170252-1

Client Sample ID: 2019-07-F-20220720-01

Date Collected: 07/20/22 14:11
Date Received: 07/21/22 11:50

Lab Sample ID: 240-170252-1

Matrix: Water

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	520		100	57	ug/L		07/22/22 12:00	07/25/22 18:52	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	880000		50000	29000	ug/L		07/22/22 12:00	07/27/22 14:18	50
Magnesium	250000		1000	200	ug/L		07/22/22 12:00	07/25/22 17:33	1
Potassium	23000		1000	220	ug/L		07/22/22 12:00	07/25/22 17:33	1
Sodium	9200000		50000	16000	ug/L		07/22/22 12:00	07/27/22 14:18	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	220		5.0	2.6	mg/L			07/22/22 17:10	1
Bicarbonate Alkalinity as CaCO3	220		5.0	2.6	mg/L			07/22/22 17:10	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 17:10	1
Chloride	17000		1000	280	mg/L			07/23/22 05:24	1000
Fluoride	50	U	50	24	mg/L			07/23/22 05:24	1000
Sulfate	510		50	17	mg/L			07/23/22 05:02	50
Total Dissolved Solids	21000		1000	780	mg/L			07/25/22 09:52	1

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

Job ID: 240-170252-1

Client Sample ID: EB-001-F-20220720-01

Date Collected: 07/20/22 15:00
Date Received: 07/21/22 11:50

Lab Sample ID: 240-170252-2

Matrix: Water

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/22/22 12:00	07/25/22 19:05	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		07/22/22 12:00	07/25/22 17:36	1
Magnesium	1000	U	1000	200	ug/L		07/22/22 12:00	07/25/22 17:36	1
Potassium	1000	U	1000	220	ug/L		07/22/22 12:00	07/25/22 17:36	1
Sodium	1000	U	1000	330	ug/L		07/22/22 12:00	07/27/22 14:21	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			07/22/22 17:14	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 17:14	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 17:14	1
Chloride	**0.48**	**J**	1.0	0.28	mg/L			07/23/22 06:29	1
Fluoride	0.050	U	0.050	0.024	mg/L			07/23/22 06:29	1
Sulfate	1.0	U	1.0	0.35	mg/L			07/23/22 06:29	1
Total Dissolved Solids	**240**		10	7.8	mg/L			07/27/22 09:40	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-535864/1-A
Matrix: Water
Analysis Batch: 536068

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535864

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		07/22/22 12:00	07/25/22 18:18	1

Lab Sample ID: LCS 240-535864/2-A
Matrix: Water
Analysis Batch: 536068

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535864

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	979		ug/L		98	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-535864/1-A
Matrix: Water
Analysis Batch: 536230

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535864

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		07/22/22 12:00	07/25/22 17:02	1
Magnesium	1000	U	1000	200	ug/L		07/22/22 12:00	07/25/22 17:02	1
Potassium	1000	U	1000	220	ug/L		07/22/22 12:00	07/25/22 17:02	1
Sodium	1000	U	1000	330	ug/L		07/22/22 12:00	07/25/22 17:02	1

Lab Sample ID: LCS 240-535864/3-A
Matrix: Water
Analysis Batch: 536230

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535864

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	25800		ug/L		103	80 - 120
Magnesium	25000	25300		ug/L		101	80 - 120
Potassium	25000	24900		ug/L		99	80 - 120
Sodium	25000	25000		ug/L		100	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-535929/30
Matrix: Water
Analysis Batch: 535929

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			07/22/22 16:21	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 16:21	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 16:21	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-535908/3
Matrix: Water
Analysis Batch: 535908

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			07/22/22 17:28	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-535908/3
Matrix: Water
Analysis Batch: 535908

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			07/22/22 17:28	1
Sulfate	1.0	U	1.0	0.35	mg/L			07/22/22 17:28	1

Lab Sample ID: LCS 240-535908/4
Matrix: Water
Analysis Batch: 535908

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	49.9		mg/L		100	90 - 110
Fluoride	2.50	2.55		mg/L		102	90 - 110
Sulfate	50.0	51.1		mg/L		102	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-536009/1
Matrix: Water
Analysis Batch: 536009

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			07/25/22 09:52	1

Lab Sample ID: LCS 240-536009/2
Matrix: Water
Analysis Batch: 536009

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	186	152		mg/L		82	80 - 120

Lab Sample ID: MB 240-536214/1
Matrix: Water
Analysis Batch: 536214

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			07/26/22 10:21	1

Lab Sample ID: LCS 240-536214/2
Matrix: Water
Analysis Batch: 536214

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	186	157		mg/L		84	80 - 120

Lab Sample ID: MB 240-536390/1
Matrix: Water
Analysis Batch: 536390

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			07/27/22 09:40	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-536390/2
Matrix: Water
Analysis Batch: 536390

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	186	178		mg/L		96	80 - 120

Metals

Prep Batch: 535864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total Recoverable	Water	3005A	
240-170252-2	EB-001-F-20220720-01	Total Recoverable	Water	3005A	
MB 240-535864/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535864/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-535864/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 536068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total Recoverable	Water	6010D	535864
240-170252-2	EB-001-F-20220720-01	Total Recoverable	Water	6010D	535864
MB 240-535864/1-A	Method Blank	Total Recoverable	Water	6010D	535864
LCS 240-535864/2-A	Lab Control Sample	Total Recoverable	Water	6010D	535864

Analysis Batch: 536230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total Recoverable	Water	6020B	535864
240-170252-2	EB-001-F-20220720-01	Total Recoverable	Water	6020B	535864
MB 240-535864/1-A	Method Blank	Total Recoverable	Water	6020B	535864
LCS 240-535864/3-A	Lab Control Sample	Total Recoverable	Water	6020B	535864

Analysis Batch: 536551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total Recoverable	Water	6020B	535864
240-170252-2	EB-001-F-20220720-01	Total Recoverable	Water	6020B	535864

General Chemistry

Analysis Batch: 535908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	300.0	
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	300.0	
240-170252-2	EB-001-F-20220720-01	Total/NA	Water	300.0	
MB 240-535908/3	Method Blank	Total/NA	Water	300.0	
LCS 240-535908/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 535929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	2320B-1997	
240-170252-2	EB-001-F-20220720-01	Total/NA	Water	2320B-1997	
MB 240-535929/30	Method Blank	Total/NA	Water	2320B-1997	

Analysis Batch: 536009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	SM 2540C	
MB 240-536009/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-536009/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 536214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-536214/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-536214/2	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: 240-170252-1

General Chemistry

Analysis Batch: 536390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-2	EB-001-F-20220720-01	Total/NA	Water	SM 2540C	
MB 240-536390/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-536390/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170252-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: 2019-07-F-20220720-01
Lab Sample ID: 240-170252-1

Date Collected: 07/20/22 14:11
Matrix: Water
Date Received: 07/21/22 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			535864	07/22/22 12:00	SHB	EETNC CAN
Total Recoverable	Analysis	6010D		1	536068	07/25/22 18:52	RKT	EETNC CAN
Total Recoverable	Prep	3005A			535864	07/22/22 12:00	SHB	EETNC CAN
Total Recoverable	Analysis	6020B		1	536230	07/25/22 17:33	AJC	EETNC CAN
Total Recoverable	Prep	3005A			535864	07/22/22 12:00	SHB	EETNC CAN
Total Recoverable	Analysis	6020B		50	536551	07/27/22 14:18	AJC	EETNC CAN
Total/NA	Analysis	2320B-1997		1	535929	07/22/22 17:10	KMS	EETNC CAN
Total/NA	Analysis	300.0		50	535908	07/23/22 05:02	JMB	EETNC CAN
Total/NA	Analysis	300.0		1000	535908	07/23/22 05:24	JMB	EETNC CAN
Total/NA	Analysis	SM 2540C		1	536009	07/25/22 09:52	MED	EETNC CAN

Client Sample ID: EB-001-F-20220720-01
Lab Sample ID: 240-170252-2

Date Collected: 07/20/22 15:00
Matrix: Water
Date Received: 07/21/22 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			535864	07/22/22 12:00	SHB	EETNC CAN
Total Recoverable	Analysis	6010D		1	536068	07/25/22 19:05	RKT	EETNC CAN
Total Recoverable	Prep	3005A			535864	07/22/22 12:00	SHB	EETNC CAN
Total Recoverable	Analysis	6020B		1	536230	07/25/22 17:36	AJC	EETNC CAN
Total Recoverable	Prep	3005A			535864	07/22/22 12:00	SHB	EETNC CAN
Total Recoverable	Analysis	6020B		1	536551	07/27/22 14:21	AJC	EETNC CAN
Total/NA	Analysis	2320B-1997		1	535929	07/22/22 17:14	KMS	EETNC CAN
Total/NA	Analysis	300.0		1	535908	07/23/22 06:29	JMB	EETNC CAN
Total/NA	Analysis	SM 2540C		1	536390	07/27/22 09:40	MED	EETNC CAN

Laboratory References:

EETNC CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170252-1
Project/Site: Federal CCR Wells - App III

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	02-23-23
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	08-31-22
Virginia	NELAP	11570	07-27-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

1.4 / 1.4 0.6/0.6

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-97179-35520.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:	Analysis Requested		Job #:
Address: 7397 OH-7	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR - Appendix III and IV - Combined	Project #: 24019633			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	300.0_28D - Fluoride (AppIV)/Cl, F, SO4 (AppIV)	2320B - Alkalinity	9315_Ra226, 9320_Ra228	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
2019-07-F-20220720-01	7-20-22	1411	G	W			1	1	1	2		
EB-001-F-20220720-01	7-20-22	1500	G	W			★	★	★	★		FULL APP III & IV KIT SETS FOR EB

240-170252 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
★ Harrison Gutleyder	★ 7/21/22 11:50	★ KEMRON		7/21/22 11:50	EETNC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °rc and Other Remarks:

Ver: 01/16/2019

8/5/2022

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Light+Stone Site Name _____ Cooler unpacked by: Justin H
Cooler Received on 7-21-22 Opened on 7-21-22
FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other
Receipt After-hours: Drop-off Date/Time _____ Storage Location _____
Eurofins Cooler # 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 1 (Yes) No
-Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
-Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? Yes (No)
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# 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 Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2019-07-F-20220720-01	240-170252-C-1	Plastic 500ml - with Nitric Acid	<2			
2019-07-F-20220720-01	240-170252-D-1	Plastic 1 liter - Nitric Acid	<2			
2019-07-F-20220720-01	240-170252-E-1	Plastic 1 liter - Nitric Acid	<2			
EB-001--F-20220720-01	240-170252-C-2	Plastic 500ml - with Nitric Acid	<2			

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	1.4	1.4	**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			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

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-170252-2
Client Project/Site: Federal CCR Wells - App IV

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
8/24/2022 8:57:09 AM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-170252-2

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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-170252-2

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-170252-2

Comments
No additional comments.

Receipt
The samples were received on 7/21/2022 11:50 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 0.6º C and 1.4º C.

RAD
Methods 9315: Radium-226 batch 575923: 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.
2019-07-F-20220720-01 (240-170252-1), (LCS 160-575923/2-A), (LCSD 160-575923/3-A) and (MB 160-575923/1-A)

Methods 9320: Radium 228 Batch 160-575925: The Ra-228 laboratory control sample duplicate (LCSD) associated with the following samples recovered at 127%: (LCSD 160-575925/3-A). The limits in our LIMS system at 75-125% reflect the requirements of a regulatory agency that represents a large amount of our work. However, the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of 62-148% per method requirements. The LCSD is within criteria and no further action is required. (LCSD 160-575925/3-A)

Method 9320: Radium-228 prep batch 160- 575925: The following sample(s) did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interferences. The data have been reported with this narrative.
2019-07-F-20220720-01 (240-170252-1)

Method 9320: Radium-228 prep batch 160-575925: 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.2019-07-F-20220720-01 (240-170252-1), (LCS 160-575925/2-A), (LCSD 160-575925/3-A) and (MB 160-575925/1-A)

Method PrecSep_0: Radium-228 Prep Batch 160-575925: The following sample was prepared at a reduced aliquot due to Matrix: 2019-07-F-20220720-01 (240-170252-1). 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 160-575925: Insufficient sample volume was available to perform a sample duplicate for the following samples: 2019-07-F-20220720-01 (240-170252-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep_0: Radium-228 Prep Batch 160-576195: The following sample was prepared at a reduced aliquot due to Matrix: 2019-07-F-20220720-01 (240-170252-1). 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 160-575923: The following sample was prepared at a reduced aliquot due to Matrix: 2019-07-F-20220720-01 (240-170252-1). 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 160-575923: Insufficient sample volume was available to perform a sample duplicate for the following samples: 2019-07-F-20220720-01 (240-170252-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-576189: The following sample was prepared at a reduced aliquot due to Matrix: 2019-07-F-20220720-01 (240-170252-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Job ID: 240-170252-2 (Continued)

Laboratory: Eurofins Canton (Continued)

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: Federal CCR Wells - App IV

Job ID: 240-170252-2

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: 240-170252-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-170252-1	2019-07-F-20220720-01	Water	07/20/22 14:11	07/21/22 11:50
240-170252-2	EB-001-F-20220720-01	Water	07/20/22 15:00	07/21/22 11:50

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170252-2
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 2019-07-F-20220720-01 — Lab Sample ID: 240-170252-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.2	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	550		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	11		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	4.4		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	0.96	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	290		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	250000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	9.4		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	23000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	9200000		50000	16000	ug/L	50		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

Client Sample ID: EB-001-F-20220720-01 — Lab Sample ID: 240-170252-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.16	J	0.20	0.13	ug/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2019-07-F-20220720-01
Lab Sample ID: 240-170252-1

Date Collected: 07/20/22 14:11
Matrix: Water
Date Received: 07/21/22 11:50

Method: 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		07/22/22 12:00	07/25/22 17:33	1
Arsenic	**3.2**	**J**	5.0	0.75	ug/L		07/22/22 12:00	07/25/22 17:33	1
Barium	**550**		5.0	2.2	ug/L		07/22/22 12:00	07/25/22 17:33	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/22/22 12:00	07/25/22 17:33	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 17:33	1
Chromium	**11**		5.0	2.5	ug/L		07/22/22 12:00	07/25/22 17:33	1
Cobalt	**4.4**		1.0	0.19	ug/L		07/22/22 12:00	07/25/22 17:33	1
Lead	**0.96**	**J**	1.0	0.45	ug/L		07/22/22 12:00	07/25/22 17:33	1
Lithium	**290**		8.0	1.7	ug/L		07/22/22 12:00	07/25/22 17:33	1
Magnesium	**250000**		1000	200	ug/L		07/22/22 12:00	07/25/22 17:33	1
Molybdenum	**9.4**		5.0	1.1	ug/L		07/22/22 12:00	07/25/22 17:33	1
Potassium	**23000**		1000	220	ug/L		07/22/22 12:00	07/25/22 17:33	1
Selenium	5.0	U	5.0	0.89	ug/L		07/22/22 12:00	07/25/22 17:33	1
Sodium	**9200000**		50000	16000	ug/L		07/22/22 12:00	07/27/22 14:18	50
Thallium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 17:33	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		07/22/22 12:00	07/26/22 21:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**220**		5.0	2.6	mg/L			07/22/22 17:10	1
Bicarbonate Alkalinity as CaCO3	**220**		5.0	2.6	mg/L			07/22/22 17:10	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 17:10	1
Fluoride	50	U	50	24	mg/L			07/23/22 05:24	1000

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.19**		0.462	0.474	1.00	0.545	pCi/L	08/01/22 08:42	08/19/22 20:53	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.8*		*40 - 110*	*08/01/22 08:42*	*08/19/22 20:53*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.58	U G	1.20	1.21	1.00	1.84	pCi/L	08/01/22 08:48	08/09/22 11:25	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.8*		*40 - 110*	*08/01/22 08:48*	*08/09/22 11:25*	*1*
Y Carrier	*86.0*		*40 - 110*	*08/01/22 08:48*	*08/09/22 11:25*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170252-2
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 2019-07-F-20220720-01
Lab Sample ID: 240-170252-1
Date Collected: 07/20/22 14:11
Matrix: Water
Date Received: 07/21/22 11:50

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	2.77		1.29	1.30	5.00	1.84	pCi/L		08/23/22 20:18	1

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170252-2
Project/Site: Federal CCR Wells - App IV

Client Sample ID: EB-001-F-20220720-01
Lab Sample ID: 240-170252-2

Date Collected: 07/20/22 15:00
Matrix: Water
Date Received: 07/21/22 11:50

Method: 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		07/22/22 12:00	07/25/22 17:36	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/22/22 12:00	07/25/22 17:36	1
Barium	5.0	U	5.0	2.2	ug/L		07/22/22 12:00	07/25/22 17:36	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/22/22 12:00	07/25/22 17:36	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 17:36	1
Chromium	5.0	U	5.0	2.5	ug/L		07/22/22 12:00	07/25/22 17:36	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/22/22 12:00	07/25/22 17:36	1
Lead	1.0	U	1.0	0.45	ug/L		07/22/22 12:00	07/25/22 17:36	1
Lithium	8.0	U	8.0	1.7	ug/L		07/22/22 12:00	07/25/22 17:36	1
Magnesium	1000	U	1000	200	ug/L		07/22/22 12:00	07/25/22 17:36	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/22/22 12:00	07/25/22 17:36	1
Potassium	1000	U	1000	220	ug/L		07/22/22 12:00	07/25/22 17:36	1
Selenium	5.0	U	5.0	0.89	ug/L		07/22/22 12:00	07/25/22 17:36	1
Sodium	1000	U	1000	330	ug/L		07/22/22 12:00	07/27/22 14:21	1
Thallium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 17:36	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.16	J	0.20	0.13	ug/L		07/22/22 12:00	07/26/22 21:23	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			07/22/22 17:14	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 17:14	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 17:14	1
Fluoride	0.050	U	0.050	0.024	mg/L			07/23/22 06:29	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170252-2
Project/Site: Federal CCR Wells - App IV

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)
240-170252-1	2019-07-F-20220720-01	99.8
LCS 160-575923/2-A	Lab Control Sample	104
LCSD 160-575923/3-A	Lab Control Sample Dup	99.0
MB 160-575923/1-A	Method Blank	104

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)
240-170252-1	2019-07-F-20220720-01	99.8	86.0
LCS 160-575925/2-A	Lab Control Sample	104	83.7
LCSD 160-575925/3-A	Lab Control Sample Dup	99.0	82.2
MB 160-575925/1-A	Method Blank	104	83.4

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-535864/1-A
Matrix: Water
Analysis Batch: 536230

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535864

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/22/22 12:00	07/25/22 17:02	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/22/22 12:00	07/25/22 17:02	1
Barium	5.0	U	5.0	2.2	ug/L		07/22/22 12:00	07/25/22 17:02	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/22/22 12:00	07/25/22 17:02	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 17:02	1
Chromium	5.0	U	5.0	2.5	ug/L		07/22/22 12:00	07/25/22 17:02	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/22/22 12:00	07/25/22 17:02	1
Lead	1.0	U	1.0	0.45	ug/L		07/22/22 12:00	07/25/22 17:02	1
Lithium	8.0	U	8.0	1.7	ug/L		07/22/22 12:00	07/25/22 17:02	1
Magnesium	1000	U	1000	200	ug/L		07/22/22 12:00	07/25/22 17:02	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/22/22 12:00	07/25/22 17:02	1
Potassium	1000	U	1000	220	ug/L		07/22/22 12:00	07/25/22 17:02	1
Selenium	5.0	U	5.0	0.89	ug/L		07/22/22 12:00	07/25/22 17:02	1
Sodium	1000	U	1000	330	ug/L		07/22/22 12:00	07/25/22 17:02	1
Thallium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 17:02	1

Lab Sample ID: LCS 240-535864/3-A
Matrix: Water
Analysis Batch: 536230

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535864

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	100		ug/L		100	80 - 120
Arsenic	1000	942		ug/L		94	80 - 120
Barium	1000	973		ug/L		97	80 - 120
Beryllium	500	460		ug/L		92	80 - 120
Cadmium	500	477		ug/L		95	80 - 120
Chromium	500	499		ug/L		100	80 - 120
Cobalt	500	477		ug/L		95	80 - 120
Lead	500	484		ug/L		97	80 - 120
Lithium	500	495		ug/L		99	80 - 120
Magnesium	25000	25300		ug/L		101	80 - 120
Molybdenum	500	479		ug/L		96	80 - 120
Potassium	25000	24900		ug/L		99	80 - 120
Selenium	1000	938		ug/L		94	80 - 120
Sodium	25000	25000		ug/L		100	80 - 120
Thallium	1000	932		ug/L		93	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-535865/1-A
Matrix: Water
Analysis Batch: 536342

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 535865

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/22/22 12:00	07/26/22 20:56	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-535865/2-A
Matrix: Water
Analysis Batch: 536342

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 535865

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.91		ug/L		98	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-535929/30
Matrix: Water
Analysis Batch: 535929

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			07/22/22 16:21	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 16:21	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 16:21	1

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-535908/3
Matrix: Water
Analysis Batch: 535908

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			07/22/22 17:28	1

Lab Sample ID: LCS 240-535908/4
Matrix: Water
Analysis Batch: 535908

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

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-575923/1-A
Matrix: Water
Analysis Batch: 578736

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 575923

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.007942	U	0.0441	0.0441	1.00	0.0963	pCi/L	08/01/22 08:42	08/19/22 13:50	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*08/01/22 08:42*	*08/19/22 13:50*	*1*

Lab Sample ID: LCS 160-575923/2-A
Matrix: Water
Analysis Batch: 578736

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 575923

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	9.700		1.02	1.00	0.125	pCi/L	86	75 - 125

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-575923/2-A
Matrix: Water
Analysis Batch: 578736

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 575923

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	104		40 - 110

Lab Sample ID: LCSD 160-575923/3-A
Matrix: Water
Analysis Batch: 578736

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 575923

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	10.21		1.06	1.00	0.0981	pCi/L	90	75 - 125	0.25	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	99.0		40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-575925/1-A
Matrix: Water
Analysis Batch: 577142

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 575925

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2580	U	0.264	0.265	1.00	0.426	pCi/L	08/01/22 08:48	08/09/22 11:24	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110	08/01/22 08:48	08/09/22 11:24	1
Y Carrier	83.4		40 - 110	08/01/22 08:48	08/09/22 11:24	1

Lab Sample ID: LCS 160-575925/2-A
Matrix: Water
Analysis Batch: 577142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 575925

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.38	9.598		1.25	1.00	0.462	pCi/L	115	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	83.7		40 - 110

Lab Sample ID: LCSD 160-575925/3-A
Matrix: Water
Analysis Batch: 577142

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 575925

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.38	10.67		1.37	1.00	0.488	pCi/L	127	75 - 125	0.41	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-575925/3-A
Matrix: Water
Analysis Batch: 577142

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 575925

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	99.0		40 - 110
Y Carrier	82.2		40 - 110

Metals

Prep Batch: 535864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total Recoverable	Water	3005A	
240-170252-2	EB-001-F-20220720-01	Total Recoverable	Water	3005A	
MB 240-535864/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535864/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 535865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	7470A	
240-170252-2	EB-001-F-20220720-01	Total/NA	Water	7470A	
MB 240-535865/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-535865/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 536230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total Recoverable	Water	6020B	535864
240-170252-2	EB-001-F-20220720-01	Total Recoverable	Water	6020B	535864
MB 240-535864/1-A	Method Blank	Total Recoverable	Water	6020B	535864
LCS 240-535864/3-A	Lab Control Sample	Total Recoverable	Water	6020B	535864

Analysis Batch: 536342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	7470A	535865
240-170252-2	EB-001-F-20220720-01	Total/NA	Water	7470A	535865
MB 240-535865/1-A	Method Blank	Total/NA	Water	7470A	535865
LCS 240-535865/2-A	Lab Control Sample	Total/NA	Water	7470A	535865

Analysis Batch: 536551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total Recoverable	Water	6020B	535864
240-170252-2	EB-001-F-20220720-01	Total Recoverable	Water	6020B	535864

General Chemistry

Analysis Batch: 535908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	300.0-1993 R2.1	
240-170252-2	EB-001-F-20220720-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-535908/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-535908/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 535929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	2320B-1997	
240-170252-2	EB-001-F-20220720-01	Total/NA	Water	2320B-1997	
MB 240-535929/30	Method Blank	Total/NA	Water	2320B-1997	

Rad

Prep Batch: 575923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	PrecSep-21	
MB 160-575923/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 575923 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-575923/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-575923/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 575925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170252-1	2019-07-F-20220720-01	Total/NA	Water	PrecSep_0	
MB 160-575925/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-575925/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-575925/3-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: 240-170252-2

Client Sample ID: 2019-07-F-20220720-01

Lab Sample ID: 240-170252-1

Date Collected: 07/20/22 14:11

Matrix: Water

Date Received: 07/21/22 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535864	SHB	EET CAN	07/22/22 12:00
Total Recoverable	Analysis	6020B		1	536230	AJC	EET CAN	07/25/22 17:33
Total Recoverable	Prep	3005A			535864	SHB	EET CAN	07/22/22 12:00
Total Recoverable	Analysis	6020B		50	536551	AJC	EET CAN	07/27/22 14:18
Total/NA	Prep	7470A			535865	SHB	EET CAN	07/22/22 12:00
Total/NA	Analysis	7470A		1	536342	DSH	EET CAN	07/26/22 21:21
Total/NA	Analysis	2320B-1997		1	535929	KMS	EET CAN	07/22/22 17:10
Total/NA	Analysis	300.0-1993 R2.1		1000	535908	JMB	EET CAN	07/23/22 05:24
Total/NA	Prep	PrecSep-21			575923	MS	EET SL	08/01/22 08:42
Total/NA	Analysis	9315		1	578736	FLC	EET SL	08/19/22 20:53
Total/NA	Prep	PrecSep_0			575925	MS	EET SL	08/01/22 08:48
Total/NA	Analysis	9320		1	577142	FLC	EET SL	08/09/22 11:25
Total/NA	Analysis	Ra226_Ra228		1	579199	CLP	EET SL	08/23/22 20:18

Client Sample ID: EB-001-F-20220720-01

Lab Sample ID: 240-170252-2

Date Collected: 07/20/22 15:00

Matrix: Water

Date Received: 07/21/22 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535864	SHB	EET CAN	07/22/22 12:00
Total Recoverable	Analysis	6020B		1	536230	AJC	EET CAN	07/25/22 17:36
Total Recoverable	Prep	3005A			535864	SHB	EET CAN	07/22/22 12:00
Total Recoverable	Analysis	6020B		1	536551	AJC	EET CAN	07/27/22 14:21
Total/NA	Prep	7470A			535865	SHB	EET CAN	07/22/22 12:00
Total/NA	Analysis	7470A		1	536342	DSH	EET CAN	07/26/22 21:23
Total/NA	Analysis	2320B-1997		1	535929	KMS	EET CAN	07/22/22 17:14
Total/NA	Analysis	300.0-1993 R2.1		1	535908	JMB	EET CAN	07/23/22 06:29

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
Job ID: 240-170252-2
Project/Site: Federal CCR Wells - App IV

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	02-23-23
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	08-31-22
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	09-30-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170252-2
Project/Site: Federal CCR Wells - App IV

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	07-31-23
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.

