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AMERICAN ELECTRIC POWER

BOUNDLESS ENERGY™

ALTERNATIVE SOURCE DEMONSTRATION REPORT

2024 2nd SEMIANNUAL EVENT

TEXAS STATE CCR RULE

H.W. Pirkey Power Plant Landfill

Registration No. CCR 104

Hallsville, Texas

Prepared for

American Electric Power
1 Riverside Plaza
Columbus, Ohio 43215-2372

Prepared by

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Project CHA8495B

March 2025

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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 second 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 second semiannual detection monitoring event of 2024 was performed in September 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 November 2024. Following verification resampling, SSIs were identified for boron and chloride at wells AD-23 and 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 July 2024, 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 (GEI 2024).

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 Monitoring Well Network Report (Arcadis 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 and chloride in AD-23 and 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 (natural variation) issue.

3.1.1 Boron

SSIs for boron were observed at downgradient monitoring wells AD-23 and AD-36 (**Table 1**). Boron concentrations at AD-23 from the initial sampling event (0.229 milligrams per liter [mg/L]) and verification sampling event (0.279 mg/L) exceeded the intrawell UPL of 0.0612 mg/L, and boron concentrations at AD-36 from the initial sampling event (0.082 mg/L) and verification sampling event (0.085 mg/L) exceeded the intrawell UPL of 0.0747 mg/L.

Boron concentrations at AD-23 and AD-36 have been within the range of those observed at Landfill background wells since monitoring began (**Figure 3**). Upgradient background well AD-8 consistently has greater boron concentrations than all Landfill compliance wells, including AD-23 and AD-36. 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 compliance wells is possible.

Aqueous sulfate trends at AD-23 and AD-36 do not support a release from the Landfill. Sulfate is considered to be an indicator parameter for potential CCR releases due to frequently elevated concentrations in CCR source material and limited chemical attenuation along groundwater flow paths. A review of sulfate concentrations at compliance wells of interest indicates that neither well displays an increasing trend and that sulfate concentrations at both wells appear to be stable (**Figure 4**). A leachate sample collected in February 2023 from the Landfill collection system contained a reported aqueous sulfate concentration of 329 mg/L (**Attachment D**), which is over an order of magnitude higher than sulfate concentrations observed at AD-23 and AD-36. If Landfill leachate were impacting groundwater quality at downgradient wells, an increase in sulfate concentrations in compliance well groundwater would also be expected due to the effect of physical mixing.

Major ion geochemistry of AD-23 and AD-36 groundwater also does not support a release from the Landfill. Major ion chemistry at both wells over time is illustrated on a Piper diagram (**Figure 5**). 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 or AD-36 groundwater by causing the groundwater major ion distribution to alter to reflect that of the Landfill leachate. Both wells show

general geochemical stability over time and do not demonstrate geochemical shifts toward the Landfill leachate sample (**Figure 6**), indicating that the geochemistry is not changing appreciably as would be expected in the event of a Landfill release.

It is noted that groundwater boron concentrations at all well locations discussed are lower than the Texas Risk Reduction Program (TRRP) Class I residential ingestion pathway limit ($^{GW}GW_{Ing}$) of 4.9 mg/L (TCEQ 2009; TCEQ 2025), and the recent groundwater boron concentrations at AD-23 and AD-36 range from approximately 20 to 60 times less than the TRRP limit. Further, TCEQ established a Texas-specific soil 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.

3.1.2 Chloride

SSIs for chloride were observed at monitoring wells AD-23 and AD-36 (**Table 1**). Chloride concentrations at AD-23 from the initial sampling event (9.03 mg/L) and verification sampling event (9.44 mg/L) exceeded the intrawell UPL of 8.92 mg/L, and chloride concentrations at AD-36 from the initial sampling event (15.7 mg/L) and verification sampling event (16.3 mg/L) exceeded the intrawell UPL of 11.8 mg/L.

Although chloride concentrations have been slightly increasing at wells AD-23 and AD-36 since mid-2023, similar increases in chloride have also been observed at upgradient monitoring wells AD-16 and AD-27 (**Figure 6**). Aqueous chloride concentrations from both wells with chloride exceedances detected during the second semiannual initial and verification monitoring events were less than concentrations reported for upgradient wells AD-8 and AD-16 (**Figure 6**).

Despite minor increases in chloride at AD-23 and AD-36, concentrations still fall within the range observed for background chloride from monitoring wells upgradient of the Landfill. Notable chloride increases within the background groundwater over variable time periods are occasionally observed and reflect natural fluctuations in aqueous chloride within the aquifer unit. Within 2024, background well AD-8 experienced a chloride concentration increase of 12.7 mg/L between April and September sampling events, and background well AD-16 experienced a chloride concentration increase of 6.4 mg/L between April and September sampling events. These chloride concentration increases observed in background monitoring wells are similar to or greater than the intrawell chloride UPLs at both wells with exceedances (**Table 1**). These same fluctuations in chloride concentrations would be expected to occur in downgradient groundwater as well.

Regional scale sampling data from shallow wells located in Harrison County (**Attachment C**, Broom and Myers 1966) provide further support for evidence of naturally occurring chloride concentrations exceeding those observed at the site. At the time of publication in 1966, chloride concentrations were reported for 44 samples from 27 wells screened at depths less than 60 feet. Of these 44 samples, 18 were below the AD-23 UPL of 8.92 mg/L (the lower of both AD-23 and AD-36 UPLs). The majority of the samples were above 20 mg/L, which is higher than the chloride concentrations reported at AD-23 and AD-36 to date (**Figure 7**). These data indicate that chloride concentrations vary within groundwater at comparable depths at the regional scale.

As discussed above, sulfate concentration trends at AD-23 and AD-36 do not support a release from the Landfill and major ion chemistry at both locations does not reflect an influence from Landfill leachate and instead demonstrates relative geochemical stability (**Figure 5**). Based on the

above evaluation, the variability of chloride in groundwater at AD-23 and AD-36 should not be attributed to the Landfill.

Further, although protective concentration levels have not been established for chloride in groundwater through the TRRP program; the TRRP protective concentration level tables (TCEQ 2025) list a secondary maximum contaminant level (MCL) for chloride of 250 mg/L. A secondary MCL is a non-enforceable guideline regulating containments that may cause cosmetic effects or aesthetic effects in drinking water. The recent chloride concentrations observed at AD-23 and AD-36 range from approximately15 to 25 times less than the secondary MCL.

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 at this location. As discussed in previous ASDs (Geosyntec 2023; Geosyntec 2024c; Geosyntec 2024d), 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 8**. The location of AD-36 relative to the recently constructed brine storage area is shown in **Figure 9**.

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 E**. 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 September 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 F.**

5. REFERENCES

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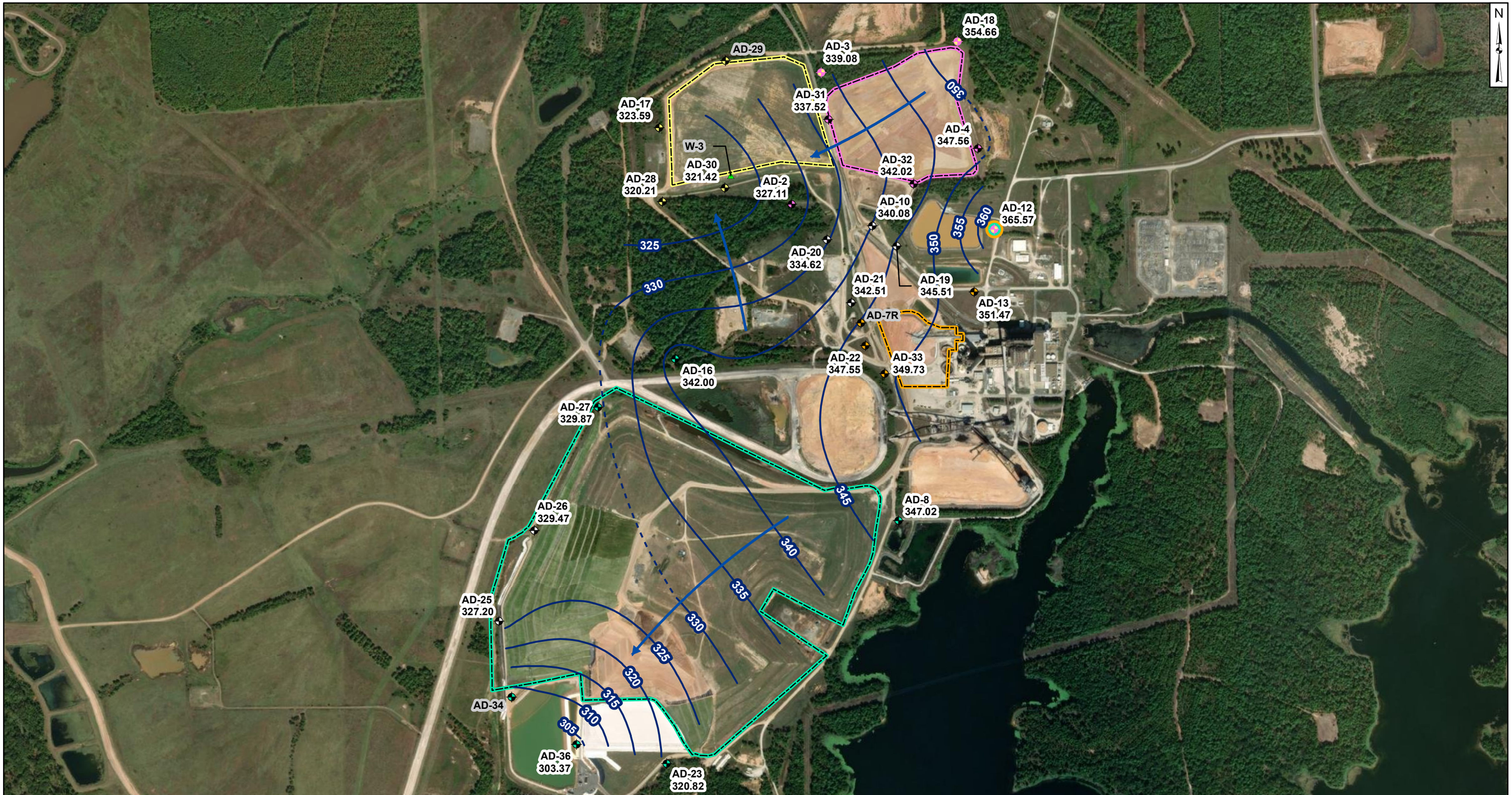
TABLES

