

ALTERNATIVE SOURCE DEMONSTRATION REPORT

2024 1st SEMIANNUAL EVENT TEXAS STATE CCR RULE

H.W. Pirkey Power Plant Landfill Registration No. CCR 104 Hallsville, Texas

Prepared for

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Project CHA8495B

December 2024

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ACRONYMS AND ABBREVIATIONS

AEP	American Electric Power
ASD	alternative source demonstration
CCR	coal combustion residuals
EPRI	Electric Power Research Institute
HDPE	high-density polyethylene
LPL	lower prediction limit
mg/L	milligrams per liter
SSI	statistically significant increase
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
UPL	upper prediction limit

1. INTRODUCTION AND SUMMARY

This alternative source demonstration (ASD) report has been prepared to address statistically significant increases (SSIs) for boron and chloride in the groundwater monitoring network at the H.W. Pirkey Plant Landfill (Landfill) in Hallsville, Texas, following the first semiannual detection monitoring event of 2024. The H.W. Pirkey Plant has four coal combustion residuals (CCR) storage units regulated by the Texas Commission on Environmental Quality (TCEQ) under Registration No. CCR104, including the Landfill (**Figure 1**). The western side of the Landfill overlies a former lignite mining area, as shown on **Figure 2**.

Background groundwater concentrations for the Landfill were initially calculated in January 2018 with data from at least eight monitoring events (Geosyntec 2018). Upper prediction limits (UPLs) were calculated for each Appendix III parameter to represent background values. Lower prediction limits (LPLs) were also calculated for pH.

Because of the presence of lignite mine spoils within the screened interval at downgradient well AD-34, an ASD was certified on January 7, 2020 which resulted in a switch in the groundwater monitoring network statistics from interwell tests to intrawell tests for evaluation of pH, sulfate, and total dissolved solids prediction limits for all wells (Geosyntec 2020). The intrawell prediction limits were updated once sufficient data could be incorporated into the background data set (Geosyntec 2021). After a minimum of four additional detection monitoring events were completed, the prediction limits were recalculated based on a one-of-two retesting procedure to maintain an appropriate site-wide false positive rate (Geosyntec 2024a). With this procedure, an SSI is concluded only if both samples in a series of two exceed the UPL or, in the case of pH, are below the LPL.

The first semiannual detection monitoring event of 2024 was performed in April 2024, and the results were compared to the calculated prediction limits in accordance with Texas Administrative Code (TAC) Title 30, §352.941(a) [30 TAC §352.941(a)]. Where initial exceedances were identified, verification resampling was completed in June 2024. Following verification resampling, SSIs were identified for boron at well AD-23 and chloride at AD-36 by intrawell analysis (Geosyntec 2024b). A summary of the detection monitoring analytical results for the downgradient compliance wells and the calculated prediction limits to which they were compared is provided in **Table 1**. The laboratory analytical reports can be found in **Attachment A**.

1.1 CCR Rule Requirements

TCEQ regulations regarding detection monitoring programs for CCR landfills and surface impoundments provide owners and operators with the option to make an ASD when an SSI is identified:

In making a demonstration under this section, the owner or operator must . . . within 90 days of making a determination of an SSI over the background value for any Appendix III constituent adopted by reference in §352.1421 of this title, submit a report prepared and certified in accordance with §352.4 of this title (relating to Engineering and Geoscientific Information), to the executive director, and any local pollution agency with jurisdiction that has requested to be notified, demonstrating that a source other than a coal combustion residuals unit caused the SSI or that the SSI resulted from error in sampling, analysis,

statistical evaluation, or natural variation in groundwater quality. (30 TAC §352.941(c)(2)).

Pursuant to 30 TAC §352.941(c)(2), Geosyntec Consultants, Inc. (Geosyntec) has prepared this ASD report on behalf of American Electric Power (AEP) to document that the SSIs identified for boron and chloride in the groundwater monitoring network for the Landfill are from a source other than the Landfill.

1.2 Demonstration of Alternative Sources

An evaluation was completed to assess possible alternative sources to which the identified SSIs could be attributed. Alternative sources were categorized into the following five types, based on methods provided by the Electric Power Research Institute (EPRI 2017):

- ASD Type I: Sampling Causes
- ASD Type II: Laboratory Causes
- ASD Type III: Statistical Evaluation Causes
- ASD Type IV: Natural Variation
- ASD Type V: Alternative Sources (i.e., anthropogenic impacts)

A demonstration was conducted to show that the SSIs identified for boron and chloride were based on a Type IV cause and not by a release from the Pirkey Landfill.

2. SUMMARY OF SITE CONDITIONS

The Landfill design and construction, regional geology and site hydrogeology, and groundwater monitoring network and flow conditions are described below.

2.1 Landfill Design and Construction

The Pirkey Landfill was designed to receive CCR materials including fly ash, bottom ash, economizer ash, and stabilized flue gas desulfurization sludge (Arcadis 2022). The Landfill consists of cells which have been constructed periodically since 1984, when the first cell was developed at the northeastern corner of the Landfill. The most recent cell that has been developed was constructed at the southeast corner of the Landfill beginning in 2018. The Landfill is now approximately 134 acres in size.

The Landfill was constructed within an unnamed tributary creek, and the base of the Landfill is partially excavated into the creek bed (Arcadis 2022). Earthen embankments were installed around portions of the Landfill to control stormwater flow. Leachate is drained from the Landfill via bottom area drains and collection pipes installed at the base of the Landfill. From previous investigations of the Landfill summarized by Arcadis (2022), the Landfill was constructed with an engineered liner. The initial cells included a 3-foot thick compacted soil liner. In 1995, the design was modified to include a 60-mil thick high-density polyethylene (HDPE) geomembrane liner overlying a geosynthetic clay liner. The most recent cell was constructed with a single-composite liner system consisting of, from top to bottom: a 2-foot thick leachate drainage layer; a 60-mil thick HDPE geomembrane liner; and a 2-foot thick compacted clay liner (Akron Consulting, LLC 2022).

As of November 2023, the 2018 expansion is the only cell still actively receiving waste. The approximate area of active waste placement is shown in **Figure 2**. The remainder of the Landfill is either considered closed and covered by a final vegetative cover or closure turf material or considered inactive with temporary soil cover (AEP 2023).

2.2 Regional Geology / Site Hydrogeology

The Landfill is positioned on an outcrop of the Eocene-age Recklaw Formation, which consists predominantly of clay and fine-grained sand (Arcadis 2022). The Recklaw Formation is underlain by the Carrizo Sand, which crops out in the topographically lower southern portion of the plant. The Carrizo Sand consists of fine- to medium-grained sand interbedded with silt and clay.

The Landfill monitoring well network monitors groundwater within the uppermost aquifer, which was defined by Arcadis (2022) as very-fine- to fine-grained clayey and silty sand located below and adjacent to the Landfill, between an elevation of approximately 270 and 330 feet above mean sea level. Cross sections and a cross-section location map from the Arcadis Monitoring Well Network Report (2022) are provided as **Attachment B**. Geologic cross sections C-C' and D-D' show the subsurface structure of the uppermost aquifer (indicated as clayey silty sand, brown to gray) underlying the Landfill. These geologic cross sections also demonstrate lateral continuity of the uppermost aquifer, spanning both directions underneath the entire length of the Landfill.

2.3 Groundwater Monitoring Network and Flow Conditions

The Landfill monitoring well network consists of upgradient monitoring wells AD-8, AD-12, AD-16, and AD-27, and downgradient compliance wells AD-23, AD-34, and AD-36. AD-36 was

installed in April 2019 (after the initial monitoring well network was already in place) as a replacement for well AD-35, which was decommissioned in November 2018 due to the Landfill expansion (Arcadis 2022). The groundwater flow direction near the Landfill is southwesterly (**Figure 1**). Seasonal variability in groundwater flow direction has not been observed since the monitoring well network was installed.

3. ALTERNATIVE SOURCE DEMONSTRATION

The ASD evaluation method and proposed alternative source of boron in AD-23 and chloride in AD-36 and the future groundwater sampling requirements are described below.

3.1 Proposed Alternative Source

An initial review of site geochemistry, site historical data, and laboratory quality assurance and quality control data did not identify an alternative source for boron or chloride due to Type I (sampling), Type II (laboratory), Type III (statistical evaluation), or Type V (anthropogenic impact) issues. Groundwater sampling, laboratory analysis, and statistical evaluations were generally completed in accordance with 30 TAC §352.931(a) and the draft TCEQ guidance for groundwater monitoring (TCEQ 2020). Based on a review of groundwater data and recent site construction events, the SSIs for boron and chloride were attributed to natural variation associated with naturally occurring aqueous boron and chloride concentrations within the aquifer unit beneath the Landfill, which is a Type IV issue.

3.1.1 Boron

An SSI for boron was observed at downgradient monitoring well AD-23. The boron concentration at AD-23 observed during the initial sampling event (0.207 milligrams per liter [mg/L]) exceeded the UPL of 0.0612 mg/L. The June verification event confirmed the exceedance, with a boron concentration of 0.242 mg/L. Boron concentrations at AD-23 are within the range of those observed at other wells in the groundwater monitoring network (**Figure 3**). Upgradient background well AD-8 consistently has greater boron concentrations than downgradient well AD-23. Given that the uppermost aquifer unit is horizontally continuous in the area surrounding the Landfill (**Attachment B**), migration of boron from this upgradient location to downgradient wells is possible.

Sulfate and chloride concentration trends at AD-23 do not support a release from the Landfill. Sulfate and chloride are considered indicator parameters for potential CCR releases due to their concentrations in CCR source material and limited chemical attenuation along groundwater flow paths. A review of the sulfate and chloride concentrations at downgradient well AD-23 over time do not display an increasing trend, but rather generally stable concentrations which are less than or comparable to the downgradient monitoring wells (**Figures 4 and 5**).

AD-23 major ion geochemistry also does not support a release from the Landfill. Major ion chemistry for AD-23 over time is illustrated on a Piper diagram (**Figure 6**). The Piper diagram shows trends in major ion chemistry over time by indicating the relative proportion of individual major cations and anions. A Landfill release would be expected to cause notable changes in the major ion signature of AD-23 groundwater. AD-23 shows general geochemical stability over time, indicating that the geochemistry is not changing appreciably as would be expected in the event of a Landfill release.

A leachate sample collected in February 2023 from the Landfill had a reported sulfate concentration of 329 mg/L, which is over an order of magnitude higher than those observed at AD-23 (**Attachment C**). If Landfill leachate were impacting groundwater quality at downgradient wells, an increase in sulfate concentrations at AD-23 would also be expected. Therefore, the variability of boron in groundwater at AD-23 should not be attributed to a release from the Landfill.

TCEQ established a Texas-specific soil median background concentration of 30 milligrams per kilogram of boron in 30 TAC §350.51(m). Given the abundance of boron in Texas soils, some contribution of boron to groundwater from the aquifer is anticipated. Therefore, the boron concentrations observed at AD-23 are within the expected range attributable to natural variation within the aquifer. Groundwater boron concentrations at AD-23 are an order of magnitude lower than the Texas Risk Reduction Program (TRRP) Class I residential ingestion pathway limit ($^{GW}GW_{Ing}$) of 4.9 mg/L (TCEQ 2009; updated TCEQ 2023a).

3.1.2 Chloride

The SSI for chloride was observed at monitoring well AD-36, which is located immediately downgradient of the Landfill adjacent to a non-CCR pond (**Figure 1**). Following the initial exceedance (14.8 mg/L, which exceeds the UPL of 11.8 mg/L) reported during the April 2024 sampling event, a verification event was completed. The June 2024 verification event chloride concentration at AD-36 (14.2 mg/L) confirmed the SSI.

Although chloride values have been slightly increasing at AD-36 since mid-2023, similar increases in chloride have also been observed at upgradient monitoring wells AD-16 and AD-27 (**Figure 5**). AD-36 aqueous chloride concentrations detected during the first semiannual and verification events were less than concentrations reported for upgradient well AD-16 (26.1 mg/L) (**Figure 5**).

Despite minor increases in chloride at AD-36, concentrations still fall within the range observed for background chloride from monitoring wells upgradient of the Landfill. Slight chloride increases within the background groundwater over multi-year time periods are occasionally observed and reflect natural fluctuations in aqueous chloride within the aquifer unit. These same fluctuations would be expected to occur within the AD-36 groundwater as well.

Boron and sulfate concentration trends at AD-36 do not support a release from the Landfill. A review of the boron and sulfate concentrations at downgradient well AD-36 over time do not display an increasing trend, but rather generally stable concentrations which are less than or comparable to the downgradient monitoring wells (**Figures 4 and 5**). A leachate sample collected in February 2023 from the Landfill leachate collection system had a reported sulfate concentration of 329 mg/L (**Attachment C**), which is almost two orders of magnitude higher than the groundwater concentrations observed at AD-36. If Landfill leachate were impacting groundwater quality at downgradient wells and causing the minor increases in chloride at AD-36, an increase in boron and sulfate concentrations at AD-36 would also be expected.

Based on the above evaluation, the variability of chloride in groundwater at AD-36 should not be attributed to the Landfill.

3.1.2.1 Effect of Construction Activities

While the chloride concentrations found at AD-36 are indicative of a Type IV source, additional anthropogenic activities may be contributing factors. As discussed in previous ASDs (Geosyntec 2023; Geosyntec 2024c), several construction activities were completed in the vicinity of AD-36 in late 2022 and early 2023, including extensive earthwork and construction to support the installation of an evaporation system associated with plant closure at the brine pond immediately adjacent to well AD-36. An area of the non-CCR pond immediately adjacent to AD-36 was bermed and lined to support its use as brine storage, as shown in the photograph provided in **Figure 7**. The location of AD-36 relative to the recently constructed brine storage area is shown in **Figure 8**.

Well AD-36 is screened from 5-15 feet below ground surface, as shown in the boring log and well construction diagram provided as **Attachment D**. Given the proximity of the screen of well AD-36 to the ground surface and the previous construction activities occurring immediately adjacent to AD-36 within the non-CCR pond, these construction activities potentially resulted in changes to the groundwater composition at AD-36 (e.g., impacts from meteoric or surface water infiltration, infiltration of water used as dust suppressant on the adjacent gravel road).

3.2 Sampling Requirements

As the ASD presented above supports the position that the identified SSIs were not due to a release from the Pirkey Landfill, the unit will remain in the detection monitoring program. Groundwater at the unit will continue to be sampled for Appendix III parameters semiannually.

4. CONCLUSIONS AND RECOMMENDATIONS

The preceding information serves as the ASD prepared in accordance with 30 TAC §352.941(c)(2) and supports the position that the SSIs for boron and chloride identified during detection monitoring in April 2024 were not due to a release from the Landfill. The identified SSIs were instead attributed to naturally occurring aqueous boron and chloride concentrations found within the aquifer. Therefore, no further action is warranted, and the Pirkey Landfill will remain in the detection monitoring program. Certification of this ASD by a qualified professional engineer is provided in **Attachment E**.

5. REFERENCES

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- TCEQ. 2023. *Update to Texas Risk Reduction Program (TRRP) Protective Concentration Limits and Chemical/Physical Properties*. Texas Commission on Environmental Quality, Remediation Division. May 10.