1.4 / 1.4 0.6/0.6

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-97179-35520.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR - Appendix III and IV - Combined	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	300.0_28D - Fluoride (AppIV)/Cl, F, SO4 (AppIV)	2320B - Alkalinity	9315_Ra226, 9320_Ra228	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
2019-07-F-20220720-01	7-20-22	1411	G	W			1	1	1	2		
EB-001-F-20220720-01	7-20-22	1500	G	W			☆	☆	☆	☆		FULL APP III & IV KIT SETS FOR EB

240-170252 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
☆ Harrison Lockeydoo	☆ 7/21/22 11:50	☆ KEMRON	☆	7/21/22 11:50	ETNC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °rc and Other Remarks:

Ver: 01/16/2019

Page 22 of 27

8/24/2022

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Light+Stone Site Name _____ Cooler unpacked by: Justin H
Cooler Received on 7-21-22 Opened on 7-21-22
FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other
Receipt After-hours: Drop-off Date/Time _____ Storage Location _____
Eurofins Cooler # 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 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	(No)
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# 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 Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
2019-07-F-20220720-01	240-170252-C-1	Plastic 500ml - with Nitric Acid	<2			
2019-07-F-20220720-01	240-170252-D-1	Plastic 1 liter - Nitric Acid	<2			
2019-07-F-20220720-01	240-170252-E-1	Plastic 1 liter - Nitric Acid	<2			
EB-001--F-20220720-01	240-170252-C-2	Plastic 500ml - with Nitric Acid	<2			

Login # : ____________

Eurofins - Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA (circled) Client Box Other	IR-13 (circled) IR-15	1.4	1.4	Wet Ice (circled) Blue Ice Dry Ice Water None
TA (circled) Client Box Other	IR-13 (circled) IR-15	0.6	0.6	Wet Ice (circled) 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

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-154814.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-170252-1
Address: 13715 Rider Trail North, .	Due Date Requested: 8/3/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Federal CCR Wells - App II and App IV - Combined	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2019-07-F-20220720-01 (240-170252-1)	7/20/22	14:11 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 7-22-22 937	Company ETA	Received by:	Date/Time:	Company
Relinquished by: FED EX	Date/Time:	Company	Received by: FED EX Siera Worthington	Date/Time: JUL 25 2022 0800	Company GRSR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

8/24/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-170252-2

Login Number: 170252
List Number: 2
Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis
List Creation: 07/25/22 10:45 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-170257-1
Client Project/Site: Federal CCR Wells - App IV

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
8/23/2022 12:56:40 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-170257-1

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
^-	Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
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.
¤	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: 240-170257-1

Job ID: 240-170257-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-170257-1

Comments
No additional comments.

Receipt
The samples were received on 7/21/2022 11:50 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 0.6º C and 1.4º C.

RAD
Methods 9315: Radium-226 batch 575921: 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-20220720-01 (240-170257-1), EB-001-F-20220720-01 (240-170257-2), (LCS 160-575921/2-A), (LCSD 160-575921/3-A) and (MB 160-575921/1-A)

Methods 9320: Radium 228 batch 160-575922: 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-20220720-01 (240-170257-1), EB-001-F-20220720-01 (240-170257-2), (LCS 160-575922/2-A), (LCSD 160-575922/3-A) and (MB 160-575922/1-A)

Method PrecSep_0: Radium-228 Prep Batch 160-575922: The following sample was prepared at a reduced aliquot due to Matrix: 96152-F-20220720-01 (240-170257-1). 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 160-575922: Insufficient sample volume was available to perform a sample duplicate for the following samples: 96152-F-20220720-01 (240-170257-1) and EB-001-F-20220720-01 (240-170257-2). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep_0: Radium-228 Prep Batch 160-576195: The following samples were prepared at a reduced aliquot due to Matrix: 96152-F-20220720-01 (240-170257-1) and EB-001-F-20220720-01 (240-170257-2). 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 160-575921: The following sample was prepared at a reduced aliquot due to Matrix: 96152-F-20220720-01 (240-170257-1). 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 160-575921: Insufficient sample volume was available to perform a sample duplicate for the following samples: 96152-F-20220720-01 (240-170257-1) and EB-001-F-20220720-01 (240-170257-2). 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: Federal CCR Wells - App IV

Job ID: 240-170257-1

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: 240-170257-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-170257-1	96152-F-20220720-01	Water	07/20/22 10:00	07/21/22 11:50
240-170257-2	EB-001-F-20220720-01	Water	07/20/22 15:00	07/21/22 11:50

Detection Summary

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

Job ID: 240-170257-1

Client Sample ID: 96152-F-20220720-01 — Lab Sample ID: 240-170257-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	9.2		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	830		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cobalt	3.0		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	0.51	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	83		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	3.8	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	8300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2200000		10000	3300	ug/L	10		6020B	Total Recoverable
Total Alkalinity	590		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	590		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.77	^-	0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20220720-01 — Lab Sample ID: 240-170257-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	610	J	1000	330	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 96152-F-20220720-01
Lab Sample ID: 240-170257-1

Date Collected: 07/20/22 10:00
Matrix: Water
Date Received: 07/21/22 11:50

Method: 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		07/22/22 12:00	07/25/22 16:30	1
Arsenic	**9.2**		5.0	0.75	ug/L		07/22/22 12:00	07/25/22 16:30	1
Barium	**830**		5.0	2.2	ug/L		07/22/22 12:00	07/25/22 16:30	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/22/22 12:00	07/25/22 16:30	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 16:30	1
Chromium	5.0	U	5.0	2.5	ug/L		07/22/22 12:00	07/25/22 16:30	1
Cobalt	**3.0**		1.0	0.19	ug/L		07/22/22 12:00	07/25/22 16:30	1
Lead	**0.51**	**J**	1.0	0.45	ug/L		07/22/22 12:00	07/25/22 16:30	1
Lithium	**83**		8.0	1.7	ug/L		07/22/22 12:00	07/25/22 16:30	1
Magnesium	**16000**		1000	200	ug/L		07/22/22 12:00	07/25/22 16:30	1
Molybdenum	**3.8**	**J**	5.0	1.1	ug/L		07/22/22 12:00	07/25/22 16:30	1
Potassium	**8300**		1000	220	ug/L		07/22/22 12:00	07/25/22 16:30	1
Selenium	5.0	U	5.0	0.89	ug/L		07/22/22 12:00	07/25/22 16:30	1
Sodium	**2200000**		10000	3300	ug/L		07/22/22 12:00	07/27/22 13:51	10
Thallium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 16:30	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		07/22/22 12:00	07/28/22 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**590**		5.0	2.6	mg/L			07/22/22 14:59	1
Bicarbonate Alkalinity as CaCO3	**590**		5.0	2.6	mg/L			07/22/22 14:59	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 14:59	1
Fluoride	**0.77**	**^-**	0.25	0.12	mg/L			08/10/22 21:50	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.33**		0.304	0.370	1.00	0.140	pCi/L	08/01/22 08:32	08/19/22 11:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.8*		*40 - 110*	*08/01/22 08:32*	*08/19/22 11:54*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.81**		0.641	0.691	1.00	0.640	pCi/L	08/01/22 08:40	08/11/22 11:18	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.8*		*40 - 110*	*08/01/22 08:40*	*08/11/22 11:18*	*1*
Y Carrier	*86.0*		*40 - 110*	*08/01/22 08:40*	*08/11/22 11:18*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170257-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 96152-F-20220720-01
Lab Sample ID: 240-170257-1
Date Collected: 07/20/22 10:00
Matrix: Water
Date Received: 07/21/22 11:50

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	5.15		0.709	0.784	5.00	0.640	pCi/L		08/23/22 11:21	1

Client Sample ID: EB-001-F-20220720-01
Lab Sample ID: 240-170257-2

Date Collected: 07/20/22 15:00
Matrix: Water
Date Received: 07/21/22 11:50

Method: 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		07/22/22 12:00	07/25/22 16:33	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/22/22 12:00	07/25/22 16:33	1
Barium	5.0	U	5.0	2.2	ug/L		07/22/22 12:00	07/25/22 16:33	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/22/22 12:00	07/25/22 16:33	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 16:33	1
Chromium	5.0	U	5.0	2.5	ug/L		07/22/22 12:00	07/25/22 16:33	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/22/22 12:00	07/25/22 16:33	1
Lead	1.0	U	1.0	0.45	ug/L		07/22/22 12:00	07/25/22 16:33	1
Lithium	8.0	U	8.0	1.7	ug/L		07/22/22 12:00	07/25/22 16:33	1
Magnesium	1000	U	1000	200	ug/L		07/22/22 12:00	07/25/22 16:33	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/22/22 12:00	07/25/22 16:33	1
Potassium	1000	U	1000	220	ug/L		07/22/22 12:00	07/25/22 16:33	1
Selenium	5.0	U	5.0	0.89	ug/L		07/22/22 12:00	07/25/22 16:33	1
Sodium	**610**	**J**	1000	330	ug/L		07/22/22 12:00	07/25/22 16:33	1
Thallium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 16:33	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		07/22/22 12:00	07/28/22 15:37	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			07/22/22 17:36	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 17:36	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 17:36	1
Fluoride	0.050	U	0.050	0.024	mg/L			08/03/22 22:22	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	-0.0190	U	0.0582	0.0582	1.00	0.128	pCi/L	08/01/22 08:32	08/19/22 11:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.8*		*40 - 110*	*08/01/22 08:32*	*08/19/22 11:54*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0712	U	0.233	0.233	1.00	0.423	pCi/L	08/01/22 08:40	08/11/22 11:19	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.8*		*40 - 110*	*08/01/22 08:40*	*08/11/22 11:19*	*1*
Y Carrier	*86.4*		*40 - 110*	*08/01/22 08:40*	*08/11/22 11:19*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170257-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: EB-001-F-20220720-01
Lab Sample ID: 240-170257-2
Date Collected: 07/20/22 15:00
Matrix: Water
Date Received: 07/21/22 11:50

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	0.0521	U	0.240	0.240	5.00	0.423	pCi/L		08/23/22 11:21	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170257-1
Project/Site: Federal CCR Wells - App IV

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)
240-170257-1	96152-F-20220720-01	99.8
240-170257-2	EB-001-F-20220720-01	99.8
LCS 160-575921/2-A	Lab Control Sample	103
LCSD 160-575921/3-A	Lab Control Sample Dup	101
MB 160-575921/1-A	Method Blank	104

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)
240-170257-1	96152-F-20220720-01	99.8	86.0
240-170257-2	EB-001-F-20220720-01	99.8	86.4
LCS 160-575922/2-A	Lab Control Sample	103	87.5
LCSD 160-575922/3-A	Lab Control Sample Dup	101	86.4
MB 160-575922/1-A	Method Blank	104	85.2

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-535874/1-A
Matrix: Water
Analysis Batch: 536230

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 535874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		07/22/22 12:00	07/25/22 15:10	1
Arsenic	5.0	U	5.0	0.75	ug/L		07/22/22 12:00	07/25/22 15:10	1
Barium	5.0	U	5.0	2.2	ug/L		07/22/22 12:00	07/25/22 15:10	1
Beryllium	1.0	U	1.0	0.62	ug/L		07/22/22 12:00	07/25/22 15:10	1
Cadmium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 15:10	1
Chromium	5.0	U	5.0	2.5	ug/L		07/22/22 12:00	07/25/22 15:10	1
Cobalt	1.0	U	1.0	0.19	ug/L		07/22/22 12:00	07/25/22 15:10	1
Lead	1.0	U	1.0	0.45	ug/L		07/22/22 12:00	07/25/22 15:10	1
Lithium	8.0	U	8.0	1.7	ug/L		07/22/22 12:00	07/25/22 15:10	1
Magnesium	1000	U	1000	200	ug/L		07/22/22 12:00	07/25/22 15:10	1
Molybdenum	5.0	U	5.0	1.1	ug/L		07/22/22 12:00	07/25/22 15:10	1
Potassium	1000	U	1000	220	ug/L		07/22/22 12:00	07/25/22 15:10	1
Selenium	5.0	U	5.0	0.89	ug/L		07/22/22 12:00	07/25/22 15:10	1
Sodium	1000	U	1000	330	ug/L		07/22/22 12:00	07/25/22 15:10	1
Thallium	1.0	U	1.0	0.20	ug/L		07/22/22 12:00	07/25/22 15:10	1

Lab Sample ID: LCS 240-535874/2-A
Matrix: Water
Analysis Batch: 536230

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 535874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	99.7		ug/L		100	80 - 120
Arsenic	1000	942		ug/L		94	80 - 120
Barium	1000	954		ug/L		95	80 - 120
Beryllium	500	454		ug/L		91	80 - 120
Cadmium	500	472		ug/L		94	80 - 120
Chromium	500	485		ug/L		97	80 - 120
Cobalt	500	476		ug/L		95	80 - 120
Lead	500	477		ug/L		95	80 - 120
Lithium	500	471		ug/L		94	80 - 120
Magnesium	25000	24700		ug/L		99	80 - 120
Molybdenum	500	476		ug/L		95	80 - 120
Potassium	25000	24500		ug/L		98	80 - 120
Selenium	1000	933		ug/L		93	80 - 120
Sodium	25000	24400		ug/L		98	80 - 120
Thallium	1000	919		ug/L		92	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-535877/1-A
Matrix: Water
Analysis Batch: 536752

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 535877

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		07/22/22 12:00	07/28/22 14:39	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-535877/2-A
Matrix: Water
Analysis Batch: 536752

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 535877

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.42		ug/L		108	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-535929/30
Matrix: Water
Analysis Batch: 535929

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			07/22/22 16:21	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 16:21	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 16:21	1

Lab Sample ID: MB 240-535929/4
Matrix: Water
Analysis Batch: 535929

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			07/22/22 14:35	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 14:35	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			07/22/22 14:35	1

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-537242/3
Matrix: Water
Analysis Batch: 537242

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			08/03/22 13:39	1

Lab Sample ID: LCS 240-537242/4
Matrix: Water
Analysis Batch: 537242

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	2.54		mg/L		102	90 - 110

Lab Sample ID: MB 240-538097/4
Matrix: Water
Analysis Batch: 538097

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			08/10/22 10:59	1

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-538097/5
Matrix: Water
Analysis Batch: 538097

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

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-575921/1-A
Matrix: Water
Analysis Batch: 578688

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 575921

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0008323	U	0.0462	0.0462	1.00	0.101	pCi/L	08/01/22 08:32	08/19/22 08:13	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*08/01/22 08:32*	*08/19/22 08:13*	*1*

Lab Sample ID: LCS 160-575921/2-A
Matrix: Water
Analysis Batch: 578736

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 575921

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	9.876		1.03	1.00	0.105	pCi/L	87	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*103*		*40 - 110*

Lab Sample ID: LCSD 160-575921/3-A
Matrix: Water
Analysis Batch: 578736

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 575921

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	11.3	9.619		1.01	1.00	0.105	pCi/L	85	75 - 125	0.13	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*101*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-575922/1-A
Matrix: Water
Analysis Batch: 577587

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 575922

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.05175	U	0.251	0.251	1.00	0.455	pCi/L	08/01/22 08:40	08/11/22 11:09	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-575922/1-A
Matrix: Water
Analysis Batch: 577587

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 575922

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110	08/01/22 08:40	08/11/22 11:09	1
Y Carrier	85.2		40 - 110	08/01/22 08:40	08/11/22 11:09	1

Lab Sample ID: LCS 160-575922/2-A
Matrix: Water
Analysis Batch: 577587

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 575922

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.37	8.277		1.13	1.00	0.492	pCi/L	99	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	103		40 - 110
Y Carrier	87.5		40 - 110

Lab Sample ID: LCSD 160-575922/3-A
Matrix: Water
Analysis Batch: 577587

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 575922

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.37	7.979		1.09	1.00	0.446	pCi/L	95	75 - 125	0.13	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	86.4		40 - 110

Metals

Prep Batch: 535874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total Recoverable	Water	3005A	
240-170257-2	EB-001-F-20220720-01	Total Recoverable	Water	3005A	
MB 240-535874/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-535874/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 535877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total/NA	Water	7470A	
240-170257-2	EB-001-F-20220720-01	Total/NA	Water	7470A	
MB 240-535877/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-535877/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 536230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total Recoverable	Water	6020B	535874
240-170257-2	EB-001-F-20220720-01	Total Recoverable	Water	6020B	535874
MB 240-535874/1-A	Method Blank	Total Recoverable	Water	6020B	535874
LCS 240-535874/2-A	Lab Control Sample	Total Recoverable	Water	6020B	535874

Analysis Batch: 536551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total Recoverable	Water	6020B	535874

Analysis Batch: 536752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total/NA	Water	7470A	535877
240-170257-2	EB-001-F-20220720-01	Total/NA	Water	7470A	535877
MB 240-535877/1-A	Method Blank	Total/NA	Water	7470A	535877
LCS 240-535877/2-A	Lab Control Sample	Total/NA	Water	7470A	535877

General Chemistry

Analysis Batch: 535929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total/NA	Water	2320B-1997	
240-170257-2	EB-001-F-20220720-01	Total/NA	Water	2320B-1997	
MB 240-535929/30	Method Blank	Total/NA	Water	2320B-1997	
MB 240-535929/4	Method Blank	Total/NA	Water	2320B-1997	

Analysis Batch: 537242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-2	EB-001-F-20220720-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-537242/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-537242/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 538097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-538097/4	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-538097/5	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 575921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total/NA	Water	PrecSep-21	
240-170257-2	EB-001-F-20220720-01	Total/NA	Water	PrecSep-21	
MB 160-575921/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-575921/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-575921/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 575922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170257-1	96152-F-20220720-01	Total/NA	Water	PrecSep_0	
240-170257-2	EB-001-F-20220720-01	Total/NA	Water	PrecSep_0	
MB 160-575922/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-575922/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-575922/3-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: 240-170257-1

Client Sample ID: 96152-F-20220720-01

Lab Sample ID: 240-170257-1

Date Collected: 07/20/22 10:00

Matrix: Water

Date Received: 07/21/22 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535874	SHB	EET CAN	07/22/22 12:00
Total Recoverable	Analysis	6020B		1	536230	AJC	EET CAN	07/25/22 16:30
Total Recoverable	Prep	3005A			535874	SHB	EET CAN	07/22/22 12:00
Total Recoverable	Analysis	6020B		10	536551	AJC	EET CAN	07/27/22 13:51
Total/NA	Prep	7470A			535877	SHB	EET CAN	07/22/22 12:00
Total/NA	Analysis	7470A		1	536752	DSH	EET CAN	07/28/22 15:35
Total/NA	Analysis	2320B-1997		1	535929	KMS	EET CAN	07/22/22 14:59
Total/NA	Analysis	300.0-1993 R2.1		5	538097	KMS	EET CAN	08/10/22 21:50
Total/NA	Prep	PrecSep-21			575921	MS	EET SL	08/01/22 08:32
Total/NA	Analysis	9315		1	578736	FLC	EET SL	08/19/22 11:54
Total/NA	Prep	PrecSep_0			575922	MS	EET SL	08/01/22 08:40
Total/NA	Analysis	9320		1	577570	FLC	EET SL	08/11/22 11:18
Total/NA	Analysis	Ra226_Ra228		1	579070	EMH	EET SL	08/23/22 11:21

Client Sample ID: EB-001-F-20220720-01

Lab Sample ID: 240-170257-2

Date Collected: 07/20/22 15:00

Matrix: Water

Date Received: 07/21/22 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			535874	SHB	EET CAN	07/22/22 12:00
Total Recoverable	Analysis	6020B		1	536230	AJC	EET CAN	07/25/22 16:33
Total/NA	Prep	7470A			535877	SHB	EET CAN	07/22/22 12:00
Total/NA	Analysis	7470A		1	536752	DSH	EET CAN	07/28/22 15:37
Total/NA	Analysis	2320B-1997		1	535929	KMS	EET CAN	07/22/22 17:36
Total/NA	Analysis	300.0-1993 R2.1		1	537242	JMB	EET CAN	08/03/22 22:22
Total/NA	Prep	PrecSep-21			575921	MS	EET SL	08/01/22 08:32
Total/NA	Analysis	9315		1	578736	FLC	EET SL	08/19/22 11:54
Total/NA	Prep	PrecSep_0			575922	MS	EET SL	08/01/22 08:40
Total/NA	Analysis	9320		1	577570	FLC	EET SL	08/11/22 11:19
Total/NA	Analysis	Ra226_Ra228		1	579070	EMH	EET SL	08/23/22 11:21

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
Job ID: 240-170257-1
Project/Site: Federal CCR Wells - App IV

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	02-23-23
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	08-31-22
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	09-30-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-170257-1
Project/Site: Federal CCR Wells - App IV

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	07-31-23
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.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

1.4/1.4 0.6/0.6

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93466-34578.1
Client Contact: Taylor Huffman	Phone:	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:

Address: 7397 OH-7	Due Date Requested:
City: Cheshire	TAT Requested (days):
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No
Phone: 740-925-3171(Tel)	PO #: 2935505
Email: taylor.huffman@lightstonegen.com	WO #:
Project Name: Federal CCR Wells - App IV	Project #: 24019633
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
96152-F-20220720-01	7-20-22	1022	G	Water			1	1	1	2		
EB-001-F-20220720-01	7-20-22	1500	G	Water			1	1	1	2		
				Water								
				Water								
				Water								

240-170257 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Harrison Lockaylee	07/21/22 11:50	KEADON	M.D.D.	7/21/22 11:50	EETNC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client Light+Stone Site Name _____ Cooler unpacked by: Justin H

Cooler Received on 7-21-22 Opened on 7-21-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 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 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? Yes (No)
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# 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 Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
96152-F-20220720-01	240-170257-C-1	Plastic 500ml - with Nitric Acid	<2			
96152-F-20220720-01	240-170257-D-1	Plastic 1 liter - Nitric Acid	<2			
96152-F-20220720-01	240-170257-E-1	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220720-01	240-170257-C-2	Plastic 500ml - with Nitric Acid	<2			
EB-001-F-20220720-01	240-170257-D-2	Plastic 1 liter - Nitric Acid	<2			
EB-001-F-20220720-01	240-170257-E-2	Plastic 1 liter - Nitric Acid	<2			

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	1.4	1.4	(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			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

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-154814.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-170257-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 8/15/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 24019633			
Project Name: Federal CCR Wells - App IV	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
96152-F-20220720-01 (240-170257-1)	7/20/22	10:00 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220720-01 (240-170257-2)	7/20/22	15:00 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	7-22-22 937	ETA	FED EX		
	Relinquished by: FED EX	Date/Time:	Company	Received by: [signature]	Date/Time: JUL 25 2022 0800	Company EDT
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-170257-1

Login Number: 170257
List Number: 2
Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis
List Creation: 07/25/22 10:45 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-171750-1
Client Project/Site: Federal CCR Wells - App IV

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
9/19/2022 5:00:11 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171750-1
Project/Site: Federal CCR Wells - App IV

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
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
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-171750-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171750-1

Comments
No additional comments.