Table 1. Detection Monitoring Data Summary
Alternative Source Demonstration
Pirkey – Landfill

Analyte	Unit	Description	AD-23		AD-34	AD-36	
			9/18/2024	11/6/2024	9/18/2024	9/18/2024	11/6/2024
Boron	mg/L	Intrawell Background Value (UPL)	0.0612		0.108	0.0747	
		Analytical Result	**0.229**	**0.279**	0.07	**0.082**	**0.085**
Calcium	mg/L	Intrawell Background Value (UPL)	0.503		46.1	1.22	
		Analytical Result	0.20	--	43.0	0.77	--
Chloride	mg/L	Intrawell Background Value (UPL)	8.92		8.97	11.8	
		Analytical Result	**9.03**	**9.44**	7.32	**15.7**	**16.3**
Fluoride	mg/L	Intrawell Background Value (UPL)	0.156		1.58	0.0980	
		Analytical Result	0.05	--	0.54	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	3.0	3.8	3.7	3.6	3.9
Sulfate	mg/L	Intrawell Background Value (UPL)	13.6		1,340	4.77	
		Analytical Result	7.1	--	1,150	2.8	--
Total Dissolved Solids	mg/L	Intrawell Background Value (UPL)	104		1,840	84.9	
		Analytical Result	60	--	1620	50	--

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 levels (collected on September 16, 17, and 18, 2024) provided by AEP.
2. Site features based on information available in coal combustion residuals (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. Wells AD-29 and W-3 were not gauged during the September 2024 event.
5. AD-7R replaced AD-7, which was abandoned on September 12, 2023.
6. Wells shaded in gray were not used for contouring.
7. Well AD-34 had artesian characteristics during this event and was not used for contouring.
8. AD-35 was abandoned on November 13, 2018 and is not shown on the map.
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 for the FGDSA was completed 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.

1,000 500 0 1,000 Feet

Beth Ann Gross

January 10, 2025
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STATE OF TEXAS
BETH ANN GROSS
79864
LICENSED
PROFESSIONAL ENGINEER

Potentiometric Contours: Uppermost Aquifer September 2024

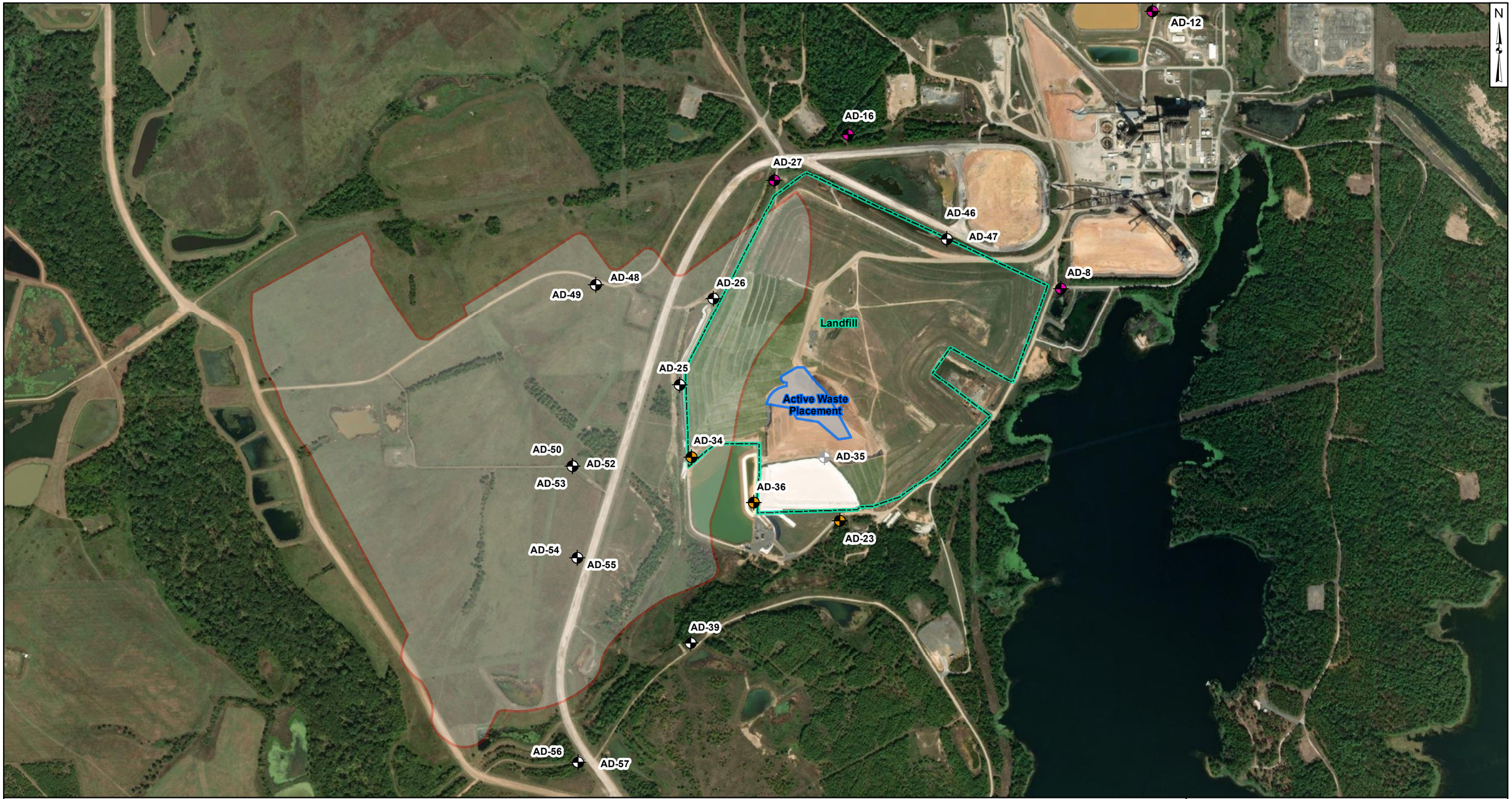
AEP Pirkey Power Plant
Hallsville, Texas

Geosyntec consultants

Columbus, Ohio | 2024/12/24

Figure 1

A:\Projects\AEP\Groundwater Statistical Evaluation - CHA8423\Groundwater Mapping\GIS Files\MXD\Pirkey\2024\AEP-Pirkey_GW_2024-09Pirkey.mxd. Okiemute.Commander. 12/24/2024. Project/Phase/Task.



Legend

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

Notes

- Monitoring well coordinate data 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.