TABLES

**Table 1. Detection Monitoring Data Summary
Detection Summary Memorandum
Pirkey – Landfill**

Analyte	Unit	Description	AD-23		AD-34	AD-36	
			4/24/2024	6/26/2024	4/24/2024	4/23/2024	6/26/2024
Boron	mg/L	Intrawell Background Value (UPL)	0.0612		0.108	0.0747	
		Analytical Result	0.207	0.242	0.057	0.053	--
Calcium	mg/L	Intrawell Background Value (UPL)	0.503		46.1	1.22	
		Analytical Result	0.22	--	40.5	0.75	--
Chloride	mg/L	Intrawell Background Value (UPL)	8.92		8.97	11.8	
		Analytical Result	8.65	--	7.32	14.8	14.2
Fluoride	mg/L	Intrawell Background Value (UPL)	0.156		1.58	0.0980	
		Analytical Result	0.06	--	0.69	0.08	--
pH	SU	Intrawell Background Value (UPL)	5.0		4.1	5.2	
		Intrawell Background Value (LPL)	3.1		2.9	3.7	
		Analytical Result	3.7	--	3.7	4.7	--
Sulfate	mg/L	Intrawell Background Value (UPL)	13.6		1,340	4.77	
		Analytical Result	7.1	--	1,150	2.9	--
Total Dissolved Solids	mg/L	Intrawell Background Value (UPL)	104		1,840	84.9	
		Analytical Result	70	--	1,650	60	--

Notes:

1. Bold values exceed the background value.

2. Background values are shaded gray.

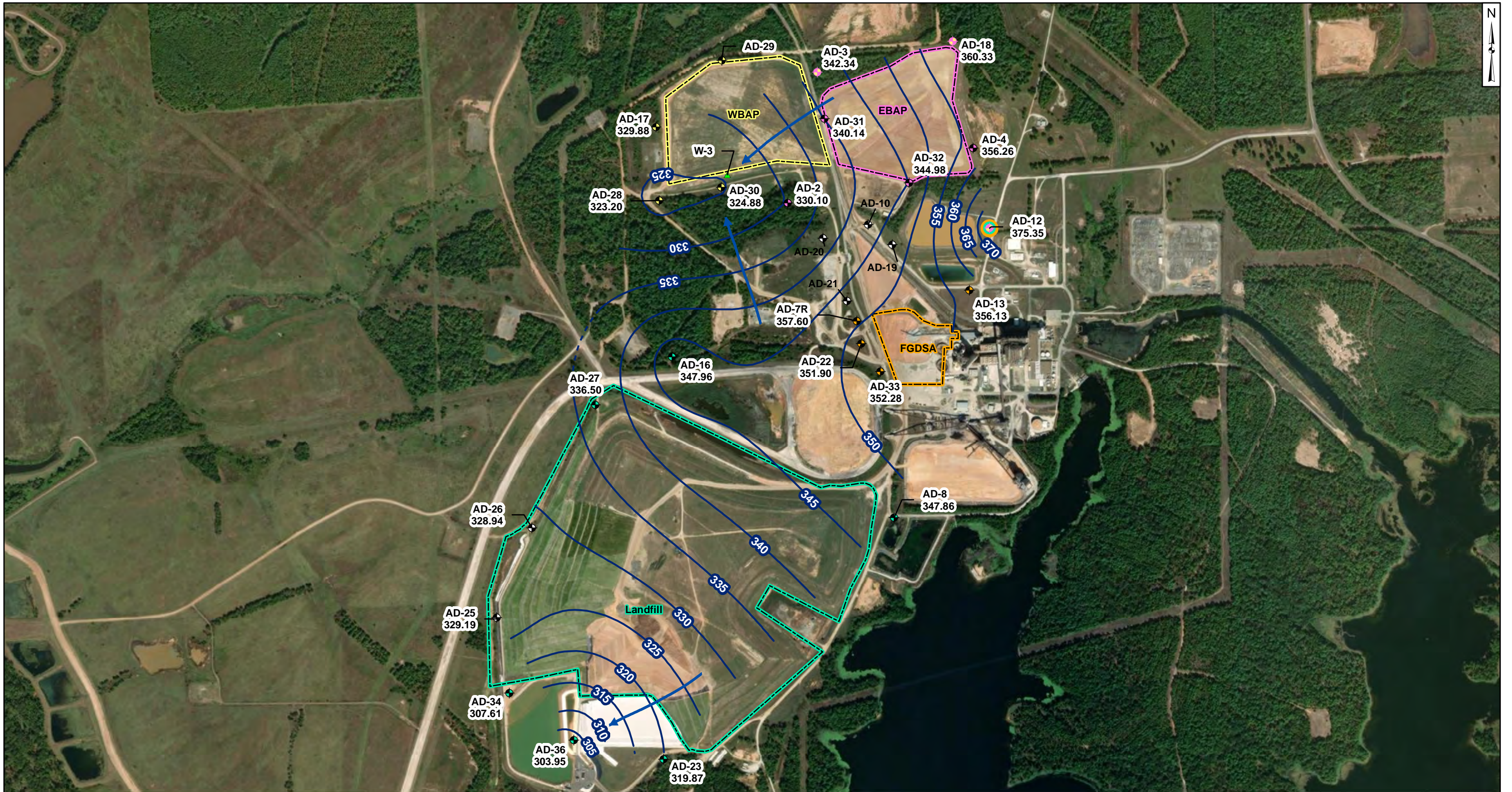
LPL: lower prediction limit

mg/L: milligrams per liter

SU: standard units

UPL: upper prediction limit

FIGURES



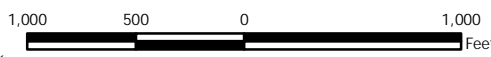
Legend
Groundwater Monitoring Wells

- Out of Network
- East Bottom Ash Pond (EBAP)
- West Bottom Ash Pond (WBAP)
- Landfill
- Flue Gas Desulfurization Stackout Area (FGDSA)
- EBAP and WBAP

- All CCR Unit Networks
- Piezometer
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Approximate Groundwater Flow Direction

Notes

1. Monitoring well coordinates and water level data (collected on April 22, 23 and 24, 2024) provided by AEP.
2. Site features based on information available in coal combustion residual (CCR) Groundwater Monitoring Well Network Evaluation Update (Arcadis 2022) provided by AEP.
3. Groundwater elevation units are feet above mean sea level (ft msl).
4. AD-10, AD-19, AD-20, AD-21, AD-29, and W-3 were not gauged during the April 2024 event.
5. AD-7R replaced AD-7, which was abandoned.
6. AD-7R (357.60 ft msl) was not used for contouring due to an anomalous reading.
7. Wells shaded in grey were not used for contouring.
8. AD-35 was abandoned on November 13, 2018.
9. Removal of CCR plus one foot of material for the WBAP was completed for on July 26, 2022.
10. Removal of CCR plus one foot of material for the EBAP was completed on July 20, 2023, for the East Pond.
11. Removal of CCR plus one foot of material was completed for the FGDSA on September 18, 2023.
12. Map is updated to incorporate Landfill survey data collected on May 1, 2024.
13. Aerial imagery provided by ESRI, dated September 19, 2023.



December 11, 2024
Geosyntec Consultants, Inc.
Texas Firm Registration No. 1182

Beth Ann Gross



Potentiometric Contours: Uppermost Aquifer
April 2024

AEP Pirkey Power Plant
Hallsville, Texas

Geosyntec
consultants








Columbus, Ohio

2024/12/02

Figure

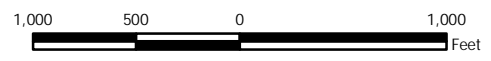
1



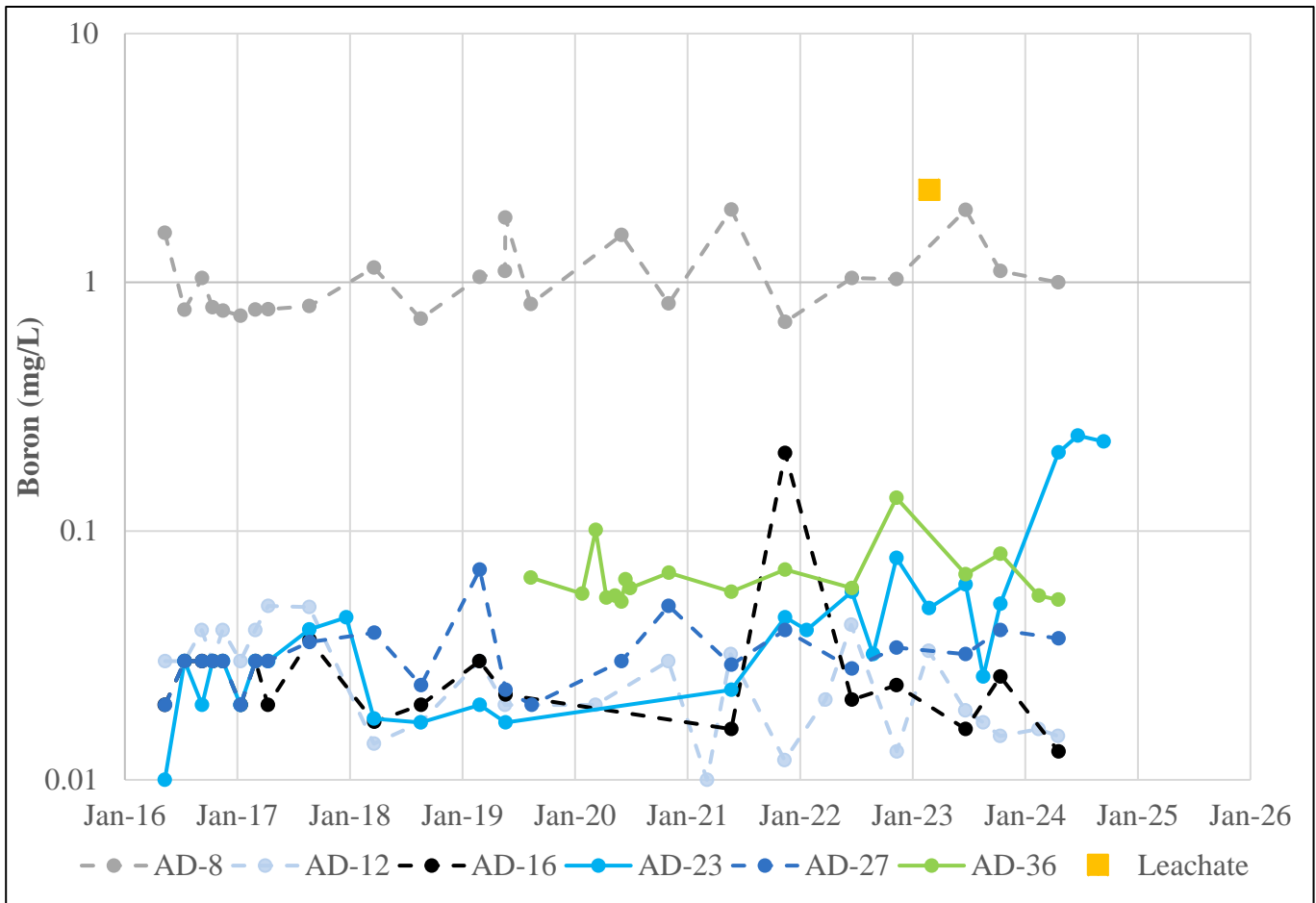
- Legend**
-  Upgradient Well
 -  Downgradient Well
 -  Out of Network Well
 -  Abandoned Well
 -  Former Lignite Mine
 -  Waste Placement
 -  Landfill

Notes

- Monitoring well locations provided by AEP.
- AD-35 was abandoned on November 13, 2018.
- Active Waste Placement location is approximate.
- Aerial imagery provided by ESRI, dated September 19, 2023.



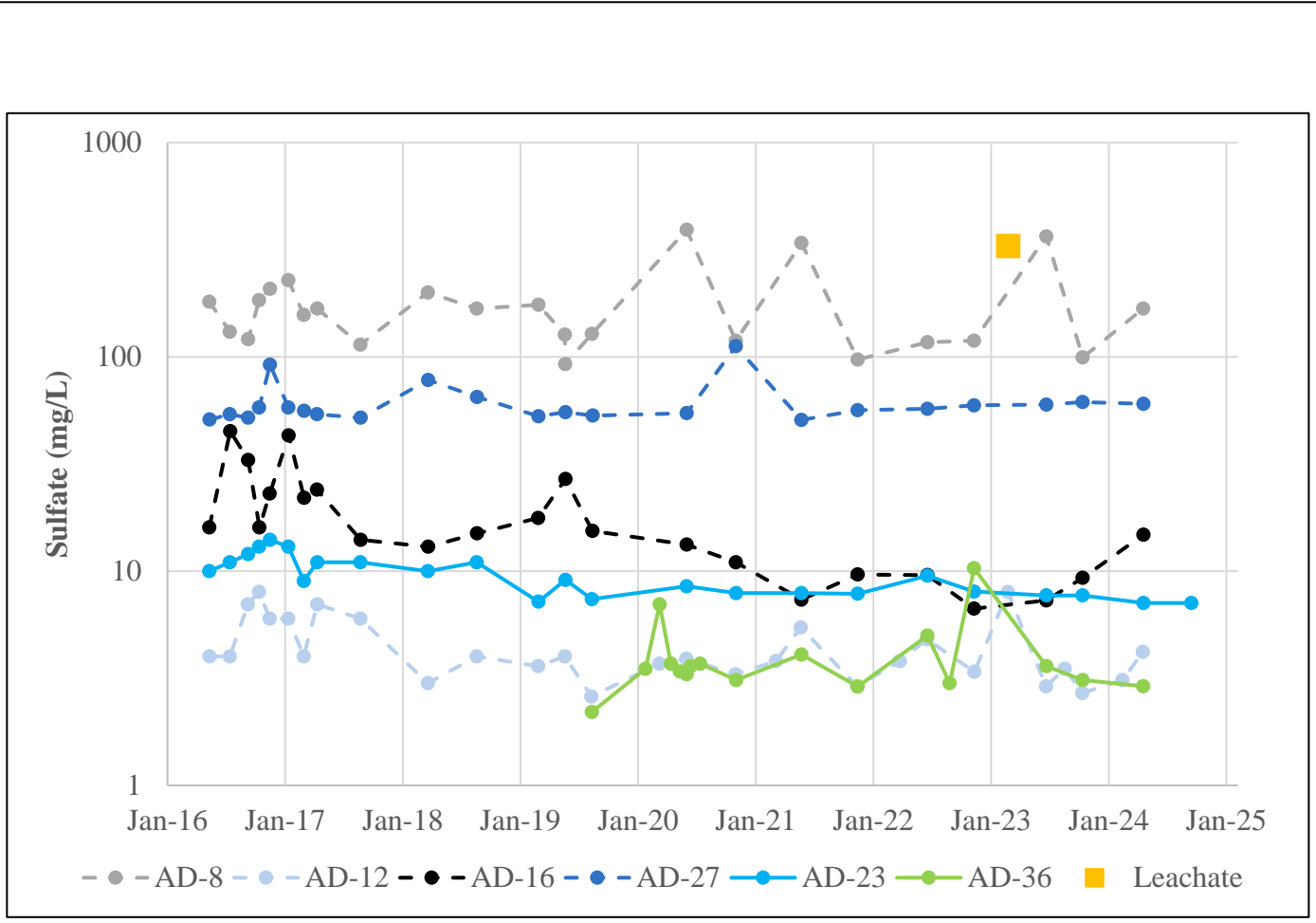
<p>Landfill Location Relative to Former Lignite Mine Area</p> <p>AEP Pirkey Power Plant Hallsville, Texas</p>		<p>Figure 2</p>
<p>Geosyntec consultants</p>		
Columbus, Ohio	2024/12/11	



Notes:

- Boron concentrations are shown in milligrams per liter (mg/L).
- Graph includes the AD-23 2024 verification sampling event result and leachate sample collected in June 2024.
- Boron data collected for AD-23 during the September event is represented on the graph.
- Graph is displayed on a logarithmic scale.
- Solid lines represent downgradient wells and dashed lines represent upgradient wells.