Receipt
The samples were received on 8/19/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.4º C, 1.2º C, 1.2º C and 1.2º C.

RAD
Methods 9315: Radium-226 batch 579338: 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-20220816-01 (240-171750-1), DUPE-001-96152-F-20220816-01 (240-171750-2), MW-20-F-20220816-01 (240-171750-3), MW-20-F-20220816-01 (240-171750-3[MS]), MW-20-F-20220816-01 (240-171750-3[MSD]), EB-001-F-20220816-01 (240-171750-4), (LCS 160-579338/2-A) and (MB 160-579338/1-A)

Methods 9320: Radium-228 batch 579342: 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-20220816-01 (240-171750-1), DUPE-001-96152-F-20220816-01 (240-171750-2), MW-20-F-20220816-01 (240-171750-3), MW-20-F-20220816-01 (240-171750-3[MS]), MW-20-F-20220816-01 (240-171750-3[MSD]), EB-001-F-20220816-01 (240-171750-4), (LCS 160-579342/2-A) and (MB 160-579342/1-A)

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 300.0: The bracketing CCB had a result above the reporting limit for fluoride. Sample is being reported to get in hold results. Sample will be reanalyzed outside of hold and both in hold and out of hold data to be reported. 96152-F-20220816-01 (240-171750-1)

Method 300.0: Reanalysis of the following sample was performed outside of the analytical holding time due to failing QC in initial run: 96152-F-20220816-01 (240-171750-1). 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 - App IV

Job ID: 240-171750-1

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: 240-171750-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171750-1	96152-F-20220816-01	Water	08/16/22 10:31	08/19/22 09:30
240-171750-2	DUPE-001-96152-F-20220816-01	Water	08/16/22 10:31	08/19/22 09:30
240-171750-3	MW-20-F-20220816-01	Water	08/16/22 12:36	08/19/22 09:30
240-171750-4	EB-001-F-20220816-01	Water	08/16/22 16:30	08/19/22 09:30

Detection Summary

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

Job ID: 240-171750-1

Client Sample ID: 96152-F-20220816-01 — Lab Sample ID: 240-171750-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.4		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	690		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	3.0	J	5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	2.5		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	0.45	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	91		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	17000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	4.0	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	8400		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2300000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	1.7		1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	480		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	480		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.90	^2	0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA
Fluoride - RA	0.72	H	0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: DUPE-001-96152-F-20220816-01 — Lab Sample ID: 240-171750-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.4		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	660		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	2.7	J	5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	2.5		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	88		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	3.7	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	8100		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2200000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.48	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	480		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	480		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.78		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 240-171750-1

Client Sample ID: MW-20-F-20220816-01 — Lab Sample ID: 240-171750-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.76	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	16		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cadmium	0.37	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Cobalt	210		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	180	F1 F2	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	110000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	5500		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	2.3	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	25000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	1.5		1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	150		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	150		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	1.5		0.050	0.024	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20220816-01 — Lab Sample ID: 240-171750-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	730	J	1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.41	J	1.0	0.20	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 96152-F-20220816-01
Lab Sample ID: 240-171750-1

Date Collected: 08/16/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

Method: 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		08/22/22 14:00	08/24/22 23:35	1
Arsenic	**5.4**		5.0	0.75	ug/L		08/22/22 14:00	08/24/22 23:35	1
Barium	**690**		5.0	2.2	ug/L		08/22/22 14:00	08/24/22 23:35	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 23:35	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:35	1
Chromium	**3.0**	**J**	5.0	2.5	ug/L		08/22/22 14:00	08/24/22 23:35	1
Cobalt	**2.5**		1.0	0.19	ug/L		08/22/22 14:00	08/24/22 23:35	1
Lead	**0.45**	**J**	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 23:35	1
Lithium	**91**		8.0	1.7	ug/L		08/22/22 14:00	08/24/22 23:35	1
Magnesium	**17000**		1000	200	ug/L		08/22/22 14:00	08/24/22 23:35	1
Molybdenum	**4.0**	**J**	5.0	1.1	ug/L		08/22/22 14:00	08/24/22 23:35	1
Potassium	**8400**		1000	220	ug/L		08/22/22 14:00	08/24/22 23:35	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 23:35	1
Sodium	**2300000**		1000	330	ug/L		08/22/22 14:00	08/24/22 23:35	1
Thallium	**1.7**		1.0	0.20	ug/L		08/22/22 14:00	08/24/22 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		08/22/22 12:00	08/23/22 10:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**480**		5.0	2.6	mg/L			08/22/22 17:04	1
Bicarbonate Alkalinity as CaCO3	**480**		5.0	2.6	mg/L			08/22/22 17:04	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/22/22 17:04	1
Fluoride	**0.90**	**^2**	0.25	0.12	mg/L			09/13/22 10:33	5

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.72**	**H**	0.25	0.12	mg/L			09/18/22 11:56	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.09**		0.172	0.198	1.00	0.0932	pCi/L	08/24/22 13:16	09/15/22 07:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*08/24/22 13:16*	*09/15/22 07:27*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.40**		0.496	0.543	1.00	0.475	pCi/L	08/24/22 14:12	09/01/22 11:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*08/24/22 14:12*	*09/01/22 11:28*	*1*
Y Carrier	*87.9*		*40 - 110*	*08/24/22 14:12*	*09/01/22 11:28*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171750-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 96152-F-20220816-01
Lab Sample ID: 240-171750-1
Date Collected: 08/16/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

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	3.49		0.525	0.578	5.00	0.475	pCi/L		09/16/22 14:15	1

Client Sample ID: DUPE-001-96152-F-20220816-01
Lab Sample ID: 240-171750-2

Date Collected: 08/16/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

Method: 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		08/22/22 14:00	08/24/22 23:39	1
Arsenic	**5.4**		5.0	0.75	ug/L		08/22/22 14:00	08/24/22 23:39	1
Barium	**660**		5.0	2.2	ug/L		08/22/22 14:00	08/24/22 23:39	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 23:39	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:39	1
Chromium	**2.7**	**J**	5.0	2.5	ug/L		08/22/22 14:00	08/24/22 23:39	1
Cobalt	**2.5**		1.0	0.19	ug/L		08/22/22 14:00	08/24/22 23:39	1
Lead	1.0	U	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 23:39	1
Lithium	**88**		8.0	1.7	ug/L		08/22/22 14:00	08/24/22 23:39	1
Magnesium	**16000**		1000	200	ug/L		08/22/22 14:00	08/24/22 23:39	1
Molybdenum	**3.7**	**J**	5.0	1.1	ug/L		08/22/22 14:00	08/24/22 23:39	1
Potassium	**8100**		1000	220	ug/L		08/22/22 14:00	08/24/22 23:39	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 23:39	1
Sodium	**2200000**		1000	330	ug/L		08/22/22 14:00	08/24/22 23:39	1
Thallium	**0.48**	**J**	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:39	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		08/22/22 12:00	08/23/22 10:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**480**		5.0	2.6	mg/L			08/22/22 17:09	1
Bicarbonate Alkalinity as CaCO3	**480**		5.0	2.6	mg/L			08/22/22 17:09	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/22/22 17:09	1
Fluoride	**0.78**		0.25	0.12	mg/L			09/13/22 11:02	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.49**		0.222	0.259	1.00	0.144	pCi/L	08/24/22 13:16	09/15/22 07:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*08/24/22 13:16*	*09/15/22 07:27*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**2.04**		0.483	0.518	1.00	0.489	pCi/L	08/24/22 14:12	09/01/22 11:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*40 - 110*	*08/24/22 14:12*	*09/01/22 11:33*	*1*
Y Carrier	*90.1*		*40 - 110*	*08/24/22 14:12*	*09/01/22 11:33*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171750-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: DUPE-001-96152-F-20220816-01
Lab Sample ID: 240-171750-2
Date Collected: 08/16/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

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	3.53		0.532	0.579	5.00	0.489	pCi/L		09/16/22 14:15	1

Client Sample ID: MW-20-F-20220816-01
Lab Sample ID: 240-171750-3

Date Collected: 08/16/22 12:36
Matrix: Water
Date Received: 08/19/22 09:30

Method: 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		08/22/22 14:00	08/24/22 23:04	1
Arsenic	**0.76**	**J**	5.0	0.75	ug/L		08/22/22 14:00	08/24/22 23:04	1
Barium	**16**		5.0	2.2	ug/L		08/22/22 14:00	08/24/22 23:04	1
Beryllium	1.0	U F1 F2	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 23:04	1
Cadmium	**0.37**	**J**	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:04	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/22 14:00	08/24/22 23:04	1
Cobalt	**210**		1.0	0.19	ug/L		08/22/22 14:00	08/24/22 23:04	1
Lead	1.0	U	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 23:04	1
Lithium	**180**	**F1 F2**	8.0	1.7	ug/L		08/22/22 14:00	08/24/22 23:04	1
Magnesium	**110000**		1000	200	ug/L		08/22/22 14:00	08/24/22 23:04	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/22/22 14:00	08/24/22 23:04	1
Potassium	**5500**		1000	220	ug/L		08/22/22 14:00	08/24/22 23:04	1
Selenium	**2.3**	**J**	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 23:04	1
Sodium	**25000**		1000	330	ug/L		08/22/22 14:00	08/24/22 23:04	1
Thallium	**1.5**		1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:04	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		08/22/22 12:00	08/23/22 10:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**150**		5.0	2.6	mg/L			08/22/22 17:17	1
Bicarbonate Alkalinity as CaCO3	**150**		5.0	2.6	mg/L			08/22/22 17:17	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/22/22 17:17	1
Fluoride	**1.5**		0.050	0.024	mg/L			09/13/22 11:24	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	**0.108**		0.0681	0.0688	1.00	0.0908	pCi/L	08/24/22 13:16	09/15/22 10:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*40 - 110*	*08/24/22 13:16*	*09/15/22 10:01*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.275	U	0.277	0.278	1.00	0.445	pCi/L	08/24/22 14:12	09/01/22 11:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.0*		*40 - 110*	*08/24/22 14:12*	*09/01/22 11:33*	*1*
Y Carrier	*90.1*		*40 - 110*	*08/24/22 14:12*	*09/01/22 11:33*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171750-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: MW-20-F-20220816-01
Lab Sample ID: 240-171750-3
Date Collected: 08/16/22 12:36
Matrix: Water
Date Received: 08/19/22 09:30

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	0.383	U	0.285	0.286	5.00	0.445	pCi/L		09/16/22 14:15	1

Client Sample ID: EB-001-F-20220816-01
Lab Sample ID: 240-171750-4

Date Collected: 08/16/22 16:30
Matrix: Water
Date Received: 08/19/22 09:30

Method: 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		08/22/22 14:00	08/24/22 23:44	1
Arsenic	5.0	U	5.0	0.75	ug/L		08/22/22 14:00	08/24/22 23:44	1
Barium	5.0	U	5.0	2.2	ug/L		08/22/22 14:00	08/24/22 23:44	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 23:44	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:44	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/22 14:00	08/24/22 23:44	1
Cobalt	1.0	U	1.0	0.19	ug/L		08/22/22 14:00	08/24/22 23:44	1
Lead	1.0	U	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 23:44	1
Lithium	8.0	U	8.0	1.7	ug/L		08/22/22 14:00	08/24/22 23:44	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/24/22 23:44	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/22/22 14:00	08/24/22 23:44	1
Potassium	1000	U	1000	220	ug/L		08/22/22 14:00	08/24/22 23:44	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 23:44	1
Sodium	**730**	**J**	1000	330	ug/L		08/22/22 14:00	08/24/22 23:44	1
Thallium	**0.41**	**J**	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:44	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		08/22/22 12:00	08/23/22 10:12	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			08/22/22 17:19	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/22/22 17:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/22/22 17:19	1
Fluoride	0.050	U	0.050	0.024	mg/L			09/13/22 12:29	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	-0.0153	U	0.0332	0.0332	1.00	0.0806	pCi/L	08/24/22 13:19	09/15/22 10:02	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*08/24/22 13:19*	*09/15/22 10:02*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.368	U	0.326	0.328	1.00	0.520	pCi/L	08/24/22 14:12	09/01/22 11:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*08/24/22 14:12*	*09/01/22 11:33*	*1*
Y Carrier	*90.1*		*40 - 110*	*08/24/22 14:12*	*09/01/22 11:33*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171750-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: EB-001-F-20220816-01
Lab Sample ID: 240-171750-4
Date Collected: 08/16/22 16:30
Matrix: Water
Date Received: 08/19/22 09:30

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	0.352	U	0.328	0.330	5.00	0.520	pCi/L		09/16/22 14:15	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171750-1
Project/Site: Federal CCR Wells - App IV

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)
240-171750-1	96152-F-20220816-01	101
240-171750-2	DUPE-001-96152-F-20220816-01	90.6
240-171750-3	MW-20-F-20220816-01	99.0
240-171750-3 MS	MW-20-F-20220816-01	92.3
240-171750-3 MSD	MW-20-F-20220816-01	83.5
240-171750-4	EB-001-F-20220816-01	109
LCS 160-579338/2-A	Lab Control Sample	101
MB 160-579338/1-A	Method Blank	95.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-171750-1	96152-F-20220816-01	101	87.9
240-171750-2	DUPE-001-96152-F-20220816-01	90.6	90.1
240-171750-3	MW-20-F-20220816-01	99.0	90.1
240-171750-3 MS	MW-20-F-20220816-01	92.3	90.8
240-171750-3 MSD	MW-20-F-20220816-01	83.5	89.3
240-171750-4	EB-001-F-20220816-01	109	90.1
LCS 160-579342/2-A	Lab Control Sample	101	89.3
MB 160-579342/1-A	Method Blank	95.8	89.7

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-539678/1-A
Matrix: Water
Analysis Batch: 540072

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 539678

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		08/22/22 14:00	08/24/22 22:55	1
Arsenic	5.0	U	5.0	0.75	ug/L		08/22/22 14:00	08/24/22 22:55	1
Barium	5.0	U	5.0	2.2	ug/L		08/22/22 14:00	08/24/22 22:55	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 22:55	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 22:55	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/22 14:00	08/24/22 22:55	1
Cobalt	1.0	U	1.0	0.19	ug/L		08/22/22 14:00	08/24/22 22:55	1
Lead	1.0	U	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 22:55	1
Lithium	8.0	U	8.0	1.7	ug/L		08/22/22 14:00	08/24/22 22:55	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/24/22 22:55	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/22/22 14:00	08/24/22 22:55	1
Potassium	1000	U	1000	220	ug/L		08/22/22 14:00	08/24/22 22:55	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 22:55	1
Sodium	1000	U	1000	330	ug/L		08/22/22 14:00	08/24/22 22:55	1
Thallium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 22:55	1

Lab Sample ID: LCS 240-539678/2-A
Matrix: Water
Analysis Batch: 540072

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 539678

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	98.5		ug/L		98	80 - 120
Arsenic	1000	956		ug/L		96	80 - 120
Barium	1000	879		ug/L		88	80 - 120
Beryllium	500	472		ug/L		94	80 - 120
Cadmium	500	458		ug/L		92	80 - 120
Chromium	500	472		ug/L		94	80 - 120
Cobalt	500	492		ug/L		98	80 - 120
Lead	500	481		ug/L		96	80 - 120
Lithium	500	476		ug/L		95	80 - 120
Magnesium	25000	24600		ug/L		99	80 - 120
Molybdenum	500	445		ug/L		89	80 - 120
Potassium	25000	24000		ug/L		96	80 - 120
Selenium	1000	945		ug/L		95	80 - 120
Sodium	25000	24600		ug/L		98	80 - 120
Thallium	1000	983		ug/L		98	80 - 120

Lab Sample ID: 240-171750-3 MS
Matrix: Water
Analysis Batch: 540072

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total Recoverable
Prep Batch: 539678

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	2.0	U	100	103		ug/L		103	80 - 120
Arsenic	0.76	J	1000	990		ug/L		99	80 - 120
Barium	16		1000	938		ug/L		92	80 - 120
Beryllium	1.0	U F1 F2	500	459		ug/L		92	80 - 120
Cadmium	0.37	J	500	455		ug/L		91	80 - 120
Chromium	5.0	U	500	484		ug/L		97	80 - 120
Cobalt	210		500	694		ug/L		97	80 - 120

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

Lab Sample ID: 240-171750-3 MS
Matrix: Water
Analysis Batch: 540072

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total Recoverable
Prep Batch: 539678

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	1.0	U	500	478		ug/L		96	80 - 120
Lithium	180	F1 F2	500	676		ug/L		99	80 - 120
Magnesium	110000		25000	131000	4	ug/L		68	80 - 120
Molybdenum	5.0	U	500	476		ug/L		95	80 - 120
Potassium	5500		25000	29800		ug/L		97	80 - 120
Selenium	2.3	J	1000	994		ug/L		99	80 - 120
Sodium	25000		25000	48600		ug/L		94	80 - 120
Thallium	1.5		1000	982		ug/L		98	80 - 120

Lab Sample ID: 240-171750-3 MSD
Matrix: Water
Analysis Batch: 540072

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total Recoverable
Prep Batch: 539678

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	2.0	U	100	105		ug/L		105	80 - 120	1	20
Arsenic	0.76	J	1000	1020		ug/L		102	80 - 120	3	20
Barium	16		1000	954		ug/L		94	80 - 120	2	20
Beryllium	1.0	U F1 F2	500	626	F1 F2	ug/L		125	80 - 120	31	20
Cadmium	0.37	J	500	465		ug/L		93	80 - 120	2	20
Chromium	5.0	U	500	498		ug/L		100	80 - 120	3	20
Cobalt	210		500	711		ug/L		100	80 - 120	2	20
Lead	1.0	U	500	491		ug/L		98	80 - 120	3	20
Lithium	180	F1 F2	500	938	F1 F2	ug/L		151	80 - 120	32	20
Magnesium	110000		25000	130000	4	ug/L		64	80 - 120	1	20
Molybdenum	5.0	U	500	492		ug/L		98	80 - 120	3	20
Potassium	5500		25000	29900		ug/L		97	80 - 120	1	20
Selenium	2.3	J	1000	1020		ug/L		102	80 - 120	3	20
Sodium	25000		25000	48300		ug/L		93	80 - 120	1	20
Thallium	1.5		1000	1010		ug/L		101	80 - 120	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-539680/1-A
Matrix: Water
Analysis Batch: 539870

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539680

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		08/22/22 12:00	08/23/22 09:57	1

Lab Sample ID: LCS 240-539680/2-A
Matrix: Water
Analysis Batch: 539870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539680

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.61		ug/L		112	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 240-171750-3 MS
Matrix: Water
Analysis Batch: 539870

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA
Prep Batch: 539680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U	1.00	0.990		ug/L		99	80 - 120

Lab Sample ID: 240-171750-3 MSD
Matrix: Water
Analysis Batch: 539870

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA
Prep Batch: 539680

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.20	U	1.00	1.01		ug/L		101	80 - 120	2	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-539790/4
Matrix: Water
Analysis Batch: 539790

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			08/22/22 16:19	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/22/22 16:19	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/22/22 16:19	1

Lab Sample ID: LCS 240-539790/3
Matrix: Water
Analysis Batch: 539790

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	120		mg/L		99	86 - 123

Lab Sample ID: 240-171750-3 DU
Matrix: Water
Analysis Batch: 539790

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	150		154		mg/L		1	20
Bicarbonate Alkalinity as CaCO3	150		154		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 240-542425/4
Matrix: Water
Analysis Batch: 542425

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			09/13/22 10:53	1

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-542425/5
Matrix: Water
Analysis Batch: 542425

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: MB 240-542476/8
Matrix: Water
Analysis Batch: 542476

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			09/13/22 12:51	1

Lab Sample ID: LCS 240-542476/9
Matrix: Water
Analysis Batch: 542476

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	2.50		mg/L		100	90 - 110		

Lab Sample ID: 240-171750-3 MS
Matrix: Water
Analysis Batch: 542476

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride	1.5		2.50	3.97		mg/L		101	80 - 120		

Lab Sample ID: 240-171750-3 MSD
Matrix: Water
Analysis Batch: 542476

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	1.5		2.50	3.94		mg/L		99	80 - 120	1	15

Lab Sample ID: MB 240-543074/3
Matrix: Water
Analysis Batch: 543074

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			09/18/22 01:52	1

Lab Sample ID: LCS 240-543074/4
Matrix: Water
Analysis Batch: 543074

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	2.42		mg/L		97	90 - 110		

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-579338/1-A
Matrix: Water
Analysis Batch: 582285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579338

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01899	U	0.0527	0.0528	1.00	0.0983	pCi/L	08/24/22 13:16	09/15/22 07:25	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*40 - 110*	*08/24/22 13:16*	*09/15/22 07:25*	*1*

Lab Sample ID: LCS 160-579338/2-A
Matrix: Water
Analysis Batch: 582285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579338

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	9.878		1.02	1.00	0.102	pCi/L	87	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*101*		*40 - 110*

Lab Sample ID: 240-171750-3 MS
Matrix: Water
Analysis Batch: 582217

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA
Prep Batch: 579338

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226	0.108		11.3	10.98		1.13	1.00	0.120	pCi/L	96	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*92.3*		*40 - 110*