1,000 500 0 1,000 Feet

Landfill Location Relative to Former Lignite Mine Area

AEP Pirkey Power Plant
Hallsville, Texas

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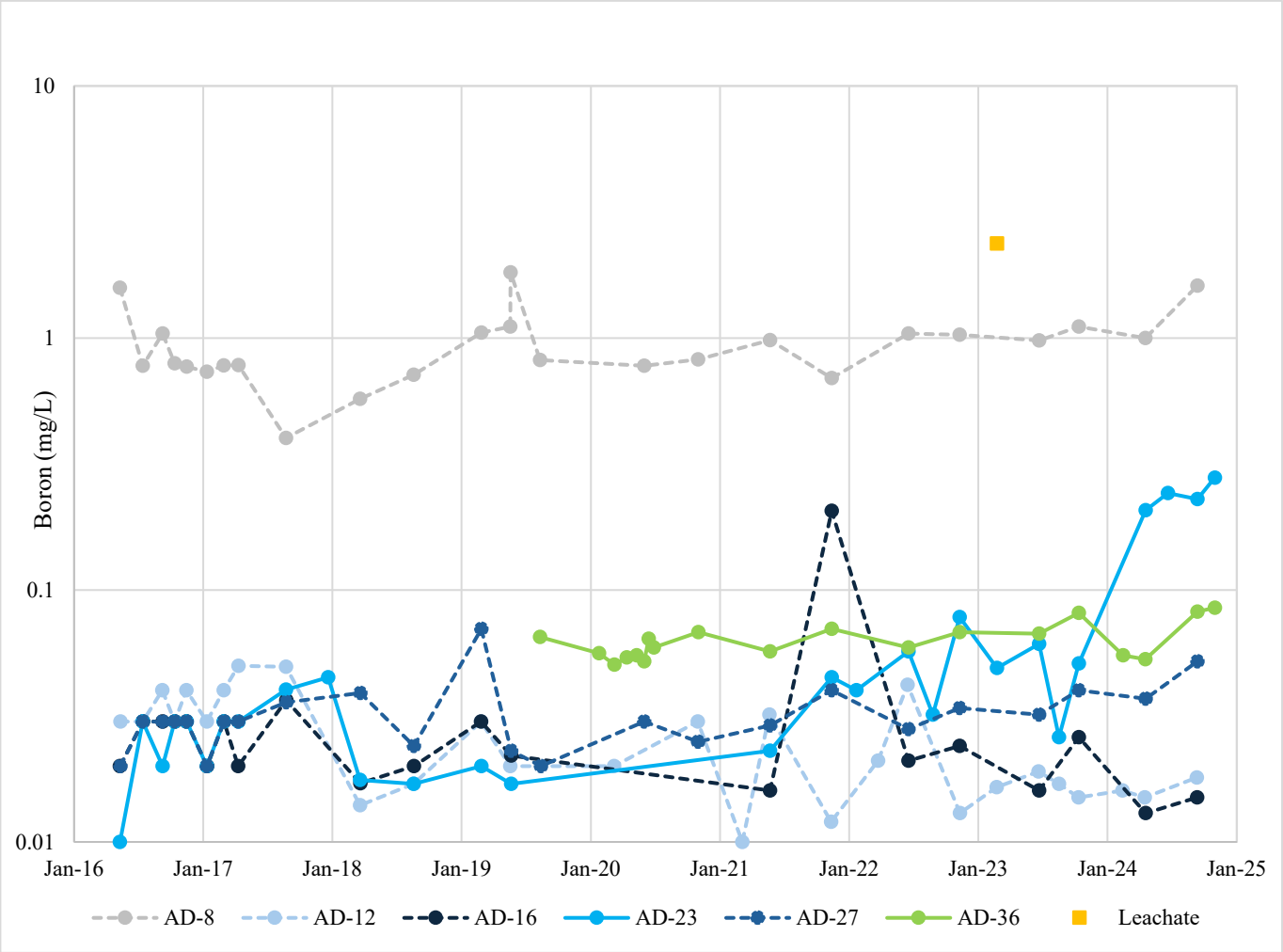
Columbus, Ohio | 2025/03/27

Figure **2**

M:\Projects\AEP\Groundwater Statistical Evaluation - CHA8423\Groundwater Mapping\GIS Files\MXD\Pirkey\Pirkey LF ASD Site Layout waste placement_updated active zone.mxd. HDuff. 3/27/2025. Project/Phase/Task.



Notes:

1. Boron concentrations are shown in milligrams per liter (mg/L).
2. Background monitoring wells are shown with dashed lines.
3. Boron concentrations are plotted on a logarithmic scale.
4. Leachate sample was collected on 2/28/2023.

Boron Time Series Graph

Pirkey Landfill

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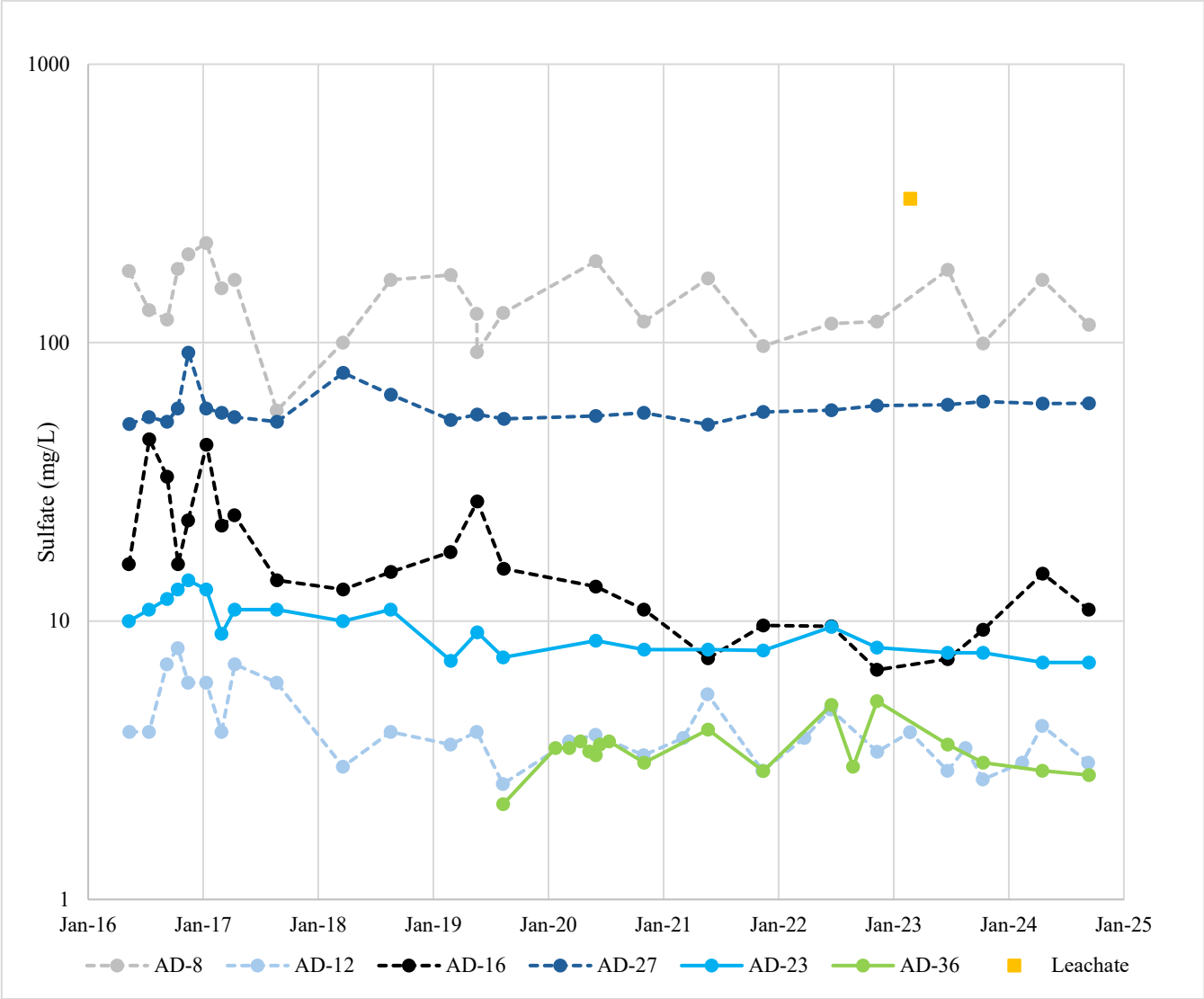
Figure 3

Columbus, Ohio

March 2025



Notes:
1. Sulfate concentrations are shown in milligrams per liter (mg/L).
2. Background monitoring wells are shown with dashed lines.
3. Sulfate concentrations are plotted on a logarithmic scale.
4. Leachate sample was collected on 2/28/2023.

Sulfate Time Series Graph
Pirkey Landfill

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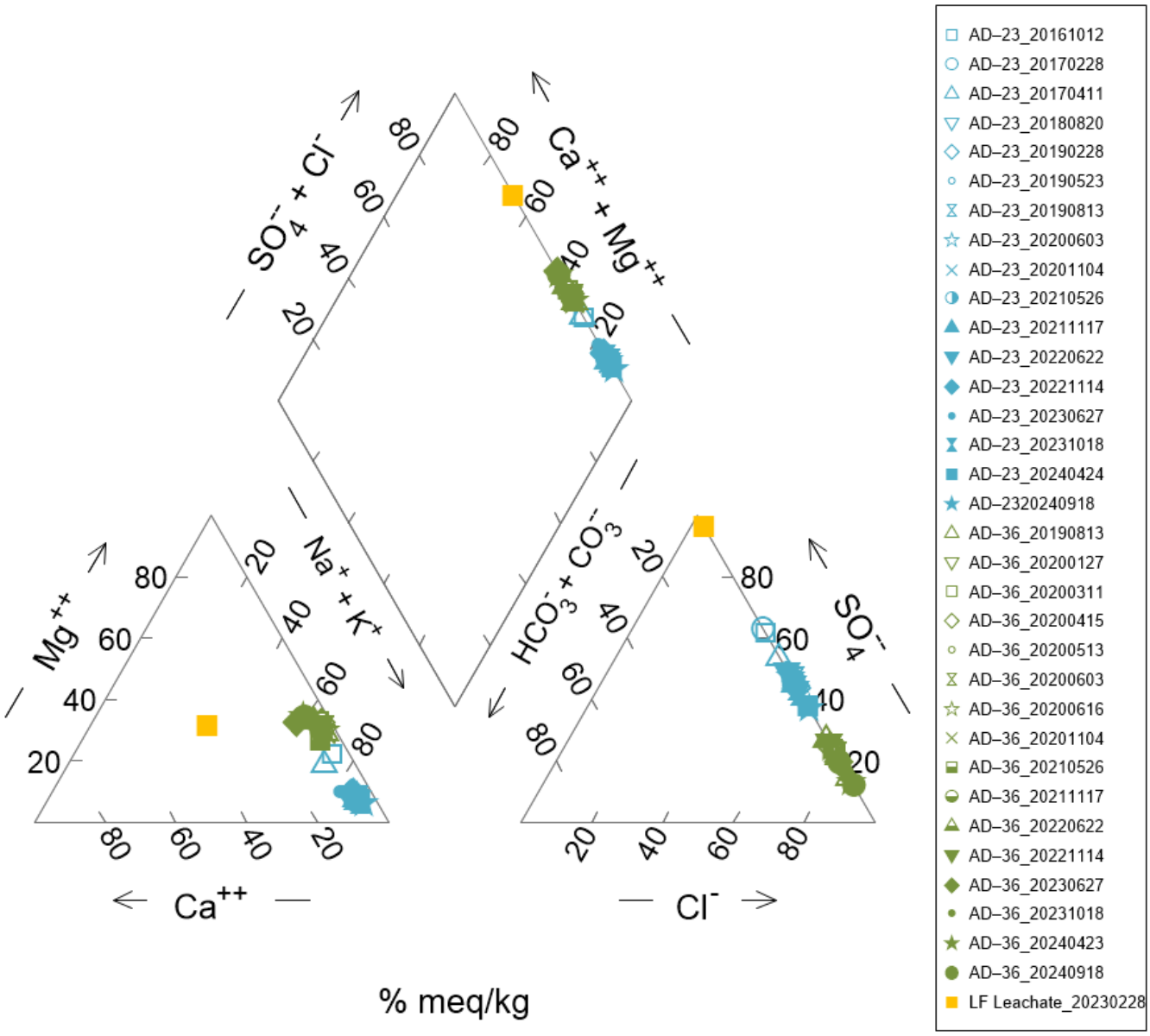
Columbus, Ohio