Boron Time Series Graph Pirkey Landfill		
		Figure 3
Columbus, Ohio	December 2024	

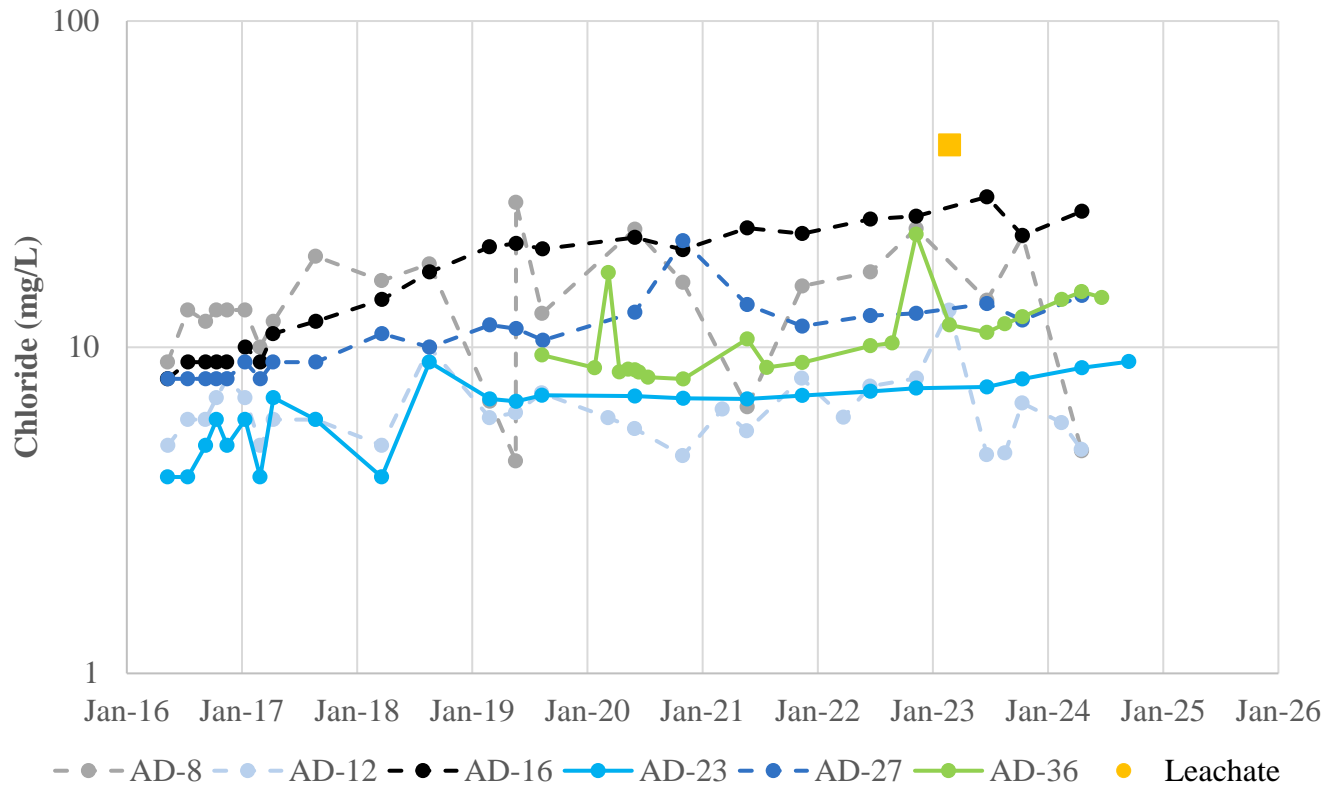


Notes:

1. Sulfate concentrations are shown in milligrams per liter (mg/L).
2. Solid lines represent downgradient wells and dashed lines represent upgradient wells.
3. Sulfate data collected for AD-23 during the September event is represented on the graph.
4. AD-34 is not shown due to effect of acid mine drainage on sulfate concentrations at that location.
5. Graph is displayed on a logarithmic scale.

Sulfate Time Series Graph
Pirkey Landfill

		<p>Figure 4</p>
Columbus, Ohio	December 2024	



Notes:

1. Chloride concentrations are shown in milligrams per liter (mg/L).
2. Graph includes the AD-36 June 2024 verification sampling result and the leachate sample collected in February 2023.
3. Chloride data collected for AD-23 during the September event is represented on the graph.
4. Graph is displayed on a logarithmic scale.
5. Solid lines represent downgradient wells and dashed lines represent upgradient wells.

Chloride Time Series Graph
Pirkey Landfill

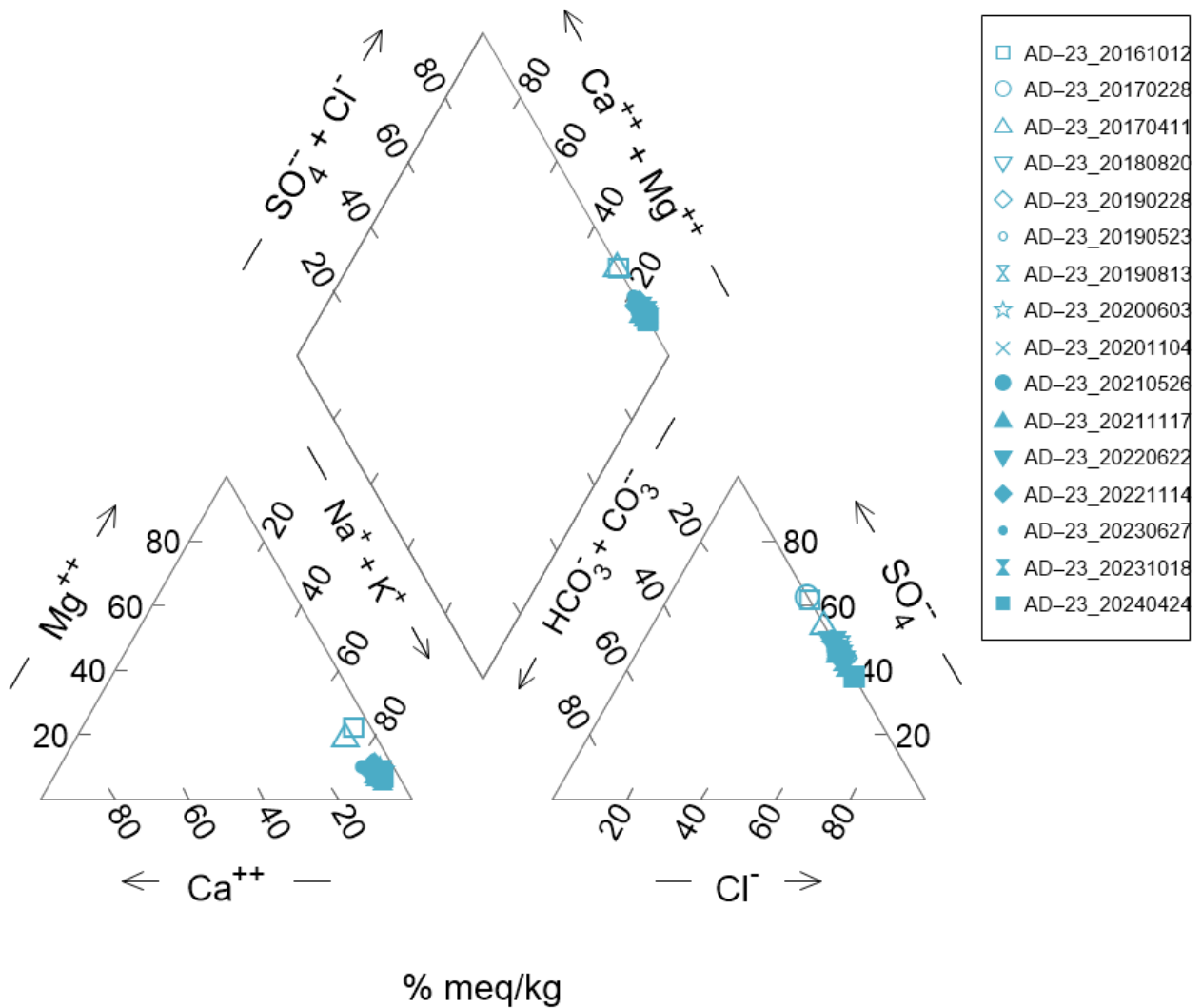


Figure

5

Columbus, Ohio

December 2024



Notes:

1. AD-23 groundwater samples are plotted in units of percentage milliequivalents per kilogram of water (% meq/kg).
2. All AD-23 groundwater samples contained total alkalinity at values below the method detection limit. Alkalinity values of 0 % meq/kg were used in the Piper plot.

AD-23 Piper Diagram
Pirkey Landfill

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consultants



Figure

6

Columbus, Ohio

December 2024



Notes:

1. Photograph illustrating the construction of a lined brine tank immediately adjacent to monitoring well AD-36.
2. The photograph was taken looking south on July 28, 2023.

Non-CCR Pond Construction Photograph

Pirkey Landfill



Figure

7

Columbus, Ohio

December 2024



Notes:

1. Photograph depicting the location of AD-36 relative to the newly constructed brine tank portion of the non-CCR pond.
2. The photograph was taken looking northwest on August 28, 2023.

AD-36 Location Photograph
Pirkey Landfill

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consultants



Figure

8

Columbus, Ohio

December 2024

ATTACHMENT A

Groundwater Analytical Data



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-2

Customer Description:

Lab Number: 241393-001

Preparation:

Date Collected: 04/23/2024 09:21 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.44	mg/L	2	0.10	0.02		CRJ	05/09/2024 18:59	EPA 300.1 -1997, Rev. 1.0
Chloride	31.2	mg/L	2	0.06	0.02		CRJ	05/09/2024 18:59	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.27	mg/L	2	0.06	0.02		CRJ	05/09/2024 18:59	EPA 300.1 -1997, Rev. 1.0
Sulfate	309	mg/L	10	3.0	0.6		CRJ	05/09/2024 15:09	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	570	mg/L	1	50	20		ELT	04/29/2024 06:46	SM 2540C-2015

Customer Sample ID: AD-3

Customer Description:

Lab Number: 241393-002

Preparation:

Date Collected: 04/23/2024 12:04 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.08	mg/L	2	0.10	0.02	J1	CRJ	05/09/2024 15:41	EPA 300.1 -1997, Rev. 1.0
Chloride	5.83	mg/L	2	0.06	0.02		CRJ	05/09/2024 15:41	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.05	mg/L	2	0.06	0.02	J1	CRJ	05/09/2024 15:41	EPA 300.1 -1997, Rev. 1.0
Sulfate	28.5	mg/L	2	0.6	0.1		CRJ	05/09/2024 15:41	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	160	mg/L	1	50	20		ELT	04/29/2024 06:54	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-4

Customer Description:

Lab Number: 241393-003

Preparation:

Date Collected: 04/24/2024 10:31 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.32	mg/L	2	0.10	0.02		CRJ	05/09/2024 16:14	EPA 300.1 -1997, Rev. 1.0
Chloride	3.97	mg/L	2	0.06	0.02		CRJ	05/09/2024 16:14	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.07	mg/L	2	0.06	0.02		CRJ	05/09/2024 16:14	EPA 300.1 -1997, Rev. 1.0
Sulfate	20.3	mg/L	2	0.6	0.1		CRJ	05/09/2024 16:14	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	140	mg/L	1	50	20		ELT	04/29/2024 06:54	SM 2540C-2015

Customer Sample ID: AD-7R

Customer Description:

Lab Number: 241393-004

Preparation:

Date Collected: 04/22/2024 10:25 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.61	mg/L	2	0.10	0.02		CRJ	05/09/2024 16:47	EPA 300.1 -1997, Rev. 1.0
Chloride	20.6	mg/L	2	0.06	0.02		CRJ	05/09/2024 16:47	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.16	mg/L	2	0.06	0.02		CRJ	05/09/2024 16:47	EPA 300.1 -1997, Rev. 1.0
Sulfate	73.6	mg/L	2	0.6	0.1		CRJ	05/09/2024 16:47	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	220	mg/L	1	50	20		ELT	04/29/2024 06:54	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-8

Customer Description:

Lab Number: 241393-005

Preparation:

Date Collected: 04/23/2024 11:11 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.60	mg/L	2	0.10	0.02		CRJ	05/09/2024 18:26	EPA 300.1 -1997, Rev. 1.0
Chloride	4.81	mg/L	2	0.06	0.02		CRJ	05/09/2024 18:26	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.28	mg/L	2	0.06	0.02		CRJ	05/09/2024 18:26	EPA 300.1 -1997, Rev. 1.0
Sulfate	168	mg/L	10	3.0	0.6		CRJ	05/09/2024 17:53	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	126	mg/L	1	20	5		MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	390	mg/L	1	50	20		ELT	04/29/2024 06:54	SM 2540C-2015

Customer Sample ID: AD-12

Customer Description:

Lab Number: 241393-006

Preparation:

Date Collected: 04/22/2024 10:44 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.07	mg/L	2	0.10	0.02	J1	CRJ	05/09/2024 21:44	EPA 300.1 -1997, Rev. 1.0
Chloride	4.86	mg/L	2	0.06	0.02		CRJ	05/09/2024 21:44	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.08	mg/L	2	0.06	0.02		CRJ	05/09/2024 21:44	EPA 300.1 -1997, Rev. 1.0
Sulfate	4.2	mg/L	2	0.6	0.1		CRJ	05/09/2024 21:44	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	60	mg/L	1	50	20		ELT	04/29/2024 07:00	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-13

Customer Description:

Lab Number: 241393-007

Preparation:

Date Collected: 04/22/2024 09:20 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.27	mg/L	2	0.10	0.02		CRJ	05/09/2024 20:38	EPA 300.1 -1997, Rev. 1.0
Chloride	42.2	mg/L	10	0.3	0.1		CRJ	05/09/2024 20:05	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.34	mg/L	2	0.06	0.02		CRJ	05/09/2024 20:38	EPA 300.1 -1997, Rev. 1.0
Sulfate	84.9	mg/L	2	0.6	0.1		CRJ	05/09/2024 20:38	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	220	mg/L	1	50	20		ELT	04/29/2024 07:00	SM 2540C-2015

Customer Sample ID: AD-16

Customer Description:

Lab Number: 241393-008

Preparation:

Date Collected: 04/24/2024 12:04 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.18	mg/L	2	0.10	0.02		CRJ	05/10/2024 01:01	EPA 300.1 -1997, Rev. 1.0
Chloride	26.1	mg/L	2	0.06	0.02		CRJ	05/10/2024 01:01	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.09	mg/L	2	0.06	0.02		CRJ	05/10/2024 01:01	EPA 300.1 -1997, Rev. 1.0
Sulfate	14.8	mg/L	2	0.6	0.1		CRJ	05/10/2024 01:01	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	120	mg/L	1	50	20		ELT	04/29/2024 07:00	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-17

Customer Description:

Lab Number: 241393-009

Preparation:

Date Collected: 04/23/2024 11:16 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.10	mg/L	2	0.10	0.02		CRJ	05/10/2024 01:34	EPA 300.1 -1997, Rev. 1.0
Chloride	6.44	mg/L	2	0.06	0.02		CRJ	05/10/2024 01:34	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.09	mg/L	2	0.06	0.02		CRJ	05/10/2024 01:34	EPA 300.1 -1997, Rev. 1.0
Sulfate	2.1	mg/L	2	0.6	0.1		CRJ	05/10/2024 01:34	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	40	mg/L	1	50	20	J1	ELT	04/29/2024 07:00	SM 2540C-2015

Customer Sample ID: AD-18

Customer Description:

Lab Number: 241393-010

Preparation:

Date Collected: 04/23/2024 11:58 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.07	mg/L	2	0.10	0.02	J1	CRJ	05/10/2024 02:07	EPA 300.1 -1997, Rev. 1.0
Chloride	5.39	mg/L	2	0.06	0.02		CRJ	05/10/2024 02:07	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.02	mg/L	2	0.06	0.02	J1	CRJ	05/10/2024 02:07	EPA 300.1 -1997, Rev. 1.0
Sulfate	7.2	mg/L	2	0.6	0.1		CRJ	05/10/2024 02:07	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	90	mg/L	1	50	20		ELT	04/29/2024 07:08	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-22