Lab Sample ID: 240-171750-3 MSD
Matrix: Water
Analysis Batch: 582217

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA
Prep Batch: 579338

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.108		11.3	9.947		1.04	1.00	0.119	pCi/L	87	60 - 140	0.48	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*83.5*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-579342/1-A
Matrix: Water
Analysis Batch: 580362

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579342

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3652	U	0.294	0.296	1.00	0.455	pCi/L	08/24/22 14:12	09/01/22 11:21	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110	08/24/22 14:12	09/01/22 11:21	1
Y Carrier	89.7		40 - 110	08/24/22 14:12	09/01/22 11:21	1

Lab Sample ID: LCS 160-579342/2-A
Matrix: Water
Analysis Batch: 580362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579342

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.32	9.673		1.26	1.00	0.499	pCi/L	116	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	89.3		40 - 110

Lab Sample ID: 240-171750-3 MS
Matrix: Water
Analysis Batch: 580337

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA
Prep Batch: 579342

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228	0.275	U	8.28	9.811		1.31	1.00	0.593	pCi/L	115	60 - 140		

Carrier	MS %Yield	MS Qualifier	Limits
Ba Carrier	92.3		40 - 110
Y Carrier	90.8		40 - 110

Lab Sample ID: 240-171750-3 MSD
Matrix: Water
Analysis Batch: 580337

Client Sample ID: MW-20-F-20220816-01
Prep Type: Total/NA
Prep Batch: 579342

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.275	U	8.31	9.171		1.27	1.00	0.520	pCi/L	107	60 - 140	0.25	1

Carrier	MSD %Yield	MSD Qualifier	Limits
Ba Carrier	83.5		40 - 110
Y Carrier	89.3		40 - 110

Metals

Prep Batch: 539678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1	96152-F-20220816-01	Total Recoverable	Water	3005A	
240-171750-2	DUPE-001-96152-F-20220816-01	Total Recoverable	Water	3005A	
240-171750-3	MW-20-F-20220816-01	Total Recoverable	Water	3005A	
240-171750-4	EB-001-F-20220816-01	Total Recoverable	Water	3005A	
MB 240-539678/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-539678/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-171750-3 MS	MW-20-F-20220816-01	Total Recoverable	Water	3005A	
240-171750-3 MSD	MW-20-F-20220816-01	Total Recoverable	Water	3005A	

Prep Batch: 539680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1	96152-F-20220816-01	Total/NA	Water	7470A	
240-171750-2	DUPE-001-96152-F-20220816-01	Total/NA	Water	7470A	
240-171750-3	MW-20-F-20220816-01	Total/NA	Water	7470A	
240-171750-4	EB-001-F-20220816-01	Total/NA	Water	7470A	
MB 240-539680/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-539680/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-171750-3 MS	MW-20-F-20220816-01	Total/NA	Water	7470A	
240-171750-3 MSD	MW-20-F-20220816-01	Total/NA	Water	7470A	

Analysis Batch: 539870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1	96152-F-20220816-01	Total/NA	Water	7470A	539680
240-171750-2	DUPE-001-96152-F-20220816-01	Total/NA	Water	7470A	539680
240-171750-3	MW-20-F-20220816-01	Total/NA	Water	7470A	539680
240-171750-4	EB-001-F-20220816-01	Total/NA	Water	7470A	539680
MB 240-539680/1-A	Method Blank	Total/NA	Water	7470A	539680
LCS 240-539680/2-A	Lab Control Sample	Total/NA	Water	7470A	539680
240-171750-3 MS	MW-20-F-20220816-01	Total/NA	Water	7470A	539680
240-171750-3 MSD	MW-20-F-20220816-01	Total/NA	Water	7470A	539680

Analysis Batch: 540072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1	96152-F-20220816-01	Total Recoverable	Water	6020B	539678
240-171750-2	DUPE-001-96152-F-20220816-01	Total Recoverable	Water	6020B	539678
240-171750-3	MW-20-F-20220816-01	Total Recoverable	Water	6020B	539678
240-171750-4	EB-001-F-20220816-01	Total Recoverable	Water	6020B	539678
MB 240-539678/1-A	Method Blank	Total Recoverable	Water	6020B	539678
LCS 240-539678/2-A	Lab Control Sample	Total Recoverable	Water	6020B	539678
240-171750-3 MS	MW-20-F-20220816-01	Total Recoverable	Water	6020B	539678
240-171750-3 MSD	MW-20-F-20220816-01	Total Recoverable	Water	6020B	539678

General Chemistry

Analysis Batch: 539790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1	96152-F-20220816-01	Total/NA	Water	2320B-1997	
240-171750-2	DUPE-001-96152-F-20220816-01	Total/NA	Water	2320B-1997	
240-171750-3	MW-20-F-20220816-01	Total/NA	Water	2320B-1997	
240-171750-4	EB-001-F-20220816-01	Total/NA	Water	2320B-1997	
MB 240-539790/4	Method Blank	Total/NA	Water	2320B-1997	

General Chemistry (Continued)

Analysis Batch: 539790 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-539790/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-171750-3 DU	MW-20-F-20220816-01	Total/NA	Water	2320B-1997	

Analysis Batch: 542425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1	96152-F-20220816-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-542425/4	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-542425/5	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 542476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-2	DUPE-001-96152-F-20220816-01	Total/NA	Water	300.0-1993 R2.1	
240-171750-3	MW-20-F-20220816-01	Total/NA	Water	300.0-1993 R2.1	
240-171750-4	EB-001-F-20220816-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-542476/8	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-542476/9	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
240-171750-3 MS	MW-20-F-20220816-01	Total/NA	Water	300.0-1993 R2.1	
240-171750-3 MSD	MW-20-F-20220816-01	Total/NA	Water	300.0-1993 R2.1	

Analysis Batch: 543074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1 - RA	96152-F-20220816-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-543074/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-543074/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 579338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1	96152-F-20220816-01	Total/NA	Water	PrecSep-21	
240-171750-2	DUPE-001-96152-F-20220816-01	Total/NA	Water	PrecSep-21	
240-171750-3	MW-20-F-20220816-01	Total/NA	Water	PrecSep-21	
240-171750-4	EB-001-F-20220816-01	Total/NA	Water	PrecSep-21	
MB 160-579338/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-579338/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-171750-3 MS	MW-20-F-20220816-01	Total/NA	Water	PrecSep-21	
240-171750-3 MSD	MW-20-F-20220816-01	Total/NA	Water	PrecSep-21	

Prep Batch: 579342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171750-1	96152-F-20220816-01	Total/NA	Water	PrecSep_0	
240-171750-2	DUPE-001-96152-F-20220816-01	Total/NA	Water	PrecSep_0	
240-171750-3	MW-20-F-20220816-01	Total/NA	Water	PrecSep_0	
240-171750-4	EB-001-F-20220816-01	Total/NA	Water	PrecSep_0	
MB 160-579342/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-579342/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-171750-3 MS	MW-20-F-20220816-01	Total/NA	Water	PrecSep_0	
240-171750-3 MSD	MW-20-F-20220816-01	Total/NA	Water	PrecSep_0	

Lab Chronicle

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

Job ID: 240-171750-1

Client Sample ID: 96152-F-20220816-01

Lab Sample ID: 240-171750-1

Date Collected: 08/16/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539678	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 23:35
Total/NA	Prep	7470A			539680	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 10:08
Total/NA	Analysis	2320B-1997		1	539790	MMS	EET CAN	08/22/22 17:04
Total/NA	Analysis	300.0-1993 R2.1		5	542425	JMB	EET CAN	09/13/22 10:33
Total/NA	Analysis	300.0-1993 R2.1	RA	5	543074	JMB	EET CAN	09/18/22 11:56
Total/NA	Prep	PrecSep-21			579338	BMP	EET SL	08/24/22 13:16
Total/NA	Analysis	9315		1	582285	JCB	EET SL	09/15/22 07:27
Total/NA	Prep	PrecSep_0			579342	BMP	EET SL	08/24/22 14:12
Total/NA	Analysis	9320		1	580337	FLC	EET SL	09/01/22 11:28
Total/NA	Analysis	Ra226_Ra228		1	582501	SCB	EET SL	09/16/22 14:15

Client Sample ID: DUPE-001-96152-F-20220816-01

Lab Sample ID: 240-171750-2

Date Collected: 08/16/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539678	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 23:39
Total/NA	Prep	7470A			539680	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 10:10
Total/NA	Analysis	2320B-1997		1	539790	MMS	EET CAN	08/22/22 17:09
Total/NA	Analysis	300.0-1993 R2.1		5	542476	JMB	EET CAN	09/13/22 11:02
Total/NA	Prep	PrecSep-21			579338	BMP	EET SL	08/24/22 13:16
Total/NA	Analysis	9315		1	582285	JCB	EET SL	09/15/22 07:27
Total/NA	Prep	PrecSep_0			579342	BMP	EET SL	08/24/22 14:12
Total/NA	Analysis	9320		1	580337	FLC	EET SL	09/01/22 11:33
Total/NA	Analysis	Ra226_Ra228		1	582501	SCB	EET SL	09/16/22 14:15

Client Sample ID: MW-20-F-20220816-01

Lab Sample ID: 240-171750-3

Date Collected: 08/16/22 12:36
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539678	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 23:04
Total/NA	Prep	7470A			539680	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 10:01
Total/NA	Analysis	2320B-1997		1	539790	MMS	EET CAN	08/22/22 17:17
Total/NA	Analysis	300.0-1993 R2.1		1	542476	JMB	EET CAN	09/13/22 11:24
Total/NA	Prep	PrecSep-21			579338	BMP	EET SL	08/24/22 13:16
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 10:01

Lab Chronicle

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

Job ID: 240-171750-1

Client Sample ID: MW-20-F-20220816-01

Lab Sample ID: 240-171750-3

Date Collected: 08/16/22 12:36
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep_0			579342	BMP	EET SL	08/24/22 14:12
Total/NA	Analysis	9320		1	580337	FLC	EET SL	09/01/22 11:33
Total/NA	Analysis	Ra226_Ra228		1	582501	SCB	EET SL	09/16/22 14:15

Client Sample ID: EB-001-F-20220816-01

Lab Sample ID: 240-171750-4

Date Collected: 08/16/22 16:30
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539678	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 23:44
Total/NA	Prep	7470A			539680	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 10:12
Total/NA	Analysis	2320B-1997		1	539790	MMS	EET CAN	08/22/22 17:19
Total/NA	Analysis	300.0-1993 R2.1		1	542476	JMB	EET CAN	09/13/22 12:29
Total/NA	Prep	PrecSep-21			579338	BMP	EET SL	08/24/22 13:19
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 10:02
Total/NA	Prep	PrecSep_0			579342	BMP	EET SL	08/24/22 14:12
Total/NA	Analysis	9320		1	580337	FLC	EET SL	09/01/22 11:33
Total/NA	Analysis	Ra226_Ra228		1	582501	SCB	EET SL	09/16/22 14:15

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
Job ID: 240-171750-1
Project/Site: Federal CCR Wells - App IV

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	02-23-23
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	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	09-30-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171750-1
Project/Site: Federal CCR Wells - App IV

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	08-31-23
Oregon	NELAP	4157	09-01-23
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	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Custo	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93466-34578.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal CCR Wells - App IV	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
96152-F-20220816-01	8-16-22	1031	G	Water			1	1	1	2		
Dupe-001-96152-F-20220816-01	8-16-22	1031	G	Water			1	1	1	2		
MW-20-F-20220816-01	8-16-22	1236	G	Water			1	1	1	2		
MW-20-F 20220816-MS	8-16-22	1236	G	Water		X	1	1	1	2		
MW-20-F-20220816-MSD	8-16-22	1236	G	Water		X	1	1	1	2		
EB-001-F-20220816-01	8-16-22	1630	G	W			1	1	1	2		
BC												

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	8-19-22 / 0700		[signature]	08/19/22 0700	Kenmore
2	[signature]	08/19/22 0930	Kenmore	[signature]	8-19-22 0930	ELPTNL
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Eurofins - Canton Sample Receipt Form/Narrative **Login # : 171850**
Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Rachelle Haidet

Cooler Received on 8.20.22 Opened on 8.20.22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # _____ 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)?	(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# 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)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	0.4	0.4	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	1.2	1.2	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
			☐ See Temperature Excursion Form	

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-171750-1

Login Number: 171750
List Number: 2
Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis
List Creation: 08/22/22 12:13 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-171751-1
Client Project/Site: Federal CCR Wells - App III and App IV combined

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
9/19/2022 4:20:17 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-171751-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171751-1

Comments
The Radium analysis was performed at Eurofins St. Louis Laboratory.

Receipt
The samples were received on 8/19/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.4º C, 1.2º C, 1.2º C and 1.2º C.

Receipt Exceptions:
Insufficient sample volume was provided for the following samples for the analysis 9320, 9315, Ra226/Ra228 combined: 2019-07-F-20220818-01 (240-171751-1), 2019-09-F-20220818-01 (240-171751-2) and EB-001-F-20220818-01 (240-171751-3). 240-171751-D-1 was received with only 750mL which is insufficient for the requested analysis 1L is required.

RAD
Methods 9315: Radium-226 batch 579318: 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. 2019-07-F-20220818-01 (240-171751-1), 2019-09-F-20220818-01 (240-171751-2), EB-001-F-20220818-01 (240-171751-3), (LCS 160-579318/2-A), (LCSD 160-579318/3-A) and (MB 160-579318/1-A)

Methods 9320: Radium-228 batch 579326: 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: 2019-09-F-20220818-01 (240-171751-2). Analytical results are reported with the detection limit achieved.

Methods 9320: Radium-228 batch 579326: 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. 2019-07-F-20220818-01 (240-171751-1), 2019-09-F-20220818-01 (240-171751-2), EB-001-F-20220818-01 (240-171751-3), (LCS 160-579326/2-A), (LCSD 160-579326/3-A) and (MB 160-579326/1-A)

Method PrecSep_0: Radium-228 Prep Batch 160-579326: The following samples were prepared at a reduced aliquot due to Matrix: 2019-07-F-20220818-01 (240-171751-1) and 2019-09-F-20220818-01 (240-171751-2). 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 160-579318: The following samples were prepared at a reduced aliquot due to Matrix: 2019-07-F-20220818-01 (240-171751-1) and 2019-09-F-20220818-01 (240-171751-2). 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
Method 6010D: The continuing calibration verification (CCV) associated with batch 240-539905 recovered above the upper control limit for boron. The samples associated with this CCV were below the reporting limit for the affected analytes; therefore, the data have been reported. The associated sample is impacted: EB-001-F-20220818-01 (240-171751-3).

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

General Chemistry
Method 300.0: The following samples were diluted due to the nature of the sample matrix: 2019-07-F-20220818-01 (240-171751-1) and 2019-09-F-20220818-01 (240-171751-2). 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
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

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
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 - App III and App IV combined

Job ID: 240-171751-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171751-1	2019-07-F-20220818-01	Water	08/18/22 10:31	08/19/22 09:30
240-171751-2	2019-09-F-20220818-01	Water	08/18/22 14:22	08/19/22 09:30
240-171751-3	EB-001-F-20220818-01	Water	08/18/22 15:45	08/19/22 09:30

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

Client Sample ID: 2019-07-F-20220818-01
Lab Sample ID: 240-171751-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	510		100	57	ug/L	1		6010D	Total Recoverable
Antimony	0.58	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Arsenic	2.3	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	650		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cadmium	0.33	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Calcium	840000		20000	12000	ug/L	20		6020B	Total Recoverable
Chromium	17		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	3.9		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	1.8		1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	320		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	280000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	12		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	24000		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	2.7	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	9600000		20000	6600	ug/L	20		6020B	Total Recoverable
Thallium	1.2	B	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
Chloride	19000		100	28	mg/L	100		300.0	Total/NA
Sulfate	480		20	7.0	mg/L	20		300.0	Total/NA

Client Sample ID: 2019-09-F-20220818-01
Lab Sample ID: 240-171751-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	360		100	57	ug/L	1		6010D	Total Recoverable
Antimony	1.7	J F1	2.0	0.57	ug/L	1		6020B	Total Recoverable
Arsenic	37	F1	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	25000		100	45	ug/L	20		6020B	Total Recoverable
Beryllium	8.9	F1	1.0	0.62	ug/L	1		6020B	Total Recoverable
Cadmium	0.41	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Calcium	800000		20000	12000	ug/L	20		6020B	Total Recoverable
Chromium	420		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	69	F1	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
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

Client Sample ID: 2019-09-F-20220818-01 (Continued)
Lab Sample ID: 240-171751-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	72	F1	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	510	F1	8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	310000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	61		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	44000	F1	1000	220	ug/L	1		6020B	Total Recoverable
Selenium	9.1	F1	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	8600000		20000	6600	ug/L	20		6020B	Total Recoverable
Thallium	1.0	F1 B	1.0	0.20	ug/L	1		6020B	Total Recoverable
Mercury	0.21		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	18000		100	28	mg/L	100		300.0	Total/NA

Client Sample ID: EB-001-F-20220818-01
Lab Sample ID: 240-171751-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	2.9	J	5.0	2.2	ug/L	1		6020B	Total Recoverable
Lead	0.74	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	5.4	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Thallium	1.3	B	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chloride	0.53	J	1.0	0.28	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2019-07-F-20220818-01
Lab Sample ID: 240-171751-1

Date Collected: 08/18/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	510		100	57	ug/L		08/22/22 14:00	08/23/22 15:05	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.58	J	2.0	0.57	ug/L		08/22/22 14:00	08/23/22 16:54	1
Arsenic	2.3	J	5.0	0.75	ug/L		08/22/22 14:00	08/23/22 16:54	1
Barium	650		5.0	2.2	ug/L		08/22/22 14:00	08/23/22 16:54	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/23/22 16:54	1
Cadmium	0.33	J	1.0	0.20	ug/L		08/22/22 14:00	08/23/22 16:54	1
Calcium	840000		20000	12000	ug/L		08/22/22 14:00	08/24/22 20:26	20
Chromium	17		5.0	2.5	ug/L		08/22/22 14:00	08/23/22 16:54	1
Cobalt	3.9		1.0	0.19	ug/L		08/22/22 14:00	08/23/22 16:54	1
Lead	1.8		1.0	0.45	ug/L		08/22/22 14:00	08/23/22 16:54	1
Lithium	320		8.0	1.7	ug/L		08/22/22 14:00	08/23/22 16:54	1
Magnesium	280000		1000	200	ug/L		08/22/22 14:00	08/23/22 16:54	1
Molybdenum	12		5.0	1.1	ug/L		08/22/22 14:00	08/23/22 16:54	1
Potassium	24000		1000	220	ug/L		08/22/22 14:00	08/23/22 16:54	1
Selenium	2.7	J	5.0	0.89	ug/L		08/22/22 14:00	08/23/22 16:54	1
Sodium	9600000		20000	6600	ug/L		08/22/22 14:00	08/24/22 20:26	20
Thallium	1.2	B	1.0	0.20	ug/L		08/22/22 14:00	08/23/22 16:54	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		08/22/22 12:00	08/23/22 10:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	230		5.0	2.6	mg/L			08/31/22 10:39	1
Bicarbonate Alkalinity as CaCO3	230		5.0	2.6	mg/L			08/31/22 10:39	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:39	1
Chloride	19000		100	28	mg/L			09/13/22 16:28	100
Fluoride	1.0	U	1.0	0.48	mg/L			09/13/22 16:06	20
Sulfate	480		20	7.0	mg/L			09/13/22 16:06	20

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.35		0.273	0.298	1.00	0.172	pCi/L	08/24/22 11:00	09/15/22 07:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:14*	*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		0.650	0.662	1.00	0.888	pCi/L	08/24/22 11:44	09/02/22 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*1*

Client Sample ID: 2019-07-F-20220818-01
Lab Sample ID: 240-171751-1

Date Collected: 08/18/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	*86.7*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*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	**2.72**		0.705	0.726	5.00	0.888	pCi/L		09/19/22 15:50	1

Client Sample ID: 2019-09-F-20220818-01
Lab Sample ID: 240-171751-2

Date Collected: 08/18/22 14:22
Matrix: Water
Date Received: 08/19/22 09:30

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	360		100	57	ug/L		08/22/22 14:00	08/24/22 18:31	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.7	J F1	2.0	0.57	ug/L		08/22/22 14:00	08/23/22 16:59	1
Arsenic	37	F1	5.0	0.75	ug/L		08/22/22 14:00	08/23/22 16:59	1
Barium	25000		100	45	ug/L		08/22/22 14:00	08/24/22 20:31	20
Beryllium	8.9	F1	1.0	0.62	ug/L		08/22/22 14:00	08/23/22 16:59	1
Cadmium	0.41	J	1.0	0.20	ug/L		08/22/22 14:00	08/23/22 16:59	1
Calcium	800000		20000	12000	ug/L		08/22/22 14:00	08/24/22 20:31	20
Chromium	420		5.0	2.5	ug/L		08/22/22 14:00	08/23/22 16:59	1
Cobalt	69	F1	1.0	0.19	ug/L		08/22/22 14:00	08/23/22 16:59	1
Lead	72	F1	1.0	0.45	ug/L		08/22/22 14:00	08/23/22 16:59	1
Lithium	510	F1	8.0	1.7	ug/L		08/22/22 14:00	08/23/22 16:59	1
Magnesium	310000		1000	200	ug/L		08/22/22 14:00	08/23/22 16:59	1
Molybdenum	61		5.0	1.1	ug/L		08/22/22 14:00	08/23/22 16:59	1
Potassium	44000	F1	1000	220	ug/L		08/22/22 14:00	08/23/22 16:59	1
Selenium	9.1	F1	5.0	0.89	ug/L		08/22/22 14:00	08/23/22 16:59	1
Sodium	8600000		20000	6600	ug/L		08/22/22 14:00	08/24/22 20:31	20
Thallium	1.0	F1 B	1.0	0.20	ug/L		08/22/22 14:00	08/23/22 16:59	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		08/22/22 12:00	08/23/22 11:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	210		5.0	2.6	mg/L			08/31/22 10:43	1
Bicarbonate Alkalinity as CaCO3	210		5.0	2.6	mg/L			08/31/22 10:43	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:43	1
Chloride	18000		100	28	mg/L			09/13/22 17:33	100
Fluoride	1.0	U	1.0	0.48	mg/L			09/13/22 17:12	20
Sulfate	20	U	20	7.0	mg/L			09/13/22 17:12	20

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	39.8		1.97	4.09	1.00	0.302	pCi/L	08/24/22 11:00	09/15/22 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	70.8	G	4.60	7.98	1.00	1.63	pCi/L	08/24/22 11:44	09/02/22 12:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*1*

Client Sample ID: 2019-09-F-20220818-01
Lab Sample ID: 240-171751-2

Date Collected: 08/18/22 14:22
Matrix: Water
Date Received: 08/19/22 09:30

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*85.2*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*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	**111**		5.00	8.97	5.00	1.63	pCi/L		09/19/22 15:50	1

Client Sample ID: EB-001-F-20220818-01
Lab Sample ID: 240-171751-3

Date Collected: 08/18/22 15:45
Matrix: Water
Date Received: 08/19/22 09:30

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U ^+	100	57	ug/L		08/22/22 14:00	08/23/22 20:02	1