March 2025

Figure 4



Notes:
1. AD-23 and AD-36 groundwater samples are plotted in units of percentage milliequivalents per kilogram of water (% meq/kg).
2. All groundwater samples contained total alkalinity at values below the analytical method detection limit. Alkalinity values of 0 % meq/kg were used in the Piper plot.
3. Landfill (LF) leachate sample was collected on February 28, 2023.

Piper Diagram
Pirkey Landfill

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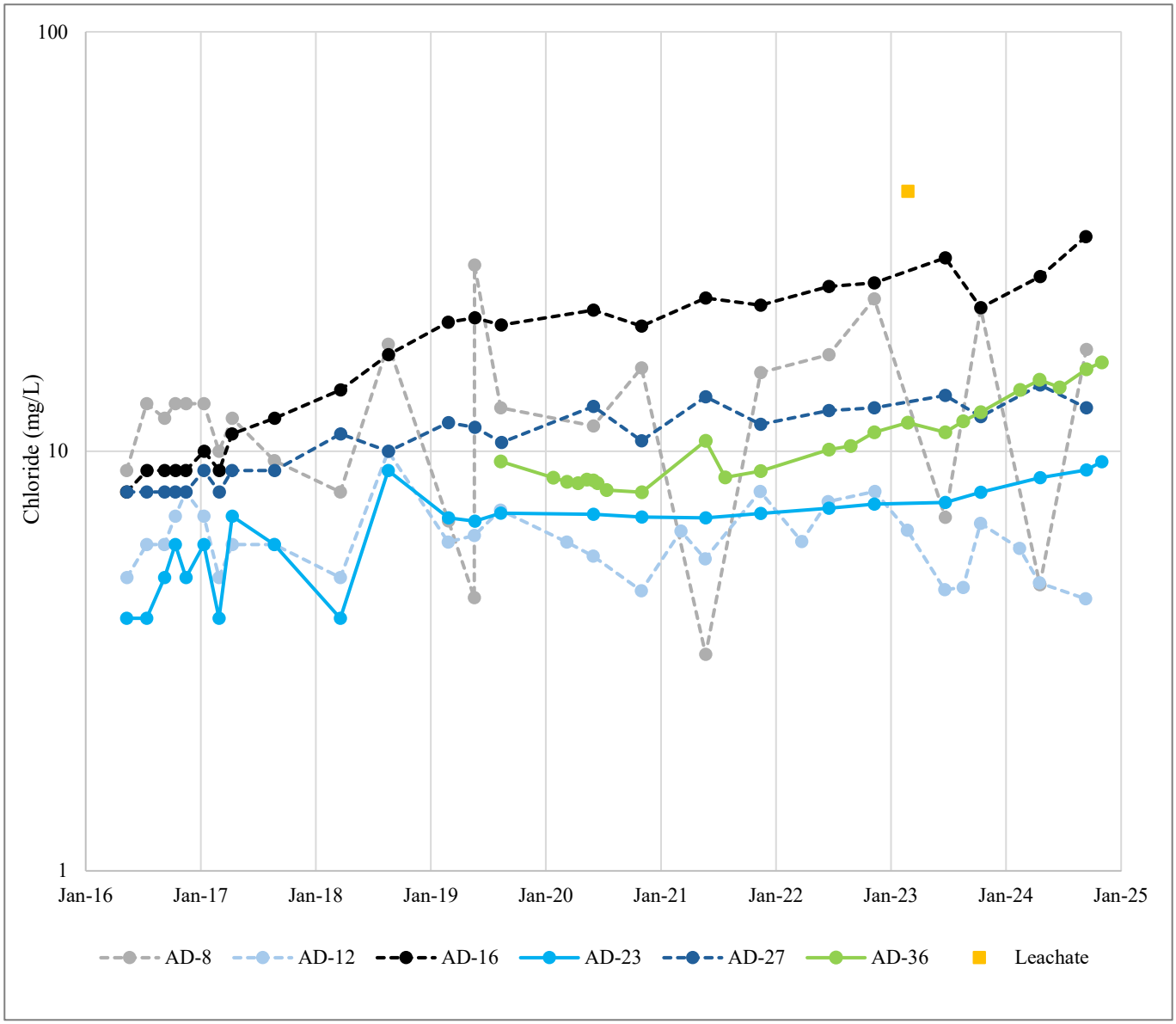
Columbus, Ohio | March 2025

Figure **5**



Notes:
1. Chloride concentrations are shown in milligrams per liter (mg/L).
2. Background monitoring wells are shown with dashed lines.
3. Leachate sample was collected on 2/28/2023.

Chloride Time Series Graph
Pirkey Landfill

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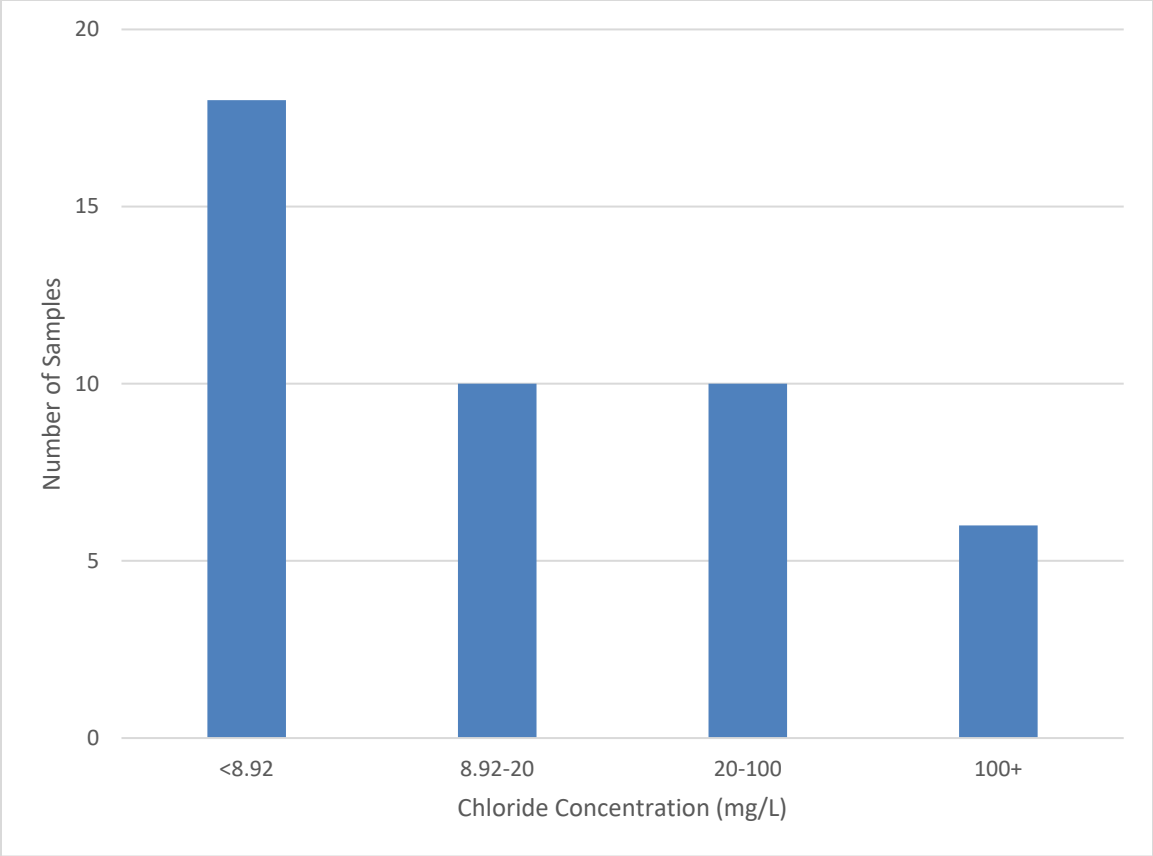
Figure 6

Columbus, Ohio

March 2025



Notes:
1. Chloride concentrations are shown in milligrams per liter (mg/L).
2. Chloride analytical data shown for 44 groundwater samples collected from 27 groundwater wells screened at a depth of less than 60 feet below ground surface.
3. From Broom and Myers (Texas Water Development Board), 1966 (provided as **Attachment C).**

Harrison County Chloride Concentrations in Shallow (<60' Depth Wells)
Pirkey Landfill