Customer Description:

Lab Number: 241393-011

Preparation:

Date Collected: 04/22/2024 11:22 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.40	mg/L	2	0.10	0.02		CRJ	05/10/2024 04:19	EPA 300.1 -1997, Rev. 1.0
Chloride	70.5	mg/L	25	0.8	0.3		CRJ	05/10/2024 03:46	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.75	mg/L	2	0.06	0.02		CRJ	05/10/2024 04:19	EPA 300.1 -1997, Rev. 1.0
Sulfate	360	mg/L	25	8	2		CRJ	05/10/2024 03:46	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	610	mg/L	1	50	20		ELT	04/29/2024 07:08	SM 2540C-2015

Customer Sample ID: AD-23

Customer Description:

Lab Number: 241393-012

Preparation:

Date Collected: 04/24/2024 12:05 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.25	mg/L	2	0.10	0.02		CRJ	05/10/2024 02:40	EPA 300.1 -1997, Rev. 1.0
Chloride	8.65	mg/L	2	0.06	0.02		CRJ	05/10/2024 02:40	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.06	mg/L	2	0.06	0.02		CRJ	05/10/2024 02:40	EPA 300.1 -1997, Rev. 1.0
Sulfate	7.1	mg/L	2	0.6	0.1		CRJ	05/10/2024 02:40	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	70	mg/L	1	50	20		ELT	04/29/2024 07:08	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-27

Customer Description:

Lab Number: 241393-013

Preparation:

Date Collected: 04/24/2024 09:30 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.39	mg/L	2	0.10	0.02		CRJ	05/10/2024 05:25	EPA 300.1 -1997, Rev. 1.0
Chloride	14.4	mg/L	2	0.06	0.02		CRJ	05/10/2024 05:25	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.16	mg/L	2	0.06	0.02		CRJ	05/10/2024 05:25	EPA 300.1 -1997, Rev. 1.0
Sulfate	60.4	mg/L	2	0.6	0.1		CRJ	05/10/2024 05:25	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	200	mg/L	1	50	20		ELT	04/29/2024 07:08	SM 2540C-2015

Customer Sample ID: AD-28

Customer Description:

Lab Number: 241393-014

Preparation:

Date Collected: 04/23/2024 10:28 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.09	mg/L	2	0.10	0.02	J1	CRJ	05/10/2024 07:36	EPA 300.1 -1997, Rev. 1.0
Chloride	3.90	mg/L	2	0.06	0.02		CRJ	05/10/2024 07:36	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.79	mg/L	2	0.06	0.02		CRJ	05/10/2024 07:36	EPA 300.1 -1997, Rev. 1.0
Sulfate	24.7	mg/L	2	0.6	0.1		CRJ	05/10/2024 07:36	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	100	mg/L	1	50	20		ELT	04/29/2024 07:17	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-30

Customer Description:

Lab Number: 241393-015

Preparation:

Date Collected: 04/23/2024 09:43 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.16	mg/L	2	0.10	0.02		CRJ	05/10/2024 06:30	EPA 300.1 -1997, Rev. 1.0
Chloride	12.2	mg/L	2	0.06	0.02		CRJ	05/10/2024 06:30	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.05	mg/L	2	0.06	0.02	J1	CRJ	05/10/2024 06:30	EPA 300.1 -1997, Rev. 1.0
Sulfate	104	mg/L	10	3.0	0.6		CRJ	05/10/2024 05:58	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	220	mg/L	1	50	20		ELT	04/29/2024 07:17	SM 2540C-2015

Customer Sample ID: AD-31

Customer Description:

Lab Number: 241393-016

Preparation:

Date Collected: 04/22/2024 12:20 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.25	mg/L	2	0.10	0.02		CRJ	05/10/2024 13:57	EPA 300.1 -1997, Rev. 1.0
Chloride	16.8	mg/L	2	0.06	0.02		CRJ	05/10/2024 13:57	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.10	mg/L	2	0.06	0.02		CRJ	05/10/2024 13:57	EPA 300.1 -1997, Rev. 1.0
Sulfate	79.8	mg/L	2	0.6	0.1		CRJ	05/10/2024 13:57	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	250	mg/L	1	50	20		ELT	04/29/2024 07:17	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-32

Customer Description:

Lab Number: 241393-017

Preparation:

Date Collected: 04/22/2024 11:33 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.42	mg/L	2	0.10	0.02		CRJ	05/10/2024 15:03	EPA 300.1 -1997, Rev. 1.0
Chloride	10.6	mg/L	2	0.06	0.02		CRJ	05/10/2024 15:03	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.32	mg/L	2	0.06	0.02		CRJ	05/10/2024 15:03	EPA 300.1 -1997, Rev. 1.0
Sulfate	67.0	mg/L	2	0.6	0.1		CRJ	05/10/2024 15:03	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	190	mg/L	1	50	20		ELT	04/29/2024 07:17	SM 2540C-2015

Customer Sample ID: AD-33

Customer Description:

Lab Number: 241393-018

Preparation:

Date Collected: 04/22/2024 12:13 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.36	mg/L	2	0.10	0.02		CRJ	05/10/2024 19:26	EPA 300.1 -1997, Rev. 1.0
Chloride	9.97	mg/L	2	0.06	0.02		CRJ	05/10/2024 19:26	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.27	mg/L	2	0.06	0.02		CRJ	05/10/2024 19:26	EPA 300.1 -1997, Rev. 1.0
Sulfate	65.7	mg/L	2	0.6	0.1		CRJ	05/10/2024 19:26	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	180	mg/L	1	50	20		ELT	04/29/2024 07:24	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: AD-34

Customer Description:

Lab Number: 241393-019

Preparation:

Date Collected: 04/24/2024 11:11 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.21	mg/L	5	0.25	0.05	J1	CRJ	05/10/2024 16:42	EPA 300.1 -1997, Rev. 1.0
Chloride	7.32	mg/L	5	0.15	0.05		CRJ	05/10/2024 16:42	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.69	mg/L	5	0.15	0.05		CRJ	05/10/2024 16:42	EPA 300.1 -1997, Rev. 1.0
Sulfate	1150	mg/L	50	15	3		CRJ	05/10/2024 16:09	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	1650	mg/L	1	50	20		ELT	04/29/2024 07:24	SM 2540C-2015

Customer Sample ID: AD-36

Customer Description:

Lab Number: 241393-020

Preparation:

Date Collected: 04/23/2024 10:20 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.59	mg/L	2	0.10	0.02		CRJ	05/10/2024 19:59	EPA 300.1 -1997, Rev. 1.0
Chloride	14.8	mg/L	2	0.06	0.02		CRJ	05/10/2024 19:59	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.08	mg/L	2	0.06	0.02		CRJ	05/10/2024 19:59	EPA 300.1 -1997, Rev. 1.0
Sulfate	2.9	mg/L	2	0.6	0.1		CRJ	05/10/2024 19:59	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	60	mg/L	1	50	20		ELT	04/29/2024 07:24	SM 2540C-2015



Water Analysis Report

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

Job ID: 241393

Customer: Pirkey Power Station

Date Reported: 06/05/2024

Customer Sample ID: Duplicate 1

Customer Description:

Lab Number: 241393-021

Preparation:

Date Collected: 04/22/2024 15:00 EDT

Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.61	mg/L	2	0.10	0.02		CRJ	05/10/2024 18:20	EPA 300.1 -1997, Rev. 1.0
Chloride	20.8	mg/L	2	0.06	0.02		CRJ	05/10/2024 18:20	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.15	mg/L	2	0.06	0.02		CRJ	05/10/2024 18:20	EPA 300.1 -1997, Rev. 1.0
Sulfate	76.5	mg/L	2	0.6	0.1		CRJ	05/10/2024 18:20	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	04/29/2024 15:40	SM 2320B-2011
TDS, Filterable Residue	230	mg/L	1	50	20		ELT	04/29/2024 07:37	SM 2540C-2015

Report Verification

This report and the above data have been confirmed by the following analyst.

Michael Ohlinger, Chemist

Email: msohlinger@aep.com

Phone: 614-836-4184

Audinet: 8-210-4184

THIS TEST REPORT RELATES ONLY TO THE ITEMS TESTED AND SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF THE LABORATORY. ALL TEST RESULTS MEET ALL OF THE REQUIREMENTS OF THE ACCREDITING AUTHORITY, UNLESS OTHERWISE NOTED. ALL TIMES LISTED ARE IN THE EASTERN TIME ZONE.

Data Qualifer Legend

U1 - Not detected at or below method detection limit (MDL).

J1 - Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-2

Customer Description:

Lab Number: 241410-001

Preparation:

Date Collected: 04/23/2024 09:21 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Arsenic	2.05	µg/L	1	0.10	0.03		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Barium	14.8	µg/L	1	0.20	0.05		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Beryllium	1.03	µg/L	5	0.25	0.04		GES	05/08/2024 08:29	EPA 200.8-1994, Rev. 5.4
Boron	3.18	mg/L	1	0.050	0.007		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Cadmium	0.135	µg/L	1	0.020	0.004		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Calcium	4.51	mg/L	1	0.05	0.02		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Chromium	0.54	µg/L	1	0.30	0.07		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Cobalt	33.0	µg/L	1	0.020	0.005		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Lead	0.65	µg/L	1	0.20	0.05		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Lithium	0.0739	mg/L	5	0.0015	0.0003		GES	05/08/2024 08:29	EPA 200.8-1994, Rev. 5.4
Magnesium	9.21	mg/L	1	0.100	0.009		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Mercury	56	ng/L	1	5	2		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Potassium	1.43	mg/L	1	0.10	0.01		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Selenium	6.51	µg/L	1	0.50	0.04		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Sodium	111	mg/L	1	0.20	0.02		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Strontium	0.0635	mg/L	1	0.00200	0.00005		GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4
Thallium	0.13	µg/L	1	0.20	0.02	J1	GES	05/07/2024 19:31	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.55	pCi/L	0.13	0.16		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	91.9	%						
Radium-228	1.63	pCi/L	0.17	0.50		TTP	05/24/2024 13:03	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	83.4	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-2

Customer Description:

Lab Number: 241410-001-01

Preparation: Dissolved

Date Collected: 04/23/2024 09:21 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.023	µg/L	1	0.100	0.008	J1	GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Arsenic	2.06	µg/L	1	0.10	0.03		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Barium	15.5	µg/L	1	0.20	0.05		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Beryllium	1.10	µg/L	5	0.25	0.04		GES	05/08/2024 08:34	EPA 200.8-1994, Rev. 5.4
Cadmium	0.138	µg/L	1	0.020	0.004		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Chromium	0.54	µg/L	1	0.30	0.07		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Cobalt	34.1	µg/L	1	0.020	0.005		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Iron	0.198	mg/L	1	0.020	0.003		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Lead	0.73	µg/L	1	0.20	0.05		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Lithium	0.0784	mg/L	5	0.0015	0.0003		GES	05/08/2024 08:34	EPA 200.8-1994, Rev. 5.4
Manganese	0.112	mg/L	1	0.00100	0.00007		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Selenium	6.84	µg/L	1	0.50	0.04		GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4
Thallium	0.13	µg/L	1	0.20	0.02	J1	GES	05/07/2024 19:36	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-3

Customer Description:

Lab Number: 241410-002

Preparation:

Date Collected: 04/23/2024 12:04 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Arsenic	0.25	µg/L	1	0.10	0.03		GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Barium	65.2	µg/L	1	0.20	0.05		GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Beryllium	0.24	µg/L	5	0.25	0.04	J1	GES	05/08/2024 08:39	EPA 200.8-1994, Rev. 5.4
Boron	0.038	mg/L	1	0.050	0.007	J1	GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Cadmium	0.017	µg/L	1	0.020	0.004	J1	GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Calcium	4.32	mg/L	1	0.05	0.02		GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Chromium	0.24	µg/L	1	0.30	0.07	J1	GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Cobalt	3.57	µg/L	1	0.020	0.005		GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Lead	0.05	µg/L	1	0.20	0.05	J1	GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Lithium	0.0599	mg/L	5	0.0015	0.0003		GES	05/08/2024 08:39	EPA 200.8-1994, Rev. 5.4
Magnesium	1.93	mg/L	1	0.100	0.009		GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Potassium	2.28	mg/L	1	0.10	0.01		GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Selenium	0.06	µg/L	1	0.50	0.04	J1	GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Sodium	8.66	mg/L	1	0.20	0.02		GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Strontium	0.0298	mg/L	1	0.00200	0.00005		GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4
Thallium	0.05	µg/L	1	0.20	0.02	J1	GES	05/07/2024 19:41	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.66	pCi/L	0.13	0.15		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	100	%						
Radium-228	1.15	pCi/L	0.15	0.46		TTP	05/24/2024 13:03	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	87.3	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-3

Customer Description:

Lab Number: 241410-002-01

Preparation: Dissolved

Date Collected: 04/23/2024 12:04 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.017	µg/L	1	0.100	0.008	J1	GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Arsenic	0.22	µg/L	1	0.10	0.03		GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Barium	67.0	µg/L	1	0.20	0.05		GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Beryllium	0.26	µg/L	5	0.25	0.04		GES	05/08/2024 08:45	EPA 200.8-1994, Rev. 5.4
Cadmium	0.017	µg/L	1	0.020	0.004	J1	GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Chromium	0.28	µg/L	1	0.30	0.07	J1	GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Cobalt	3.78	µg/L	1	0.020	0.005		GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Iron	1.21	mg/L	1	0.020	0.003		GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Lead	0.11	µg/L	1	0.20	0.05	J1	GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Lithium	0.0633	mg/L	5	0.0015	0.0003		GES	05/08/2024 08:45	EPA 200.8-1994, Rev. 5.4
Manganese	0.0427	mg/L	1	0.00100	0.00007		GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4
Thallium	0.05	µg/L	1	0.20	0.02	J1	GES	05/07/2024 19:47	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-4

Customer Description:

Lab Number: 241410-003

Preparation:

Date Collected: 04/24/2024 10:31 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.014	µg/L	1	0.100	0.008	J1	GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Arsenic	0.44	µg/L	1	0.10	0.03		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Barium	97.2	µg/L	1	0.20	0.05		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Beryllium	0.64	µg/L	5	0.25	0.04		GES	05/08/2024 08:50	EPA 200.8-1994, Rev. 5.4
Boron	0.017	mg/L	1	0.050	0.007	J1	GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Cadmium	0.020	µg/L	1	0.020	0.004		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Calcium	2.26	mg/L	1	0.05	0.02		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Chromium	0.31	µg/L	1	0.30	0.07		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Cobalt	5.95	µg/L	1	0.020	0.005		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Lead	0.06	µg/L	1	0.20	0.05	J1	GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Lithium	0.0395	mg/L	5	0.0015	0.0003		GES	05/08/2024 08:50	EPA 200.8-1994, Rev. 5.4
Magnesium	1.18	mg/L	1	0.100	0.009		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Potassium	2.36	mg/L	1	0.10	0.01		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Sodium	8.05	mg/L	1	0.20	0.02		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Strontium	0.0189	mg/L	1	0.00200	0.00005		GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4
Thallium	0.07	µg/L	1	0.20	0.02	J1	GES	05/07/2024 19:52	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.67	pCi/L	0.13	0.18		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	106	%						
Radium-228	1.12	pCi/L	0.19	0.60		TTP	05/24/2024 13:03	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	79.0	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-4

Customer Description:

Lab Number: 241410-003-01

Preparation: Dissolved

Date Collected: 04/24/2024 10:31 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.014	µg/L	1	0.100	0.008	J1	GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Arsenic	<0.03	µg/L	1	0.10	0.03	U1	GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Barium	96.5	µg/L	1	0.20	0.05		GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Beryllium	0.66	µg/L	5	0.25	0.04		GES	05/08/2024 08:55	EPA 200.8-1994, Rev. 5.4
Cadmium	0.011	µg/L	1	0.020	0.004	J1	GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Chromium	0.28	µg/L	1	0.30	0.07	J1	GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Cobalt	5.86	µg/L	1	0.020	0.005		GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Iron	0.025	mg/L	1	0.020	0.003		GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Lithium	0.0411	mg/L	5	0.0015	0.0003		GES	05/08/2024 08:55	EPA 200.8-1994, Rev. 5.4
Manganese	0.0497	mg/L	1	0.00100	0.00007		GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Selenium	0.05	µg/L	1	0.50	0.04	J1	GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4
Thallium	0.07	µg/L	1	0.20	0.02	J1	GES	05/07/2024 19:57	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-7R

Customer Description:

Lab Number: 241410-004

Preparation:

Date Collected: 04/22/2024 10:25 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Arsenic	0.38	µg/L	1	0.10	0.03		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Barium	41.3	µg/L	1	0.20	0.05		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Beryllium	2.37	µg/L	5	0.25	0.04		GES	05/08/2024 09:00	EPA 200.8-1994, Rev. 5.4
Boron	0.049	mg/L	1	0.050	0.007	J1	GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Cadmium	0.310	µg/L	1	0.020	0.004		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Calcium	3.37	mg/L	1	0.05	0.02		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Chromium	0.23	µg/L	1	0.30	0.07	J1	GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Cobalt	20.9	µg/L	1	0.020	0.005		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Lithium	0.0790	mg/L	5	0.0015	0.0003		GES	05/08/2024 09:00	EPA 200.8-1994, Rev. 5.4
Magnesium	5.03	mg/L	1	0.100	0.009		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Mercury	<4	ng/L	2	10	4	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Potassium	1.99	mg/L	1	0.10	0.01		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Selenium	1.00	µg/L	1	0.50	0.04		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Sodium	23.4	mg/L	1	0.20	0.02		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Strontium	0.0366	mg/L	1	0.00200	0.00005		GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4
Thallium	0.14	µg/L	1	0.20	0.02	J1	GES	05/07/2024 20:02	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	1.16	pCi/L	0.18	0.16		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	99.8	%						
Radium-228	1.46	pCi/L	0.18	0.55		TTP	05/24/2024 13:03	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	87.3	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-7R

Customer Description:

Lab Number: 241410-004-01

Preparation: Dissolved

Date Collected: 04/22/2024 10:25 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Arsenic	0.37	µg/L	1	0.10	0.03		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Barium	41.7	µg/L	1	0.20	0.05		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Beryllium	1.96	µg/L	1	0.050	0.007		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Cadmium	0.318	µg/L	1	0.020	0.004		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Chromium	0.25	µg/L	1	0.30	0.07	J1	GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Cobalt	21.0	µg/L	1	0.020	0.005		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Iron	5.21	mg/L	1	0.020	0.003		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Lead	0.06	µg/L	1	0.20	0.05	J1	GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Lithium	0.0678	mg/L	1	0.00030	0.00006		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Manganese	0.0649	mg/L	1	0.00100	0.00007		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Selenium	1.03	µg/L	1	0.50	0.04		GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4
Thallium	0.14	µg/L	1	0.20	0.02	J1	GES	05/07/2024 20:07	EPA 200.8-1994, Rev. 5.4

Customer Sample ID: AD-8

Customer Description:

Lab Number: 241410-005

Preparation:

Date Collected: 04/23/2024 11:11 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Boron	0.999	mg/L	1	0.050	0.007		GES	05/07/2024 20:12	EPA 200.8-1994, Rev. 5.4
Calcium	87.7	mg/L	1	0.05	0.02		GES	05/07/2024 20:12	EPA 200.8-1994, Rev. 5.4
Magnesium	6.27	mg/L	1	0.100	0.009		GES	05/07/2024 20:12	EPA 200.8-1994, Rev. 5.4
Potassium	1.19	mg/L	1	0.10	0.01		GES	05/07/2024 20:12	EPA 200.8-1994, Rev. 5.4
Sodium	11.5	mg/L	1	0.20	0.02		GES	05/07/2024 20:12	EPA 200.8-1994, Rev. 5.4
Strontium	0.526	mg/L	1	0.00200	0.00005		GES	05/07/2024 20:12	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-12

Customer Description:

Lab Number: 241410-006

Preparation:

Date Collected: 04/22/2024 10:44 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.009	µg/L	1	0.100	0.008	J1	GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Arsenic	0.09	µg/L	1	0.10	0.03	J1	GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Barium	19.3	µg/L	1	0.20	0.05		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Beryllium	0.121	µg/L	1	0.050	0.007		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Boron	0.015	mg/L	1	0.050	0.007	J1	GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Cadmium	0.007	µg/L	1	0.020	0.004	J1	GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Calcium	0.18	mg/L	1	0.05	0.02		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Chromium	0.34	µg/L	1	0.30	0.07		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Cobalt	1.08	µg/L	1	0.020	0.005		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Lead	0.08	µg/L	1	0.20	0.05	J1	GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Lithium	0.00462	mg/L	1	0.00030	0.00006		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Magnesium	0.342	mg/L	1	0.100	0.009		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Potassium	0.20	mg/L	1	0.10	0.01		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Selenium	0.31	µg/L	1	0.50	0.04	J1	GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Sodium	3.75	mg/L	1	0.20	0.02		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Strontium	0.00203	mg/L	1	0.00200	0.00005		GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4
Thallium	<0.02	µg/L	1	0.20	0.02	U1	GES	05/07/2024 20:17	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.83	pCi/L	0.15	0.14		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	106	%						
Radium-228	1.79	pCi/L	0.21	0.64		TTP	05/24/2024 13:03	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	74.6	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-12

Customer Description:

Lab Number: 241410-006-01

Preparation: Dissolved

Date Collected: 04/22/2024 10:44 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.037	µg/L	1	0.100	0.008	J1	GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Arsenic	0.07	µg/L	1	0.10	0.03	J1	GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Barium	19.5	µg/L	1	0.20	0.05		GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Beryllium	0.129	µg/L	1	0.050	0.007		GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Cadmium	0.007	µg/L	1	0.020	0.004	J1	GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Chromium	0.25	µg/L	1	0.30	0.07	J1	GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Cobalt	1.07	µg/L	1	0.020	0.005		GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Iron	0.020	mg/L	1	0.020	0.003		GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Lead	0.12	µg/L	1	0.20	0.05	J1	GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Lithium	0.00490	mg/L	1	0.00030	0.00006		GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Manganese	0.00313	mg/L	1	0.00100	0.00007		GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Selenium	0.26	µg/L	1	0.50	0.04	J1	GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4
Thallium	0.02	µg/L	1	0.20	0.02	J1	GES	05/07/2024 21:34	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-13

Customer Description:

Lab Number: 241410-007

Preparation:

Date Collected: 04/22/2024 09:20 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Arsenic	0.54	µg/L	1	0.10	0.03		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Barium	34.9	µg/L	1	0.20	0.05		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Beryllium	0.163	µg/L	1	0.050	0.007		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Boron	0.066	mg/L	1	0.050	0.007		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Cadmium	<0.004	µg/L	1	0.020	0.004	U1	GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Calcium	10.6	mg/L	1	0.05	0.02		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Chromium	0.22	µg/L	1	0.30	0.07	J1	GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Cobalt	46.2	µg/L	1	0.020	0.005		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Lithium	0.135	mg/L	1	0.00030	0.00006		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Magnesium	13.2	mg/L	1	0.100	0.009		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Potassium	4.83	mg/L	1	0.10	0.01		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Sodium	19.9	mg/L	1	0.20	0.02		GES	05/08/2024 10:01	EPA 200.8-1994, Rev. 5.4
Strontium	0.0787	mg/L	1	0.00200	0.00005		GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4
Thallium	0.03	µg/L	1	0.20	0.02	J1	GES	05/07/2024 21:39	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.65	pCi/L	0.15	0.23		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	92.6	%						
Radium-228	2.02	pCi/L	0.20	0.59		TTP	05/24/2024 13:03	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	86.1	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-13

Customer Description:

Lab Number: 241410-007-01

Preparation: Dissolved

Date Collected: 04/22/2024 09:20 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Arsenic	0.32	µg/L	1	0.10	0.03		GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Barium	33.9	µg/L	1	0.20	0.05		GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Beryllium	0.151	µg/L	1	0.050	0.007		GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Cadmium	<0.004	µg/L	1	0.020	0.004	U1	GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Chromium	0.19	µg/L	1	0.30	0.07	J1	GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Cobalt	44.9	µg/L	1	0.020	0.005		GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Iron	33.8	mg/L	1	0.020	0.003		GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Lithium	0.133	mg/L	1	0.00030	0.00006		GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Manganese	0.447	mg/L	1	0.00100	0.00007		GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4
Thallium	0.03	µg/L	1	0.20	0.02	J1	GES	05/07/2024 21:45	EPA 200.8-1994, Rev. 5.4

Customer Sample ID: AD-16

Customer Description:

Lab Number: 241410-008

Preparation:

Date Collected: 04/24/2024 12:04 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Boron	0.013	mg/L	1	0.050	0.007	J1	GES	05/07/2024 21:50	EPA 200.8-1994, Rev. 5.4
Calcium	1.13	mg/L	1	0.05	0.02		GES	05/07/2024 21:50	EPA 200.8-1994, Rev. 5.4
Magnesium	2.37	mg/L	1	0.100	0.009		GES	05/07/2024 21:50	EPA 200.8-1994, Rev. 5.4
Potassium	1.53	mg/L	1	0.10	0.01		GES	05/07/2024 21:50	EPA 200.8-1994, Rev. 5.4
Sodium	13.5	mg/L	1	0.20	0.02		GES	05/08/2024 10:12	EPA 200.8-1994, Rev. 5.4
Strontium	0.0135	mg/L	1	0.00200	0.00005		GES	05/07/2024 21:50	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-17

Customer Description:

Lab Number: 241410-009

Preparation:

Date Collected: 04/23/2024 12:16 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Arsenic	0.09	µg/L	1	0.10	0.03	J1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Barium	47.6	µg/L	1	0.20	0.05		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Beryllium	0.221	µg/L	1	0.050	0.007		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Boron	0.020	mg/L	1	0.050	0.007	J1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Cadmium	0.011	µg/L	1	0.020	0.004	J1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Calcium	0.04	mg/L	1	0.05	0.02	J1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Chromium	0.37	µg/L	1	0.30	0.07		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Cobalt	1.99	µg/L	1	0.020	0.005		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Lithium	0.00705	mg/L	1	0.00030	0.00006		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Magnesium	0.899	mg/L	1	0.100	0.009		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Mercury	51	ng/L	4	20	8		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Potassium	0.15	mg/L	1	0.10	0.01		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Selenium	0.11	µg/L	1	0.50	0.04	J1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Sodium	3.85	mg/L	1	0.20	0.02		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Strontium	0.00224	mg/L	1	0.00200	0.00005		GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4
Thallium	<0.02	µg/L	1	0.20	0.02	U1	GES	05/07/2024 21:55	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.45	pCi/L	0.11	0.15		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	101	%						
Radium-228	1.35	pCi/L	0.15	0.44		TTP	05/24/2024 13:02	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	83.0	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-17

Customer Description:

Lab Number: 241410-009-01

Preparation: Dissolved

Date Collected: 04/23/2024 11:16 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Arsenic	0.05	µg/L	1	0.10	0.03	J1	GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Barium	46.3	µg/L	1	0.20	0.05		GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Beryllium	0.196	µg/L	1	0.050	0.007		GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Cadmium	0.010	µg/L	1	0.020	0.004	J1	GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Chromium	0.38	µg/L	1	0.30	0.07		GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Cobalt	1.95	µg/L	1	0.020	0.005		GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Iron	0.004	mg/L	1	0.020	0.003	J1	GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Lithium	0.00647	mg/L	1	0.00030	0.00006		GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Manganese	0.00240	mg/L	1	0.00100	0.00007		GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Selenium	0.09	µg/L	1	0.50	0.04	J1	GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4
Thallium	<0.02	µg/L	1	0.20	0.02	U1	GES	05/07/2024 22:00	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-18

Customer Description:

Lab Number: 241410-010

Preparation:

Date Collected: 04/23/2024 11:58 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Arsenic	0.19	µg/L	1	0.10	0.03		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Barium	76.6	µg/L	1	0.20	0.05		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Beryllium	0.083	µg/L	1	0.050	0.007		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Boron	0.008	mg/L	1	0.050	0.007	J1	GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Cadmium	0.010	µg/L	1	0.020	0.004	J1	GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Calcium	0.19	mg/L	1	0.05	0.02		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Chromium	0.32	µg/L	1	0.30	0.07		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Cobalt	0.851	µg/L	1	0.020	0.005		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Lead	0.06	µg/L	1	0.20	0.05	J1	GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Lithium	0.0130	mg/L	1	0.00030	0.00006		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Magnesium	0.294	mg/L	1	0.100	0.009		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Mercury	8	ng/L	1	5	2		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Potassium	0.74	mg/L	1	0.10	0.01		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Selenium	0.11	µg/L	1	0.50	0.04	J1	GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Sodium	5.64	mg/L	1	0.20	0.02		GES	05/08/2024 10:27	EPA 200.8-1994, Rev. 5.4
Strontium	0.00415	mg/L	1	0.00200	0.00005		GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4
Thallium	0.03	µg/L	1	0.20	0.02	J1	GES	05/07/2024 22:05	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.42	pCi/L	0.11	0.18		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	104	%						
Radium-228	0.57	pCi/L	0.13	0.42		TTP	05/24/2024 13:02	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	85.9	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-18

Customer Description:

Lab Number: 241410-010-01

Preparation: Dissolved

Date Collected: 04/23/2024 11:58 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.020	µg/L	1	0.100	0.008	J1	GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Arsenic	0.07	µg/L	1	0.10	0.03	J1	GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Barium	80.5	µg/L	1	0.20	0.05		GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Beryllium	0.084	µg/L	1	0.050	0.007		GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Cadmium	0.011	µg/L	1	0.020	0.004	J1	GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Chromium	0.41	µg/L	1	0.30	0.07		GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Cobalt	0.921	µg/L	1	0.020	0.005		GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Iron	0.031	mg/L	1	0.020	0.003		GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Lead	0.07	µg/L	1	0.20	0.05	J1	GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Lithium	0.0135	mg/L	1	0.00030	0.00006		GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Manganese	0.00407	mg/L	1	0.00100	0.00007		GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Selenium	0.08	µg/L	1	0.50	0.04	J1	GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4
Thallium	0.03	µg/L	1	0.20	0.02	J1	GES	05/07/2024 22:10	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-22

Customer Description:

Lab Number: 241410-011

Preparation:

Date Collected: 04/22/2024 11:22 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Arsenic	3.54	µg/L	1	0.10	0.03		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Barium	16.2	µg/L	1	0.20	0.05		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Beryllium	7.53	µg/L	1	0.050	0.007	M1	GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Boron	0.064	mg/L	1	0.050	0.007		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Cadmium	1.22	µg/L	1	0.020	0.004		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Calcium	13.5	mg/L	1	0.05	0.02		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Chromium	0.43	µg/L	1	0.30	0.07		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Cobalt	99.3	µg/L	1	0.020	0.005	M1	GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Lead	0.23	µg/L	1	0.20	0.05		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Lithium	0.146	mg/L	1	0.00030	0.00006	M1	GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Magnesium	19.9	mg/L	1	0.100	0.009		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Mercury	66	ng/L	4	20	8		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Potassium	3.81	mg/L	1	0.10	0.01		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Selenium	11.9	µg/L	1	0.50	0.04		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Sodium	90.3	mg/L	5	1.0	0.1		GES	05/08/2024 10:37	EPA 200.8-1994, Rev. 5.4
Strontium	0.129	mg/L	1	0.00200	0.00005		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4
Thallium	0.20	µg/L	1	0.20	0.02		GES	05/07/2024 22:15	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	1.78	pCi/L	0.23	0.17		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	95.0	%						
Radium-228	1.24	pCi/L	0.14	0.40	O2, P2	TTP	06/05/2024 13:38	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	56.2	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-22