Method: 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		08/22/22 14:00	08/23/22 17:25	1
Arsenic	5.0	U	5.0	0.75	ug/L		08/22/22 14:00	08/23/22 17:25	1
Barium	**2.9**	**J**	5.0	2.2	ug/L		08/22/22 14:00	08/23/22 17:25	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/23/22 17:25	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/23/22 17:25	1
Calcium	1000	U	1000	580	ug/L		08/22/22 14:00	08/23/22 17:25	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/22 14:00	08/23/22 17:25	1
Cobalt	1.0	U	1.0	0.19	ug/L		08/22/22 14:00	08/23/22 17:25	1
Lead	**0.74**	**J**	1.0	0.45	ug/L		08/22/22 14:00	08/23/22 17:25	1
Lithium	**5.4**	**J**	8.0	1.7	ug/L		08/22/22 14:00	08/23/22 17:25	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/23/22 17:25	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/22/22 14:00	08/23/22 17:25	1
Potassium	1000	U	1000	220	ug/L		08/22/22 14:00	08/23/22 17:25	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/23/22 17:25	1
Sodium	1000	U	1000	330	ug/L		08/22/22 14:00	09/16/22 19:09	1
Thallium	**1.3**	**B**	1.0	0.20	ug/L		08/22/22 14:00	08/23/22 17:25	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		08/22/22 12:00	08/23/22 11:05	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			08/31/22 10:47	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:47	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:47	1
Chloride	**0.53**	**J**	1.0	0.28	mg/L			09/13/22 19:00	1
Fluoride	0.050	U	0.050	0.024	mg/L			09/13/22 19:00	1
Sulfate	1.0	U	1.0	0.35	mg/L			09/13/22 19:00	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	0.0257	U	0.0463	0.0463	1.00	0.0828	pCi/L	08/24/22 11:00	09/15/22 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.461	U	0.319	0.322	1.00	0.475	pCi/L	08/24/22 11:44	09/02/22 12:01	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.6*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:01*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

Client Sample ID: EB-001-F-20220818-01
Lab Sample ID: 240-171751-3
Date Collected: 08/18/22 15:45
Matrix: Water
Date Received: 08/19/22 09:30

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	85.6		40 - 110	08/24/22 11:44	09/02/22 12:01	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	0.487		0.322	0.325	5.00	0.475	pCi/L		09/19/22 15:50	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

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)
240-171751-1	2019-07-F-20220818-01	102
240-171751-2	2019-09-F-20220818-01	105
240-171751-3	EB-001-F-20220818-01	89.6
LCS 160-579318/2-A	Lab Control Sample	98.8
LCSD 160-579318/3-A	Lab Control Sample Dup	96.8
MB 160-579318/1-A	Method Blank	97.0

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)
240-171751-1	2019-07-F-20220818-01	102	86.7
240-171751-2	2019-09-F-20220818-01	105	85.2
240-171751-3	EB-001-F-20220818-01	89.6	85.6
LCS 160-579326/2-A	Lab Control Sample	98.8	87.1
LCSD 160-579326/3-A	Lab Control Sample Dup	96.8	86.4
MB 160-579326/1-A	Method Blank	97.0	89.0

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-539676/1-A
Matrix: Water
Analysis Batch: 539905

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		08/22/22 14:00	08/23/22 14:44	1

Lab Sample ID: LCS 240-539676/2-A
Matrix: Water
Analysis Batch: 539905

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	955		ug/L		96	80 - 120

Lab Sample ID: 240-171751-1 MS
Matrix: Water
Analysis Batch: 539905

Client Sample ID: 2019-07-F-20220818-01
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	510		1000	1450		ug/L		94	75 - 125

Lab Sample ID: 240-171751-1 MSD
Matrix: Water
Analysis Batch: 539905

Client Sample ID: 2019-07-F-20220818-01
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	510		1000	1490		ug/L		97	75 - 125	2	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-539676/1-A
Matrix: Water
Analysis Batch: 539954

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		08/22/22 14:00	08/23/22 16:37	1
Arsenic	5.0	U	5.0	0.75	ug/L		08/22/22 14:00	08/23/22 16:37	1
Barium	5.0	U	5.0	2.2	ug/L		08/22/22 14:00	08/23/22 16:37	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/23/22 16:37	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/23/22 16:37	1
Calcium	1000	U	1000	580	ug/L		08/22/22 14:00	08/23/22 16:37	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/22 14:00	08/23/22 16:37	1
Cobalt	1.0	U	1.0	0.19	ug/L		08/22/22 14:00	08/23/22 16:37	1
Lead	1.0	U	1.0	0.45	ug/L		08/22/22 14:00	08/23/22 16:37	1
Lithium	8.0	U	8.0	1.7	ug/L		08/22/22 14:00	08/23/22 16:37	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/23/22 16:37	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/22/22 14:00	08/23/22 16:37	1
Potassium	1000	U	1000	220	ug/L		08/22/22 14:00	08/23/22 16:37	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/23/22 16:37	1
Sodium	1000	U	1000	330	ug/L		08/22/22 14:00	08/23/22 16:37	1
Thallium	0.219	J	1.0	0.20	ug/L		08/22/22 14:00	08/23/22 16:37	1

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

Lab Sample ID: LCS 240-539676/3-A
Matrix: Water
Analysis Batch: 539954

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	99.5		ug/L		99	80 - 120
Arsenic	1000	969		ug/L		97	80 - 120
Barium	1000	927		ug/L		93	80 - 120
Beryllium	500	490		ug/L		98	80 - 120
Cadmium	500	481		ug/L		96	80 - 120
Chromium	500	484		ug/L		97	80 - 120
Cobalt	500	501		ug/L		100	80 - 120
Lead	500	495		ug/L		99	80 - 120
Lithium	500	489		ug/L		98	80 - 120
Magnesium	25000	24500		ug/L		98	80 - 120
Molybdenum	500	465		ug/L		93	80 - 120
Potassium	25000	24600		ug/L		98	80 - 120
Selenium	1000	982		ug/L		98	80 - 120
Sodium	25000	24500	^+	ug/L		98	80 - 120
Thallium	1000	1000		ug/L		100	80 - 120

Lab Sample ID: 240-171751-2 MS
Matrix: Water
Analysis Batch: 539954

Client Sample ID: 2019-09-F-20220818-01
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.7	J F1	100	75.9	F1	ug/L		74	80 - 120
Arsenic	37	F1	1000	733	F1	ug/L		70	80 - 120
Beryllium	8.9	F1	500	597		ug/L		118	80 - 120
Cadmium	0.41	J	500	413		ug/L		82	80 - 120
Chromium	420		500	854		ug/L		86	80 - 120
Cobalt	69	F1	500	441	F1	ug/L		74	80 - 120
Lead	72	F1	500	444	F1	ug/L		74	80 - 120
Lithium	510	F1	500	1140	F1	ug/L		124	80 - 120
Magnesium	310000		25000	333000	4	ug/L		77	80 - 120
Molybdenum	61		500	562		ug/L		100	80 - 120
Potassium	44000	F1	25000	73400		ug/L		119	80 - 120
Selenium	9.1	F1	1000	623	F1	ug/L		61	80 - 120
Thallium	1.0	F1 B	1000	784	F1	ug/L		78	80 - 120

Lab Sample ID: 240-171751-2 MS
Matrix: Water
Analysis Batch: 540072

Client Sample ID: 2019-09-F-20220818-01
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	25000		1000	26600	4	ug/L		108	80 - 120
Sodium	8600000		25000	8610000	4	ug/L		78	80 - 120

Lab Sample ID: 240-171751-2 MSD
Matrix: Water
Analysis Batch: 539954

Client Sample ID: 2019-09-F-20220818-01
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	1.7	J F1	100	76.6	F1	ug/L		75	80 - 120	1	20

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

Lab Sample ID: 240-171751-2 MSD
Matrix: Water
Analysis Batch: 539954

Client Sample ID: 2019-09-F-20220818-01
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	37	F1	1000	779	F1	ug/L		74	80 - 120	6	20
Beryllium	8.9	F1	500	668	F1	ug/L		132	80 - 120	11	20
Cadmium	0.41	J	500	446		ug/L		89	80 - 120	8	20
Chromium	420		500	905		ug/L		96	80 - 120	6	20
Cobalt	69	F1	500	472		ug/L		80	80 - 120	7	20
Lead	72	F1	500	490		ug/L		84	80 - 120	10	20
Lithium	510	F1	500	1210	F1	ug/L		139	80 - 120	6	20
Magnesium	310000		25000	364000	4	ug/L		203	80 - 120	9	20
Molybdenum	61		500	604		ug/L		109	80 - 120	7	20
Potassium	44000	F1	25000	80200	F1	ug/L		146	80 - 120	9	20
Selenium	9.1	F1	1000	672	F1	ug/L		66	80 - 120	8	20
Thallium	1.0	F1 B	1000	862		ug/L		86	80 - 120	10	20

Lab Sample ID: 240-171751-2 MSD
Matrix: Water
Analysis Batch: 540072

Client Sample ID: 2019-09-F-20220818-01
Prep Type: Total Recoverable
Prep Batch: 539676

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Barium	25000		1000	28500	4	ug/L		301	80 - 120	7	20
Sodium	8600000		25000	9040000	4	ug/L		1796	80 - 120	5	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-539677/1-A
Matrix: Water
Analysis Batch: 539870

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		08/22/22 12:00	08/23/22 10:52	1

Lab Sample ID: LCS 240-539677/2-A
Matrix: Water
Analysis Batch: 539870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.55		ug/L		111	80 - 120

Lab Sample ID: 240-171751-1 MS
Matrix: Water
Analysis Batch: 539870

Client Sample ID: 2019-07-F-20220818-01
Prep Type: Total/NA
Prep Batch: 539677

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.20	U F1	1.00	1.28	F1	ug/L		128	80 - 120

Lab Sample ID: 240-171751-1 MSD
Matrix: Water
Analysis Batch: 539870

Client Sample ID: 2019-07-F-20220818-01
Prep Type: Total/NA
Prep Batch: 539677

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	1.27	F1	ug/L		127	80 - 120	1	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-540918/4
Matrix: Water
Analysis Batch: 540918

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			08/31/22 09:30	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:30	1

Lab Sample ID: LCS 240-540918/3
Matrix: Water
Analysis Batch: 540918

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	140		mg/L		116	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-542476/8
Matrix: Water
Analysis Batch: 542476

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			09/13/22 12:51	1
Fluoride	0.050	U	0.050	0.024	mg/L			09/13/22 12:51	1
Sulfate	1.0	U	1.0	0.35	mg/L			09/13/22 12:51	1

Lab Sample ID: LCS 240-542476/9
Matrix: Water
Analysis Batch: 542476

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	2.50		mg/L		100	90 - 110
Sulfate	50.0	50.7		mg/L		101	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-579318/1-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579318

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0006513	U	0.0453	0.0453	1.00	0.0937	pCi/L	08/24/22 11:00	09/15/22 07:14	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.0*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:14*	*1*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-579318/2-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579318

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.37		1.07	1.00	0.116	pCi/L	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*

Lab Sample ID: LCSD 160-579318/3-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 579318

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	9.264		0.968	1.00	0.107	pCi/L	82	75 - 125	0.54	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.8*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-579326/1-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579326

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1004	U	0.226	0.226	1.00	0.453	pCi/L	08/24/22 11:44	09/02/22 12:00	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.0*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*1*
Y Carrier	*89.0*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*1*

Lab Sample ID: LCS 160-579326/2-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579326

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.31	9.408		1.23	1.00	0.429	pCi/L	113	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*
Y Carrier	*87.1*		*40 - 110*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-579326/3-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 579326

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.31	8.818		1.18	1.00	0.454	pCi/L	106	75 - 125	0.24	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.8*		*40 - 110*
Y Carrier	*86.4*		*40 - 110*

Metals

Prep Batch: 539676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total Recoverable	Water	3005A	
240-171751-2	2019-09-F-20220818-01	Total Recoverable	Water	3005A	
240-171751-3	EB-001-F-20220818-01	Total Recoverable	Water	3005A	
MB 240-539676/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-539676/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-539676/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-171751-1 MS	2019-07-F-20220818-01	Total Recoverable	Water	3005A	
240-171751-1 MSD	2019-07-F-20220818-01	Total Recoverable	Water	3005A	
240-171751-2 MS	2019-09-F-20220818-01	Total Recoverable	Water	3005A	
240-171751-2 MSD	2019-09-F-20220818-01	Total Recoverable	Water	3005A	

Prep Batch: 539677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total/NA	Water	7470A	
240-171751-2	2019-09-F-20220818-01	Total/NA	Water	7470A	
240-171751-3	EB-001-F-20220818-01	Total/NA	Water	7470A	
MB 240-539677/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-539677/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-171751-1 MS	2019-07-F-20220818-01	Total/NA	Water	7470A	
240-171751-1 MSD	2019-07-F-20220818-01	Total/NA	Water	7470A	

Analysis Batch: 539870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total/NA	Water	7470A	539677
240-171751-2	2019-09-F-20220818-01	Total/NA	Water	7470A	539677
240-171751-3	EB-001-F-20220818-01	Total/NA	Water	7470A	539677
MB 240-539677/1-A	Method Blank	Total/NA	Water	7470A	539677
LCS 240-539677/2-A	Lab Control Sample	Total/NA	Water	7470A	539677
240-171751-1 MS	2019-07-F-20220818-01	Total/NA	Water	7470A	539677
240-171751-1 MSD	2019-07-F-20220818-01	Total/NA	Water	7470A	539677

Analysis Batch: 539905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total Recoverable	Water	6010D	539676
240-171751-3	EB-001-F-20220818-01	Total Recoverable	Water	6010D	539676
MB 240-539676/1-A	Method Blank	Total Recoverable	Water	6010D	539676
LCS 240-539676/2-A	Lab Control Sample	Total Recoverable	Water	6010D	539676
240-171751-1 MS	2019-07-F-20220818-01	Total Recoverable	Water	6010D	539676
240-171751-1 MSD	2019-07-F-20220818-01	Total Recoverable	Water	6010D	539676

Analysis Batch: 539954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total Recoverable	Water	6020B	539676
240-171751-2	2019-09-F-20220818-01	Total Recoverable	Water	6020B	539676
240-171751-3	EB-001-F-20220818-01	Total Recoverable	Water	6020B	539676
MB 240-539676/1-A	Method Blank	Total Recoverable	Water	6020B	539676
LCS 240-539676/3-A	Lab Control Sample	Total Recoverable	Water	6020B	539676
240-171751-2 MS	2019-09-F-20220818-01	Total Recoverable	Water	6020B	539676
240-171751-2 MSD	2019-09-F-20220818-01	Total Recoverable	Water	6020B	539676

Metals

Analysis Batch: 540017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-2	2019-09-F-20220818-01	Total Recoverable	Water	6010D	539676

Analysis Batch: 540072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total Recoverable	Water	6020B	539676
240-171751-2	2019-09-F-20220818-01	Total Recoverable	Water	6020B	539676
240-171751-2 MS	2019-09-F-20220818-01	Total Recoverable	Water	6020B	539676
240-171751-2 MSD	2019-09-F-20220818-01	Total Recoverable	Water	6020B	539676

Analysis Batch: 543094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-3	EB-001-F-20220818-01	Total Recoverable	Water	6020B	539676

General Chemistry

Analysis Batch: 540918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total/NA	Water	2320B-1997	
240-171751-2	2019-09-F-20220818-01	Total/NA	Water	2320B-1997	
240-171751-3	EB-001-F-20220818-01	Total/NA	Water	2320B-1997	
MB 240-540918/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-540918/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 542476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total/NA	Water	300.0	
240-171751-1	2019-07-F-20220818-01	Total/NA	Water	300.0	
240-171751-2	2019-09-F-20220818-01	Total/NA	Water	300.0	
240-171751-2	2019-09-F-20220818-01	Total/NA	Water	300.0	
240-171751-3	EB-001-F-20220818-01	Total/NA	Water	300.0	
MB 240-542476/8	Method Blank	Total/NA	Water	300.0	
LCS 240-542476/9	Lab Control Sample	Total/NA	Water	300.0	

Rad

Prep Batch: 579318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total/NA	Water	PrecSep-21	
240-171751-2	2019-09-F-20220818-01	Total/NA	Water	PrecSep-21	
240-171751-3	EB-001-F-20220818-01	Total/NA	Water	PrecSep-21	
MB 160-579318/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-579318/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-579318/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 579326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171751-1	2019-07-F-20220818-01	Total/NA	Water	PrecSep_0	
240-171751-2	2019-09-F-20220818-01	Total/NA	Water	PrecSep_0	
240-171751-3	EB-001-F-20220818-01	Total/NA	Water	PrecSep_0	
MB 160-579326/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-579326/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-579326/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

Client Sample ID: 2019-07-F-20220818-01
Lab Sample ID: 240-171751-1

Date Collected: 08/18/22 10:31
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6010D		1	539905	KLC	EET CAN	08/23/22 15:05
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	539954	RKT	EET CAN	08/23/22 16:54
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		20	540072	DSH	EET CAN	08/24/22 20:26
Total/NA	Prep	7470A			539677	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 10:56
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 10:39
Total/NA	Analysis	300.0		20	542476	JMB	EET CAN	09/13/22 16:06
Total/NA	Analysis	300.0		100	542476	JMB	EET CAN	09/13/22 16:28
Total/NA	Prep	PrecSep-21			579318	BMP	EET SL	08/24/22 11:00
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 07:14
Total/NA	Prep	PrecSep_0			579326	BMP	EET SL	08/24/22 11:44
Total/NA	Analysis	9320		1	580470	FLC	EET SL	09/02/22 12:00
Total/NA	Analysis	Ra226_Ra228		1	582675	SCB	EET SL	09/19/22 15:50

Client Sample ID: 2019-09-F-20220818-01
Lab Sample ID: 240-171751-2

Date Collected: 08/18/22 14:22
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6010D		1	540017	RKT	EET CAN	08/24/22 18:31
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	539954	RKT	EET CAN	08/23/22 16:59
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		20	540072	DSH	EET CAN	08/24/22 20:31
Total/NA	Prep	7470A			539677	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 11:03
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 10:43
Total/NA	Analysis	300.0		20	542476	JMB	EET CAN	09/13/22 17:12
Total/NA	Analysis	300.0		100	542476	JMB	EET CAN	09/13/22 17:33
Total/NA	Prep	PrecSep-21			579318	BMP	EET SL	08/24/22 11:00
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 07:15
Total/NA	Prep	PrecSep_0			579326	BMP	EET SL	08/24/22 11:44
Total/NA	Analysis	9320		1	580470	FLC	EET SL	09/02/22 12:00
Total/NA	Analysis	Ra226_Ra228		1	582675	SCB	EET SL	09/19/22 15:50

Lab Chronicle

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

Client Sample ID: EB-001-F-20220818-01
Lab Sample ID: 240-171751-3

Date Collected: 08/18/22 15:45
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6010D		1	539905	KLC	EET CAN	08/23/22 20:02
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	539954	RKT	EET CAN	08/23/22 17:25
Total Recoverable	Prep	3005A			539676	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	543094	RKT	EET CAN	09/16/22 19:09
Total/NA	Prep	7470A			539677	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 11:05
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 10:47
Total/NA	Analysis	300.0		1	542476	JMB	EET CAN	09/13/22 19:00
Total/NA	Prep	PrecSep-21			579318	BMP	EET SL	08/24/22 11:00
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 07:15
Total/NA	Prep	PrecSep_0			579326	BMP	EET SL	08/24/22 11:44
Total/NA	Analysis	9320		1	580470	FLC	EET SL	09/02/22 12:01
Total/NA	Analysis	Ra226_Ra228		1	582675	SCB	EET SL	09/19/22 15:50

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
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

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	02-23-23
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	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	09-30-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171751-1
Project/Site: Federal CCR Wells - App III and App IV combined

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	08-31-23
Oregon	NELAP	4157	09-01-23
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	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Casto	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-97179-35520.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Gavin CCR - Appendix III and IV - Combined	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7470A	300.0_28D - Fluoride (Appl/V/Cl, F, SO4 (Appl/V)	2320B - Alkalinity	9315_Ra226, 9320_Ra228	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
2019-07-F-20220818-01	8-18-22	1031	G	W			1	1	1	2*		*ONLY 1700 mL collected for Rq *
2019-09-F-20220818-01	8-18-22	1422	G	W			1	1	1	2		
EB-001-F-20220818-01	8-18-22	1545	G	W			1	1	1	2		
BC												

240-171751 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Bobby Casto	8-19-22 1676			081922 0700	Kemron
2		081922 0930	Kemron		8-19-22 0930	EETNC
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °rc and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative **Login # : 171751**
Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Rachelle Haider

Cooler Received on 8-20-22 Opened on 8-20-22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # _____ 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)	**Tests that are not checked for pH by Receiving:**
-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)	**VOAs**
3. Shippers' packing slip attached to the cooler(s)?	Yes (No)	**Oil and Grease**
4. Did custody papers accompany the sample(s)?	(Yes) No	**TOC**
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# 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 _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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**	0.4	0.4	**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**	1.2	1.2	**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
				☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-171751-1

Login Number: 171751
List Number: 2
Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis
List Creation: 08/22/22 12:13 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 | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-171752-1
Client Project/Site: Federal CCR Wells - App IV

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
9/19/2022 4:21:20 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-171752-1

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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-171752-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171752-1

Comments
The Radium analysis was performed at Eurofins St. Louis Laboratory.

Receipt
The samples were received on 8/19/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.4º C, 1.2º C, 1.2º C and 1.2º C.