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Columbus, Ohio | March 2025

Figure **7**

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

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Figure
8

Columbus, Ohio

March 2025

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

Geosyntec consultants

AMERICAN ELECTRIC POWER

Figure
9

Columbus, Ohio

March 2025

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

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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

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

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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

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

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

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

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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
Lab Number: 241393-021
Date Collected: 04/22/2024 15:00 EDT

Customer Description:
Preparation:
Date Received: 04/26/2024 10:00 EDT

Ion Chromatography

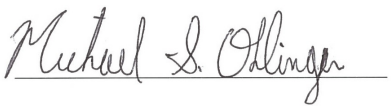
Parameter	Result	Units	Dilution	RL	MDL	Data Qualifiers	Analyst	Analysis Date	Method
Bromide	0.61	mg/L	2	0.10	0.02		CRJ	05/10/2024 18:20	EPA 300.1 -1997, Rev. 1.0
Chloride	20.8	mg/L	2	0.06	0.02		CRJ	05/10/2024 18:20	EPA 300.1 -1997, Rev. 1.0
Fluoride	0.15	mg/L	2	0.06	0.02		CRJ	05/10/2024 18:20	EPA 300.1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

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
Lab Number: 241410-001
Date Collected: 04/23/2024 09:21 EDT

Customer Description:
Preparation:
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
Lab Number: 241410-003
Date Collected: 04/24/2024 10:31 EDT

Customer Description:
Preparation:
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.

AMERICAN ELECTRIC POWER

Dolan Chemical Laboratory
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Audinet: 210-4221

Water Analysis Report

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
Lab Number: 241410-004
Date Collected: 04/22/2024 10:25 EDT

Customer Description:
Preparation:
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.

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
Lab Number: 241410-004-01
Date Collected: 04/22/2024 10:25 EDT

Customer Description:
Preparation: Dissolved
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
Lab Number: 241410-005
Date Collected: 04/23/2024 11:11 EDT

Customer Description:
Preparation:
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
Lab Number: 241410-006
Date Collected: 04/22/2024 10:44 EDT

Customer Description:
Preparation:
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
Lab Number: 241410-006-01
Date Collected: 04/22/2024 10:44 EDT

Customer Description:
Preparation: Dissolved
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
Lab Number: 241410-007
Date Collected: 04/22/2024 09:20 EDT

Customer Description:
Preparation:
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.

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
Lab Number: 241410-009
Date Collected: 04/23/2024 12:16 EDT

Customer Description:
Preparation:
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.

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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
Lab Number: 241410-010
Date Collected: 04/23/2024 11:58 EDT

Customer Description:
Preparation:
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.

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.

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

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Groveport, OH 43125
Phone: 614-836-4221
Audinet: 210-4221

Water Analysis Report

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
Lab Number: 241410-014
Date Collected: 04/23/2024 10:28 EDT

Customer Description:
Preparation:
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	O2, 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.

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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

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Job ID: 241410 **Customer: Pirkey Power Station** **Date Reported: 06/11/2024**

Customer Sample ID: AD-30
Lab Number: 241410-015
Date Collected: 04/23/2024 09:43 EDT

Customer Description:
Preparation:
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	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.

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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
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Job ID: 241410 **Customer: Pirkey Power Station** **Date Reported: 06/11/2024**

Customer Sample ID: AD-31
Lab Number: 241410-016
Date Collected: 04/22/2024 12:20 EDT

Customer Description:
Preparation:
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	O2, 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.

AMERICAN ELECTRIC POWER

Dolan Chemical Laboratory
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Water Analysis Report

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
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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.

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	O2, 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.

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
Lab Number: 241410-018-01
Date Collected: 04/22/2024 12:13 EDT
Customer Description:
Preparation: Dissolved
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
Lab Number: 241410-019
Date Collected: 04/24/2024 11:11 EDT
Customer Description:
Preparation:
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

Dolan Chemical Laboratory
4001 Bixby Road
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Phone: 614-836-4221
Audinet: 210-4221

Job ID: 241410 **Customer: Pirkey Power Station** **Date Reported: 06/11/2024**

Customer Sample ID: AD-36
Lab Number: 241410-020
Date Collected: 04/23/2024 10:20 EDT
Customer Description:
Preparation:
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
Lab Number: 241410-021
Date Collected: 04/22/2024 15:00 EDT
Customer Description:
Preparation:
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

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
Lab Number: 241410-022
Date Collected: 04/23/2024 10:53 EDT

Customer Description:
Preparation:
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
Lab Number: 241410-023
Date Collected: 04/23/2024 10:56 EDT

Customer Description:
Preparation:
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

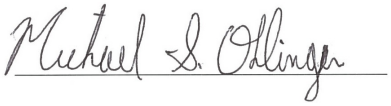
Water Analysis Report

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

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.
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
Lab Number: 241961-001
Date Collected: 06/26/2024 09:42 EDT
Customer Description:
Preparation:
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

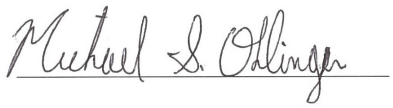
Customer Sample ID: AD-36
Lab Number: 241961-002
Date Collected: 06/26/2024 10:04 EDT
Customer Description:
Preparation:
Date Received: 06/27/2024 10:00 EDT

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

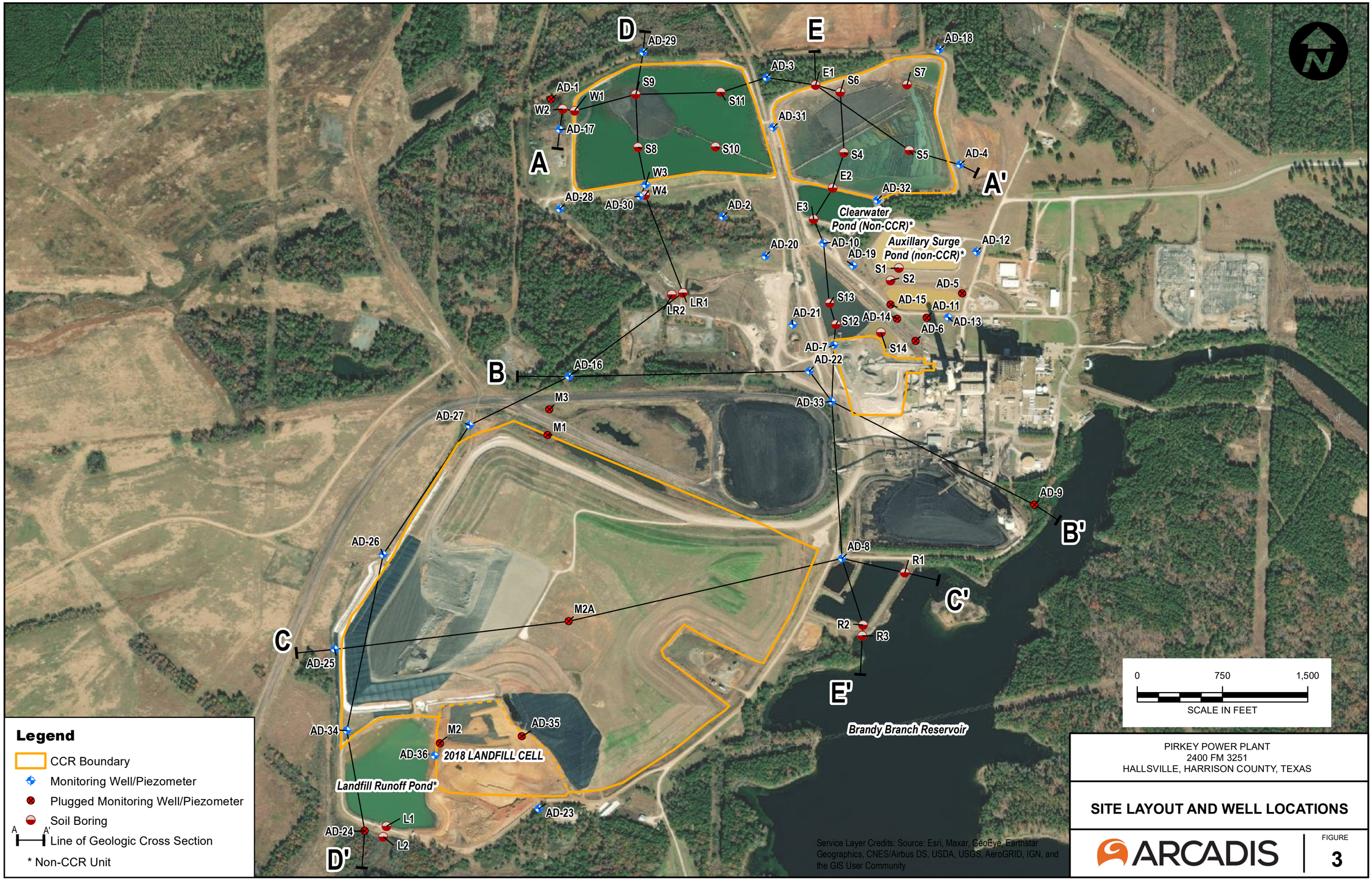
Report Verification

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

ATTACHMENT B
Geologic Cross Sections C-C' and D-D'



Legend

- CCR Boundary
- Monitoring Well/Piezometer
- Plugged Monitoring Well/Piezometer
- Soil Boring
- A — A' Line of Geologic Cross Section
- * Non-CCR Unit

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

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

SITE LAYOUT AND WELL LOCATIONS

ARCADIS

FIGURE
3

Document Path: T:_ENV\AEP\Pirkey Plant\MXD\Updated\Figure 3 - Site Layout and Well Locations.mxd

WEST

C

EAST

C'

LANDFILL

Approximate lateral extent of the former lignite mine

AD-25

AD-8

R1

LANDFILL
LOW-PERMEABILITY LINER
(CLAY, PVC, OR HDPE)

CCR FILL
(HEIGHT VARIES)

CLAYEY SAND

SANDY CLAY

SILTY SANDY CLAY.