Customer Description:

Lab Number: 241410-011-01

Preparation: Dissolved

Date Collected: 04/22/2024 11:22 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.015	µg/L	1	0.100	0.008	J1	GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Arsenic	3.76	µg/L	1	0.10	0.03		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Barium	16.7	µg/L	1	0.20	0.05		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Beryllium	7.18	µg/L	1	0.050	0.007		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Cadmium	1.30	µg/L	1	0.020	0.004		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Chromium	0.44	µg/L	1	0.30	0.07		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Cobalt	106	µg/L	1	0.020	0.005		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Iron	17.8	mg/L	1	0.020	0.003		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Lead	0.23	µg/L	1	0.20	0.05		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Lithium	0.141	mg/L	1	0.00030	0.00006		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Manganese	0.347	mg/L	1	0.00100	0.00007		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Mercury	9	ng/L	1	5	2		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Selenium	12.1	µg/L	1	0.50	0.04		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4
Thallium	0.24	µg/L	1	0.20	0.02		GES	05/07/2024 22:31	EPA 200.8-1994, Rev. 5.4

Customer Sample ID: AD-23

Customer Description:

Lab Number: 241410-012

Preparation:

Date Collected: 04/24/2024 12:05 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Boron	0.207	mg/L	1	0.050	0.007		GES	05/08/2024 00:14	EPA 200.8-1994, Rev. 5.4
Calcium	0.22	mg/L	1	0.05	0.02		GES	05/08/2024 00:14	EPA 200.8-1994, Rev. 5.4
Magnesium	0.197	mg/L	1	0.100	0.009		GES	05/08/2024 00:14	EPA 200.8-1994, Rev. 5.4
Potassium	2.51	mg/L	1	0.10	0.01		GES	05/08/2024 00:14	EPA 200.8-1994, Rev. 5.4
Sodium	3.54	mg/L	1	0.20	0.02		GES	05/08/2024 12:25	EPA 200.8-1994, Rev. 5.4
Strontium	0.00254	mg/L	1	0.00200	0.00005		GES	05/08/2024 00:14	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-27

Customer Description:

Lab Number: 241410-013

Preparation:

Date Collected: 04/24/2024 09:30 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Boron	0.037	mg/L	1	0.050	0.007	J1	GES	05/08/2024 00:19	EPA 200.8-1994, Rev. 5.4
Calcium	3.89	mg/L	1	0.05	0.02		GES	05/08/2024 00:19	EPA 200.8-1994, Rev. 5.4
Magnesium	4.97	mg/L	1	0.100	0.009		GES	05/08/2024 00:19	EPA 200.8-1994, Rev. 5.4
Potassium	1.87	mg/L	1	0.10	0.01		GES	05/08/2024 00:19	EPA 200.8-1994, Rev. 5.4
Sodium	8.79	mg/L	1	0.20	0.02		GES	05/08/2024 12:30	EPA 200.8-1994, Rev. 5.4
Strontium	0.0560	mg/L	1	0.00200	0.00005		GES	05/08/2024 00:19	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-28

Customer Description:

Lab Number: 241410-014

Preparation:

Date Collected: 04/23/2024 10:28 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Arsenic	0.12	µg/L	1	0.10	0.03		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Barium	121	µg/L	1	0.20	0.05		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Beryllium	0.770	µg/L	1	0.050	0.007		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Boron	0.290	mg/L	1	0.050	0.007		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Cadmium	0.055	µg/L	1	0.020	0.004		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Calcium	1.19	mg/L	1	0.05	0.02		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Chromium	0.38	µg/L	1	0.30	0.07		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Cobalt	13.0	µg/L	1	0.020	0.005		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Lead	0.07	µg/L	1	0.20	0.05	J1	GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Lithium	0.0179	mg/L	1	0.00030	0.00006		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Magnesium	2.81	mg/L	1	0.100	0.009		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Mercury	13	ng/L	1	5	2		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Potassium	0.61	mg/L	1	0.10	0.01		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Selenium	0.33	µg/L	1	0.50	0.04	J1	GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Sodium	5.13	mg/L	1	0.20	0.02		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Strontium	0.0209	mg/L	1	0.00200	0.00005		GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4
Thallium	0.03	µg/L	1	0.20	0.02	J1	GES	05/08/2024 00:24	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.56	pCi/L	0.13	0.22		ST	05/21/2024 09:02	SW-846 9315-1986, Rev. 0
Carrier Recovery	98.4	%						
Radium-228	0.99	pCi/L	0.19	0.60	02, P2	TTP	06/05/2024 13:38	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	75.8	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-28

Customer Description:

Lab Number: 241410-014-01

Preparation: Dissolved

Date Collected: 04/23/2024 10:28 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Arsenic	0.10	µg/L	1	0.10	0.03		GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Barium	124	µg/L	1	0.20	0.05		GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Beryllium	0.755	µg/L	1	0.050	0.007		GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Cadmium	0.052	µg/L	1	0.020	0.004		GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Chromium	0.22	µg/L	1	0.30	0.07	J1	GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Cobalt	13.0	µg/L	1	0.020	0.005		GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Iron	0.008	mg/L	1	0.020	0.003	J1	GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Lead	0.05	µg/L	1	0.20	0.05	J1	GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Lithium	0.0186	mg/L	1	0.00030	0.00006		GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Manganese	0.0382	mg/L	1	0.00100	0.00007		GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Mercury	5	ng/L	1	5	2		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Selenium	0.27	µg/L	1	0.50	0.04	J1	GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4
Thallium	0.02	µg/L	1	0.20	0.02	J1	GES	05/08/2024 00:29	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-30

Customer Description:

Lab Number: 241410-015

Preparation:

Date Collected: 04/23/2024 09:43 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Arsenic	0.15	µg/L	1	0.10	0.03		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Barium	49.9	µg/L	1	0.20	0.05		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Beryllium	0.122	µg/L	1	0.050	0.007		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Boron	1.13	mg/L	1	0.050	0.007		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Cadmium	0.012	µg/L	1	0.020	0.004	J1	GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Calcium	0.38	mg/L	1	0.05	0.02		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Chromium	0.42	µg/L	1	0.30	0.07		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Cobalt	3.30	µg/L	1	0.020	0.005		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Lithium	0.00736	mg/L	1	0.00030	0.00006		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Magnesium	1.72	mg/L	1	0.100	0.009		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Mercury	23	ng/L	1	5	2		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Potassium	0.70	mg/L	1	0.10	0.01		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Selenium	0.30	µg/L	1	0.50	0.04	J1	GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Sodium	56.1	mg/L	1	0.20	0.02		GES	05/08/2024 12:45	EPA 200.8-1994, Rev. 5.4
Strontium	0.00645	mg/L	1	0.00200	0.00005		GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4
Thallium	0.03	µg/L	1	0.20	0.02	J1	GES	05/08/2024 00:34	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.21	pCi/L	0.08	0.16		ST	05/21/2024 11:31	SW-846 9315-1986, Rev. 0
Carrier Recovery	92.4	%						
Radium-228	0.68	pCi/L	0.17	0.54	02, P2	TTP	06/05/2024 13:38	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	83.0	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-30

Customer Description:

Lab Number: 241410-015-01

Preparation: Dissolved

Date Collected: 04/23/2024 09:43 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Arsenic	0.11	µg/L	1	0.10	0.03		GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Barium	48.3	µg/L	1	0.20	0.05		GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Beryllium	0.124	µg/L	1	0.050	0.007		GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Cadmium	0.010	µg/L	1	0.020	0.004	J1	GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Chromium	0.32	µg/L	1	0.30	0.07		GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Cobalt	3.34	µg/L	1	0.020	0.005		GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Iron	0.005	mg/L	1	0.020	0.003	J1	GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Lithium	0.00741	mg/L	1	0.00030	0.00006		GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Manganese	0.0147	mg/L	1	0.00100	0.00007		GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Selenium	0.30	µg/L	1	0.50	0.04	J1	GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4
Thallium	0.03	µg/L	1	0.20	0.02	J1	GES	05/08/2024 00:39	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-31

Customer Description:

Lab Number: 241410-016

Preparation:

Date Collected: 04/22/2024 12:20 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Arsenic	0.44	µg/L	1	0.10	0.03		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Barium	33.3	µg/L	1	0.20	0.05		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Beryllium	1.04	µg/L	5	0.25	0.04		GES	05/08/2024 12:56	EPA 200.8-1994, Rev. 5.4
Boron	0.022	mg/L	1	0.050	0.007	J1	GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Cadmium	0.064	µg/L	1	0.020	0.004		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Calcium	2.45	mg/L	1	0.05	0.02		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Chromium	0.55	µg/L	1	0.30	0.07		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Cobalt	9.38	µg/L	1	0.020	0.005		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Lead	0.31	µg/L	1	0.20	0.05		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Lithium	0.0792	mg/L	5	0.0015	0.0003		GES	05/08/2024 12:56	EPA 200.8-1994, Rev. 5.4
Magnesium	3.62	mg/L	1	0.100	0.009		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Mercury	430	ng/L	10	50	20		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Potassium	1.52	mg/L	1	0.10	0.01		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Selenium	0.51	µg/L	1	0.50	0.04		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Sodium	31.0	mg/L	5	1.0	0.1		GES	05/08/2024 12:56	EPA 200.8-1994, Rev. 5.4
Strontium	0.0357	mg/L	1	0.00200	0.00005		GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4
Thallium	0.09	µg/L	1	0.20	0.02	J1	GES	05/08/2024 00:44	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.42	pCi/L	0.11	0.16		ST	05/21/2024 11:31	SW-846 9315-1986, Rev. 0
Carrier Recovery	93.2	%						
Radium-228	2.12	pCi/L	0.17	0.48	02, P2	TTP	06/05/2024 13:38	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	84.1	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-31

Customer Description:

Lab Number: 241410-016-01

Preparation: Dissolved

Date Collected: 04/22/2024 12:20 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.027	µg/L	1	0.100	0.008	J1	GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Arsenic	0.29	µg/L	1	0.10	0.03		GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Barium	32.4	µg/L	1	0.20	0.05		GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Beryllium	1.02	µg/L	5	0.25	0.04		GES	05/08/2024 13:01	EPA 200.8-1994, Rev. 5.4
Cadmium	0.063	µg/L	1	0.020	0.004		GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Chromium	0.38	µg/L	1	0.30	0.07		GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Cobalt	9.05	µg/L	1	0.020	0.005		GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Iron	0.125	mg/L	1	0.020	0.003		GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Lead	0.31	µg/L	1	0.20	0.05		GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Lithium	0.0780	mg/L	5	0.0015	0.0003		GES	05/08/2024 13:01	EPA 200.8-1994, Rev. 5.4
Manganese	0.0230	mg/L	1	0.00100	0.00007		GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Mercury	17	ng/L	1	5	2		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Selenium	0.44	µg/L	1	0.50	0.04	J1	GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4
Thallium	0.09	µg/L	1	0.20	0.02	J1	GES	05/08/2024 00:49	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-32

Customer Description:

Lab Number: 241410-017

Preparation:

Date Collected: 04/22/2024 11:33 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Arsenic	3.46	µg/L	1	0.10	0.03		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Barium	40.3	µg/L	1	0.20	0.05		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Beryllium	0.449	µg/L	1	0.050	0.007		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Boron	0.231	mg/L	1	0.050	0.007		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Cadmium	0.035	µg/L	1	0.020	0.004		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Calcium	5.63	mg/L	1	0.05	0.02		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Chromium	0.34	µg/L	1	0.30	0.07		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Cobalt	13.2	µg/L	1	0.020	0.005		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Lithium	0.0567	mg/L	1	0.00030	0.00006		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Magnesium	6.18	mg/L	1	0.100	0.009		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Mercury	180	ng/L	20	100	40		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Potassium	2.65	mg/L	1	0.10	0.01		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Selenium	0.48	µg/L	1	0.50	0.04	J1	GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Sodium	19.6	mg/L	1	0.20	0.02		GES	05/08/2024 13:06	EPA 200.8-1994, Rev. 5.4
Strontium	0.0806	mg/L	1	0.00200	0.00005		GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4
Thallium	0.07	µg/L	1	0.20	0.02	J1	GES	05/08/2024 00:55	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.48	pCi/L	0.12	0.21		ST	05/21/2024 11:31	SW-846 9315-1986, Rev. 0
Carrier Recovery	92.3	%						
Radium-228	1.16	pCi/L	0.17	0.51	O2, P2	TTP	06/05/2024 13:38	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	83.0	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-32

Customer Description:

Lab Number: 241410-017-01

Preparation: Dissolved

Date Collected: 04/22/2024 11:33 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.018	µg/L	1	0.100	0.008	J1	GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Arsenic	2.44	µg/L	1	0.10	0.03		GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Barium	40.1	µg/L	1	0.20	0.05		GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Beryllium	0.472	µg/L	1	0.050	0.007		GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Cadmium	0.037	µg/L	1	0.020	0.004		GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Chromium	0.21	µg/L	1	0.30	0.07	J1	GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Cobalt	13.1	µg/L	1	0.020	0.005		GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Iron	10.9	mg/L	1	0.020	0.003	M1	GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Lead	0.07	µg/L	1	0.20	0.05	J1	GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Lithium	0.0569	mg/L	1	0.00030	0.00006	M1	GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Manganese	0.0827	mg/L	1	0.00100	0.00007		GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Selenium	0.47	µg/L	1	0.50	0.04	J1	GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4
Thallium	0.07	µg/L	1	0.20	0.02	J1	GES	05/08/2024 01:00	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-33

Customer Description:

Lab Number: 241410-018

Preparation:

Date Collected: 04/22/2024 12:13 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Arsenic	1.00	µg/L	1	0.10	0.03		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Barium	42.2	µg/L	1	0.20	0.05		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Beryllium	1.31	µg/L	1	0.050	0.007		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Boron	0.141	mg/L	1	0.050	0.007		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Cadmium	0.058	µg/L	1	0.020	0.004		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Calcium	2.08	mg/L	1	0.05	0.02		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Chromium	0.23	µg/L	1	0.30	0.07	J1	GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Cobalt	11.0	µg/L	1	0.020	0.005		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Lead	0.27	µg/L	1	0.20	0.05		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Lithium	0.0199	mg/L	1	0.00030	0.00006		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Magnesium	4.36	mg/L	1	0.100	0.009		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Mercury	6600	ng/L	100	500	200		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Potassium	0.26	mg/L	1	0.10	0.01		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Selenium	3.18	µg/L	1	0.50	0.04		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Sodium	17.7	mg/L	1	0.20	0.02		GES	05/08/2024 14:23	EPA 200.8-1994, Rev. 5.4
Strontium	0.0350	mg/L	1	0.00200	0.00005		GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4
Thallium	0.04	µg/L	1	0.20	0.02	J1	GES	05/08/2024 02:17	EPA 200.8-1994, Rev. 5.4

Radiochemistry

Parameter	Result	Units	UNC*(+/-)	MDA*	Data Qualifiers	Analyst	Analysis Date	Method
Radium-226	0.73	pCi/L	0.15	0.18		ST	05/21/2024 11:31	SW-846 9315-1986, Rev. 0
Carrier Recovery	87.2	%						
Radium-228	0.88	pCi/L	0.12	0.38	02, P2	TTP	06/05/2024 13:38	SW-846 9320-2014, Rev. 1.0
Carrier Recovery	89.1	%						

* The Required Detection Limit (RDL) is equivalent to the RL and for Radium-226 and Radium-228, the RDL is calculated to be 1.0 pCi/L. The Minimal Detectable Activity (MDA) listed with these results is sample specific and empirical. The combined standard uncertainty (UNC) is a counting uncertainty representing "one-sigma" which has the same units of measurement as the result.