RAD
Methods 9315: Radium-226 batch 579318: 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-17-F-20220817-01 (240-171752-1), 2019-02-F-20220817-01 (240-171752-2), EB-001-F-20220817-01 (240-171752-3), (LCS 160-579318/2-A), (LCSD 160-579318/3-A) and (MB 160-579318/1-A)

Methods 9320: Radium-228 batch 579326: 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-17-F-20220817-01 (240-171752-1), 2019-02-F-20220817-01 (240-171752-2), EB-001-F-20220817-01 (240-171752-3), (LCS 160-579326/2-A), (LCSD 160-579326/3-A) and (MB 160-579326/1-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 - App IV

Job ID: 240-171752-1

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: 240-171752-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171752-1	MW-17-F-20220817-01	Water	08/17/22 12:41	08/19/22 09:30
240-171752-2	2019-02-F-20220817-01	Water	08/17/22 14:24	08/19/22 09:30
240-171752-3	EB-001-F-20220817-01	Water	08/17/22 15:40	08/19/22 09:30

Detection Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171752-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: MW-17-F-20220817-01 — Lab Sample ID: 240-171752-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.8	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	2200		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cobalt	0.58	J	1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	79		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	20		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	4900		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2600000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.20	J	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	1.6		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: 2019-02-F-20220817-01 — Lab Sample ID: 240-171752-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.8		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	570		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	6.1		5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	0.30	J	1.0	0.19	ug/L	1		6020B	Total Recoverable
Lead	0.65	J	1.0	0.45	ug/L	1		6020B	Total Recoverable
Lithium	230		8.0	1.7	ug/L	1		6020B	Total Recoverable
Molybdenum	15		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	12000		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	1.3	J	5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	430000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.20	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	1500		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	15		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.45		0.10	0.048	mg/L	2		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20220817-01 — Lab Sample ID: 240-171752-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	500	J	1000	330	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: MW-17-F-20220817-01
Lab Sample ID: 240-171752-1

Date Collected: 08/17/22 12:41
Matrix: Water
Date Received: 08/19/22 09:30

Method: 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		08/22/22 14:00	08/24/22 23:48	1
Arsenic	**2.8**	**J**	5.0	0.75	ug/L		08/22/22 14:00	08/24/22 23:48	1
Barium	**2200**		5.0	2.2	ug/L		08/22/22 14:00	08/24/22 23:48	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 23:48	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:48	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/22 14:00	08/24/22 23:48	1
Cobalt	**0.58**	**J**	1.0	0.19	ug/L		08/22/22 14:00	08/24/22 23:48	1
Lead	1.0	U	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 23:48	1
Lithium	**79**		8.0	1.7	ug/L		08/22/22 14:00	08/24/22 23:48	1
Magnesium	**16000**		1000	200	ug/L		08/22/22 14:00	08/24/22 23:48	1
Molybdenum	**20**		5.0	1.1	ug/L		08/22/22 14:00	08/24/22 23:48	1
Potassium	**4900**		1000	220	ug/L		08/22/22 14:00	08/24/22 23:48	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 23:48	1
Sodium	**2600000**		1000	330	ug/L		08/22/22 14:00	08/24/22 23:48	1
Thallium	**0.20**	**J**	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:48	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		08/22/22 12:00	08/23/22 10:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**230**		5.0	2.6	mg/L			08/31/22 09:38	1
Bicarbonate Alkalinity as CaCO3	**230**		5.0	2.6	mg/L			08/31/22 09:38	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:38	1
Fluoride	**1.6**		0.25	0.12	mg/L			09/13/22 13:34	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**2.73**		0.258	0.356	1.00	0.0856	pCi/L	08/24/22 11:00	09/15/22 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**3.97**		0.564	0.672	1.00	0.395	pCi/L	08/24/22 11:44	09/02/22 12:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:03*	*1*
Y Carrier	*87.9*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:03*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171752-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: MW-17-F-20220817-01
Lab Sample ID: 240-171752-1
Date Collected: 08/17/22 12:41
Matrix: Water
Date Received: 08/19/22 09:30

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	6.70		0.620	0.760	5.00	0.395	pCi/L		09/19/22 15:50	1

Client Sample ID: 2019-02-F-20220817-01
Lab Sample ID: 240-171752-2

Date Collected: 08/17/22 14:24
Matrix: Water
Date Received: 08/19/22 09:30

Method: 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		08/22/22 14:00	08/24/22 23:52	1
Arsenic	**5.8**		5.0	0.75	ug/L		08/22/22 14:00	08/24/22 23:52	1
Barium	**570**		5.0	2.2	ug/L		08/22/22 14:00	08/24/22 23:52	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 23:52	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:52	1
Chromium	**6.1**		5.0	2.5	ug/L		08/22/22 14:00	08/24/22 23:52	1
Cobalt	**0.30**	**J**	1.0	0.19	ug/L		08/22/22 14:00	08/24/22 23:52	1
Lead	**0.65**	**J**	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 23:52	1
Lithium	**230**		8.0	1.7	ug/L		08/22/22 14:00	08/24/22 23:52	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/24/22 23:52	1
Molybdenum	**15**		5.0	1.1	ug/L		08/22/22 14:00	08/24/22 23:52	1
Potassium	**12000**		1000	220	ug/L		08/22/22 14:00	08/24/22 23:52	1
Selenium	**1.3**	**J**	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 23:52	1
Sodium	**430000**		1000	330	ug/L		08/22/22 14:00	08/24/22 23:52	1
Thallium	**0.20**	**J**	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:52	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		08/22/22 12:00	08/23/22 10:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1500**		5.0	2.6	mg/L			08/31/22 09:45	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:45	1
Carbonate Alkalinity as CaCO3	**15**		5.0	2.6	mg/L			08/31/22 09:45	1
Fluoride	**0.45**		0.10	0.048	mg/L			09/13/22 14:40	2

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.78**		0.212	0.265	1.00	0.0854	pCi/L	08/24/22 11:00	09/15/22 07:15	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:15*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.762**		0.302	0.310	1.00	0.376	pCi/L	08/24/22 11:44	09/02/22 12:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*106*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:03*	*1*
Y Carrier	*90.8*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:03*	*1*

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171752-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 2019-02-F-20220817-01
Lab Sample ID: 240-171752-2
Date Collected: 08/17/22 14:24
Matrix: Water
Date Received: 08/19/22 09:30

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	2.54		0.369	0.408	5.00	0.376	pCi/L		09/19/22 15:50	1

Client Sample ID: EB-001-F-20220817-01
Lab Sample ID: 240-171752-3

Date Collected: 08/17/22 15:40
Matrix: Water
Date Received: 08/19/22 09:30

Method: 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		08/22/22 14:00	08/24/22 23:57	1
Arsenic	5.0	U	5.0	0.75	ug/L		08/22/22 14:00	08/24/22 23:57	1
Barium	5.0	U	5.0	2.2	ug/L		08/22/22 14:00	08/24/22 23:57	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 23:57	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:57	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/22 14:00	08/24/22 23:57	1
Cobalt	1.0	U	1.0	0.19	ug/L		08/22/22 14:00	08/24/22 23:57	1
Lead	1.0	U	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 23:57	1
Lithium	8.0	U	8.0	1.7	ug/L		08/22/22 14:00	08/24/22 23:57	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/24/22 23:57	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/22/22 14:00	08/24/22 23:57	1
Potassium	1000	U	1000	220	ug/L		08/22/22 14:00	08/24/22 23:57	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 23:57	1
Sodium	**500**	**J**	1000	330	ug/L		08/22/22 14:00	08/24/22 23:57	1
Thallium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 23:57	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		08/22/22 12:00	08/23/22 10:23	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			08/31/22 09:49	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:49	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:49	1
Fluoride	0.050	U	0.050	0.024	mg/L			09/13/22 15:01	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	-0.00611	U	0.0395	0.0395	1.00	0.0917	pCi/L	08/24/22 11:00	09/15/22 07:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.8*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:16*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0569	U	0.302	0.302	1.00	0.552	pCi/L	08/24/22 11:44	09/02/22 12:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.8*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:03*	*1*
Y Carrier	*87.1*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:03*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171752-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: EB-001-F-20220817-01
Lab Sample ID: 240-171752-3
Date Collected: 08/17/22 15:40
Matrix: Water
Date Received: 08/19/22 09:30

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	0.0508	U	0.305	0.305	5.00	0.552	pCi/L		09/19/22 15:50	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171752-1
Project/Site: Federal CCR Wells - App IV

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)
240-171752-1	MW-17-F-20220817-01	108
240-171752-2	2019-02-F-20220817-01	106
240-171752-3	EB-001-F-20220817-01	79.8
LCS 160-579318/2-A	Lab Control Sample	98.8
LCSD 160-579318/3-A	Lab Control Sample Dup	96.8
MB 160-579318/1-A	Method Blank	97.0

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-171752-1	MW-17-F-20220817-01	108	87.9
240-171752-2	2019-02-F-20220817-01	106	90.8
240-171752-3	EB-001-F-20220817-01	79.8	87.1
LCS 160-579326/2-A	Lab Control Sample	98.8	87.1
LCSD 160-579326/3-A	Lab Control Sample Dup	96.8	86.4
MB 160-579326/1-A	Method Blank	97.0	89.0

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-539678/1-A
Matrix: Water
Analysis Batch: 540072

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 539678

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		08/22/22 14:00	08/24/22 22:55	1
Arsenic	5.0	U	5.0	0.75	ug/L		08/22/22 14:00	08/24/22 22:55	1
Barium	5.0	U	5.0	2.2	ug/L		08/22/22 14:00	08/24/22 22:55	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/22/22 14:00	08/24/22 22:55	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 22:55	1
Chromium	5.0	U	5.0	2.5	ug/L		08/22/22 14:00	08/24/22 22:55	1
Cobalt	1.0	U	1.0	0.19	ug/L		08/22/22 14:00	08/24/22 22:55	1
Lead	1.0	U	1.0	0.45	ug/L		08/22/22 14:00	08/24/22 22:55	1
Lithium	8.0	U	8.0	1.7	ug/L		08/22/22 14:00	08/24/22 22:55	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/24/22 22:55	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/22/22 14:00	08/24/22 22:55	1
Potassium	1000	U	1000	220	ug/L		08/22/22 14:00	08/24/22 22:55	1
Selenium	5.0	U	5.0	0.89	ug/L		08/22/22 14:00	08/24/22 22:55	1
Sodium	1000	U	1000	330	ug/L		08/22/22 14:00	08/24/22 22:55	1
Thallium	1.0	U	1.0	0.20	ug/L		08/22/22 14:00	08/24/22 22:55	1

Lab Sample ID: LCS 240-539678/2-A
Matrix: Water
Analysis Batch: 540072

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 539678

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	98.5		ug/L		98	80 - 120
Arsenic	1000	956		ug/L		96	80 - 120
Barium	1000	879		ug/L		88	80 - 120
Beryllium	500	472		ug/L		94	80 - 120
Cadmium	500	458		ug/L		92	80 - 120
Chromium	500	472		ug/L		94	80 - 120
Cobalt	500	492		ug/L		98	80 - 120
Lead	500	481		ug/L		96	80 - 120
Lithium	500	476		ug/L		95	80 - 120
Magnesium	25000	24600		ug/L		99	80 - 120
Molybdenum	500	445		ug/L		89	80 - 120
Potassium	25000	24000		ug/L		96	80 - 120
Selenium	1000	945		ug/L		95	80 - 120
Sodium	25000	24600		ug/L		98	80 - 120
Thallium	1000	983		ug/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-539680/1-A
Matrix: Water
Analysis Batch: 539870

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539680

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		08/22/22 12:00	08/23/22 09:57	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-539680/2-A
Matrix: Water
Analysis Batch: 539870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539680

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.61		ug/L		112	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-540918/4
Matrix: Water
Analysis Batch: 540918

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			08/31/22 09:30	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:30	1

Lab Sample ID: LCS 240-540918/3
Matrix: Water
Analysis Batch: 540918

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	140		mg/L		116	86 - 123

Lab Sample ID: 240-171752-1 DU
Matrix: Water
Analysis Batch: 540918

Client Sample ID: MW-17-F-20220817-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	230		233		mg/L		0.7	20
Bicarbonate Alkalinity as CaCO3	230		233		mg/L		0.7	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 240-542476/39
Matrix: Water
Analysis Batch: 542476

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			09/14/22 00:04	1

Lab Sample ID: MB 240-542476/8
Matrix: Water
Analysis Batch: 542476

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			09/13/22 12:51	1

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-542476/40
Matrix: Water
Analysis Batch: 542476

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	2.53		mg/L		101	90 - 110		

Lab Sample ID: LCS 240-542476/9
Matrix: Water
Analysis Batch: 542476

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	2.50		mg/L		100	90 - 110		

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-579318/1-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579318

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0006513	U	0.0453	0.0453	1.00	0.0937	pCi/L	08/24/22 11:00	09/15/22 07:14	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.0*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:14*	*1*

Lab Sample ID: LCS 160-579318/2-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579318

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.37		1.07	1.00	0.116	pCi/L	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*

Lab Sample ID: LCSD 160-579318/3-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 579318

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	9.264		0.968	1.00	0.107	pCi/L	82	75 - 125	0.54	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.8*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-579326/1-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579326

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1004	U	0.226	0.226	1.00	0.453	pCi/L	08/24/22 11:44	09/02/22 12:00	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.0*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*1*
Y Carrier	*89.0*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*1*

Lab Sample ID: LCS 160-579326/2-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579326

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.31	9.408		1.23	1.00	0.429	pCi/L	113	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*
Y Carrier	*87.1*		*40 - 110*

Lab Sample ID: LCSD 160-579326/3-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 579326

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.31	8.818		1.18	1.00	0.454	pCi/L	106	75 - 125	0.24	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.8*		*40 - 110*
Y Carrier	*86.4*		*40 - 110*

Metals

Prep Batch: 539678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171752-1	MW-17-F-20220817-01	Total Recoverable	Water	3005A	
240-171752-2	2019-02-F-20220817-01	Total Recoverable	Water	3005A	
240-171752-3	EB-001-F-20220817-01	Total Recoverable	Water	3005A	
MB 240-539678/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-539678/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 539680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171752-1	MW-17-F-20220817-01	Total/NA	Water	7470A	
240-171752-2	2019-02-F-20220817-01	Total/NA	Water	7470A	
240-171752-3	EB-001-F-20220817-01	Total/NA	Water	7470A	
MB 240-539680/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-539680/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 539870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171752-1	MW-17-F-20220817-01	Total/NA	Water	7470A	539680
240-171752-2	2019-02-F-20220817-01	Total/NA	Water	7470A	539680
240-171752-3	EB-001-F-20220817-01	Total/NA	Water	7470A	539680
MB 240-539680/1-A	Method Blank	Total/NA	Water	7470A	539680
LCS 240-539680/2-A	Lab Control Sample	Total/NA	Water	7470A	539680

Analysis Batch: 540072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171752-1	MW-17-F-20220817-01	Total Recoverable	Water	6020B	539678
240-171752-2	2019-02-F-20220817-01	Total Recoverable	Water	6020B	539678
240-171752-3	EB-001-F-20220817-01	Total Recoverable	Water	6020B	539678
MB 240-539678/1-A	Method Blank	Total Recoverable	Water	6020B	539678
LCS 240-539678/2-A	Lab Control Sample	Total Recoverable	Water	6020B	539678

General Chemistry

Analysis Batch: 540918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171752-1	MW-17-F-20220817-01	Total/NA	Water	2320B-1997	
240-171752-2	2019-02-F-20220817-01	Total/NA	Water	2320B-1997	
240-171752-3	EB-001-F-20220817-01	Total/NA	Water	2320B-1997	
MB 240-540918/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-540918/3	Lab Control Sample	Total/NA	Water	2320B-1997	
240-171752-1 DU	MW-17-F-20220817-01	Total/NA	Water	2320B-1997	

Analysis Batch: 542476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171752-1	MW-17-F-20220817-01	Total/NA	Water	300.0-1993 R2.1	
240-171752-2	2019-02-F-20220817-01	Total/NA	Water	300.0-1993 R2.1	
240-171752-3	EB-001-F-20220817-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-542476/39	Method Blank	Total/NA	Water	300.0-1993 R2.1	
MB 240-542476/8	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-542476/40	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
LCS 240-542476/9	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 579318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171752-1	MW-17-F-20220817-01	Total/NA	Water	PrecSep-21	
240-171752-2	2019-02-F-20220817-01	Total/NA	Water	PrecSep-21	
240-171752-3	EB-001-F-20220817-01	Total/NA	Water	PrecSep-21	
MB 160-579318/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-579318/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-579318/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 579326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171752-1	MW-17-F-20220817-01	Total/NA	Water	PrecSep_0	
240-171752-2	2019-02-F-20220817-01	Total/NA	Water	PrecSep_0	
240-171752-3	EB-001-F-20220817-01	Total/NA	Water	PrecSep_0	
MB 160-579326/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-579326/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-579326/3-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: 240-171752-1

Client Sample ID: MW-17-F-20220817-01

Lab Sample ID: 240-171752-1

Date Collected: 08/17/22 12:41
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539678	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 23:48
Total/NA	Prep	7470A			539680	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 10:14
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 09:38
Total/NA	Analysis	300.0-1993 R2.1		5	542476	JMB	EET CAN	09/13/22 13:34
Total/NA	Prep	PrecSep-21			579318	BMP	EET SL	08/24/22 11:00
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 07:15
Total/NA	Prep	PrecSep_0			579326	BMP	EET SL	08/24/22 11:44
Total/NA	Analysis	9320		1	580436	FLC	EET SL	09/02/22 12:03
Total/NA	Analysis	Ra226_Ra228		1	582675	SCB	EET SL	09/19/22 15:50

Client Sample ID: 2019-02-F-20220817-01

Lab Sample ID: 240-171752-2

Date Collected: 08/17/22 14:24
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539678	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 23:52
Total/NA	Prep	7470A			539680	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 10:16
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 09:45
Total/NA	Analysis	300.0-1993 R2.1		2	542476	JMB	EET CAN	09/13/22 14:40
Total/NA	Prep	PrecSep-21			579318	BMP	EET SL	08/24/22 11:00
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 07:15
Total/NA	Prep	PrecSep_0			579326	BMP	EET SL	08/24/22 11:44
Total/NA	Analysis	9320		1	580436	FLC	EET SL	09/02/22 12:03
Total/NA	Analysis	Ra226_Ra228		1	582675	SCB	EET SL	09/19/22 15:50

Client Sample ID: EB-001-F-20220817-01

Lab Sample ID: 240-171752-3

Date Collected: 08/17/22 15:40
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539678	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 23:57
Total/NA	Prep	7470A			539680	MRL	EET CAN	08/22/22 12:00
Total/NA	Analysis	7470A		1	539870	MRL	EET CAN	08/23/22 10:23
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 09:49
Total/NA	Analysis	300.0-1993 R2.1		1	542476	JMB	EET CAN	09/13/22 15:01
Total/NA	Prep	PrecSep-21			579318	BMP	EET SL	08/24/22 11:00
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 07:16
Total/NA	Prep	PrecSep_0			579326	BMP	EET SL	08/24/22 11:44
Total/NA	Analysis	9320		1	580436	FLC	EET SL	09/02/22 12:03

Lab Chronicle

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

Job ID: 240-171752-1

Client Sample ID: EB-001-F-20220817-01

Date Collected: 08/17/22 15:40
Date Received: 08/19/22 09:30

Lab Sample ID: 240-171752-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Ra226_Ra228		1	582675	SCB	EET SL	09/19/22 15:50

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
Job ID: 240-171752-1
Project/Site: Federal CCR Wells - App IV

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	02-23-23
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	09-14-22
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	09-30-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171752-1
Project/Site: Federal CCR Wells - App IV

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	08-31-23
Oregon	NELAP	4157	09-01-23
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	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Caste	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93466-34578.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal CCR Wells - App IV	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
MW-17-F-20220817-01	8-17-22	1241	G	Water			1	1	1	2		
2019-02-F-20220817-01	8-17-22	1424	G	Water			1	1	1	2		
EB-001-F-20220817-01	8-17-22	1540	G	Water			1	1	1	2		
				Water								
				Water								

240-171752 Chain of Custody

AC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	8-19-22/0700		[signature]	081922 0700	Kenvon
2	[signature]	081922 0930	Kenvon	[signature]	8-19-22 0930	CETNC
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins - Canton Sample Receipt Form/Narrative **Login # : 171752**
Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Rachelle Haidet

Cooler Received on 8.20.22 Opened on 8.20.22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # _____ 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)	
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)	

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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	0.4	0.4	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	1.2	1.2	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

☐ 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

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-156188.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-171752-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/1/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 24019633			
Project Name: Gavin CCR	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of	Special Instructions/Note:
MW-17-F-20220817-01 (240-171752-1)	8/17/22	12:41 Eastern		Water	X	X	X		, Recount of TAR after 21 day ingrowth if > action limit; save planchet
2019-02-F-20220817-01 (240-171752-2)	8/17/22	14:24 Eastern		Water	X	X	X		, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220817-01 (240-171752-3)	8/17/22	15:40 Eastern		Water	X	X	X		, 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ___ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	8/20/22 1240		FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by:	Date/Time: AUG 22 2022 0845	Company ETASTL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

9/19/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-171752-1

Login Number: 171752
List Number: 2
Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis
List Creation: 08/22/22 12:13 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 240-171753-1
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:
8/31/2022 2:14:40 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-171753-1

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.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-171753-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171753-1

Comments
No additional comments.

Receipt
The samples were received on 8/19/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.4º C, 1.2º C, 1.2º C and 1.2º C.

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: Federal CCR Wells - App III

Job ID: 240-171753-1

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: 240-171753-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171753-1	MW-17-F-20220817-01	Water	08/17/22 12:41	08/19/22 09:30
240-171753-2	2019-02-F-20220817-01	Water	08/17/22 14:24	08/19/22 09:30
240-171753-3	EB-001-F-20220817-01	Water	08/17/22 15:40	08/19/22 09:30

Detection Summary

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

Job ID: 240-171753-1

Client Sample ID: MW-17-F-20220817-01 — Lab Sample ID: 240-171753-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	400		100	57	ug/L	1		6010D	Total Recoverable
Calcium	91000		1000	580	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Potassium	5300		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2600000	B	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	4500		50	14	mg/L	50		300.0	Total/NA
Fluoride	1.5		0.25	0.12	mg/L	5		300.0	Total/NA
Sulfate	28		5.0	1.7	mg/L	5		300.0	Total/NA
Total Dissolved Solids	6700		100	78	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2019-02-F-20220817-01 — Lab Sample ID: 240-171753-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	290000		1000	580	ug/L	1		6020B	Total Recoverable
Potassium	13000		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	410000	B	1000	330	ug/L	1		6020B	Total Recoverable
Total Alkalinity	1500		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	16		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Chloride	110		2.0	0.57	mg/L	2		300.0	Total/NA
Fluoride	0.43		0.10	0.048	mg/L	2		300.0	Total/NA
Sulfate	6.4		2.0	0.70	mg/L	2		300.0	Total/NA
Total Dissolved Solids	1700		50	39	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-001-F-20220817-01 — Lab Sample ID: 240-171753-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	980	J B	1000	330	ug/L	1		6020B	Total Recoverable
Chloride	0.54	J	1.0	0.28	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171753-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: MW-17-F-20220817-01
Lab Sample ID: 240-171753-1

Date Collected: 08/17/22 12:41
Matrix: Water
Date Received: 08/19/22 09:30

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	400		100	57	ug/L		08/22/22 14:00	08/23/22 16:50	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	91000		1000	580	ug/L		08/22/22 14:00	08/23/22 19:15	1
Magnesium	16000		1000	200	ug/L		08/22/22 14:00	08/23/22 19:15	1
Potassium	5300		1000	220	ug/L		08/22/22 14:00	08/23/22 19:15	1
Sodium	2600000	B	1000	330	ug/L		08/22/22 14:00	08/23/22 19:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	240		5.0	2.6	mg/L			08/31/22 09:54	1
Bicarbonate Alkalinity as CaCO3	240		5.0	2.6	mg/L			08/31/22 09:54	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:54	1
Chloride	4500		50	14	mg/L			08/29/22 21:15	50
Fluoride	1.5		0.25	0.12	mg/L			08/29/22 20:55	5
Sulfate	28		5.0	1.7	mg/L			08/29/22 20:55	5
Total Dissolved Solids	6700		100	78	mg/L			08/24/22 13:17	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171753-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: 2019-02-F-20220817-01
Lab Sample ID: 240-171753-2

Date Collected: 08/17/22 14:24
Matrix: Water
Date Received: 08/19/22 09:30

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		08/22/22 14:00	08/23/22 16:55	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**290000**		1000	580	ug/L		08/22/22 14:00	08/23/22 19:50	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/23/22 19:50	1
Potassium	**13000**		1000	220	ug/L		08/22/22 14:00	08/23/22 19:50	1
Sodium	**410000**	**B**	1000	330	ug/L		08/22/22 14:00	08/23/22 19:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**1500**		5.0	2.6	mg/L			08/31/22 10:02	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:02	1
Carbonate Alkalinity as CaCO3	**16**		5.0	2.6	mg/L			08/31/22 10:02	1
Chloride	**110**		2.0	0.57	mg/L			08/29/22 21:35	2
Fluoride	**0.43**		0.10	0.048	mg/L			08/29/22 21:35	2
Sulfate	**6.4**		2.0	0.70	mg/L			08/29/22 21:35	2
Total Dissolved Solids	**1700**		50	39	mg/L			08/24/22 13:17	1

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171753-1
Project/Site: Federal CCR Wells - App III

Client Sample ID: EB-001-F-20220817-01
Lab Sample ID: 240-171753-3

Date Collected: 08/17/22 15:40
Matrix: Water
Date Received: 08/19/22 09:30

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		08/22/22 14:00	08/23/22 16:59	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		08/22/22 14:00	08/23/22 19:54	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/23/22 19:54	1
Potassium	1000	U	1000	220	ug/L		08/22/22 14:00	08/23/22 19:54	1
Sodium	**980**	**J B**	1000	330	ug/L		08/22/22 14:00	08/23/22 19:54	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			08/31/22 10:06	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:06	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:06	1
Chloride	**0.54**	**J**	1.0	0.28	mg/L			08/29/22 22:55	1
Fluoride	0.050	U	0.050	0.024	mg/L			08/29/22 22:55	1
Sulfate	1.0	U	1.0	0.35	mg/L			08/29/22 22:55	1
Total Dissolved Solids	10	U	10	7.8	mg/L			08/24/22 13:17	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-539692/1-A
Matrix: Water
Analysis Batch: 539905