CLAYEY SILTY SAND.

SILTY SANDY CLAY.

CLAYEY SILTY SAND, BROWN TO GRAY.

M2A
(PLUGGED)

ELEVATION (FEET MSL)

370'
360'
350'
340'
330'
320'
310'
300'
290'

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

0 500'
HORIZONTAL SCALE

LEGEND

MONITORING WELL SCREENED INTERVAL

WATER LEVEL IN MONITORING WELL (MAY 2021)

BASE OF CCR UNIT

STATE OF TEXAS
Kenneth J. Brandner
Geology
1787
LICENSED
PROFESSIONAL SCIENTIST

1-20-22

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

CROSS SECTION
C - C'

ARCADIS Design & Consultancy for natural and built assets

FIGURE
6

NORTH

D

SOUTH

D'

WEST BOTTOM ASH POND

PERIMETER BERM (EL. 357') [A]

W3 (PW-3)

AD-29

WATER AND CCR FILL [A]

S9

S8

COHESIVE FILL [B]

AD-30

SILTY SANDY CLAY, RED/BROWN/GRAY.

LR-1

AD-16

SILTY SANDY CLAY, TAN TO GRAY.

AD-27

LANDFILL

LANDFILL RUNOFF POND (NON-CCR UNIT) [C]

Approximate lateral extent of the former lignite mine

SILTY CLAYEY SAND

AD-26

CLAYEY SAND

SANDY CLAY, BROWN.

LANDFILL LOW-PERMEABILITY LINER (CLAY, PVC, OR HDPE)

SANDY CLAY AND CLAYEY GRAVEL, GRAY.

CLAY, GRAY

AD-34

CLAY W/CLAYEY SAND STREAKS, ORANGE/BROWN.

AD-24

CLAY, GRAY

CLAYEY SILTY SAND, BROWN TO GRAY, VERY FINE GRAINED.

BLACK LIGNITE

ELEVATION (FEET MSL)

360' 350' 340' 330' 320' 310' 300' 290' 280' 270'

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

STATE OF TEXAS
Kenneth J. Brandner
Geology
1787
LICENSED PROFESSIONAL GEOSCIENTIST

1-2022

0 600'
HORIZONTAL SCALE

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 & Consultancy for natural and built assets

FIGURE 7

ATTACHMENT C
Ground-Water Resources of Harrison County, Texas

TEXAS WATER DEVELOPMENT BOARD

REPORT 27

GROUND-WATER RESOURCES OF HARRISON COUNTY, TEXAS

By

M. E. Broom and B. N. Myers
United States Geological Survey

Prepared by the U.S. Geological Survey
in cooperation with the
Texas Water Development Board
and the
Harrison County Commissioners Court

August 1966

Table 7.--Chemical analyses of water from wells and springs in Harrison County

(Analyses given are in parts per million except specific conductance, pH, percent sodium, sodium adsorption ratio, and residual sodium carbonate.)

Well	Depth of well (ft)	Date of collection	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Percent sodium	Sodium adsorption ratio (SAR)	Residual sodium carbonate (RSC)	Specific conductance (micromhos at 25°C)	pH
LK-35-11-901	16	Jan. 29, 1942	--	--	--	6.8	17	*36	0.0	97	32	--	22	--	211	85	--	--	--	--	--
902	101	Oct. 20, 1964	43	10	--	21	14	*19	3	112	23	0.1	.0	--	233	110	28	0.8	0.00	337	5.0
19-301	39	Jan. 29, 1942	--	--	--	21	[b]	*30	134	3	4.5	.2	[c]	--	126	55	--	--	--	--	--
501	35	do	--	--	--	[a]	[b]	*22	12	10	16	--	26	--	85	16	--	--	--	--	--
601	32	do	--	--	--	15	15	*90	18	2	196	.1	[c]	--	328	99	--	--	--	--	--
20-401	18	do	--	--	--	8.8	[b]	*3.7	6	3	14	.2	[c]	--	40	25	--	--	--	--	--
402	850	July 2, 1964	15	1.5	--	6.0	2.2	235 4.0	272	11	221	.4	3.8	0.29	633	24	95	21	3.98	1,160	7.4
† 403	583	July 6, 1964	14	3.4	--	6.2	2.3	394 4.1	288	.0	455	.3	2.8	.32	1,020	25	97	34	4.22	1,870	7.5
501	36	July 2, 1964	--	.01	--	--	--	--	25	--	6.1	--	--	--	--	30	--	--	.00	98	6.2
502	310	Oct. 21, 1964	10	.67	--	13	5.2	*345	312	.0	388	.6	.8	--	916	54	93	20	4.03	1,700	7.3
801	61	Jan. 29, 1942	--	--	--	6.0	4.4	*26	37	30	20	.3	[c]	--	105	33	--	--	--	--	--
901	34	do	--	--	--	[a]	[b]	*13	6	10	12	--	[c]	--	41	5	--	--	--	--	--
21-901	16	Jan. 30, 1942	--	--	--	[a]	[b]	*15	6	3	24	.1	[c]	--	49	11	--	--	--	--	--
902	Spring	do	--	--	--	[a]	[b]	*8.7	12	2	4.5	.1	[c]	--	22	0	--	--	--	--	--
22-403	260	Aug. 7, 1964	12	.08	0.04	4.0	1.7	125 2.2	274	54	8.8	.3	.0	.77	344	17	93	1.3	4.15	563	7.9
501	30	Feb. 11, 1942	--	--	--	[a]	3.6	*4.4	18	2	3.0	.1	[c]	--	29	17	--	--	--	--	--
504	365	Oct. 23, 1964	13	.26	--	2.5	.2	*123	282	30	9.0	.2	.2	--	317	7	97	20	4.48	506	7.9
505	45	Feb. 11, 1942	--	--	--	14	[b]	*5.8	55	2	4.5	--	[c]	--	55	41	--	--	--	--	--
601	17	do	--	--	--	[a]	[b]	*5.1	12	2	3.0	.1	[c]	--	18	6	--	--	--	--	--
[c] 704	215	Sept. 16, 1964	17	--	--	28	10	*110	166	164	22	.4	3	--	436	111	--	--	--	691	7.5
705	215	June 22, 1964	23	.48	--	8.5	4.6	87 5.4	172	48	31	.1	5.8	.25	299	40	80	6.0	2.02	485	6.5
706	316	Dec. 30, 1960	13	--	--	1.0	.1	*146	235	98	18	.2	.0	--	392	3	99	37	--	651	8.1
706	316	June 22, 1964	13	.15	--	1.8	.1	150 1.7	240	107	19	.2	3.0	.31	414	5	98	29	3.83	672	7.8
707	200	do	17	.19	--	10	3.4	163 5.6	162	221	24	.1	9.8	.21	534	39	89	11	1.88	837	6.9
23-502	315	Oct. 27, 1941	--	--	--	[a]	[b]	*128	256	25	38	.4	[c]	--	320	11	--	--	--	--	--
502	315	June 17, 1964	25	1.0	--	7.2	2.7	*115	232	32	37	.2	2.2	--	335	29	90	9.3	3.22	538	7.2
602	133	Feb. 21, 1942	--	--	--	6.8	3.6	*174	360	10	74	.1	[c]	--	446	32	--	--	--	--	--

See footnotes at end of table.

Table 7.--Chemical analyses of water from wells and springs in Harrison County--Continued