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-33

Customer Description:

Lab Number: 241410-018-01

Preparation: Dissolved

Date Collected: 04/22/2024 12:13 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	0.030	µg/L	1	0.100	0.008	J1	GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Arsenic	1.04	µg/L	1	0.10	0.03		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Barium	42.7	µg/L	1	0.20	0.05		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Beryllium	1.28	µg/L	1	0.050	0.007		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Cadmium	0.058	µg/L	1	0.020	0.004		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Chromium	0.23	µg/L	1	0.30	0.07	J1	GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Cobalt	11.3	µg/L	1	0.020	0.005		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Iron	0.015	mg/L	1	0.020	0.003	J1	GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Lead	0.29	µg/L	1	0.20	0.05		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Lithium	0.0194	mg/L	1	0.00030	0.00006		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Manganese	0.00682	mg/L	1	0.00100	0.00007		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Mercury	890	ng/L	20	100	40		RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Selenium	3.36	µg/L	1	0.50	0.04		GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4
Thallium	0.04	µg/L	1	0.20	0.02	J1	GES	05/08/2024 02:22	EPA 200.8-1994, Rev. 5.4

Customer Sample ID: AD-34

Customer Description:

Lab Number: 241410-019

Preparation:

Date Collected: 04/24/2024 11:11 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Boron	0.057	mg/L	1	0.050	0.007		GES	05/08/2024 02:27	EPA 200.8-1994, Rev. 5.4
Calcium	40.5	mg/L	1	0.05	0.02		GES	05/08/2024 02:27	EPA 200.8-1994, Rev. 5.4
Magnesium	34.9	mg/L	1	0.100	0.009		GES	05/08/2024 02:27	EPA 200.8-1994, Rev. 5.4
Potassium	6.93	mg/L	1	0.10	0.01		GES	05/08/2024 02:27	EPA 200.8-1994, Rev. 5.4
Sodium	15.8	mg/L	1	0.20	0.02		GES	05/08/2024 14:33	EPA 200.8-1994, Rev. 5.4
Strontium	0.437	mg/L	1	0.00200	0.00005		GES	05/08/2024 02:27	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: AD-36

Customer Description:

Lab Number: 241410-020

Preparation:

Date Collected: 04/23/2024 10:20 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Boron	0.053	mg/L	1	0.050	0.007		GES	05/08/2024 02:32	EPA 200.8-1994, Rev. 5.4
Calcium	0.75	mg/L	1	0.05	0.02		GES	05/08/2024 02:32	EPA 200.8-1994, Rev. 5.4
Magnesium	2.28	mg/L	1	0.100	0.009		GES	05/08/2024 02:32	EPA 200.8-1994, Rev. 5.4
Potassium	1.56	mg/L	1	0.10	0.01		GES	05/08/2024 02:32	EPA 200.8-1994, Rev. 5.4
Sodium	6.51	mg/L	1	0.20	0.02		GES	05/08/2024 14:38	EPA 200.8-1994, Rev. 5.4
Strontium	0.0113	mg/L	1	0.00200	0.00005		GES	05/08/2024 02:32	EPA 200.8-1994, Rev. 5.4

Customer Sample ID: Duplicate 1

Customer Description:

Lab Number: 241410-021

Preparation:

Date Collected: 04/22/2024 15:00 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Arsenic	0.37	µg/L	1	0.10	0.03		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Barium	41.0	µg/L	1	0.20	0.05		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Beryllium	1.93	µg/L	1	0.050	0.007		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Boron	0.048	mg/L	1	0.050	0.007	J1	GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Cadmium	0.311	µg/L	1	0.020	0.004		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Calcium	3.32	mg/L	1	0.05	0.02		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Chromium	0.27	µg/L	1	0.30	0.07	J1	GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Cobalt	20.6	µg/L	1	0.020	0.005		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Lithium	0.0639	mg/L	1	0.00030	0.00006		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Magnesium	4.93	mg/L	1	0.100	0.009		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/06/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Potassium	1.99	mg/L	1	0.10	0.01		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Selenium	1.06	µg/L	1	0.50	0.04		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Sodium	25.9	mg/L	1	0.20	0.02		GES	05/08/2024 14:43	EPA 200.8-1994, Rev. 5.4
Strontium	0.0360	mg/L	1	0.00200	0.00005		GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4
Thallium	0.14	µg/L	1	0.20	0.02	J1	GES	05/08/2024 02:37	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: Duplicate 1

Customer Description:

Lab Number: 241410-021-01

Preparation: Dissolved

Date Collected: 04/22/2024 15:00 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Arsenic	0.37	µg/L	1	0.10	0.03		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Barium	40.1	µg/L	1	0.20	0.05		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Beryllium	1.99	µg/L	1	0.050	0.007		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Cadmium	0.313	µg/L	1	0.020	0.004		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Chromium	0.25	µg/L	1	0.30	0.07	J1	GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Cobalt	20.6	µg/L	1	0.020	0.005		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Iron	5.10	mg/L	1	0.020	0.003		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Lithium	0.0655	mg/L	1	0.00030	0.00006		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Manganese	0.0630	mg/L	1	0.00100	0.00007		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/06/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Selenium	1.00	µg/L	1	0.50	0.04		GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4
Thallium	0.14	µg/L	1	0.20	0.02	J1	GES	05/08/2024 02:42	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: Equipment Blank

Customer Description:

Lab Number: 241410-022

Preparation:

Date Collected: 04/23/2024 10:53 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Arsenic	<0.03	µg/L	1	0.10	0.03	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Barium	<0.05	µg/L	1	0.20	0.05	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Beryllium	<0.007	µg/L	1	0.050	0.007	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Boron	<0.007	mg/L	1	0.050	0.007	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Cadmium	<0.004	µg/L	1	0.020	0.004	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Calcium	<0.02	mg/L	1	0.05	0.02	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Chromium	0.23	µg/L	1	0.30	0.07	J1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Cobalt	0.007	µg/L	1	0.020	0.005	J1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Lithium	<0.00006	mg/L	1	0.00030	0.00006	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Magnesium	<0.009	mg/L	1	0.100	0.009	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Potassium	<0.01	mg/L	1	0.10	0.01	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Sodium	<0.02	mg/L	1	0.20	0.02	U1	GES	05/08/2024 14:54	EPA 200.8-1994, Rev. 5.4
Strontium	<0.00005	mg/L	1	0.00200	0.00005	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4
Thallium	<0.02	µg/L	1	0.20	0.02	U1	GES	05/08/2024 02:48	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Customer Sample ID: Field Blank

Customer Description:

Lab Number: 241410-023

Preparation:

Date Collected: 04/23/2024 10:56 EDT

Date Received: 04/29/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Antimony	<0.008	µg/L	1	0.100	0.008	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Arsenic	<0.03	µg/L	1	0.10	0.03	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Barium	0.10	µg/L	1	0.20	0.05	J1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Beryllium	<0.007	µg/L	1	0.050	0.007	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Boron	<0.007	mg/L	1	0.050	0.007	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Cadmium	<0.004	µg/L	1	0.020	0.004	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Calcium	<0.02	mg/L	1	0.05	0.02	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Chromium	0.26	µg/L	1	0.30	0.07	J1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Cobalt	0.025	µg/L	1	0.020	0.005		GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Lead	<0.05	µg/L	1	0.20	0.05	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Lithium	<0.00006	mg/L	1	0.00030	0.00006	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Magnesium	<0.009	mg/L	1	0.100	0.009	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Mercury	<2	ng/L	1	5	2	U1	RLP	05/01/2024 00:00	EPA 245.7-2005, Rev. 2.0
Molybdenum	<0.1	µg/L	1	0.5	0.1	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Potassium	<0.01	mg/L	1	0.10	0.01	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Selenium	<0.04	µg/L	1	0.50	0.04	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Sodium	<0.02	mg/L	1	0.20	0.02	U1	GES	05/08/2024 14:59	EPA 200.8-1994, Rev. 5.4
Strontium	<0.00005	mg/L	1	0.00200	0.00005	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4
Thallium	<0.02	µg/L	1	0.20	0.02	U1	GES	05/08/2024 02:53	EPA 200.8-1994, Rev. 5.4



Water Analysis Report

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

Job ID: 241410

Customer: Pirkey Power Station

Date Reported: 06/11/2024

Report Verification

This report and the above data have been confirmed by the following analyst.

Michael Ohlinger, Chemist

Email: msohlinger@aep.com

Phone: 614-836-4184

Audinet: 8-210-4184

THIS TEST REPORT RELATES ONLY TO THE ITEMS TESTED AND SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF THE LABORATORY. ALL TEST RESULTS MEET ALL OF THE REQUIREMENTS OF THE ACCREDITING AUTHORITY, UNLESS OTHERWISE NOTED. ALL TIMES LISTED ARE IN THE EASTERN TIME ZONE.

Data Qualifier Legend

U1 - Not detected at or below method detection limit (MDL).

J1 - Concentration estimated. Analyte was detected between the method detection limit and the reporting limit.

M1 - The associated matrix spike (MS) or matrix spike duplicate (MSD) recovery was outside acceptance limits.

O2 - Client did not provide additional bottles; therefore, the MS and duplicate are missing in this batch.

P2 - The precision on the laboratory control sample duplicate (LCSD) was above acceptance limits.



Water Analysis Report

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

Job ID: 241961

Customer: Pirkey Power Station

Date Reported: 07/26/2024

Customer Sample ID: AD-23

Customer Description:

Lab Number: 241961-001

Preparation:

Date Collected: 06/26/2024 09:42 EDT

Date Received: 06/27/2024 10:00 EDT

Metals

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Boron	0.242	mg/L	1	0.050	0.007		GES	07/03/2024 10:09	EPA 200.8-1994, Rev. 5.4

Customer Sample ID: AD-36

Customer Description:

Lab Number: 241961-002

Preparation:

Date Collected: 06/26/2024 10:04 EDT

Date Received: 06/27/2024 10:00 EDT

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Chloride	14.2	mg/L	2	0.06	0.02		CRJ	07/09/2024 11:46	EPA 300.1 -1997, Rev. 1.0

Report Verification

This report and the above data have been confirmed by the following analyst.

Michael Ohlinger, Chemist

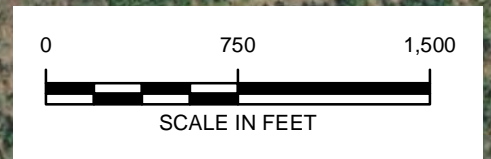
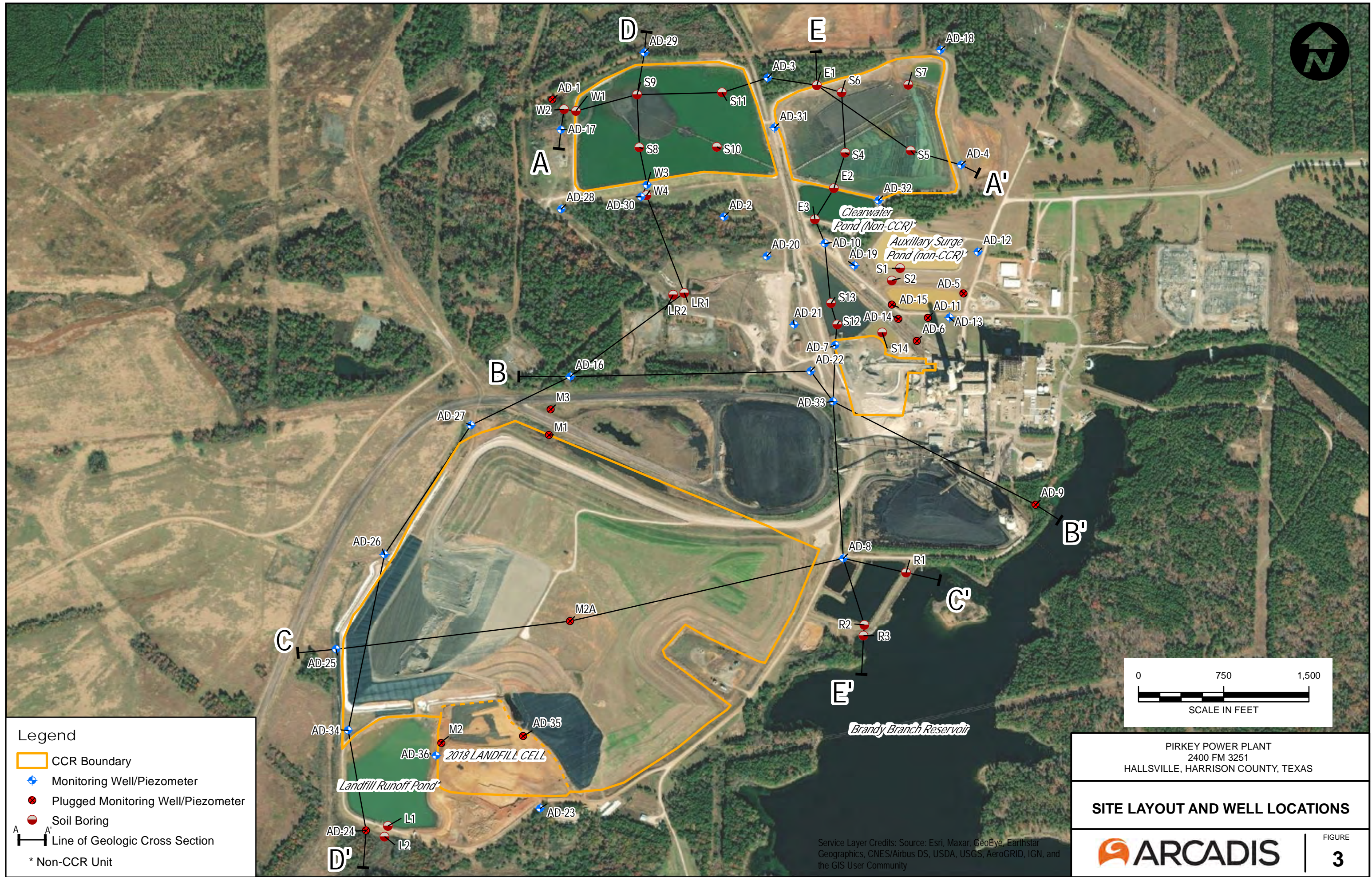
Email: msohlinger@aep.com

Phone: 614-836-4184

Audinet: 8-210-4184

THIS TEST REPORT RELATES ONLY TO THE ITEMS TESTED AND SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF THE LABORATORY. ALL TEST RESULTS MEET ALL OF THE REQUIREMENTS OF THE ACCREDITING AUTHORITY, UNLESS OTHERWISE NOTED. ALL TIMES LISTED ARE IN THE EASTERN TIME ZONE.