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 539692

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		08/22/22 14:00	08/23/22 16:03	1

Lab Sample ID: LCS 240-539692/2-A
Matrix: Water
Analysis Batch: 539905

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 539692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	977		ug/L		98	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-539692/1-A
Matrix: Water
Analysis Batch: 539954

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 539692

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	580	ug/L		08/22/22 14:00	08/23/22 19:02	1
Magnesium	1000	U	1000	200	ug/L		08/22/22 14:00	08/23/22 19:02	1
Potassium	1000	U	1000	220	ug/L		08/22/22 14:00	08/23/22 19:02	1
Sodium	668	J	1000	330	ug/L		08/22/22 14:00	08/23/22 19:02	1

Lab Sample ID: LCS 240-539692/3-A
Matrix: Water
Analysis Batch: 539954

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 539692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	23700		ug/L		95	80 - 120
Magnesium	25000	23500		ug/L		94	80 - 120
Potassium	25000	23900		ug/L		96	80 - 120
Sodium	25000	24200		ug/L		97	80 - 120

Lab Sample ID: 240-171753-1 MS
Matrix: Water
Analysis Batch: 539954

Client Sample ID: MW-17-F-20220817-01
Prep Type: Total Recoverable
Prep Batch: 539692

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	91000		25000	112000		ug/L		84	80 - 120
Magnesium	16000		25000	39200		ug/L		93	80 - 120
Potassium	5300		25000	29400		ug/L		96	80 - 120
Sodium	2600000	B	25000	2510000	4	ug/L		-404	80 - 120

Lab Sample ID: 240-171753-1 MSD
Matrix: Water
Analysis Batch: 539954

Client Sample ID: MW-17-F-20220817-01
Prep Type: Total Recoverable
Prep Batch: 539692

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	91000		25000	116000		ug/L		99	80 - 120	3	20
Magnesium	16000		25000	39300		ug/L		94	80 - 120	0	20
Potassium	5300		25000	29800		ug/L		98	80 - 120	1	20
Sodium	2600000	B	25000	2580000	4	ug/L		-134	80 - 120	3	20

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-540918/4
Matrix: Water
Analysis Batch: 540918

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			08/31/22 09:30	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:30	1

Lab Sample ID: LCS 240-540918/3
Matrix: Water
Analysis Batch: 540918

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	140		mg/L		116	86 - 123

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-540510/3
Matrix: Water
Analysis Batch: 540510

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			08/29/22 10:40	1
Fluoride	0.050	U	0.050	0.024	mg/L			08/29/22 10:40	1
Sulfate	1.0	U	1.0	0.35	mg/L			08/29/22 10:40	1

Lab Sample ID: LCS 240-540510/4
Matrix: Water
Analysis Batch: 540510

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.8		mg/L		98	90 - 110
Fluoride	2.50	2.44		mg/L		98	90 - 110
Sulfate	50.0	49.0		mg/L		98	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-540018/1
Matrix: Water
Analysis Batch: 540018

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			08/24/22 13:17	1

Lab Sample ID: LCS 240-540018/2
Matrix: Water
Analysis Batch: 540018

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	186	151		mg/L		81	80 - 120

Metals

Prep Batch: 539692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171753-1	MW-17-F-20220817-01	Total Recoverable	Water	3005A	
240-171753-2	2019-02-F-20220817-01	Total Recoverable	Water	3005A	
240-171753-3	EB-001-F-20220817-01	Total Recoverable	Water	3005A	
MB 240-539692/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-539692/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-539692/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-171753-1 MS	MW-17-F-20220817-01	Total Recoverable	Water	3005A	
240-171753-1 MSD	MW-17-F-20220817-01	Total Recoverable	Water	3005A	

Analysis Batch: 539905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171753-1	MW-17-F-20220817-01	Total Recoverable	Water	6010D	539692
240-171753-2	2019-02-F-20220817-01	Total Recoverable	Water	6010D	539692
240-171753-3	EB-001-F-20220817-01	Total Recoverable	Water	6010D	539692
MB 240-539692/1-A	Method Blank	Total Recoverable	Water	6010D	539692
LCS 240-539692/2-A	Lab Control Sample	Total Recoverable	Water	6010D	539692

Analysis Batch: 539954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171753-1	MW-17-F-20220817-01	Total Recoverable	Water	6020B	539692
240-171753-2	2019-02-F-20220817-01	Total Recoverable	Water	6020B	539692
240-171753-3	EB-001-F-20220817-01	Total Recoverable	Water	6020B	539692
MB 240-539692/1-A	Method Blank	Total Recoverable	Water	6020B	539692
LCS 240-539692/3-A	Lab Control Sample	Total Recoverable	Water	6020B	539692
240-171753-1 MS	MW-17-F-20220817-01	Total Recoverable	Water	6020B	539692
240-171753-1 MSD	MW-17-F-20220817-01	Total Recoverable	Water	6020B	539692

General Chemistry

Analysis Batch: 540018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171753-1	MW-17-F-20220817-01	Total/NA	Water	SM 2540C	
240-171753-2	2019-02-F-20220817-01	Total/NA	Water	SM 2540C	
240-171753-3	EB-001-F-20220817-01	Total/NA	Water	SM 2540C	
MB 240-540018/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-540018/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 540510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171753-1	MW-17-F-20220817-01	Total/NA	Water	300.0	
240-171753-1	MW-17-F-20220817-01	Total/NA	Water	300.0	
240-171753-2	2019-02-F-20220817-01	Total/NA	Water	300.0	
240-171753-3	EB-001-F-20220817-01	Total/NA	Water	300.0	
MB 240-540510/3	Method Blank	Total/NA	Water	300.0	
LCS 240-540510/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 540918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171753-1	MW-17-F-20220817-01	Total/NA	Water	2320B-1997	
240-171753-2	2019-02-F-20220817-01	Total/NA	Water	2320B-1997	
240-171753-3	EB-001-F-20220817-01	Total/NA	Water	2320B-1997	

General Chemistry (Continued)

Analysis Batch: 540918 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-540918/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-540918/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Lab Chronicle

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

Job ID: 240-171753-1

Client Sample ID: MW-17-F-20220817-01

Lab Sample ID: 240-171753-1

Date Collected: 08/17/22 12:41
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539692	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6010D		1	539905	KLC	EET CAN	08/23/22 16:50
Total Recoverable	Prep	3005A			539692	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	539954	RKT	EET CAN	08/23/22 19:15
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 09:54
Total/NA	Analysis	300.0		5	540510	JWW	EET CAN	08/29/22 20:55
Total/NA	Analysis	300.0		50	540510	JWW	EET CAN	08/29/22 21:15
Total/NA	Analysis	SM 2540C		1	540018	JWW	EET CAN	08/24/22 13:17

Client Sample ID: 2019-02-F-20220817-01

Lab Sample ID: 240-171753-2

Date Collected: 08/17/22 14:24
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539692	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6010D		1	539905	KLC	EET CAN	08/23/22 16:55
Total Recoverable	Prep	3005A			539692	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	539954	RKT	EET CAN	08/23/22 19:50
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 10:02
Total/NA	Analysis	300.0		2	540510	JWW	EET CAN	08/29/22 21:35
Total/NA	Analysis	SM 2540C		1	540018	JWW	EET CAN	08/24/22 13:17

Client Sample ID: EB-001-F-20220817-01

Lab Sample ID: 240-171753-3

Date Collected: 08/17/22 15:40
Matrix: Water
Date Received: 08/19/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539692	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6010D		1	539905	KLC	EET CAN	08/23/22 16:59
Total Recoverable	Prep	3005A			539692	MRL	EET CAN	08/22/22 14:00
Total Recoverable	Analysis	6020B		1	539954	RKT	EET CAN	08/23/22 19:54
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 10:06
Total/NA	Analysis	300.0		1	540510	JWW	EET CAN	08/29/22 22:55
Total/NA	Analysis	SM 2540C		1	540018	JWW	EET CAN	08/24/22 13:17

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
Job ID: 240-171753-1
Project/Site: Federal CCR Wells - App III

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	02-23-23
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	08-31-22
Virginia	NELAP	11570	09-14-22
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

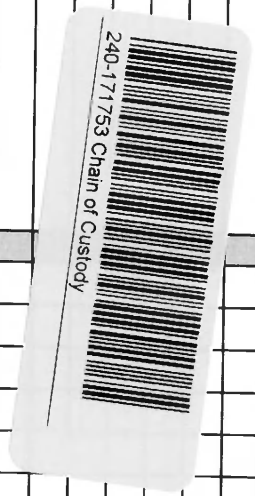
Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Caste	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93465-34577.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal CCR Wells - App III	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020	2540C_Calcd, 300.0_28D	2320B - Alkalinity	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N		
MW-17-F-20220817-01	8-17-22	1241	6	W			1	1	1		
2019-02-F-20220817-01	8-17-22	1424	6	W			1	1	1		
EB-001-F-20220817-01	8-17-22	1540	6	W			1	1	1		



Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Bobby Caste	8-19-22 0700	Kenvon	Walter Chilcott	081922 0700	Kenvon
2	Walter Chilcott	081922 0730	Kenvon		8-19-22 0930	EEINC
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

8/31/2022

Eurofins - Canton Sample Receipt Form/Narrative **Login # : 171753**
Barberton Facility

Client Lightstone Site Name _____ Cooler unpacked by: Rachelle Haidet

Cooler Received on 8.20.22 Opened on 8.20.22

FedEx: 1st Grd Exp UPS FAS Clipper (Client Drop Off) Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # _____ 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)	
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)	

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

1
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13

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**	0.4	0.4	**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**	1.2	1.2	**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

☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 240-171893-1
Client Project/Site: Federal CCR Wells - App IV

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

Attn: Taylor Huffman

Roxanne Cisneros

Authorized for release by:
9/19/2022 4:15:46 PM

Roxanne Cisneros, Senior Project Manager
(615)301-5761
roxanne.cisneros@et.eurofinsus.com

Table of Contents

Definitions/Glossary

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

Job ID: 240-171893-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-171893-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171893-1

Comments
The Radium analysis was performed at Eurofins St. Louis Laboratory.

Receipt
The samples were received on 8/22/2022 12:18 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8º C.

RAD
Methods 9315: Radium-226 batch 579318: 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. 2018-01-F-20220819-01 (240-171893-1), EB-001-F-20220819-01 (240-171893-2), (LCS 160-579318/2-A), (LCSD 160-579318/3-A) and (MB 160-579318/1-A)

Methods 9320: Radium-228 batch 579326: 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. 2018-01-F-20220819-01 (240-171893-1), EB-001-F-20220819-01 (240-171893-2), (LCS 160-579326/2-A), (LCSD 160-579326/3-A) and (MB 160-579326/1-A)

Method PrecSep_0: Radium-228 Prep Batch 160-579326: The following sample was prepared at a reduced aliquot due to Matrix: 2018-01-F-20220819-01 (240-171893-1). 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 160-579318: The following sample was prepared at a reduced aliquot due to Matrix: 2018-01-F-20220819-01 (240-171893-1). 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
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 - App IV

Job ID: 240-171893-1

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: 240-171893-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171893-1	2018-01-F-20220819-01	Water	08/19/22 09:50	08/22/22 12:18
240-171893-2	EB-001-F-20220819-01	Water	08/19/22 10:30	08/22/22 12:18

Detection Summary

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

Job ID: 240-171893-1

Client Sample ID: 2018-01-F-20220819-01 — Lab Sample ID: 240-171893-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.70	J	2.0	0.57	ug/L	1		6020B	Total Recoverable
Arsenic	110		5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	580		5.0	2.2	ug/L	1		6020B	Total Recoverable
Chromium	3.1	J	5.0	2.5	ug/L	1		6020B	Total Recoverable
Cobalt	0.55	J	1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	6.9	J	8.0	1.7	ug/L	1		6020B	Total Recoverable
Molybdenum	57		5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	3300		1000	220	ug/L	1		6020B	Total Recoverable
Selenium	8.8		5.0	0.89	ug/L	1		6020B	Total Recoverable
Sodium	2200000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	1.9		1.0	0.20	ug/L	1		6020B	Total Recoverable
Mercury	0.14	J B	0.20	0.13	ug/L	1		7470A	Total/NA
Total Alkalinity	310		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Carbonate Alkalinity as CaCO3	250		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	2.7		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

Client Sample ID: EB-001-F-20220819-01 — Lab Sample ID: 240-171893-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	650	J	1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.69	J	1.0	0.20	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: 2018-01-F-20220819-01
Lab Sample ID: 240-171893-1

Date Collected: 08/19/22 09:50
Matrix: Water
Date Received: 08/22/22 12:18

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.70**	**J**	2.0	0.57	ug/L		08/23/22 14:00	08/24/22 19:08	1
Arsenic	**110**		5.0	0.75	ug/L		08/23/22 14:00	08/24/22 19:08	1
Barium	**580**		5.0	2.2	ug/L		08/23/22 14:00	08/24/22 19:08	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/23/22 14:00	08/24/22 19:08	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/23/22 14:00	08/24/22 19:08	1
Chromium	**3.1**	**J**	5.0	2.5	ug/L		08/23/22 14:00	08/24/22 19:08	1
Cobalt	**0.55**	**J**	1.0	0.19	ug/L		08/23/22 14:00	08/24/22 19:08	1
Lead	1.0	U	1.0	0.45	ug/L		08/23/22 14:00	08/24/22 19:08	1
Lithium	**6.9**	**J**	8.0	1.7	ug/L		08/23/22 14:00	08/24/22 19:08	1
Magnesium	1000	U	1000	200	ug/L		08/23/22 14:00	08/24/22 19:08	1
Molybdenum	**57**		5.0	1.1	ug/L		08/23/22 14:00	08/24/22 19:08	1
Potassium	**3300**		1000	220	ug/L		08/23/22 14:00	08/24/22 19:08	1
Selenium	**8.8**		5.0	0.89	ug/L		08/23/22 14:00	08/24/22 19:08	1
Sodium	**2200000**		1000	330	ug/L		08/23/22 14:00	08/24/22 19:08	1
Thallium	**1.9**		1.0	0.20	ug/L		08/23/22 14:00	08/24/22 19:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.14**	**J B**	0.20	0.13	ug/L		08/24/22 12:00	08/25/22 10:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**310**		5.0	2.6	mg/L			08/31/22 10:52	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:52	1
Carbonate Alkalinity as CaCO3	**250**		5.0	2.6	mg/L			08/31/22 10:52	1
Fluoride	**2.7**		0.25	0.12	mg/L			09/13/22 15:23	5

Method: 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.822**		0.181	0.195	1.00	0.112	pCi/L	08/24/22 11:00	09/15/22 07:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:17*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.19**		0.495	0.507	1.00	0.642	pCi/L	08/24/22 11:44	09/02/22 12:03	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.6*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:03*	*1*
Y Carrier	*86.4*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:03*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171893-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 2018-01-F-20220819-01
Lab Sample ID: 240-171893-1
Date Collected: 08/19/22 09:50
Matrix: Water
Date Received: 08/22/22 12:18

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	2.01		0.527	0.543	5.00	0.642	pCi/L		09/19/22 15:51	1

Client Sample ID: EB-001-F-20220819-01
Lab Sample ID: 240-171893-2

Date Collected: 08/19/22 10:30
Matrix: Water
Date Received: 08/22/22 12:18

Method: 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		08/23/22 14:00	08/24/22 19:12	1
Arsenic	5.0	U	5.0	0.75	ug/L		08/23/22 14:00	08/24/22 19:12	1
Barium	5.0	U	5.0	2.2	ug/L		08/23/22 14:00	08/24/22 19:12	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/23/22 14:00	08/24/22 19:12	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/23/22 14:00	08/24/22 19:12	1
Chromium	5.0	U	5.0	2.5	ug/L		08/23/22 14:00	08/24/22 19:12	1
Cobalt	1.0	U	1.0	0.19	ug/L		08/23/22 14:00	08/24/22 19:12	1
Lead	1.0	U	1.0	0.45	ug/L		08/23/22 14:00	08/24/22 19:12	1
Lithium	8.0	U	8.0	1.7	ug/L		08/23/22 14:00	08/24/22 19:12	1
Magnesium	1000	U	1000	200	ug/L		08/23/22 14:00	08/24/22 19:12	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/23/22 14:00	08/24/22 19:12	1
Potassium	1000	U	1000	220	ug/L		08/23/22 14:00	08/24/22 19:12	1
Selenium	5.0	U	5.0	0.89	ug/L		08/23/22 14:00	08/24/22 19:12	1
Sodium	**650**	**J**	1000	330	ug/L		08/23/22 14:00	08/24/22 19:12	1
Thallium	**0.69**	**J**	1.0	0.20	ug/L		08/23/22 14:00	08/24/22 19:12	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		08/24/22 12:00	08/25/22 10:31	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			08/31/22 10:56	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:56	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 10:56	1
Fluoride	0.050	U	0.050	0.024	mg/L			09/13/22 15:45	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	-0.0177	U	0.0540	0.0540	1.00	0.117	pCi/L	08/24/22 11:00	09/15/22 07:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.1*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:17*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.159	U	0.282	0.282	1.00	0.486	pCi/L	08/24/22 11:44	09/02/22 12:04	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.1*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:04*	*1*
Y Carrier	*86.4*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:04*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171893-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: EB-001-F-20220819-01
Lab Sample ID: 240-171893-2

Date Collected: 08/19/22 10:30
Matrix: Water
Date Received: 08/22/22 12:18

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	0.141	U	0.287	0.287	5.00	0.486	pCi/L		09/19/22 15:51	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171893-1
Project/Site: Federal CCR Wells - App IV

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)
240-171893-1	2018-01-F-20220819-01	93.6
240-171893-2	EB-001-F-20220819-01	89.1
LCS 160-579318/2-A	Lab Control Sample	98.8
LCSD 160-579318/3-A	Lab Control Sample Dup	96.8
MB 160-579318/1-A	Method Blank	97.0

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-171893-1	2018-01-F-20220819-01	93.6	86.4
240-171893-2	EB-001-F-20220819-01	89.1	86.4
LCS 160-579326/2-A	Lab Control Sample	98.8	87.1
LCSD 160-579326/3-A	Lab Control Sample Dup	96.8	86.4
MB 160-579326/1-A	Method Blank	97.0	89.0

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-539834/1-A
Matrix: Water
Analysis Batch: 540072

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 539834

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		08/23/22 14:00	08/24/22 13:37	1
Arsenic	5.0	U	5.0	0.75	ug/L		08/23/22 14:00	08/24/22 13:37	1
Barium	5.0	U	5.0	2.2	ug/L		08/23/22 14:00	08/24/22 13:37	1
Beryllium	1.0	U	1.0	0.62	ug/L		08/23/22 14:00	08/24/22 13:37	1
Cadmium	1.0	U	1.0	0.20	ug/L		08/23/22 14:00	08/24/22 13:37	1
Chromium	5.0	U	5.0	2.5	ug/L		08/23/22 14:00	08/24/22 13:37	1
Cobalt	1.0	U	1.0	0.19	ug/L		08/23/22 14:00	08/24/22 13:37	1
Lead	1.0	U	1.0	0.45	ug/L		08/23/22 14:00	08/24/22 13:37	1
Lithium	8.0	U	8.0	1.7	ug/L		08/23/22 14:00	08/24/22 13:37	1
Magnesium	1000	U	1000	200	ug/L		08/23/22 14:00	08/24/22 13:37	1
Molybdenum	5.0	U	5.0	1.1	ug/L		08/23/22 14:00	08/24/22 13:37	1
Potassium	1000	U	1000	220	ug/L		08/23/22 14:00	08/24/22 13:37	1
Selenium	5.0	U	5.0	0.89	ug/L		08/23/22 14:00	08/24/22 13:37	1
Sodium	1000	U	1000	330	ug/L		08/23/22 14:00	08/24/22 13:37	1
Thallium	1.0	U	1.0	0.20	ug/L		08/23/22 14:00	08/24/22 13:37	1

Lab Sample ID: LCS 240-539834/3-A
Matrix: Water
Analysis Batch: 540072

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 539834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	105		ug/L		105	80 - 120
Arsenic	1000	999		ug/L		100	80 - 120
Barium	1000	971		ug/L		97	80 - 120
Beryllium	500	518		ug/L		104	80 - 120
Cadmium	500	499		ug/L		100	80 - 120
Chromium	500	495		ug/L		99	80 - 120
Cobalt	500	510		ug/L		102	80 - 120
Lead	500	496		ug/L		99	80 - 120
Lithium	500	517		ug/L		103	80 - 120
Magnesium	25000	25500		ug/L		102	80 - 120
Molybdenum	500	494		ug/L		99	80 - 120
Potassium	25000	25500		ug/L		102	80 - 120
Selenium	1000	1000		ug/L		100	80 - 120
Sodium	25000	25400		ug/L		102	80 - 120
Thallium	1000	1020		ug/L		102	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-539985/1-A
Matrix: Water
Analysis Batch: 540177

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.146	J	0.20	0.13	ug/L		08/24/22 12:00	08/25/22 10:03	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-539985/2-A
Matrix: Water
Analysis Batch: 540177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539985

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.64		ug/L		113	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-540918/4
Matrix: Water
Analysis Batch: 540918

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			08/31/22 09:30	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:30	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			08/31/22 09:30	1

Lab Sample ID: LCS 240-540918/3
Matrix: Water
Analysis Batch: 540918

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	140		mg/L		116	86 - 123

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-542476/8
Matrix: Water
Analysis Batch: 542476

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			09/13/22 12:51	1

Lab Sample ID: LCS 240-542476/9
Matrix: Water
Analysis Batch: 542476

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	2.50		mg/L		100	90 - 110

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-579318/1-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579318

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0006513	U	0.0453	0.0453	1.00	0.0937	pCi/L	08/24/22 11:00	09/15/22 07:14	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.0*		*40 - 110*	*08/24/22 11:00*	*09/15/22 07:14*	*1*

Method: 9315 - Radium 226 by GFPC (Continued)

Lab Sample ID: LCS 160-579318/2-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579318

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.37		1.07	1.00	0.116	pCi/L	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*

Lab Sample ID: LCSD 160-579318/3-A
Matrix: Water
Analysis Batch: 582217

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 579318

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	9.264		0.968	1.00	0.107	pCi/L	82	75 - 125	0.54	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.8*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-579326/1-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 579326

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1004	U	0.226	0.226	1.00	0.453	pCi/L	08/24/22 11:44	09/02/22 12:00	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.0*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*1*
Y Carrier	*89.0*		*40 - 110*	*08/24/22 11:44*	*09/02/22 12:00*	*1*

Lab Sample ID: LCS 160-579326/2-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579326

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.31	9.408		1.23	1.00	0.429	pCi/L	113	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.8*		*40 - 110*
Y Carrier	*87.1*		*40 - 110*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-579326/3-A
Matrix: Water
Analysis Batch: 580470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 579326

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.31	8.818		1.18	1.00	0.454	pCi/L	106	75 - 125	0.24	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*96.8*		*40 - 110*
Y Carrier	*86.4*		*40 - 110*

Metals

Prep Batch: 539834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171893-1	2018-01-F-20220819-01	Total Recoverable	Water	3005A	
240-171893-2	EB-001-F-20220819-01	Total Recoverable	Water	3005A	
MB 240-539834/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-539834/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 539985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171893-1	2018-01-F-20220819-01	Total/NA	Water	7470A	
240-171893-2	EB-001-F-20220819-01	Total/NA	Water	7470A	
MB 240-539985/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-539985/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 540072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171893-1	2018-01-F-20220819-01	Total Recoverable	Water	6020B	539834
240-171893-2	EB-001-F-20220819-01	Total Recoverable	Water	6020B	539834
MB 240-539834/1-A	Method Blank	Total Recoverable	Water	6020B	539834
LCS 240-539834/3-A	Lab Control Sample	Total Recoverable	Water	6020B	539834