Well	Depth of well (ft)	Date of collection	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Percent sodium	Sodium adsorption ratio (SAR)	Residual sodium carbonate (RSC)	Specific conductance (micromhos at 25°C)	pH
LK-35-23-701	--	Oct. 28, 1941	--	--	--	a/	b/	*234	354	4	168	--	c/	--	587	22	--	--	--	--	--
801	430	Feb. 21, 1942	--	--	--	10	b/	*142	299	30	44	0.1	c/	--	375	31	--	--	--	--	--
801	430	July 17, 1964	13	0.16	0.01	7.2	1.9	144 2.0	307	21	47	.0	1.8	0.18	389	26	92	12	4.51	661	8.0
902	105	Oct. 27, 1941	--	--	--	24	20	*91	262	42	52	.2	c/	--	367	142	--	--	--	--	--
24-101	103	Oct. 28, 1941	--	--	--	a/	b/	*121	220	23	50	--	c/	--	305	11	--	--	--	--	--
401	103	Nov. 3, 1941	--	--	--	a/	b/	*108	201	31	34	.3	c/	--	275	11	--	--	--	--	--
701	36	Feb. 12, 1942	--	--	--	a/	4.9	*26	6	17	34	.2	c/	--	91	20	--	--	--	--	--
27-301	16	Jan. 29, 1942	--	--	--	a/	b/	*6.7	6	2	11	.1	c/	--	29	10	--	--	--	--	--
302	424	Oct. 21, 1964	6.8	2.1	--	4.2	1.1	*271	284	1.2	262	.3	.0	--	687	15	98	30	4.35	1,260	8.2
901	274	July 24, 1964	43	6.6	.04	48	3.0	42 3.7	215	41	9.3	.0	.8	.16	297	132	40	1.6	.88	443	7.4
28-101	25	Jan. 30, 1942	--	--	--	a/	b/	*12	12	3	8.0	.2	c/	--	32	0	--	--	--	--	--
102	200	Oct. 22, 1964	30	11	--	12	7.5	*31	105	27	10	.1	.2	--	170	61	53	1.7	.50	255	6.2
402	30	Jan. 28, 1942	--	--	--	a/	b/	*9.0	6	10	4.0	--	c/	--	32	5	--	--	--	--	--
802	242	June 12, 1964	10	.09	--	2.8	.7	*99	176	63	9.7	.1	2.5	--	275	10	96	14	2.69	448	7.8
803	205	Oct. 17, 1941	--	--	--	2.8	1.7	*114	156	105	17	--	0	--	331	14	--	--	--	--	--
803	205	June 12, 1964	11	.21	--	2.5	.9	*110	152	94	16	.1	4.0	--	314	10	96	15	2.29	507	7.6
804	245	do	10	.09	--	1.5	.5	*110	160	89	13	.1	3.8	--	307	6	98	20	2.51	495	7.5
902	250	Oct. 17, 1941	--	--	--	9.6	6.1	*59	98	69	18	.1	c/	--	210	49	--	--	--	--	--
903	272	do	--	--	--	14	7.3	*47	79	69	21	.3	c/	--	197	65	--	--	--	--	--
29-102	240	July 29, 1964	11	.32	.00	1.5	1.1	254 2.1	647	8.0	8.2	2.4	3.2	.61	610	8	98	39	10.4	992	8.1
103	590	do	13	.36	--	1.5	.6	229 1.2	511	36	40	.7	1.2	.57	575	6	99	41	8.26	955	8.2
201	600	do	13	.05	--	.5	.5	207 .9	408	52	47	.5	2.0	.56	525	3	99	52	6.63	875	8.1
301	37	Jan. 30, 1942	--	--	--	a/	b/	*17	6	26	8.0	.1	c/	--	56	7	--	--	--	--	--
401	23	Feb. 17, 1942	--	--	--	a/	b/	*4.4	6	8	5.0	.3	c/	--	24	12	--	--	--	--	--
501	30	Jan. 30, 1942	--	--	--	a/	6.1	*17	18	20	25	.2	c/	--	81	34	--	--	--	--	--
701	25	Jan. 28, 1942	--	--	--	a/	b/	*11	6	3	14	.1	c/	--	37	7	--	--	--	--	--
703	220	July 30, 1964	11	.12	.01	3.0	.9	*196	378	108	7.0	.7	3.2	--	516	11	97	26	5.98	822	8.0
802	30	Jan. 28, 1942	--	--	--	6.0	4.4	*22	0	10	24	--	50	--	116	33	--	--	--	--	--

See footnotes at end of table.

Table 7.--Chemical analyses of water from wells and springs in Harrison County--Continued

Well	Depth of well (ft)	Date of collection	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Percent sodium	Sodium adsorption ratio (SAR)	Residual sodium carbonate (RSC)	Specific conductance (micromhos at 25°C)	pH
LK-35-29-902	444	Oct. 23, 1964	12	0.12	--	1.8	0.4	*246	564	62	7.9	1.1	0.2	--	608	6	99	44	9.14	968	8.3
903	315	Oct. 28, 1960	12	--	--	7.5	3.5	122 3.6	267	63	10	.4	2.5	--	356	33	88	9.2	--	574	7.5
904	410	Aug. 5, 1964	12	.12	0.01	.8	.0	170 1.1	417	23	4.1	.4	.2	0.53	417	2	99	52	6.79	681	8.2
906	248	Nov. 18, 1941	--	d/ 35	--	22	9.0	*11	0	23	64	--	c/	--	129	91	--	--	--	--	--
907	192	do	--	d/ 55	--	23	24	*45	0	50	182	0	c/	--	324	155	--	--	--	--	--
908	201	do	--	d/ 50	--	19	24	*84	0	88	185	--	c/	--	400	145	--	--	--	--	--
909	111	do	--	d/ 55	--	20	20	*46	0	81	208	--	c/	--	377	132	--	--	--	--	--
910	50	do	--	d/ 2.5	--	10	b/	*17	12	4	42	--	c/	--	82	37	--	--	--	--	--
911	128	do	--	d/ 15	--	20	13	*16	85	46	14	.2	c/	--	151	103	--	--	--	--	--
912	125	do	--	d/ 15	--	44	25	*5.3	116	100	16	--	c/	--	247	210	--	--	--	--	--
30-401	610	Nov. 17, 1941	--	--	--	10	5.4	*4.8	6	40	8.0	.2	c/	--	71	48	--	--	--	--	--
402	300	Nov. 12, 1941	--	--	--	a/	6.6	*16	24	42	7.0	.1	c/	--	88	39	--	--	--	--	--
e/ 403	300	Dec. --, 1944	31	2	.08	8	5	*22	18	53	12	f/	f/	--	144	41	--	f/	--	--	5.6
405	300	Nov. 12, 1941	--	--	--	10	5.4	*2.8	0	96	6.5	0	c/	--	121	48	--	--	--	--	--
e/ 405	300	Dec. --, 1944	32	4.1	.07	7	4	*7	0	55	11	f/	f/	--	108	34	--	f/	--	--	4.0
406	240	Nov. 12, 1941	--	--	--	7.6	9.0	*2.5	31	26	6.5	.2	c/	--	67	56	--	--	--	--	--
e/ 406	240	Dec. --, 1944	30	2.3	g/	9	9	*5	24	34	11	.4	f/	--	100	60	--	f/	--	--	6.3
e/ 408	479	July 22, 1940	29	.6	.1	43	9	*84	201	112	32	--	2.2	--	400	145	--	f/	--	--	7.4
408	479	Nov. 12, 1941	--	--	--	6	11	*109	195	103	20	0	c/	--	345	62	--	--	--	--	--
e/ 408	479	Dec. --, 1944	24	1.1	.13	40	9	*79	199	111	21	.44	1.8	--	407	137	--	f/	--	--	7.6
701	323	Nov. 18, 1941	--	--	--	104	9	*23	275	100	12	.3	c/	--	383	296	--	--	--	--	--
702	351	Nov. 13, 1941	--	--	--	15	b/	*100	189	77	16	.2	c/	--	302	40	--	--	--	--	--
e/ 702	351	Dec. --, 1944	14	.04	h/	12	3	*104	201	71	21	.5	f/	--	305	43	--	f/	--	--	7.8
e/ 703	375	July 22, 1940	24	.4	--	32	9	*90	195	94	39	f/	f/	--	370	117	--	f/	--	--	7.2
703	375	Nov. 12, 1941	--	--	--	10	3.9	*89	165	77	15	.2	c/	--	276	42	--	--	--	--	--
e/ 703	375	Dec. --, 1944	24	.14	.08	33	7	*73	189	75	27	.4	f/	--	308	112	--	f/	--	--	7.9
704	473	Nov. 12, 1941	--	--	--	18	b/	*103	177	100	18	.1	c/	--	328	51	--	--	--	--	--
e/ 704	473	Dec. --, 1944	22	.14	.09	27	6	*95	195	100	25	.4	f/	--	380	92	--	f/	--	--	7.9

See footnotes at end of table.

Table 7.--Chemical analyses of water from wells and springs in Harrison County--Continued