ATTACHMENT B
Arcadis Geologic Cross Sections



Legend

- CCR Boundary
- ◆ Monitoring Well/Piezometer
- Plugged Monitoring Well/Piezometer
- Soil Boring
- Line of Geologic Cross Section

* Non-CCR Unit

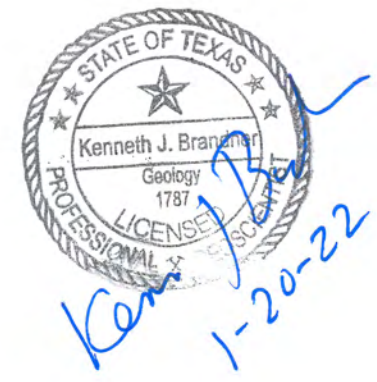
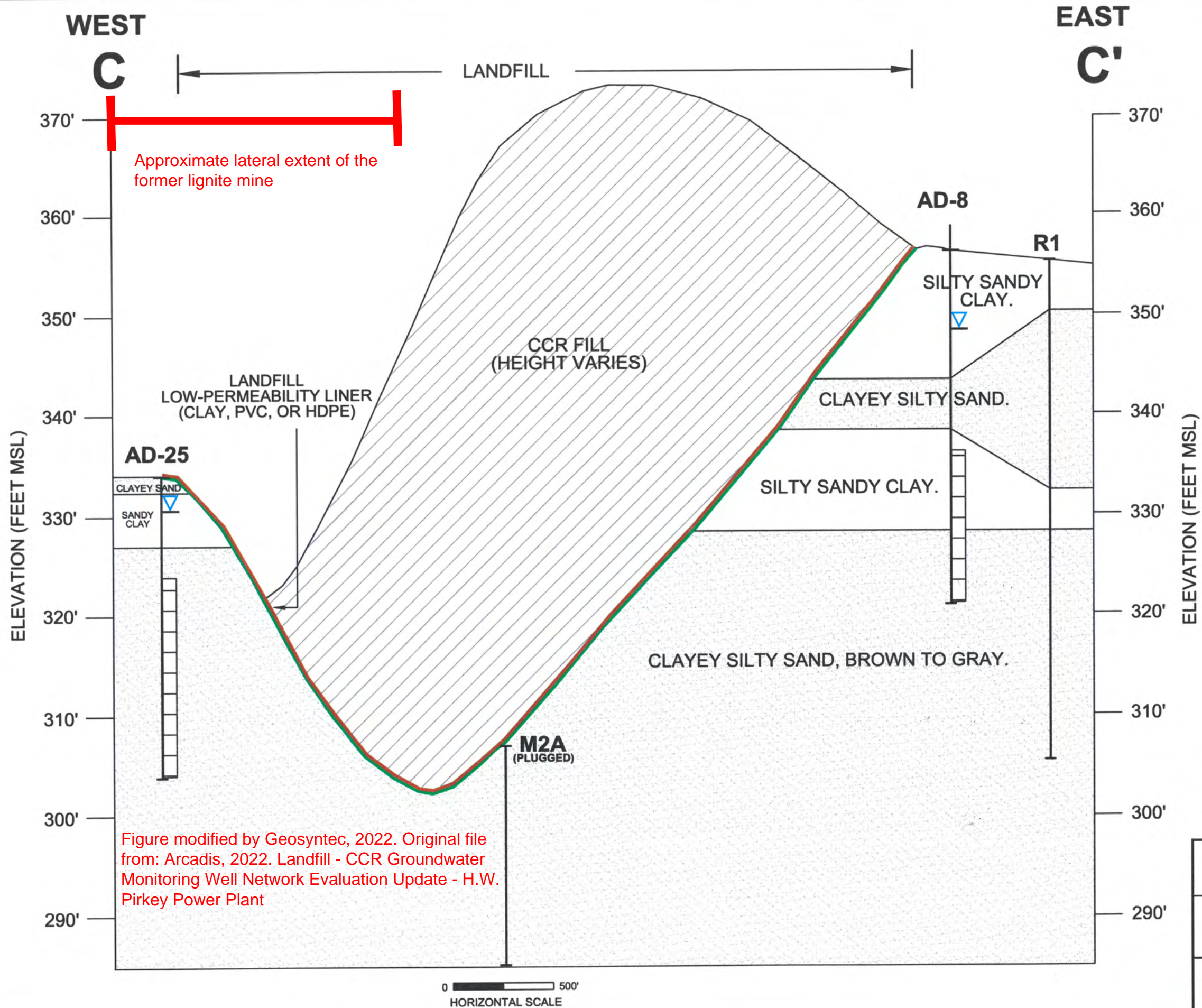
PIRKEY POWER PLANT
2400 FM 3251
HALLSVILLE, HARRISON COUNTY, TEXAS

SITE LAYOUT AND WELL LOCATIONS

FIGURE
3

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CITY: DIVGROUP: DE: LD: AM: PD: TM: TR: LYRON+OFF+REF*
 G:\Active Projects\AEP3011794 - Pirkey 2022\Figures-Maps\Figure 6 Cross Section C-C.dwg LAYOUT: MODEL: SAVED: 2/22/2018 11:19 AM: ACADVER: 24.05 (LMS TECH): PAGESETUP: PLOTSTYLETABLE: PLOTTED: 1/13/2022 11:01 AM BY: LEASE, DIANA



- LEGEND**
- MONITORING WELL SCREENED INTERVAL
 - WATER LEVEL IN MONITORING WELL (MAY 2021)
 - BASE OF CCR UNIT

PIRKEY POWER PLANT
 2400 FM 3251
 HALLSVILLE, HARRISON COUNTY, TEXAS

**CROSS SECTION
 C - C'**

ARCADIS Design & Consultancy
 for natural and built assets

FIGURE
6

CITY: DIV/GRP: DB: LD: AM: PD: TM: TR: LYRON "OFF-REF" G:\Active Projects\AEP\30117944 - Pirkey 2022\Figures-Maps\Figure 7 Cross Section D-D'.dwg LAYOUT: MODEL: SAVED: 2/22/2016 11:20 AM ACADVER: 24.05 (LMS TECH) PAGES: 7 PLOT: 1/13/2022 11:07 AM BY: LEASE, DIANA

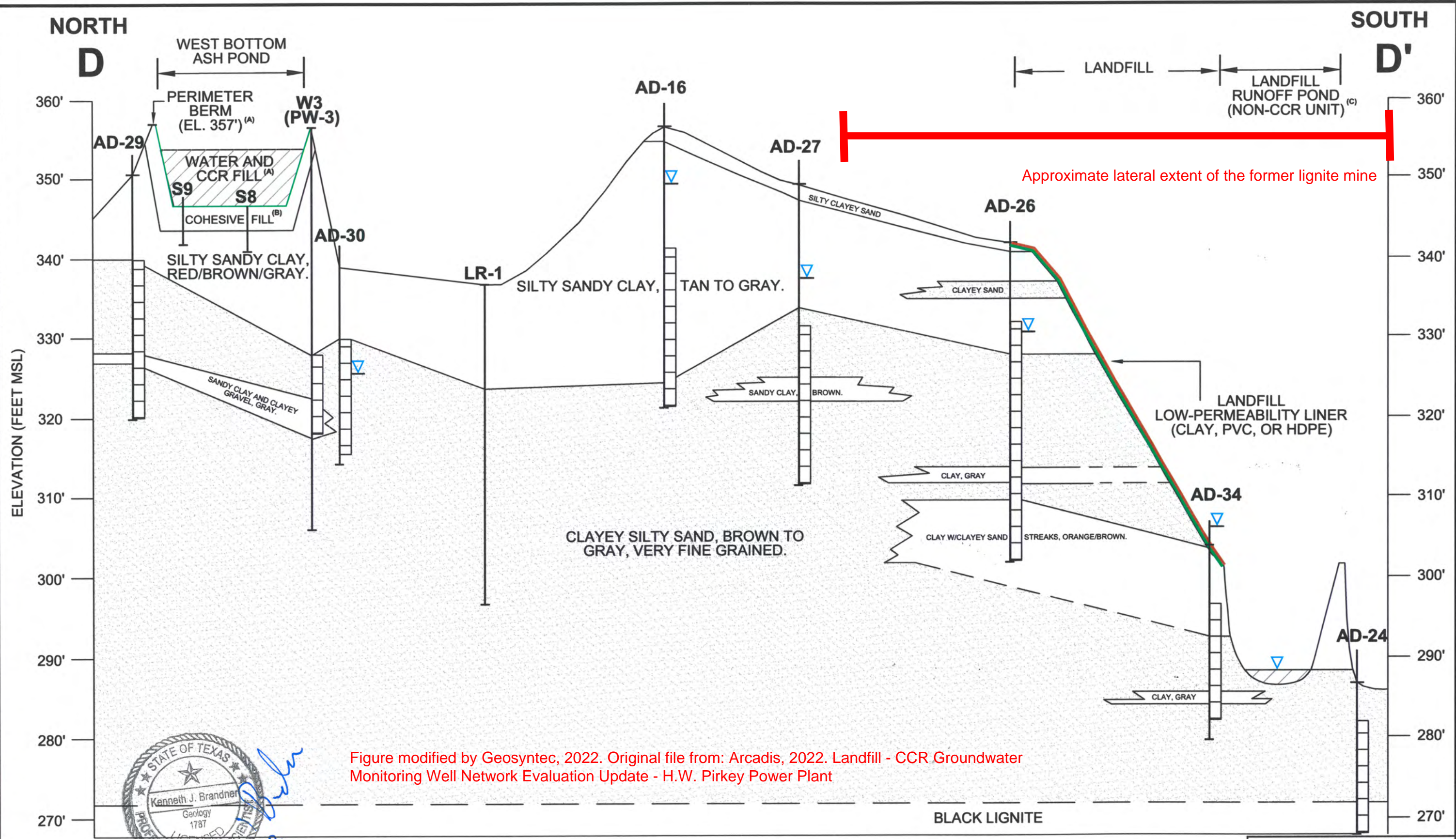
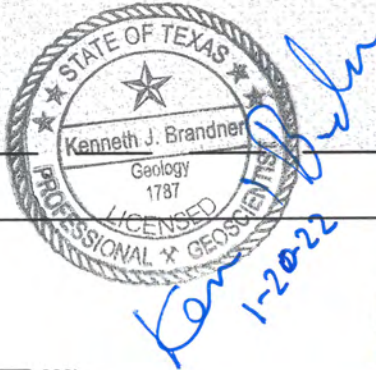


Figure modified by Geosyntec, 2022. Original file from: Arcadis, 2022. Landfill - CCR Groundwater Monitoring Well Network Evaluation Update - H.W. Pirkey Power Plant



- LEGEND**
- MONITORING WELL SCREENED INTERVAL
 - WATER LEVEL IN MONITORING WELL (MAY 2021)
 - BASE OF CCR UNIT

- NOTES:**
- A) TOP OF WEST BOTTOM ASH POND PERIMETER BERM ELEVATION IS 357', OPERATING LEVEL IS 354' (JOHNSON & PACE, MAY 2011); BASE ELEVATION OF WEST BOTTOM ASH POND IS 347' (SARGENT & LUNDY, JANUARY 1983).
 - B) COMPACTED COHESIVE SOIL FROM ELEVATION 344' TO 347' (SARGENT & LUNDY SEPTEMBER 1984; AMEC, AUGUST 2011).
 - C) LANDFILL RUNOFF POND PERIMETER BERM APPROXIMATE ELEVATION 302' MSL, BASE OF LANDFILL RUNOFF POND APPROXIMATE ELEVATION 286' MSL. NORMAL OPERATING LEVEL 288' MSL (JOHNSON & PACE MAY 2011).



PIRKEY POWER PLANT
2400 FM 3251
HALLSVILLE, HARRISON COUNTY, TEXAS

**CROSS SECTION
D - D'**

ARCADIS Design & Construction
for natural and built assets

FIGURE
7

ATTACHMENT C
February 2023 Pirkey Landfill Leachate
Laboratory Analytical Report



Water Analysis Report

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

Job ID: 230659

Customer: Pirkey Power Station

Date Reported: 04/06/2023

Customer Sample ID: EBAP

Customer Description: TG-32

Lab Number: 230659-003

Preparation:

Date Collected: 03/01/2023 00:23 EST

Date Received: 03/02/2023 10:30 EST

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.59	mg/L	5	0.25	0.05		CRJ	03/16/2023 13:42	EPA 300.1 -1997, Rev. 1.0
Chloride	84.5	mg/L	5	0.10	0.05		CRJ	03/16/2023 13:42	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.56	mg/L	5	0.15	0.05		CRJ	03/16/2023 13:42	EPA 300.1 -1997, Rev. 1.0
Sulfate	2780	mg/L	100	20	3		CRJ	03/16/2023 19:11	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	<5	mg/L	1	20	5	U1	MGK	03/03/2023 11:26	SM 2320B-2011
TDS, Filterable Residue	3900	mg/L	20	1000	400		SDW	03/07/2023 10:50	SM 2540C-2015

Customer Sample ID: Leachate

Customer Description: TG-32

Lab Number: 230659-004

Preparation:

Date Collected: 02/28/2023 10:55 EST

Date Received: 03/02/2023 10:30 EST

Ion Chromatography

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	1.82	mg/L	5	0.25	0.05		CRJ	03/16/2023 14:15	EPA 300.1 -1997, Rev. 1.0
Chloride	41.7	mg/L	5	0.10	0.05		CRJ	03/16/2023 14:15	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.47	mg/L	5	0.15	0.05		CRJ	03/16/2023 14:15	EPA 300.1 -1997, Rev. 1.0
Sulfate	329	mg/L	50	10	2		CRJ	03/16/2023 21:23	EPA 300.1 -1997, Rev. 1.0

Wet Chemistry

Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Alkalinity, as CaCO3	94	mg/L	1	20	5		MGK	03/03/2023 11:26	SM 2320B-2011
TDS, Filterable Residue	600	mg/L	20	1000	400	J1	SDW	03/03/2023 12:09	SM 2540C-2015

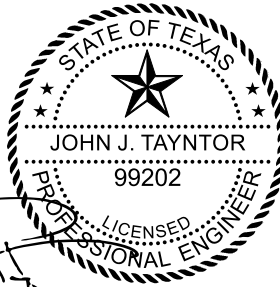
ATTACHMENT D
AD-36 Boring Log and Well
Construction Diagram

SOIL/WELL BORING LOG



Auckland Consulting LLC

TBPE Firm No. F16721



Project: AEP - Pirkey Power Station
Harrison County

Drilling Co.: C&S Lease

Driller: Buford E. Collier

Drilling Method: Hollow Stem Auger

04/30/2019

Well/Boring #: AD-36	Date Drilled: 4/24/19
Depth of Boring/well: 15 feet	Diameter of Boring: 8.25 inches
Length of Screen: 10 feet	Diameter of Screen: 2 inches
Length of Casing: 5 feet	Diameter of Casing: 2 inches
Filter Pack: 20/40	Slot Size: 0.010 inches
Logged By: John J. Tayntor	Screen Material: Sch 40 PVC

- Concrete/cement
 - Clay
 - Silty Sand
- Bentonite
 - Silty Clay
 - Sandy Clay
- Well Screen
 - Sand
 - Lignite
- Gravel
 ▽ - Initial Water Level

Depth Feet	GEOLOGIC DESCRIPTION	Lithology Classification	PID ppm	Depth Feet	Well Completion and Lithology	Remarks
0.0	Fill - Reddish Brown, Sandy Lean Clay (CL) with gravel	CL/Fill		0-9		
5.0	Reddish Brown and Tan, Clayey Sand (SC), with gravel	SC		9-11		
10.0	Reddish brown, Sandy Lean Clay (CL), few gravel	CL		11-14		
15.0	Reddish brown, Clayey Sand (SC), with gravel	SC		14-15		
Well TD = 15 feet.						

*Soil descriptions based on visual observations and intervals are approximate.
MW Location Coordinates: N6871017.4, E3202874.4

ATTACHMENT E
Certification by a Qualified Professional Engineer

CERTIFICATION BY A QUALIFIED PROFESSIONAL ENGINEER

I certify that the above described alternative source demonstration is appropriate for evaluating the groundwater monitoring data for the Pirkey Landfill CCR management area and that the requirements of 30 TAC §352.941(c)(2) have been met.

Beth Ann Gross

Printed Name of Licensed Professional Engineer

Beth Ann Gross

Signature



Geosyntec Consultants
2039 Centre Pointe Blvd, Suite 103
Tallahassee, Florida 32308

Texas Registered Engineering Firm
No. F-1182

79864
License Number

Texas
Licensing State

December 23, 2024
Date