Analysis Batch: 540177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171893-1	2018-01-F-20220819-01	Total/NA	Water	7470A	539985
240-171893-2	EB-001-F-20220819-01	Total/NA	Water	7470A	539985
MB 240-539985/1-A	Method Blank	Total/NA	Water	7470A	539985
LCS 240-539985/2-A	Lab Control Sample	Total/NA	Water	7470A	539985

General Chemistry

Analysis Batch: 540918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171893-1	2018-01-F-20220819-01	Total/NA	Water	2320B-1997	
240-171893-2	EB-001-F-20220819-01	Total/NA	Water	2320B-1997	
MB 240-540918/4	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-540918/3	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 542476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171893-1	2018-01-F-20220819-01	Total/NA	Water	300.0-1993 R2.1	
240-171893-2	EB-001-F-20220819-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-542476/8	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-542476/9	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 579318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171893-1	2018-01-F-20220819-01	Total/NA	Water	PrecSep-21	
240-171893-2	EB-001-F-20220819-01	Total/NA	Water	PrecSep-21	
MB 160-579318/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-579318/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-579318/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

QC Association Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171893-1
Project/Site: Federal CCR Wells - App IV

Rad

Prep Batch: 579326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171893-1	2018-01-F-20220819-01	Total/NA	Water	PrecSep_0	
240-171893-2	EB-001-F-20220819-01	Total/NA	Water	PrecSep_0	
MB 160-579326/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-579326/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-579326/3-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: 240-171893-1

Client Sample ID: 2018-01-F-20220819-01

Lab Sample ID: 240-171893-1

Date Collected: 08/19/22 09:50

Matrix: Water

Date Received: 08/22/22 12:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539834	SHB	EET CAN	08/23/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 19:08
Total/NA	Prep	7470A			539985	SHB	EET CAN	08/24/22 12:00
Total/NA	Analysis	7470A		1	540177	MRL	EET CAN	08/25/22 10:29
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 10:52
Total/NA	Analysis	300.0-1993 R2.1		5	542476	JMB	EET CAN	09/13/22 15:23
Total/NA	Prep	PrecSep-21			579318	BMP	EET SL	08/24/22 11:00
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 07:17
Total/NA	Prep	PrecSep_0			579326	BMP	EET SL	08/24/22 11:44
Total/NA	Analysis	9320		1	580436	FLC	EET SL	09/02/22 12:03
Total/NA	Analysis	Ra226_Ra228		1	582676	SCB	EET SL	09/19/22 15:51

Client Sample ID: EB-001-F-20220819-01

Lab Sample ID: 240-171893-2

Date Collected: 08/19/22 10:30

Matrix: Water

Date Received: 08/22/22 12:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			539834	SHB	EET CAN	08/23/22 14:00
Total Recoverable	Analysis	6020B		1	540072	DSH	EET CAN	08/24/22 19:12
Total/NA	Prep	7470A			539985	SHB	EET CAN	08/24/22 12:00
Total/NA	Analysis	7470A		1	540177	MRL	EET CAN	08/25/22 10:31
Total/NA	Analysis	2320B-1997		1	540918	MMS	EET CAN	08/31/22 10:56
Total/NA	Analysis	300.0-1993 R2.1		1	542476	JMB	EET CAN	09/13/22 15:45
Total/NA	Prep	PrecSep-21			579318	BMP	EET SL	08/24/22 11:00
Total/NA	Analysis	9315		1	582217	FLC	EET SL	09/15/22 07:17
Total/NA	Prep	PrecSep_0			579326	BMP	EET SL	08/24/22 11:44
Total/NA	Analysis	9320		1	580436	FLC	EET SL	09/02/22 12:04
Total/NA	Analysis	Ra226_Ra228		1	582676	SCB	EET SL	09/19/22 15:51

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
Job ID: 240-171893-1
Project/Site: Federal CCR Wells - App IV

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	02-23-23
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	09-14-22
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	09-30-23
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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-171893-1
Project/Site: Federal CCR Wells - App IV

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	08-31-23
Oregon	NELAP	4157	09-01-23
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	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

0.6/D.8

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Castro	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93466-34578.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal CCR Wells - App IV	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
2018-01-F-20220819-01	8-19-22	0950	G	Water			1	1	1	2		
EB-001-F-20220819-01	8-19-22	1030	G	Water			1	1	1	2		
				Water								
				Water								
				Water								
	BC											

240-171893 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Bobby Castro	8-22-22 1030	KENRON	Walter Caudill	08/22/22	0730
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Walter Caudill	08/22/22 1215	Kenron		Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

9/19/2022

Eurofins - Canton Sample Receipt Form/Narrative Login # : 171893

Barberton Facility

Client Lightstone Site Name

Cooler Received on 8-22-22 Opened on 8-22-22

Cooler unpacked by: Rachelle Haidet

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 0.0 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C
   IR GUN #IR-15 (CF -0.7°C) Observed Cooler Temp 0.8 °C Corrected Cooler Temp 0.8 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity ____	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA
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

pH Strip Lot# HC286797

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.
Sample(s) ____ were received in a broken container.
Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.
Time preserved: ____ Preservative(s) added/Lot number(s): ____

VOA Sample Preservation - Date/Time VOAs Frozen: ____

WI-NC-099

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-156287.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-171893-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 9/6/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045	PO #:			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	WO #:			
Email:	Project #: 24019633			
Project Name: Gavin CCR	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
2018-01-F-20220819-01 (240-171893-1)	8/19/22	09:50 Eastern		Water			X	X	X	2	, Recount of TAR after 21 day ingrowth if > action limit; save planchet
EB-001-F-20220819-01 (240-171893-2)	8/19/22	10:30 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	8/22 14:44	ETNL	FED EX		
Relinquished by: FED EX	Date/Time:	Company	Received by:	Date/Time: AUG 23 2022 0933	Company ETNL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∧ Yes ∧ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-171893-1

Login Number: 171893
List Number: 2
Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis
List Creation: 08/23/22 10:32 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	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

ANALYTICAL REPORT

PREPARED FOR

Attn: Taylor Huffman
Lightstone Generation Gavin Power LLC
7397 OH-7
Cheshire Ohio 45620
Generated 11/23/2022 5:21:43 PM

JOB DESCRIPTION

Federal CCR Wells - App IV

JOB NUMBER

240-175246-1

Eurofins Canton
180 S. Van Buren Avenue
Barberton OH 44203

myEOL

Table of Contents

Definitions/Glossary

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

Job ID: 240-175246-1

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.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-175246-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-175246-1

Comments
No additional comments.

Receipt
The samples were received on 10/24/2022 12:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.8º C, 1.2º C and 2.1º C.

RAD
Methods 9315: Radium-226 batch 587651: 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-20221021-01 (240-175246-1), (LCS 160-587651/2-A), (MB 160-587651/1-A)

Methods 9320: Radium-228 batch 587658: The method blank (MB) has activity above the MDC and RL. The following associated samples are either below the reporting limit for the contaminant or exhibit concentrations greater than five (5) times the concentrations observed in the MB), therefore, re-analysis is not required. The data have been reported. (MB 160-587658/1-A)

Methods 9320: Radium-228 batch 587658: 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. (LCS 160-587658/2-A), (MB 160-587658/1-A)

Methods 9320: Radium-228 batch 590544: 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-20221021-01 (240-175246-1), (LCS 160-590544/2-A), (LCSD 160-590544/3-A) and (MB 160-590544/1-A)

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
Job ID: 240-175246-1
Project/Site: Federal CCR Wells - App IV

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: 240-175246-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-175246-1	96152-F-20221021-01	Water	10/21/22 11:53	10/24/22 12:30

Detection Summary

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

Job ID: 240-175246-1

Client Sample ID: 96152-F-20221021-01

Lab Sample ID: 240-175246-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.0	J	5.0	0.75	ug/L	1		6020B	Total Recoverable
Barium	680		5.0	2.2	ug/L	1		6020B	Total Recoverable
Cobalt	1.9		1.0	0.19	ug/L	1		6020B	Total Recoverable
Lithium	84		8.0	1.7	ug/L	1		6020B	Total Recoverable
Magnesium	16000		1000	200	ug/L	1		6020B	Total Recoverable
Molybdenum	4.0	J	5.0	1.1	ug/L	1		6020B	Total Recoverable
Potassium	8600		1000	220	ug/L	1		6020B	Total Recoverable
Sodium	2200000		1000	330	ug/L	1		6020B	Total Recoverable
Thallium	0.72	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Total Alkalinity	510		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	510		5.0	2.6	mg/L	1		2320B-1997	Total/NA
Fluoride	0.89		0.25	0.12	mg/L	5		300.0-1993 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175246-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 96152-F-20221021-01
Lab Sample ID: 240-175246-1

Date Collected: 10/21/22 11:53
Matrix: Water
Date Received: 10/24/22 12:30

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		10/25/22 12:00	11/02/22 16:04	1
Arsenic	**4.0**	**J**	5.0	0.75	ug/L		10/25/22 12:00	11/02/22 16:04	1
Barium	**680**		5.0	2.2	ug/L		10/25/22 12:00	11/02/22 16:04	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/25/22 12:00	11/02/22 16:04	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/25/22 12:00	11/02/22 16:04	1
Chromium	5.0	U	5.0	2.5	ug/L		10/25/22 12:00	11/02/22 16:04	1
Cobalt	**1.9**		1.0	0.19	ug/L		10/25/22 12:00	11/02/22 16:04	1
Lead	1.0	U	1.0	0.45	ug/L		10/25/22 12:00	11/02/22 16:04	1
Lithium	**84**		8.0	1.7	ug/L		10/25/22 12:00	11/02/22 16:04	1
Magnesium	**16000**		1000	200	ug/L		10/25/22 12:00	11/02/22 16:04	1
Molybdenum	**4.0**	**J**	5.0	1.1	ug/L		10/25/22 12:00	11/02/22 16:04	1
Potassium	**8600**		1000	220	ug/L		10/25/22 12:00	11/02/22 16:04	1
Selenium	5.0	U	5.0	0.89	ug/L		10/25/22 12:00	11/02/22 16:04	1
Sodium	**2200000**		1000	330	ug/L		10/25/22 12:00	11/02/22 16:04	1
Thallium	**0.72**	**J**	1.0	0.20	ug/L		10/25/22 12:00	11/02/22 16:04	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		10/25/22 12:00	10/26/22 18:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity (SM 2320B-1997)	**510**		5.0	2.6	mg/L			10/26/22 00:19	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-1997)	**510**		5.0	2.6	mg/L			10/26/22 00:19	1
Carbonate Alkalinity as CaCO3 (SM 2320B-1997)	5.0	U	5.0	2.6	mg/L			10/26/22 00:19	1
Fluoride (EPA 300.0-1993 R2.1)	**0.89**		0.25	0.12	mg/L			11/16/22 11:16	5

Method: SW846 9315 - Radium 226 by GFPC

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**1.46**		0.233	0.267	1.00	0.134	pCi/L	10/28/22 11:09	11/21/22 11:00	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.8*		*40 - 110*	*10/28/22 11:09*	*11/21/22 11:00*	*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	**2.25**		0.479	0.522	1.00	0.438	pCi/L	11/18/22 08:22	11/23/22 13:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*40 - 110*	*11/18/22 08:22*	*11/23/22 13:10*	*1*
Y Carrier	*87.9*		*40 - 110*	*11/18/22 08:22*	*11/23/22 13:10*	*1*

Client Sample Results

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175246-1
Project/Site: Federal CCR Wells - App IV

Client Sample ID: 96152-F-20221021-01
Lab Sample ID: 240-175246-1
Date Collected: 10/21/22 11:53
Matrix: Water
Date Received: 10/24/22 12:30

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	3.71		0.533	0.586	5.00	0.438	pCi/L		11/23/22 16:28	1

Tracer/Carrier Summary

Client: Lightstone Generation Gavin Power LLC
Job ID: 240-175246-1
Project/Site: Federal CCR Wells - App IV

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)
240-175246-1	96152-F-20221021-01	99.8
LCS 160-587651/2-A	Lab Control Sample	97.8
MB 160-587651/1-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)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
240-175246-1	96152-F-20221021-01	101	87.9
LCS 160-590544/2-A	Lab Control Sample	97.3	87.5
LCSD 160-590544/3-A	Lab Control Sample Dup	95.9	84.9
MB 160-590544/1-A	Method Blank	97.6	85.6

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-548656/1-A
Matrix: Water
Analysis Batch: 550204

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 548656

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.57	ug/L		10/25/22 12:00	11/02/22 15:56	1
Arsenic	5.0	U	5.0	0.75	ug/L		10/25/22 12:00	11/02/22 15:56	1
Barium	5.0	U	5.0	2.2	ug/L		10/25/22 12:00	11/02/22 15:56	1
Beryllium	1.0	U	1.0	0.62	ug/L		10/25/22 12:00	11/02/22 15:56	1
Cadmium	1.0	U	1.0	0.20	ug/L		10/25/22 12:00	11/02/22 15:56	1
Chromium	5.0	U	5.0	2.5	ug/L		10/25/22 12:00	11/02/22 15:56	1
Cobalt	1.0	U	1.0	0.19	ug/L		10/25/22 12:00	11/02/22 15:56	1
Lead	1.0	U	1.0	0.45	ug/L		10/25/22 12:00	11/02/22 15:56	1
Lithium	8.0	U	8.0	1.7	ug/L		10/25/22 12:00	11/02/22 15:56	1
Magnesium	1000	U	1000	200	ug/L		10/25/22 12:00	11/02/22 15:56	1
Molybdenum	5.0	U	5.0	1.1	ug/L		10/25/22 12:00	11/02/22 15:56	1
Potassium	1000	U	1000	220	ug/L		10/25/22 12:00	11/02/22 15:56	1
Selenium	5.0	U	5.0	0.89	ug/L		10/25/22 12:00	11/02/22 15:56	1
Sodium	1000	U	1000	330	ug/L		10/25/22 12:00	11/02/22 15:56	1
Thallium	1.0	U	1.0	0.20	ug/L		10/25/22 12:00	11/02/22 15:56	1

Lab Sample ID: LCS 240-548656/2-A
Matrix: Water
Analysis Batch: 550204

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 548656

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	102		ug/L		102	80 - 120
Arsenic	1000	976		ug/L		98	80 - 120
Barium	1000	968		ug/L		97	80 - 120
Beryllium	500	492		ug/L		98	80 - 120
Cadmium	500	494		ug/L		99	80 - 120
Chromium	500	495		ug/L		99	80 - 120
Cobalt	500	494		ug/L		99	80 - 120
Lead	500	497		ug/L		99	80 - 120
Lithium	500	484		ug/L		97	80 - 120
Magnesium	25000	25400		ug/L		101	80 - 120
Molybdenum	500	482		ug/L		96	80 - 120
Potassium	25000	25200		ug/L		101	80 - 120
Selenium	1000	980		ug/L		98	80 - 120
Sodium	25000	25600		ug/L		102	80 - 120
Thallium	1000	1000		ug/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-548658/1-A
Matrix: Water
Analysis Batch: 548894

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 548658

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.13	ug/L		10/25/22 12:00	10/26/22 17:12	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-548658/2-A
Matrix: Water
Analysis Batch: 548894

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 548658

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.43		ug/L		109	80 - 120

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-548766/109
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 23:51	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 23:51	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 23:51	1

Lab Sample ID: MB 240-548766/83
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 22:01	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 22:01	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	2.6	mg/L			10/25/22 22:01	1

Lab Sample ID: LCS 240-548766/108
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	140		mg/L		96	86 - 123

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-552119/3
Matrix: Water
Analysis Batch: 552119

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			11/16/22 01:51	1

Lab Sample ID: LCS 240-552119/4
Matrix: Water
Analysis Batch: 552119

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	2.69		mg/L		108	90 - 110

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-175246-1 MS
Matrix: Water
Analysis Batch: 552119

Client Sample ID: 96152-F-20221021-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.89		12.5	14.4		mg/L		108	80 - 120

Lab Sample ID: 240-175246-1 MSD
Matrix: Water
Analysis Batch: 552119

Client Sample ID: 96152-F-20221021-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.89		12.5	14.3		mg/L		107	80 - 120	1	15

Method: 9315 - Radium 226 by GFPC

Lab Sample ID: MB 160-587651/1-A
Matrix: Water
Analysis Batch: 590886

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 587651

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.2293		0.107	0.109	1.00	0.123	pCi/L	10/28/22 11:09	11/21/22 10:50	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.6*		*40 - 110*	*10/28/22 11:09*	*11/21/22 10:50*	*1*

Lab Sample ID: LCS 160-587651/2-A
Matrix: Water
Analysis Batch: 590886

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 587651

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.3	10.93		1.17	1.00	0.0977	pCi/L	96	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.8*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-590544/1-A
Matrix: Water
Analysis Batch: 591199

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 590544

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1115	U	0.295	0.295	1.00	0.521	pCi/L	11/18/22 08:22	11/23/22 13:28	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*97.6*		*40 - 110*	*11/18/22 08:22*	*11/23/22 13:28*	*1*
Y Carrier	*85.6*		*40 - 110*	*11/18/22 08:22*	*11/23/22 13:28*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-590544/2-A
Matrix: Water
Analysis Batch: 591199

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 590544

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.42	8.987		1.22	1.00	0.486	pCi/L	107	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*97.3*		*40 - 110*
Y Carrier	*87.5*		*40 - 110*

Lab Sample ID: LCSD 160-590544/3-A
Matrix: Water
Analysis Batch: 591199

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 590544

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.42	9.176		1.25	1.00	0.466	pCi/L	109	75 - 125	0.08	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*95.9*		*40 - 110*
Y Carrier	*84.9*		*40 - 110*

Metals

Prep Batch: 548656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175246-1	96152-F-20221021-01	Total Recoverable	Water	3005A	
MB 240-548656/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-548656/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 548658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175246-1	96152-F-20221021-01	Total/NA	Water	7470A	
MB 240-548658/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-548658/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 548894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175246-1	96152-F-20221021-01	Total/NA	Water	7470A	548658
MB 240-548658/1-A	Method Blank	Total/NA	Water	7470A	548658
LCS 240-548658/2-A	Lab Control Sample	Total/NA	Water	7470A	548658

Analysis Batch: 550204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175246-1	96152-F-20221021-01	Total Recoverable	Water	6020B	548656
MB 240-548656/1-A	Method Blank	Total Recoverable	Water	6020B	548656
LCS 240-548656/2-A	Lab Control Sample	Total Recoverable	Water	6020B	548656

General Chemistry

Analysis Batch: 548766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175246-1	96152-F-20221021-01	Total/NA	Water	2320B-1997	
MB 240-548766/109	Method Blank	Total/NA	Water	2320B-1997	
MB 240-548766/83	Method Blank	Total/NA	Water	2320B-1997	
LCS 240-548766/108	Lab Control Sample	Total/NA	Water	2320B-1997	

Analysis Batch: 552119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175246-1	96152-F-20221021-01	Total/NA	Water	300.0-1993 R2.1	
MB 240-552119/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-552119/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
240-175246-1 MS	96152-F-20221021-01	Total/NA	Water	300.0-1993 R2.1	
240-175246-1 MSD	96152-F-20221021-01	Total/NA	Water	300.0-1993 R2.1	

Rad

Prep Batch: 587651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175246-1	96152-F-20221021-01	Total/NA	Water	PrecSep-21	
MB 160-587651/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-587651/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 590544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-175246-1	96152-F-20221021-01	Total/NA	Water	PrecSep_0	
MB 160-590544/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-590544/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Rad (Continued)

Prep Batch: 590544 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 160-590544/3-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: 240-175246-1

Client Sample ID: 96152-F-20221021-01

Date Collected: 10/21/22 11:53
Date Received: 10/24/22 12:30

Lab Sample ID: 240-175246-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			548656	SHB	EET CAN	10/25/22 12:00
Total Recoverable	Analysis	6020B		1	550204	DSH	EET CAN	11/02/22 16:04
Total/NA	Prep	7470A			548658	SHB	EET CAN	10/25/22 12:00
Total/NA	Analysis	7470A		1	548894	MRL	EET CAN	10/26/22 18:13
Total/NA	Analysis	2320B-1997		1	548766	JMR	EET CAN	10/26/22 00:19
Total/NA	Analysis	300.0-1993 R2.1		5	552119	JMB	EET CAN	11/16/22 11:16
Total/NA	Prep	PrecSep-21			587651	BMP	EET SL	10/28/22 11:09
Total/NA	Analysis	9315		1	590887	FLC	EET SL	11/21/22 11:00
Total/NA	Prep	PrecSep_0			590544	DJP	EET SL	11/18/22 08:22
Total/NA	Analysis	9320		1	591177	FLC	EET SL	11/23/22 13:10
Total/NA	Analysis	Ra226_Ra228		1	591203	CAH	EET SL	11/23/22 16:28

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
Job ID: 240-175246-1
Project/Site: Federal CCR Wells - App IV

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	10-31-23
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
Job ID: 240-175246-1
Project/Site: Federal CCR Wells - App IV

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

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Bobby Castle	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-93466-34578.1
Client Contact: Taylor Huffman	Phone: 740-373-4308	E-Mail: roxanne.cisneros@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: Lightstone Generation Gavin Power LLC	PWSID:			Job #:
Address: 7397 OH-7	Due Date Requested:			
City: Cheshire	TAT Requested (days):			
State, Zip: OH, 45620	Compliance Project: Δ Yes Δ No			
Phone: 740-925-3171(Tel)	PO #: 2935505			
Email: taylor.huffman@lightstonegen.com	WO #:			
Project Name: Federal CCR Wells - App IV	Project #: 24019633			
Site: Gavin	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7470A	300.0_28D - Fluoride	2320B - Alkalinity	9315_Ra226, 9320_Ra228, Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D		
9615-2-F-20221021-01	10-21-22	1153	G	Water			1	1	1	2		
				Water								
				Water								
				Water								
				Water								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be as... re retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Bobby Castle	10-24-22 / 0630	Kemron	Walter Culpepper	102422 0630	Kemron
2	Walter Culpepper	102422 1230	Kemron		10-24-22 1230	
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks.

Ver: 01/16/2019

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	0.8	0.8	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	2.1	2.1	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

175246

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____

Barberton Facility

Client Lisa Starr GAIN Site Name _____

Cooler Received on 10-24-22 Opened on 10-4-22

Cooler unpacked by: Mandy

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time **Storage Location** _____

Eurofins Cooler # 0012 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
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

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: _____

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cisneros, Roxanne	Carrier Tracking No(s):	COC No: 240-159268.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: roxanne.cisneros@et.eurofinsus.com	State of Origin: Ohio	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 240-175246-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/7/2022			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: Gavin CCR	Project #: 24019633			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC)	9320_Ra228/PrecSep_0 Radium-228 (GFPC)	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
9615-2-F-20221021-01 (240-175246-1)	10/21/22	11:53 Eastern		Water			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 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/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 complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10/22 1705	ECTC	FED EX		
2	FED EX				OCT 25 2022 0900	PTS STL
3				Autumn R. Johnson		

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

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11/23/2022

Login Sample Receipt Checklist

Client: Lightstone Generation Gavin Power LLC

Job Number: 240-175246-1

Login Number: 175246
List Number: 2
Creator: Booker, Autumn R

List Source: Eurofins St. Louis
List Creation: 10/25/22 04:54 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

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Authorization

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Authorized for release by
Roxanne Cisneros, Senior Project Manager
roxanne.cisneros@et.eurofinsus.com
(615)301-5761

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ERM's Boston Office
One Beacon Street, 5th Floor
Boston, MA
02108

T: +1 617 646 7800
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