Well	Depth of well (ft)	Date of collection	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Percent sodium	Sodium adsorption ratio (SAR)	Residual sodium carbonate (RSC)	Specific conductance (micromhos at 25°C)	pH
LK-35-30-803	24	Feb. 17, 1942	--	--	--	13	36	*36	12	146	69	0.1	c/	--	308	183	--	--	--	--	--
804	364	Oct. 23, 1964	22	1.4	--	21	7.2	*60	152	26	42	.2	1.8	--	255	82	61	2.9	0.85	421	7.1
901	31	Feb. 9, 1942	--	--	--	a/	6.1	*5.1	37	3	4	.1	c/	--	39	29	--	--	--	--	--
31-302	205	Feb. 14, 1942	--	--	--	a/	4.9	*11	49	2	1	.4	c/	--	53	20	--	--	--	--	--
601	17	Feb. 12, 1942	--	--	--	118	56	*108	232	2	401	.3	c/	--	800	525	--	--	--	--	--
701	28	Feb. 9, 1942	--	--	--	a/	b/	*18	12	17	20	--	c/	--	76	22	--	--	--	--	--
702	411	June 22, 1964	50	59	--	44	42	52 5.8	0	106	217	.1	.8	0.03	518	282	27	1.3	.00	931	4.0
703	792	Dec. 30, 1960	15	--	--	16	4.7	83 3.3	221	23	24	.2	3.0	--	281	59	74	4.7	--	464	7.4
703	792	July 10, 1964	17	.23	--	16	4.4	80 3.2	217	24	23	.2	4.8	.18	280	58	74	4.6	2.40	467	7.5
708	27	Feb. 9, 1942	--	--	--	a/	b/	*10	6	2	8.5	--	c/	--	46	12	--	--	--	--	--
709	415	June 22, 1964	14	.04	--	2.0	.2	141 1.5	316	3.2	38	.3	2.5	.34	358	6	97	25	5.06	607	8.0
801	19	Feb. 12, 1942	--	--	--	a/	11	*81	31	20	129	.2	c/	--	259	52	--	--	--	--	--
32-501	18	do	--	--	--	23	6	*14	85	11	9.5	.1	c/	--	104	67	--	--	--	--	--
35-201	304	Nov. 4, 1941	--	--	--	a/	b/	*79	165	46	7.5	.4	c/	--	220	22	--	--	--	--	--
601	450	July 24, 1964	8.1	1.1	0.00	4.5	1.7	686 3.1	564	1.8	760	--	.8	.49	1,740	18	99	70	8.88	3,170	7.7
604	500	do	12	.70	.01	4.5	1.5	447 2.3	664	4.8	305	1.4	4.2	.55	1,110	17	98	47	10.5	1,930	7.9
36-101	35	Jan. 27, 1942	--	--	--	a/	b/	*40	18	60	14	--	c/	--	129	12	--	--	--	--	--
201	32	do	--	--	--	a/	b/	*10	12	2	3.5	--	c/	--	32	3	--	--	--	--	--
202	26	do	--	--	--	6.0	7.1	*86	6	2	88	1.2	120	--	313	44	--	--	--	--	--
301	20	Jan. 28, 1942	--	--	--	a/	b/	*12	12	3	12	.1	c/	--	37	5	--	--	--	--	--
401	27	Nov. 4, 1941	--	--	--	a/	b/	*3.9	6	7	5.0	--	c/	--	22	11	--	--	--	--	--
501	28	Jan. 27, 1942	--	--	--	a/	3.6	*3.5	6	2	5.5	--	c/	--	30	17	--	--	--	--	--
601	220	July 28, 1964	12	.14	.01	3.0	.9	187 1.9	456	29	13	.5	2.5	.65	474	11	97	25	7.25	779	8.0
701	18	Jan. 27, 1942	--	--	--	17	13	*44	18	10	91	--	50	--	234	98	--	--	--	--	--
901	--	Nov. 14, 1941	--	--	--	a/	b/	*291	695	3	44	--	c/	--	684	2	--	--	--	--	--
37-101	465	Jan. 28, 1942	--	--	--	a/	b/	*2.1	6	2	7.5	.1	c/	--	25	17	--	--	--	--	--
401	22	do	--	--	--	a/	b/	*6.9	6	2	3.0	.1	c/	--	20	0	--	--	--	--	--
402	370	Aug. 3, 1964	17	--	--	3.0	1.1	*238	606	.8	20	1.6	.5	--	580	12	98	30	9.69	940	7.7

See footnotes at end of table.

Table 7.--Chemical analyses of water from wells and springs in Harrison County--Continued

Well	Depth of well (ft)	Date of collection	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Percent sodium	Sodium adsorption ratio (SAR)	Residual sodium carbonate (RSC)	Specific conductance (micromhos at 25°C)	pH
LK-35-37-601	6	Feb. 14, 1942	--	--	--	130	83	*143	0	899	101	0.8	c/	--	1,361	666	--	--	--	--	--
701	25	Nov. 4, 1941	--	--	--	a/	6.6	*6.2	24	2	18	--	c/	--	48	34	--	--	--	--	--
801	200	Aug. 3, 1964	12	0.09	--	2.5	1.0	*301	723	.6	46	2.4	0.2	--	722	10	98	41	11.6	1,200	8.1
802	429	do	13	.07	0.00	.8	.5	283 1.1	608	.2	63	1.3	2.2	1.0	685	4	99	62	8.89	1,150	8.5
803	420	do	12	.1	--	.8	.7	*272	629	3.4	52	1.2	.8	--	652	5	99	53	10.2	1,100	8.2
38-101	43	Feb. 17, 1942	--	--	--	23	3.6	*25	122	15	7.0	--	c/	--	134	72	--	--	--	--	--
602	150	Feb. 13, 1942	--	--	--	a/	b/	*115	262	10	28	.1	c/	--	289	17	--	--	--	--	--
603	--	Nov. 4, 1941	--	--	--	a/	b/	*186	415	5	50	.3	c/	--	448	12	--	--	--	--	--
701	105	do	--	--	--	52	39	*35	372	2	41	--	c/	--	352	289	--	--	--	--	--
801	73	Nov. 14, 1941	--	--	--	128	155	*364	756	238	620	.1	c/	--	1,883	956	--	--	--	--	--
802	91	do	--	--	--	31	15	*174	519	12	57	--	c/	--	544	139	--	--	--	--	--
803	--	do	--	--	--	30	b/	*118	153	7	148	.8	c/	--	389	87	--	--	--	--	--
804	--	do	--	--	--	a/	b/	*173	433	4	24	--	c/	--	419	17	--	--	--	--	--
39-201	33	Feb. 13, 1942	--	--	--	a/	b/	4.8	12	4	4.5	.1	c/	--	25	12	--	--	--	--	--
301	190	July 13, 1964	--	.62	--	--	--	--	348	--	40	--	--	--	--	100	--	--	3.70	694	7.4
304	247	Oct. 6, 1964	23	2.2	--	20	8.3	*100	290	6.0	40	.2	.0	--	341	84	72	4.7	3.07	610	6.9
401	35	Feb. 17, 1942	--	--	--	20	18	*140	67	67	127	.2	156	--	561	126	--	--	--	--	--
605	245	Oct. 6, 1964	11	.05	--	1.5	.4	*169	362	28	33	.2	.2	--	421	5	99	33	5.83	641	7.8
801	259	Aug. 11, 1964	57	3.8	--	18	3.9	*15	108	.0	2.7	.2	.0	--	150	61	34	.8	.55	181	6.4
902	280	do	62	6.3	--	11	4.5	*26	102	.2	13	.2	.0	--	167	46	55	1.7	.75	210	6.4
40-101	205	July 10, 1964	11	.04	--	2.0	.7	179 1.1	368	5.8	60	.2	5.0	.45	447	8	98	28	5.87	752	8.0
102	208	Oct. 20, 1964	11	.06	--	4.5	1.7	*197	396	.8	85	.3	.0	--	495	18	96	20	6.13	845	8.0
201	135	July 10, 1964	11	.66	--	13	3.8	304 2.1	396	200	132	.2	.2	.50	862	48	93	19	5.53	1,400	7.9
204	151	Oct. 29, 1941	--	--	--	16	16	*172	262	77	130	--	c/	--	540	105	--	--	--	--	--
204	151	June 18, 1964	14	1.3	--	32	9.7	*178	272	78	143	.1	.0	--	589	120	76	7.1	2.06	1,000	7.4
206	150	do	15	.05	--	30	10	*294	256	136	282	.1	5.6	--	899	116	85	12	1.88	1,530	7.9
207	170	Oct. 31, 1941	--	--	--	13	15	*177	293	77	112	--	--	--	538	94	--	--	--	--	--
401	40	Feb. 13, 1942	--	--	--	a/	b/	*18	12	23	7.5	.1	c/	--	58	6	--	--	--	--	--

See footnotes at end of table.

Table 7.--Chemical analyses of water from wells and springs in Harrison County--Continued

Well	Depth of well (ft)	Date of collection	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Percent sodium	Sodium adsorption ratio (SAR)	Residual sodium carbonate (RSC)	Specific conductance (micromhos at 25°C)	pH
LK-35-40-402	190	Oct. 6, 1964	19	0.64	--	43	12	*130	328	115	35	0.2	1.8	--	517	157	64	4.5	2.24	812	7.1
501	22	Feb. 13, 1942	--	--	--	8.4	b/	*45	92	10	24	.9	c/	--	136	26	--	--	--	--	--
502	158	Oct. 20, 1964	3.5	1.2	--	10	59	*492	622	.2	585	.1	1.0	--	1,460	268	80	13	4.85	2,550	8.8
704	25	Feb. 13, 1942	--	--	--	10	7.3	*84	37	8	141	--	c/	--	268	55	--	--	--	--	--
46-202	147	Nov. 14, 1941	--	--	--	7.6	b/	*119	317	8	12	.3	c/	--	304	26	--	--	--	--	--
47-201	310	Aug. 11, 1964	34	.46	0.02	2.0	.5	103 1.0	246	.0	24	.1	.0	0.11	286	7	96	17	3.89	443	7.8

* Sodium and potassium calculated as sodium (Na).
† Well 35-20-403 Phosphate (PO_4), 0.17.
a/ Less than 5 ppm.
b/ Less than 3 ppm.
c/ Less than 20 ppm.
d/ Iron determination on same date by Atlas Chemical Industries, Inc.
e/ Analyses by Texas State Dept. of Health.
f/ Less than 0.4 ppm.
g/ Less than 0.05 ppm.

ATTACHMENT D
February 2023 Pirkey Landfill Leachate Laboratory Analytical Report

AMERICAN ELECTRIC POWER

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

Water Analysis Report

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 E
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

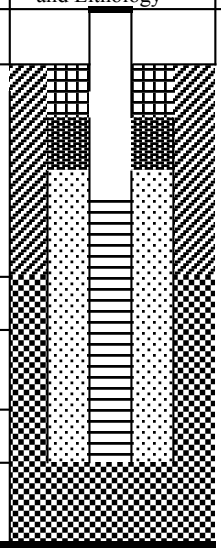
STATE OF TEXAS
JOHN J. TAYNTOR
99202
LICENSED PROFESSIONAL ENGINEER

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		
	Reddish brown, Clayey Sand (SC), with gravel	SC		14-15		
15.0	Well TD = 15 feet.					



*Soil descriptions based on visual observations and intervals are approximate.

MW Location Coordinates: N6871017.4, E3202874.4

ATTACHMENT F
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	Texas	March 28, 2025
License Number	Licensing State	Date